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Fourth Year Annual Survey Report of Joint Action for Nutrition Outcome (JANO) Project

Final Report

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Sincerely
Prof. Dr. Md. Zakir Hossain
Team Leader

Acronyms

ADC	Austrian Development Cooperation
ANC	Antenatal Care
BARI	Bangladesh Agricultural Research Institution
BIeNGS	Bangladesh Initiative to Enhance Nutrition Security and Governance
BINA	Bangladesh Institute of Nuclear Agriculture
BL	Baseline
BNNC	Bangladesh National Nutrition Council
BRRI	Bangladesh Rice Research Institute
CAPI	Computer-Assisted Personal Interviews
CARE	Cooperative for Assistance and Relief Everywhere
CC	Community Clinic
CG	Community Group
CSA	Climate-smart Agriculture
CSC	Community Score Card
CSG	Community Support Group
DAC	Development Assistance Committee
DAE	Department of Agricultural Extension
DLS	Department of Livestock Services
DNCC	District Nutrition Coordination Committee
DSHE	Directorate of Secondary and Higher Education
EOP	End of Project
ER	Expected Result
ESDO	Eco-Social Development Organization
EU	European Union
FANTA	Food and Nutrition Technical Assistance
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
FW	Family Welfare
FWA	Family Welfare Assistants
GEMS	Gender Equity Movement in School
GoB	Government of Bangladesh
GoB	Government of Bangladesh
HA	Health Assistants
HH	Households
ICT	Information and Communication Technology
IDI	In-depth Interviews
IRB	Institutional Review Board
JANO	Joint Action for Nutrition Outcome
KII	Key Informants Interview
LoA	Life of Award
LGSP	Local Governance Support Project
M&E	Monitoring and Evaluation
MICS	Multiple Indicator Cluster Surveys
MMNP	Multi-sectoral Minimum Nutrition Package

MOE	Ministry of Education
MOHA	Ministry of Home Affairs
MTR	Midterm Review
NC	Nutrition Committee
NGO	Non-Government Organization
NPAN	National Plan of Action for Nutrition
NPAN	National Information Platforms for Nutrition
OECD	Organization for Economic Co-operation and Development
PEARL	Program Evidence, Advocacy, Research & Learning
PEP	Poor and Extremely Poor
PLW	Pregnant and Lactating Women
PNC	Postnatal Care
PSC	Project Steering Committee
PSMT	Project Senior Management Team
SA	Social Audit
SBCC	Social and Behaviour Change Communication
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
SMC	School Management Committee
SRHR	Sexual and Reproductive Health and Rights
TFD	Theatre for Development
ToT	The Training of Trainers
UDCC	Union Development Coordination Committee
UH&FWC	Union Health & Family Welfare Centre
UNCC	Upazila Nutrition Coordination Committee
UNICEF	The United Nations Children's Fund
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene
WCA	Women and Children Affairs
WE	Women Empowerment
WHO	World Health Organization
WRA	Women of Reproductive Age

Executive Summary

Introduction

The Joint Action for Nutrition Outcomes (JANO) project is designed to enhance the nutritional status of PLW, children under five years of age, and adolescents through a multi-sectoral approach. JANO is implemented through a consortium of CARE, Plan International, and ESDO and works with the GoB at the national, regional, and local levels to support the effective implementation of the NPAN-2. The fourth-year annual survey was conducted to assess the progress of JANO project indicators.

Methodology

The survey adopted both quantitative and qualitative techniques to gather data and information on nutrition-specific and sensitive issues from the targeted respondents (PLWs, adolescent girls/boys, household heads/farmers) and participants (frontline workers, Community Support Group, Community Group, Union Development Coordination Committee, Upazila Nutrition Coordination Committee, District Nutrition Coordination Committee, private sector actors, respective government line departments). Adopting a stratified cluster sampling design, the survey covered 630 PLW under vva household survey and 600 students (adolescents/boys) under a student survey. In addition, the survey conducted 64 participatory tools facilitation with Community Support Groups (CSGs), 55 focus group discussions (FGDs) with different groups of participants, 50 key informant interviews (KIIs)/meetings, and ten in-depth interviews (IDIs). The survey used tablets to collect and store the data electronically.

Key Findings

The JANO project made considerable progress at the end of its fourth year of implementation in most program activities. The 4th Year Annual Survey found that the value of all 18 indicators increased from the Mid-Term Review (MTR) in 2021; in 72% of cases, the indicators' overall targets for the year 2023 were achieved. The progress of outcome-level indicators and expected results are presented below. In addition, the summary of the Logframe Indicator Progress and the calculation process is illustrated in Annex 1A and 1B.

Level	Label	Indicator#	Progress	Deviation Remarks
Outcome	Outcome	4	3.5 Met LoA target	Formal Participation did not meet LoA
ER-1	Women & Girls empowerment to increased demand	4	3.5 Met LoA target	Extension services close to meeting LoA
ER-2	Nutrition governance	4	4 Met LoA target	N/A
ER-3	Access to Nutritious production & services	3	2 Met LoA target	High-value production by HHs is close to the LoA target
ER-4	ICT for bridging the demand & supply of nutrition	3	0.5 Met LoA target	• Web-based Portal yet to be used by GoB • Frontline workers have yet to use the ICT platform • More community members to access/receive ICT message
Total		**18**	**15 Met LoA target**	**72% of indicators achieved the LoA target**

The summary of the Logframe Indicator Progress is presented in Annex 1.

Progress of Outcome Indicators

There are four outcome-level indicators. The annual survey found that JANO achieved the LoA targets in three indicators, and in outcome #4 (participation in formal decision-making spaces), it could partially meet the target.

Among other outcome indicators, the percentage of women consuming a minimum dietary diversity (MDD) has increased to 47.9% (the target for 2023 is 46.9%). In addition, the proportion of children aged 6–23 months receiving foods from four or more food groups has increased to 65.7% (the target for 2023 is 46.9%). The progress of these two indicators was satisfactory, considering the MTR and the target that the program had set for 2023. There is not much variation in MDD-W among the intervening districts; however, the annual survey found it was significantly higher for pregnant women (54.5%) compared to l actating women (44.5%). The reason for relatively higher MDD in pregnant women could be their more consciousness paired with better attention by family members. This achievement can be attributed to the JANO project as it facilitated a comprehensive learning process to raise awareness of PLWs regarding health, hygiene, and nutrition through courtyard meetings, home visits, and other means.

The survey findings suggested that all the Upazila Nutrition Coordination Committees (UNCCs) and Union Development Coordination Committees (UDCCs) (14 UNCCs, 64 UDCCs) spent the budget on nutrition-specific and nutrition-sensitive actions, as suggested/reported during the MTR. However, a clear indication of sector-wise expenditure could not be reported as the key informants only stated that the allocated budget was spent effectively. However, it was revealed from internal monitoring findings that almost all the departments under the UNCC implemented more than 80% of their targeted activities related to nutrition in the fiscal year 2021-22, which was slightly higher than the previous year. The findings suggested that it could be due to increased interdepartmental coordination, accountability, and ownership facilitated by the project. In addition, the internal project monitoring data revealed that UDCC implemented about 89% of the targeted activities throughout 2012-22 - a 9% increase compared to the last year. In terms of spending, most of the consulted UDCC members confirmed that at least 30% of the allocated budget was spent on nutrition-specific activities.

Women's participation in formal (government-led) decision-making spaces did not increase much compared to the baseline. Still, participation in informal (civil society-led, private sector-led) decision-making spaces/platforms increased by 18.4% (the target for 2023 was 11.79% for both formal and informal decision-making). However, the measurement of this indicator had an issue. It was found from the household survey data that 7.6% of women participated in the budget sessions of UDCC. Therefore, the study team and project staff agreed to measure this indicator from Participatory Tools Facilitation and document review. Hence, the survey estimated it considering their participation in Participatory Tools Facilitation (62 with CSGs) and the last six meetings of UDCCs and CGs (reviewed the final six minutes of CG and UDCC meetings). In the case of women's participation in informal forums, the survey used the household survey data where participation considered either one of the forums, i.e., village savings and loan association (VSLA), Youth Group, Women empowerment group, Local club, Farmer's field school (FFS), Adolescent club, Theatre for development (TFD), etc.

Expected Result 1

Women & Girls empowerment to increased demand

The JANO project has four indicators to measure its expected result no.1. In three of the four indicators; the project achieved its LoA target in 2022. In one indicator (#6), a partial achievement was recorded.

The percentage of women and adolescents who claimed to receive nutrition-specific services from CCs was 86.6%, and sensitive benefits from agriculture extension were 14.0% (the targets for 2023 were 53.5% and 19% for nutrition-specific and sensitive services, respectively).

About 73% of the pregnant and lactating women (PLW) received more than four Antenatal Care (ANC) services during pregnancy, and about 82% received (Postnatal Care) PNC within 48 hours of delivery. Nearly 43% of the deliveries occurred at home compared to 40.7% of the births attended by TBAs/relatives.

The percentage of students applying key learning points regarding nutrition, health, and hygiene at home increased to 31.3% (the target for 2023 is 15.4%). The remarkable increase could be connected to the learning opportunity offered at schools as the school resumed after the covid pandemic in 2021.

The functional CSGs in targeted communities increased to 74.2% (the target for 2023 was 60.0%). In the participatory tools facilitation process with 62 CSGs, participants identified that out of the performance areas, CSGs obtained relatively poor scores (<50%) in six regions, which included access to and use of services, learning sharing space, assistance to CG for resource mobilization, gender equity, community feedback, and preventing harmful social phenomena. The percentage of functional CSGs was higher in the Nilphamari district (80%) compared to the Rangpur district (68.8%).

All the 30 sample School Management Committees (SMCs) had set agendas on nutrition-specific and sensitive services for adolescents in the SMC meetings. It can be perceived from this finding that the remaining 300 SMCs had also developed an agenda on nutrition-specific and sensitive services for adolescents, which was similar to the MTR (the target for 2023 was 330 SMCs). However, 23 (out of 30) SMCs were governed by ad hoc committees. The survey found that 25 sample SMCs (out of 30) prepared the Annual Budget Plan properly.

Expected Result 2

Nutrition Governance

All four indicators in this result area reached their LoA targets.

The number of multi-sectoral plans at the district, upazila, and union levels with the allocated budgets to support nutrition intervention was similar to the MTR, namely 73 plans comprising two DNCCs, seven UNCCs from project areas, and 64 UDCCs (the target for 2023 was 73 plans). Based on the discussions with UDCCs on the increase/decrease of the annual budget, it appeared that the current year's budget was fixed by evaluating the prior year's income/ expenditure. The key informants of UDCC also mentioned that the annual budget increased from 10% to 30% in the reporting year. The project monitoring data revealed that the budget for nutrition-specific and sensitive interventions increased by 30% in 2021-2022.

The percentage of PLW from the target population that received nutrition-specific safety net support has increased to 25.1% (the target for 2023 is 18.4%).

The percentage of women and adolescent girls from the target population in government forums (UDCC, CG, CSG) who participated in the nutrition action plan development and implementation process increased to 63.6%, which was significantly higher than the MTR (41.2%). However, the measurement of this indicator is not straightforward as it could not be measured from household survey data due to underestimation of the participation. Hence the survey used the last six meeting minutes of UDCC and CG, along with the participatory tool facilitation with CSG, to track this indicator. First, the percentage of female members participating in the meetings was considered the indicators' value. Later, the participation was validated during the consultation with CSG, CG, and UDCC members. As a result, almost all the women participants said they regularly participated in their regular meetings, placed their agendas, and included them in the annual action plan.

It was found that 64 Unions and 208 CCs in the target districts allowed effective feedback mechanisms for service receivers. It was reported in the MTR that 208 CC, 64 UDCCs, 14 UNCCs, and two DNCCs allowed feedback. According to respondents, the complaint box was available in all the CCs. The key informants claimed that all the government bodies had a feedback system; however, the community people did not use it frequently. In the household survey, about two-thirds of respondents mentioned that they had an idea about the submission of complaints/feedback. The places for submission of complaints were CSG, CC/CG, and UP/UDCC, as mentioned by 36.2%, 27.2%, and 20.3% of respondents, respectively.

Expected Result 3

Access to Nutritious production & services

Out of 3 indicators of ER-3, JANO achieved the LoA targets of two indicators. Indicator #13 ('Households involvement in production') was found to be progressing towards the LoA target.

- The percentage of households producing higher-value nutrition products increased to 46.9% (the target for 2023 is 56.7%).

- The percentage of households practicing at least three climate-smart agricultural techniques increased to 17.8% (the target for 2023 is 25.0%). The progress of practicing climate-smart agricultural techniques was higher, but not as high as expected, due to the effects of COVID-19 and the lack of support required.

- JANO took eleven joint initiatives in four thematic areas (four in Agriculture, four in Livestock, two in WASH, and one in Micronutrient) with government line departments (DAE, DLS, Department of Women & Child Affairs) and the private sector (ACI Seed, ACI Animal Health, Mega Feed, Nirapad Sanitary Napkin, SMC) in consideration of the tripartite agreement (MOU).

Expected Result 4

ICT for bridging demand & supply

Finally, JANO's progress in meeting the LoA targets of ER-4 indicators is slower than under other ERs.

- Regarding the number of government forums (UNCC, DNCC) utilizing the Nutrition Information Portal for planning and decision-making at the district and upazila level, one web-based platform was developed, and Annual Nutrition Plan data entry was completed for all 14 Upazilas. However, government officials were yet to use the portal (the target for 2023 is nine government fo-rums, i.e., 2 DNCCs and 7 UNCCs). Therefore, during MTR, only the web-based portal was developed.

- Sixty percent of volunteers were found to use the ICT-based e-learning platform to support community-based needs. The project is yet to provide training to the frontline health workers to use the ICT apps but has organized training for 208 volunteers. Volunteers used the apps while facilitating courtyard sessions, individual counseling, etc. Therefore, it appears that the project is running behind in achieving the target of this indicator, which could be the effect of the COVID-19 situation.

- The percentage of community members who accessed or received ICT-based nutritional information increased to 29.7% (the target for 2023 is 45.0%). Though the percentage of people who received messages increased since the MTE, the effectiveness of messages in content, relevancy, and appropriateness was not checked.

Women's Empowerment

- The participation of women in decision-making processes was moderate: about 97% of PLW participated in household matters and about 70% in financial affairs. About 90% of PLW were found to make joint decisions on family planning, 73.4% on the purchase/sale of jewelry, 70.4% on taking loans and selling assets, and 62.3% on treatment.

- The status of freedom of movement is reasonable: About 81% reported that they could visit health centers alone, and about 64% could participate in meetings of villages/CG/CSG/UDCC. About 57% could visit local bazaars alone.

- Based on affirmative answers on three issues (freedom of movement, decision-making in household economic affairs, and seeking healthcare services from CC), it was found that 20.5% of women were empowered to make independent decisions.

Impact of the Covid-19 Pandemic and Recent Price Hike on Livelihood Issues

- Covid-19 was found to impact lives and livelihoods in several ways. About 86% of PLW claimed that the household income decreased remarkably and nearly half of PLW argued that domestic violence increased as the income decreased remarkably. Most of them had to compromise with the food menu as a coping strategy during the COVID-19 crisis.

- About 87% of households were affected by recent price hikes. As coping mechanisms, most of them relied on less expensive food (78%) and compromised on expensive food items (56.7%) and the amount of food (62.5%). The findings indicate that nearly three-fifths of these households suffered from moderate food insecurity, as they were taking less food than required.

Conclusions and Recommendations

The annual survey findings indicate that JANO has made significant progress in consideration of its targets for 2023 for several indicators, which was possible due to extended facilitation of the project in terms of educating the community people regarding nutrition-specific and sensitive services through various initiatives (such as courtyard meetings, home visits, theatres, information through ICT, etc.), increased coordination among different government platforms (UDCC, UNCC, and DNCC) and joint initiatives of government departments and the private sector. In addition, the findings from outcome harvesting indicate that women and adolescent girls are, to some extent, empowered to demand and utilize both nutrition-sensitive and nutrition-specific services.

The survey observed that some of the indicators were partially achieved, which includes nutrition-specific and sensitive services for adolescents, nutrition sensitive services from extension, use of the Nutrition Information Portal for planning and decision-making by DNCC and UNCC, capacity building of frontline workers for using ICT Apps, and nutrition-specific services in terms of institutional child delivery and assistance of delivery by SBA. The project should provide special attention to 6 low-performing areas of CSGs for improvement to make efficient functioning. As UDCCwereas reformed recently due to the UP election held in 2021, the UDCC needed some time to reactivate and adjust to the planning and budgeting for implementing nutrition activities. The project's relatively poor performance of some of the indicators might be due to the impact of covid-19. Considering the above scenarios of the project activities, JANO should continue its efforts to consolidate pending work and sustainability of the project results. In this regard, the survey team feels that one year will not be sufficient to complete the pending activities and therefore recommends extending the project period.

To continue the momentum of program activities and to make achievement sustainable, the following recommendations are made:

Strengthening nutrition-sensitive and nutrition-specific services for adolescents and children

- More attention should be given to increasing the nutrition-specific services for adolescents and nutrition sensitive services for producers in terms of demand (community people) and supply (service providers). JANO project may organize various campaigns to make people aware of receiving health and extension services.

- Institutional child delivery should be promoted extensively through awareness-raising sessions at the community level.

- Proper counseling is necessary for schools and outside of school to sensitize adolescents on the importance of seeking nutrition-specific services (iron/folic acid) to remain healthy. Discussion with adolescents indicates that they are not taking medicines (iron/folic acid) properly (every day and for the full period as prescribed by health workers).

Usage of ICT platform in Nutrition planning

- The project should continue sensitizing government forums (UNCC, DNCC) on utilizing the Nutrition Information Portal for planning and decision-making at the district and upazila levels. In addition, system strengthening and governance for the functioning of CSGs, CGs, UDCCs, UNCCs, and DNCCs require special attention for sustaining nutritional activities. In this regard, JANO needs to work closely by organizing workshops regularly with relevant government forums to resolve challenges from the sustainability perspective.

JANO should develop the capacity of frontline workers and motivate them to use the ICT-based e-learning platform to disseminate nutrition-specific and sensitive issues to the community veffectively. The women-friendly environment in getting services

- To overcome the shyness issue, the CC should have male and female health workers to make services user-friendly for adolescent girls.

Measurement, targeting & sustainability

- The current year household survey covers information from the household's head on agriculture production. Separate interview schedules for farmers can be organized in future surveys for more data quality and accuracy of indicators under Result-3 of the project.

- Considering the volume of pending activities and to make the system sustainable, the survey team feels that the rest of the project period may not be sufficient and therefore recommends an extension of the project period.

Chapter I

Introduction

CARE Bangladesh is a consortium lead and implementing the Joint Action for Nutrition Outcome (JANO) Project through a consortium of CARE, Plan International, and Eco-Social Development Organization (ESDO) with the vision to improve the nutritional status of Pregnant and Lactating Women (PLW), children under five years of age, and adolescent girls/boys through a multi-sectoral approach.

The context of the survey, along with pertinent literature, is described in Annex 9. JANO has partnered with both public and private systems to support the Government of Bangladesh (GoB) in the effective implementation of the National Plan of Action for Nutrition-2 (NPAN-2), specifically functionalizing the local and regional Nutrition Coordination Committees (NCCs) to strengthen planning, budgeting, and implementation of inclusive and accountable programs. Partnerships with local private sectors are focused on motivating and encouraging them to invest in local markets through promoting high-yielding nutritious and climate-smart crops among farmers. In addition, JANO is using a gender-transformative approach to develop the capacity of women and girls to be informed decision-makers, better producers, and income generators.

The activities of the JANO project are being implemented in seven Upazilas (sub-district administrative units) of the Rangpur and Nilphamari districts of Bangladesh. The selection of Rangpur and Nilphamari (under the Rangpur division) was influenced by the fact that both have been identified as vulnerable districts concerning child malnutrition and poor nutrition condition of pregnant and lactating women. The level of stunting among children under five stands at 29.0% in Nilphamari and 15.9% in Rangpur, according to the Multiple Indicator Cluster Survey (MICS) 2019, although this improved significantly since 2013 when its proportion was 42.0%.

Objective and Expected Results of the JANO project

The overall objective of JANO is to “contribute to ending malnutrition of children under five years of age, together with addressing the nutritional needs of Pregnant and Lactating Women and adolescent girls.” In addition, the strategic objective is to “improve maternally and child nutrition in Nilphamari and Rangpur districts of Northwest Bangladesh.”

The objective of the Annual Survey

The purpose of the Fourth-Year Annual Survey was three fold:

- First, to ascertain progress against the project’s selected outputs and outcome indicators.
- To determine the extent to which outcomes and outputs of this project have been achieved disaggregated by age, sex, governance platforms where applicable, and major geographical areas.

- To present yearly evidence of changes (intended and unintended, positive or negative) associated with interventions and the project. Based on the findings, provide specific data-driven recommendations on what needs to be emphasized for the remaining period of the project to reach the objectives and ensure sustainability.

Specific objectives of the Annual Survey

- Determine fourth-year values of key output, outcome, and contextual indicators and disaggregate by age, sex, geographical, and gendered household type as appropriate in implementation areas. Investigate the reasons for over and under-achievements.
- Assess the achievements and results of the project and document evidence. Provide recommendations on what needs to be modified for the remaining project period to reach the objectives.
- Assess achievements of the program concerning the current targets, especially output, outcome, and purpose level project indicators, and compare with baseline.

Chapter 2

Methodology

The survey adopted quantitative and qualitative techniques to gather the necessary data and information to assess the status of log frame indicators. Quantitative methods were applied to gather data and information from pregnant and lactating women, adolescent girls/boys, and household heads/farmers on several nutrition-specific and sensitive issues, including healthcare, hygiene, and food consumption behavior following MDD methodology for women and children. In addition, the relevant household-level data on the status of production of high-value nutritious crops and the adoption of climate-smart technology were collected through the quantitative survey. On the other hand, qualitative methods were applied to assess the performance of CSGs and gather the views of beneficiaries (lactating women, pregnant women, adolescent boys/girls) on empowerment to demand and utilize nutrition-sensitive and specific services, along with the views of stakeholders on project achievements concerning goals. For the first time, the JANO project applied the Outcome Harvesting method to validate the survey findings and reasons behind the progress realized during the last reporting year.

The study team prepared the research design based on a mixed-method research approach's 'explanatory sequential design' (Creswell, 2012). An explanatory sequential mixed methods design consists of first collecting quantitative data and then collecting qualitative data to help explain or elaborate on the quantitative results. The detailed methodological approach can be found in Annex 2. In the following graphics, the tools used for this study have been visualized with the sample size numbers.

Fig: 2.1: Methodology

All the tools were developed with the consultation of key project staff and thus tested in the field before applying finally. The consultant team hired separate enumerators for both quantitative and qualitative surveys, and they were engaged under the technical supervision of the consultant team. It is noted that DMA used Survey CTO, an online data collection software for collecting real-time data using tablets. The study team revisited the field to collect qualitative information and further checked the calculation process for better alignment with the indicator definition. Here, all sorts of quality control measures were taken to ensure data quality. DMA also ensured ethical issues for this survey to satisfy the donor and CARE's mandate about data security, survey ethics, and responsible data management.

Chapter 3

Findings of the Study

3.1 Socio-demographic Profile of Sample Households

The study's findings were categorically discussed according to the performance indicators based on the four expected results of the project. The progress of the indicators against the targets set in the project log frame was analyzed and compared with the corresponding estimated values of baseline, mid-term review (MTR), and the targets for the year 2023. The socio-demographic profile of households outlined several attributes, including characteristics of household members and household heads, household composition, housing amenities, and landholdings.

3.1.1 Profile of Household Members

The characteristics of household members were analyzed in terms of their age, marital status, education, and occupation. These are shown in Annex 3-Table 1 and 2.

Age and Sex: The 629 study households from thirty rural clusters had a population of 3,072. The distribution of the household population according to sex indicates that 48.8% were male and 51.2% were female. About 45% of the household population was found to be 20 years or less, and only 4% were 60 years or above. The sex ratio was 105 females per 100 males, which is remarkably higher than the national figure (99.04 males per 100 females, BBS, 2022).

Marital status: The marital status of the household aged 15 years or older indicates that about 87% were married and only 7.4% were unmarried. It is to be noted that a significant proportion (5.5%) of the household population was divorced/separated/widow.

Education: The educational attainment of the household population aged seven years or older indicated that about one in ten have no formal education, and 9.3% have no functional education as they could sign only. About 36% of the household population had primary-level education (1-5 years of schooling), and they could hardly read or write. The findings indicate that more than two-fifths of the household population attained/completed secondary and higher secondary schooling, and only 4.4% of the HH population completed a graduate level of education.

Occupation: Among the household population aged 15 years or more, about 16% were engaged in farming (own land/sharecropping), about 9% were involved in service/business/professional jobs, about 6% were working as agriculture workers, about 11% were engaged as non-agricultural laborers, 4.34% were found to engage in small trading, about 6% were (students), and about 45% were engaged in household work. The household population engaged in household work were female members. The household work included vegetable cultivation, poultry rearing, weaving mattresses, stitching khatha, collecting firewood, feeding cattle, helping in agricultural work, etc. (Kazal et al., 2010), and cooking and child caring.

3.1.2 Profile of Household Heads and Household Composition

The profile of the household heads was analyzed according to age, education, marital status, earning status, and occupation. The profile is shown in Annex 3-Table 3.

Age and Marital Status: Around 69.2% of the household heads were between the age of 21 to 40 years. Only 7% of the household heads were 61 years or above. The marital status of the household heads indicates that all of them were married except 1.4% widowed.

Education, Earning Status, and Occupation: About 9% of the household heads had no education, and another 12.9% could only sign. About 38% of the household heads had only primary-level education, and 21.9% had secondary-level education. About 18.4% of the household heads attained post-secondary education. Almost all (99%) of the household heads were income earners. About 35% of the household heads were engaged in agricultural farming, 13.7% in agricultural works, 8.3% as non-agricultural laborers, and 9.1% as shopkeepers/vendors/hawkers. Only 16% of the household heads were doing service/business/professional jobs.

Household Composition: The average household sizes were 4.64 and 5.10 for Rangpur and Nilphamari, respectively. Compared with the previous two annual surveys, it was nearly the same (4.88 in 2022, 5.0 in 2020, 4.3 in 2019).

3.1.3 Housing Amenities

The housing amenities were analyzed in terms of housing conditions, cooking place and fuel, lighting, sources of water, and sanitation facilities of the surveyed households. These are given in Annex 3-Table 4.

The survey findings suggested that about 17% of the households used four or more rooms, about 24% used three rooms, about one-third used two rooms, and about 26% used a single room for living. In the surveyed households, about 11% lacked a separate room for the kitchen. About 54% of households used solid fuels for cooking, mainly wood/straw/leaf/husk; about 42% used wood, about 3% used gas, and 1.1% used cow dung. Access to an improved source of drinking water is almost universal in Bangladesh, and it was found that 99.5% of surveyed households use tube-well as their drinking water source. Regarding sources of lighting, about 99% of households were using electricity for lighting, and the rest were using alternative energy like solar energy. Nearly two-thirds of the households used hygienic latrines that included water-preventing capacity, and about 28% used pacca and pit latrines without water-preventing capacity. About 6% of the

3.1.4 Landholding Pattern

The landholding of a household was identified by considering both homestead and agricultural land that a household owns. The distribution of households according to landholding size and types of land is presented in Annex 3-Table 5. Among the surveyed households, each of them had some homestead land. Nearly 80 percent of households' homestead land size was within 10.0 decimals. The average size of homestead land was found to be 7.92 decimals. About 32% of the surveyed households had no cultivable land at all. About 72% of the households were functionally landless (<50 decimals of land). The proportion of functionally landless households was higher in the study households than the national figure (about 61% reported by the Household Expenditure Survey 2010). These findings indicate that people in the intervention areas, to some extent, have poorer average landholdings than the national average. Cultivable land's mean and median sizes were 39.77 decimals and 22 decimals, respectively. The huge difference between the mean and median size of agricultural land indicated the domination of big landowners in estimating the averages. It is worth that the average size of homestead land for vegetable cultivation was 1.35 decimals only.

3.2 Performance of Forums and their Participation in Nutrition Sensitive and Specific Services

The performance of different platforms/forums was evaluated based on meetings with UDCC, UNCC, and DNCC, FGDs with CG and SMCs, and Participatory Tools Facilitation with CSGs. The analysis was done in terms of functionality, budgeting, and coordination. The following sections present the findings from different qualitative surveys on different forums (DNCC/UNCC/UDCC, CG, CSG, SMC).

3.2.1 UDCC/UNCC/DNCC

ER-2: Indicator #9:

# of multi-sectoral plans at district, upazila, and union levels have allocated budget to support nutrition interventions in the two target districts

Baseline	MTR	Annual Survey 2022	Target 2023
0	80 plans 2 DNCCs 14 UNCCs 64 UDCCs	73 plans 2 DNCCs 7 UNCCs 64 UDCCs	73 plans (with allocated budget 64 unions, 7 upazilas, 2 districts in each year)

Outcome: Indicator #3

# of UNCC and UDCC spent budget effectively on nutrition-specific or nutrition-sensitive actions

Baseline	MTR	Annual Survey 2022	Target 2023
0	80 plans 2 DNCCs 14 UNCCs 64 UDCCs	71 plans 7 UNCC 64 UDCC	71 plans 7 UNCC 64 UDCC

The meetings/KIIs with UDCC, UNCC, and DNCC found that the number of Annual Nutrition Plans (ANP) was the same as the MTR, which included 73 plans comprising two DNCCs, seven UNCCs, and 64 UDCCs. This is significant, sustained progress considering the situation of these platforms during the baseline survey. The baseline found that none of the departments had developed a Nutrition Action Plan. The key informants highly appreciated the role of the JANO project in accelerating the functioning of their respective platforms through organizing workshops and motivating the departments to prepare the ANP and budget.

Planning and Budget Allocation on Nutrition Intervention

Planning starts from the CSG and CG, which is integrated into the UDCC action plan, and the UDCC plan is integrated into the UNCC nutrition action plan according to the priority of peoples' needs. The UNCC nutrition action plan is department based. Some sectors have fixed budget allocations made by the respective Ministries. However, decisions on the budget for the education, health, and environment sector are made through discussion during open budget sessions organized by Upazila Parishad. The health, agriculture, livestock, and fisheries sectors receive budget allocation directly from their respective ministries to implement the nutrition action plan. However, in this regard, the education sector receives a partial budget allocation from their respective ministries.

Yearly the Union Parishad holds two meetings with the public in each Ward (Ward Shova) before each UDCC annual planning. Issues that are needed the most for the community are given priority to be included in the UDCC annual plan. The budget is increased yearly based on demand from the community and the allocation by the Ministry. It appeared that the current year's budget is usually fixed by evaluating the income/expenditure of the previous year. The budget is allocated to seven sectors, which include: 1) Communication; 2) Health; 3) Water Supply; 4) Education; 5) Natural Resource Management; 6) Agriculture Marketing; 7) Sewage and Waste Management. Relevant activities are planned under each sector as per need and priority for the community within the allocated budget.

Expenditure on Nutrition-specific and Nutrition Sensitive actions

According to UNCCs, at least 30-50% of planned nutrition activities were implemented. The health sector implemented almost 80% of planned activities, followed by the education sector. Implementation of planned activities by other sectors (e.g., agriculture, livestock, fisheries, etc.) was comparatively less. The main reason for unsatisfactory progress was the lack of human resources. Activities that the UNCC could not implement were forwarded to the DNCC. The UNCC Member Secretary of Taraganj mentioned that the CCs and UDCCs in Taraganj prioritized disseminating iron and folic acid (IFE) for adolescent girls. Regarding nutrition-specific services, the UNCC Member Secretary of Domar mentioned that since July 2022, the UHC initiated ANC/PNC camps in their area to expand ANC/PNC services. ANC/PNC camps were held four times every month in two sites (CC and UP), through which they reached approximately 700 PLWs. These camps raised awareness and motivated people on ANC/PNC services, nutritious food consumption by PLW, and institutional delivery. After this initiative, institutional delivery has increased to 120-130 from 40-50 in Domar.

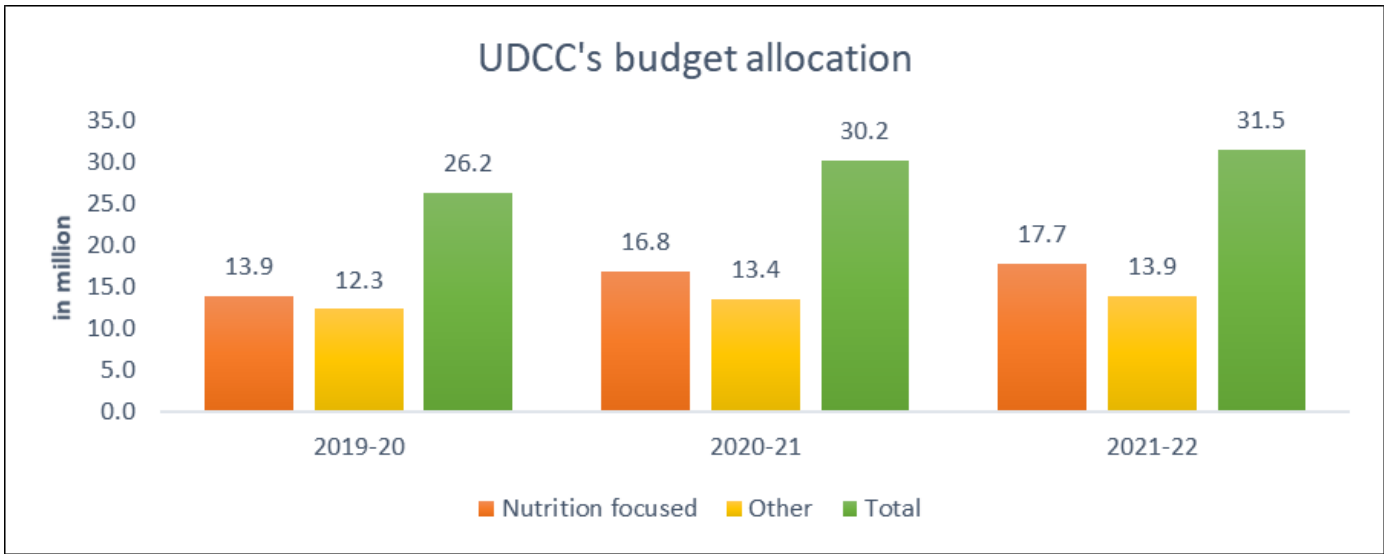
UDCC considers the safety net program [Maternity Allowance, VGD/VWB (Vulnerable women benefit), VGF, Widow Allowance, etc.] in their annual plan as part of the nutrition action plan. According to them, agriculture, livestock, fisheries, health, sanitation, and education are also related to nutrition. UDCC accepts activities proposed by CG/CSG on a priority basis and manages the budget as per the budget allocation from the Ministry. The activities accepted and implemented varied among the UDCCs. The approximate percentage of activities accepted and implemented in four UDCCs were - Kundapukur 30%, Gomnati 40%, Shahihbag 30-40%, Hariakuthi 50%, and Borabhita 60%. However, Kathalia UDCC could not estimate the

percentage of implemented activities; however, they mentioned that they had accepted 100% but could not implement all due to budget limitations. Budget from one sector cannot be used in another, except in an emergency like a natural disaster. Projects/activities that the UP could not implement due to budget limitations were forwarded to the Upazila Parishad.
The team observed the UDCC's Annual Nutrition Action Plan (FY 2021-2022) displayed in four UPs. According to the UDCC members, they implemented most of the activities from the Action Plan. However, as they reported, the following activities could not be implemented.

- Maternity allowance
- Distribution of micronutrient IFA tab and vitamins among adolescent girls and mothers
- Training on life skills and income generation for women and adolescent girls
- Inclusion of poor and malnourished PLWs in Food for Work safety-net support program
- Inclusion of poor and malnourished PLWs in other safety-net support programs to provide nutritious food (disability allowance).
- Vaccination camp for livestock and poultry (Only Hariarkuti UP Taraganj, Rangpur)

UDCC Budget Analysis

Figure 3. 1: Budget allocation for UDCC of three fiscal year 2019-2022



To understand budget allocation and yearly increase to support nutrition interventions, six targeted UDCCs' (Borobhita UP, Hariakuthi UP, Kathalia UP, Kundopukur UP, Shahidbag UP, and Gomnati UP) budgets for three consecutive fiscal years were analyzed. Figure 3.1 represents the budget allocation status of UDCC. The average annual budget of UDCC for the fiscal year 2021-2022 was BDT 31.5 million. It was 1.5% higher than the previous fiscal year's budget. Similarly, the average annual budget in the fiscal year 2020-2021 was BDT 30.2 million, a 4% increase from the previous fiscal year. The trend indicates a positive change in annual budget allocation. More than 50% of the budget was allocated for nutrition-sensitive and nutrition-specific services.

Figure 3. 2: Budget expenditure status of UDCC for three fiscal years 2017-2019

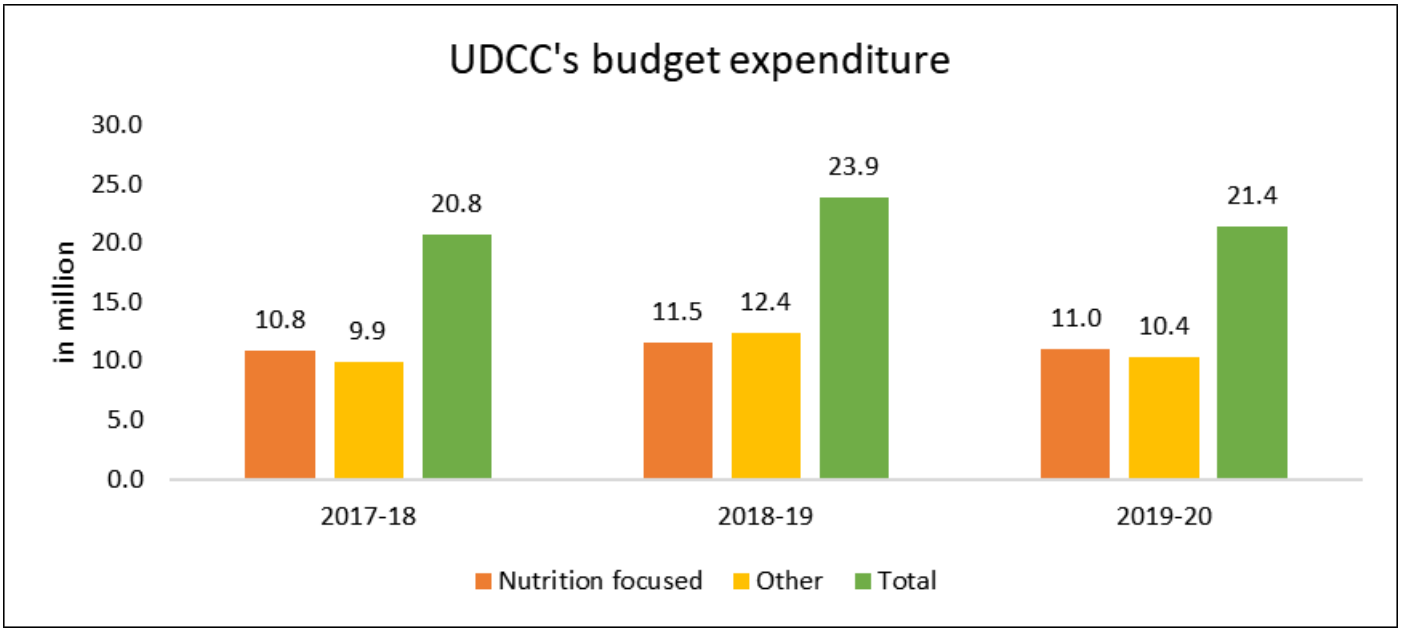


Figure 3.2 presents the budget expenditure record for the three fiscal years of 2017-18 to 2019-20. The expenditure records for fiscal years 2020-21 and 2021-22 were unavailable to UDCC. So, comparing expenditure against the allocation of the same fiscal year except 2019-20 is impossible, but it indicates expenditure from 2018 to 2020. The expenditure against allocation for the fiscal year 2019-20 showed 82% of the budget was spent. Considering the Covid-19 pandemic, it can be concluded the budget was spent effectively.

The meeting/KII with the UDCC and UNCC found that 71 forums (7 UNCC and 64 UDCC) have spent their budget on nutrition-specific or nutrition-sensitive actions. Furthermore, regarding changes between last year and the current year in planning and budgeting, each key informant mentioned that planned activities and the budgeted amount has increased over the years. This means that the amount of budget spent by 71 forums (7 UNCC and 64 UDCC) on nutrition-specific and sensitive actions increased from the MTR.

Progress monitoring:

According to the key informants, they implemented their nutrition activities through coordination meetings with different departments. The UDCC and UNCC followed the prescribed format of the government to monitor the progress of ANP. During the annual nutrition planning workshop at the DNCC level, each departmental head presented their progress and took decisions through discussion.

At the UNCC level, the progress of implementation of the nutrition action plan is discussed in the bi-monthly UNCC meeting, where department-wise UNCC members present their respective department's implementation status of the nutrition action plan.

Challenges:

- The main challenge faced by the UNCCs is that the budget is done according to an allocation by the ministry but not according to the requirement of the UNCC.
- Another challenge is the lack of sufficient human resources to implement/monitor the nutrition action plan because the JANO project provided supporting hands.
- Difficult to convince people of the need for nutrition due to a lack of awareness.

- The Education Officers make school visits. One of their monitoring activities is checking the school register on the distribution of IFA tablets among adolescent girls to monitor the implementation progress.
- All the UNCC members reported that there is only a small budget allocation from the government for the observation of National Nutrition Week. But there is no separate allo cation as logistics support for holding UNCC meetings. Currently, the bi-monthly UNCC meetings are held with the support of the JANO project. Therefore, in the absence of the JANO project, holding bi-monthly meetings regularly will be a challenge as it will be difficult to ensure the participation of the UNCC members due to a lack of sup port to meet their transportation costs.
- IFA tablet distribution cannot fulfill the need of all adolescent girls due to inadequate supply compared to need.
- Listing eligible people for safety-net support was a challenge faced by all UPs.
- Lack of adequate human resources to carry out administrative activities. As a result, the UP secretary was required to manage all administrative activities.
- Community people are reluctant to provide land for community-based projects. Even if they do, they solely claim ownership of that project after it is completed.

"We initiated a project on community-based Tube-Well installation. One of the community members provided the land. After a few days of the tube-well installation, the man put a fence around the tube-well area and claimed sole ownership. We solved the problem, but it was difficult."

-UP Secretary of Hariakuti UP.

Regarding sustainability, the respondents said that the UDCC, UNCC, and DNCC as government platforms would continue to function even after JANO. Still, they felt the momentum of activities might be slow. They opined that UDCC is the main executing authority of any program at the grassroots level; therefore, the inclusion of UDCC in the NPAN2 will give them a sense of ownership. All the KII respondents claimed that the government bodies have a strong feedback system, but it is not practiced properly. Details are attached in Annex 3-Table 5.

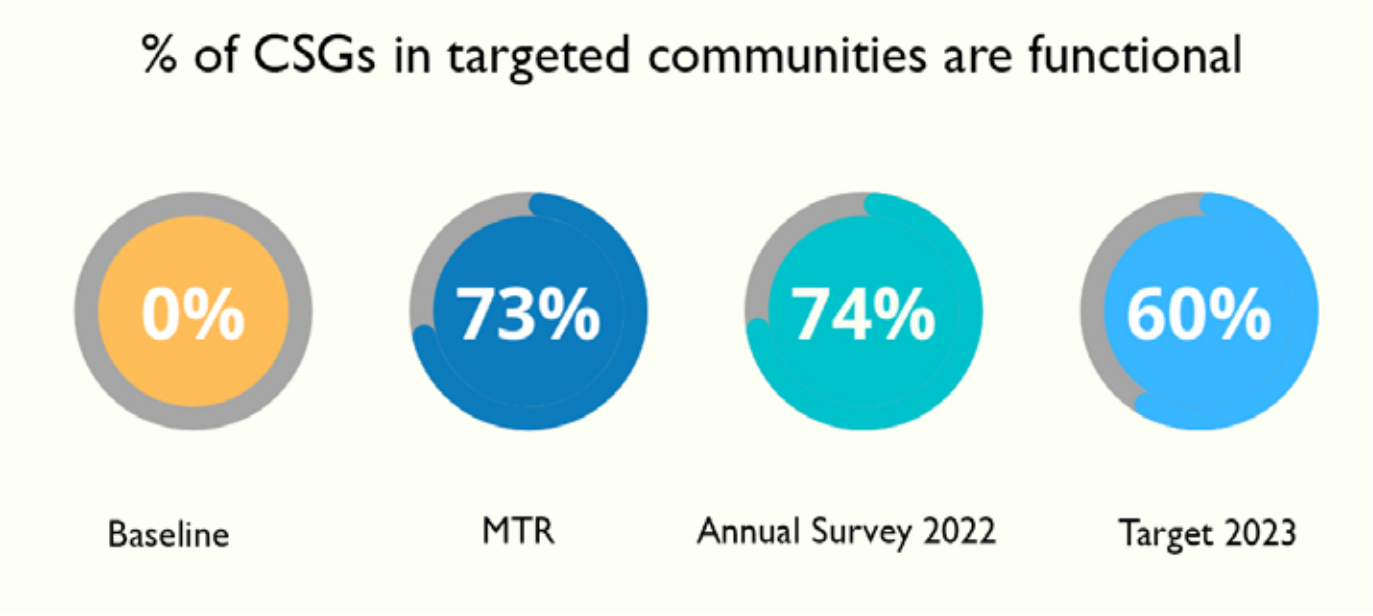
3.2.2 Community Group

FGDs were conducted with five Community Groups (CG). CGs are community-level platforms formed by the Union Parishad and existed before the JANO project intervention. The CG monitors and governs the Community Clinic (CC) related to nutrition-specific services. Each CG consists of 17 members who are community people and is led by the elected Union Parishad member. In addition, each CG has two adolescent members (a girl and a boy). One of the activities of the JANO project was supporting the development of 14 model CCs and the capacity development of the CGs associated with those 14 model CCs.

According to the FGDs with CGs and KIIs with stakeholders, the CG was responsible for organizing CC annual planning and holding weekly and monthly general meetings and decision-making. JANO played a facilitating role in this regard. According to all the CGs, the UP allocated and provided the budget for CC's various activities, such as CC's physical structure, check-up beds, medicine supply, agricultural inputs, WASH facilities, campaigns for livestock vaccination, child marriage prevention, etc. Regarding coordination with UDCC, it was found that, according to government protocol, one member from each CG was invited to UDCC meetings to present the CC budget. In this meeting, community members of the UDCC were also present. These people also included members of either CG or CSG. The main challenge faced by CGs regarding their respective CC management was the availability of medicines because allocated medicines were inadequate compared to the population in the catchment area.

3.2.2 Community Group

ER-1: Indicator #7:



Three CSGs are functioning under each of the Community Clinics (CC). One of the JANO project's activities was activating the CSGs. A total of 62 Community Support Groups (CSGs) were evaluated through Participatory Tools Facilitation. Though it was planned to evaluate 64 CSGs, two could not be done due to unavoidable circumstances. Each CSG has 17 members (male and female) who are community people. The average number of females is 10.9±2 and males 6.1±2. The average participation in CSG sessions was 6.6±1.6 for females and 3.3±1.6 for males. This is good progress in women's participation in CSGs compared to the baseline, where only 1 (0.2%) woman member was there.

The primary objective of the CSG was to replenish the nutritional deficiencies of pregnant and lactating mothers, <5-year children, and adolescents. The CSG members work by sharing their responsibilities according to the action plan. Leadership was given to the person who could give time and could influence people. The leadership status was removed if any leader was absent in three consecutive meetings, and a new leader was selected again in consultation with the members. The CSGs held bi-monthly meetings. Group formation occurred every two years.

The performance of CSGs was evaluated based on 11 issues which included:
i) Understanding of CSG group objectives; ii) Group operational nutrition and gender-sensitive plan; iii) Team cohesion and leadership; iv) Learning sharing space; v) Record keeping; vi) Access to and use of services/external relationship; vii) Regular interaction with community; viii) Stopping harmful social phenomena; ix) CSG encouragement of community to provide suggestions for better service delivery/modification of CC and up service; x) Gender equity; and xi) Support Community People for Resource Mobilization.

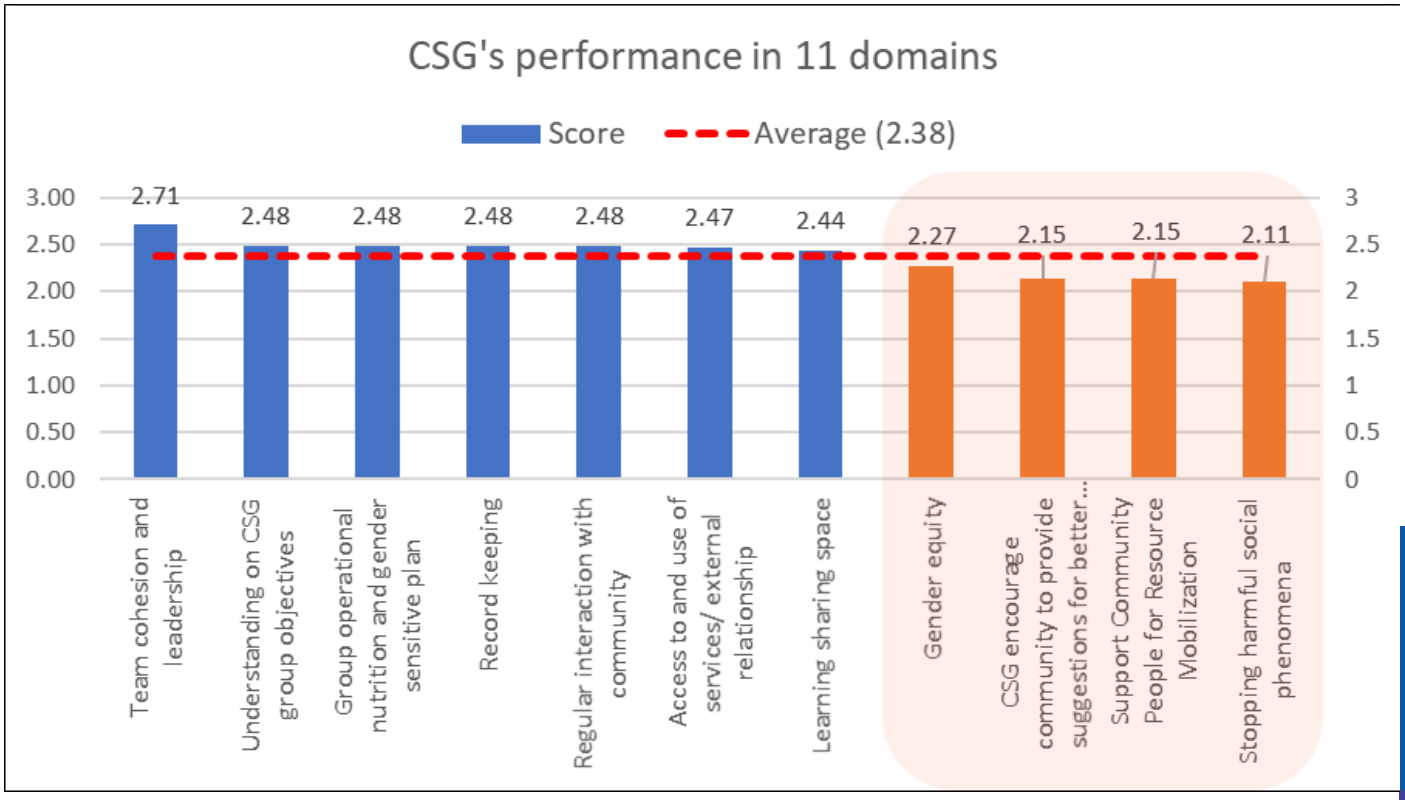
To evaluate the overall performance of CSGs, a 0-3 scale score has been assigned to each issue. Aggregating the scores of 11 issues, a final score was computed for each of the CSGs. Based on the total scores, CSGs were categorized into four groups. The following table shows the performance of CSG based on their achieved scores. The findings indicate that the performance of 74.2% of CSGs was excellent, and 24.2% CSGs were fair. CSGs performance was better in Nilphamari, where 80.0% scored excellent, compared to Rangpur, which was 68.8%.

Table 3.1: Performance of CSGs

Category	Rangpur	Nilphamari	Total
Moderate (Scores 16-18)	3.1%	0.0%	1.6%
Fair (Scores 19-24)	28.1%	20.0%	24.2%
Excellent (Scores 25-33)	68.8%	80.0%	74.2%
Total	32	30	62

In fig-3.3, CSGs' performance was depicted where out of 11 performance areas, four were found

Figure 3. 3: CSGs Performance in eleven areas



In fig-3.3, CSGs' performance was depicted where out of 11 performance areas, four were found (marked orange) as below average. Those are gender equity, CSGs' encouragement of the community, support to the community for resource mobilization, and stopping harmful social phenomena. Overall, it can be said that there is still room for improvement to functionalize the CSG, where the connection of communities could be strengthened further to allow women's and girls' issues to be adhered to and social norms to be upheld to ensure that Nutrition planning is gender transformative.

According to the CSG members, the CSGs' main responsibility was disseminating health and nutrition information to community people (source: participatory tools facilitation). When they found that the services of CC were not satisfactory, then they made a complaint in the Complain Box. In addition, they advocated and arranged for various social safety net support from the UP for eligible people. CSGs also initiated resource mobilization, such as requesting the service recipients to contribute as much money as possible and collecting funds during harvesting time for CC maintenance. They also applied for funds to the UP Chairman for CC repair/boundary wall construction purposes. Generally, the CSGs used the money contributed by the service recipients to pay CC's electricity bill and clean the CC. Details are attached in Annex 4.

3.2.4 School Management Committees

ER-1: Indicator #8:

# of School Management Committees set agenda for nutrition-specific and sensitive services for adolescents in the SMC meeting

Baseline	MTR	Annual Survey 2022	Target 2023
7 SMCs	330 SMCs	330 SMCs have set agenda	330 SMCs

FGD was conducted with 30 School Management Committees (SMCs) of high schools. Most SMCs (23) were Ad hoc Committees formed during the COVID–19 pandemic. In Ad hoc committees, each SMCs were formed with four members - the President (UNO/UP Chairman/ Elite people), the Member Secretary (Head Teacher), and two Members (Teacher and Guardian representatives). SMCs held bi-monthly meetings, but meetings were sometimes more frequent if necessary. A total of 27 SMCs reported that they held the last meeting one month back. It was also observed that 25 SMCs prepared the Annual Budget Plan properly.

All the sample SMCs were functioning well in terms of their regular responsibilities along with coordinated activities with JANO. Currently, they work with JANO on health, nutrition, hygiene, gender equity, and child marriage issues. Referring to the “Adolescent Corner” initiated by JANO, they said that it helped enhance schools’ nutrition-sensitive programs through educational games and audio-visual materials. In addition, teachers also used Gender Equity Movement in Schools (GEMS) curriculum to educate students. Schools maintained gender equity by ensuring the equal participation of girls and boys in vegetable gardening, cultural/sports programs, and school cleaning activities. In addition, the schools arranged sanitary pads for adolescent girls to ensure attendance during their menstrual period. Regarding nutrition sensitivity, students were encouraged on vegetable gardening and poultry rearing at home and advised to eat nutritious foods such as milk, eggs, fish, meat, and vegetables, as well as iron/folic acid and de-worming medicines. The Head Teacher and four Assistant teachers from each school received training on GEMS.

3.3 Feedback Mechanisms

ER-2: Indicator#12:

# of platforms in the target districts which allow effective feedback mechanisms for service receivers

Baseline	MTR	Annual Survey 2022	Target 2023
0	80	272	272
	(Unions 64, Upazila 14, District 2, and CC 208)	(Union Parishad=64 and CC=208)	(Union Parishad=64 and CC=208)

This section intends to explore effective feedback mechanisms of the platforms, viz., Union Parishad and CC. The indicators were measured using data and information from different sources: Participatory Tools Facilitation, HH survey, KII, and document review. The analysis revealed that all 272 platforms (64 Unions and 208 CCs) in the intervention districts allowed effective feedback mechanisms for service receivers. During FGDs, CGs mentioned a “Complaint Box” in the CC, which was reviewed every two months. The CGs used to collect written complaints and take action as per the gravity of the complaint in CG and UDCC meetings (Source: JANO project document). CGs also mentioned that, instead of making written complaints, some people preferred to complain to either the UP Chairman or the CHCP verbally. The respondents of the HH survey were also asked whether they had any idea where feedback and complaints regarding services could be submitted. Two-thirds of the respondents said they had an idea about submitting complaints or feedback. The places of submission of complaints were CSG, CC/CG, and UP/UDCC, as mentioned by 36.2%, 27.2%, and 20.3% of respondents, respectively (Annex 3-Table 6).

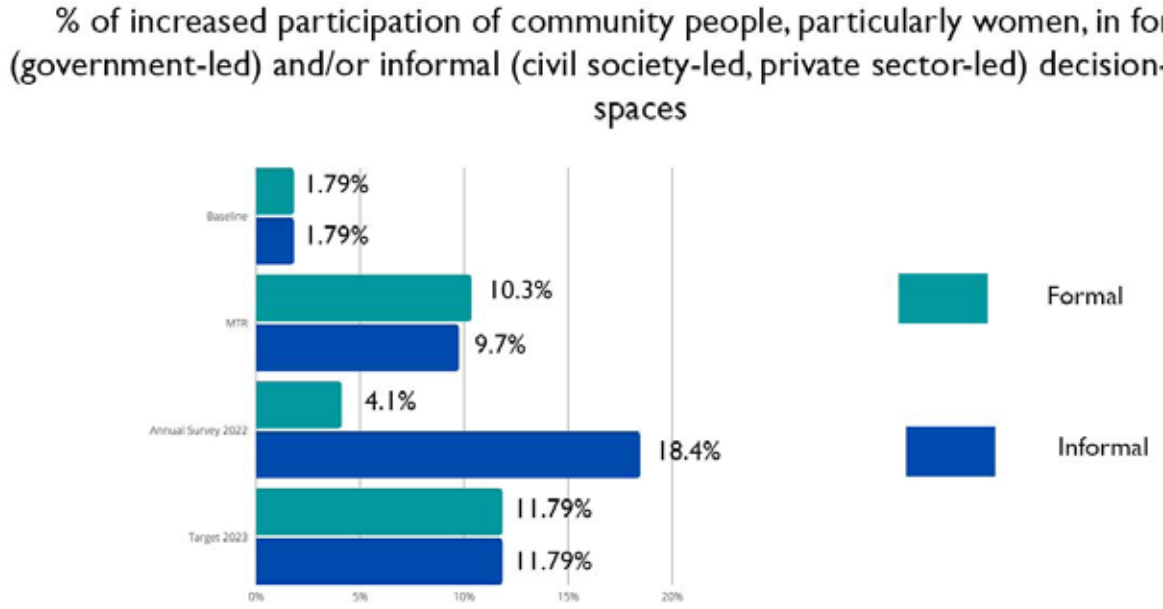
Referring to the **“Suggestion Box”** available in the UP, all UDCCs mentioned using this feedback mechanism. They opened this box monthly or during meetings and addressed the relevant suggestions. However, all the UDCCs claimed that the public’s utilization of this suggestion box was considerably low. The main reason for less use of the “suggestion box,” as perceived by most of the key Informants,s was that after dropping the written complaint or suggestion, the person could not wait for a month if it was an urgent issue that required solutions. Therefore, they preferred to take up the issue personally with the Chairman or Member for immediate solutions related to domestic violence, divorce, separation, and land issues. Another reason perceived by the key informants was that the public might not feel comfortable making complaints against the UP Chairman and Members. The most common complaints/suggestions were requests for VGD cards.

The CGs are aware of how the complaint box was used. There was a complaint box in the Shutipara CC, where some people made wrote complaints. However, this number was also very few. This box was opened in CG meetings, and complaints were documented in the logbook. The most common complaint was the lack of medicine which could not be resolved. However, few complaints were addressed/resolved, such as the repair of the CC toilet when the complaint was made.

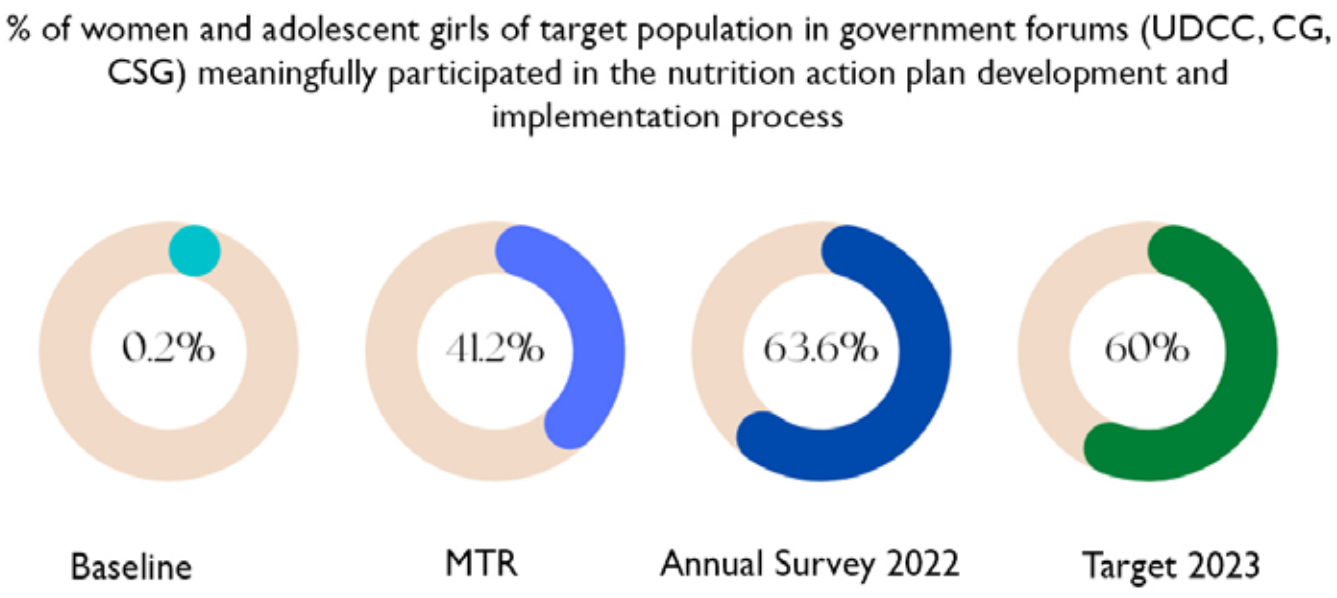
CSG3-Jamuna, Uttar Purbo Ambari CC (Model CC) mentioned that their CC required the construction of a boundary wall. But their CC did not have enough land. So, the CSG and CG, with the permission of the CC landowner, built the wall in the backyard and right side of the CC. For this purpose, funds were mobilized from the UP, CG, and CSG members. However, the CSG in Kundapukur reported no complaint box in the Kudapukur UP. Community people took up the complaint directly to the Chairman. According to the CSG members, many issues in the FWC need to be complained about, but they are unaware of where these complaints can be made.

3.4 Status of Increased Participation of Women/Adolescents in Forum and Meaningful Participation in Nutrition Action Plan

Outcome: Indicator #4:



ER-2: Indicator #11:

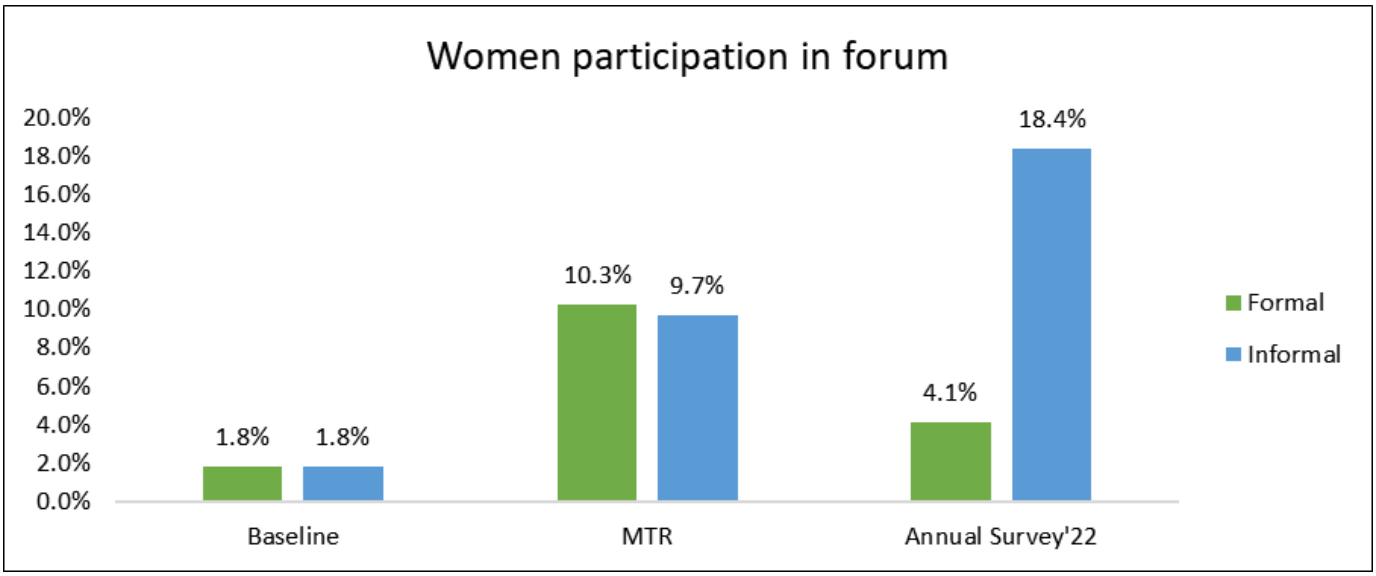


This section intends to explore the status of increased participation of community people, particularly women, in formal (CSG, CG, UDCC, SMC) and informal forums (Club, VSLA, Courtyard Group, Youth Group, etc.) and meaningful participation of women and adolescents in the nutrition action plan development and implementation process.

Women's participation in formal (government-led) and informal (civil society-led, private sector-led) decision-making spaces/platforms were measured using the data and information from different sources, viz. Participatory Tools Facilitation, HH survey, KII, and document review. The household survey respondents were asked about their knowledge regarding the budget for nutrition in CG, UDCC, UNCC, and DNCC. Only about 19% of the respondents mentioned that they had an idea about the budget for nutrition in CG, UDCC, UNCC, and DNCC. The respondents were further asked whether any member of the households had participated in the meeting of CG and UDCC, where the budget agenda was discussed. Only 7.6% of households reported that any member of their households had participated in the budget session of UDCC. Due to the low percentage of participation in the household survey, the study team experts and project staff suggested estimating this indicator from Participatory Tools Facilitation and documents review as only platform members could participate in the decision-making process. Hence, the study measured the participation in formal forums considering their participation in Participatory Tools Facilitation (62 with CSGs) and the last six meetings of UDCC and CG (reviewed the last 6 minutes of CG and UDCC meetings).

The percentage of female participation in informal forums was collected through the household survey data considering their participation in VSLA, Women's Group Local Clubs, etc. About 4.1% and 18.4% of community people, particularly women, engaged in decision-making spaces in formal and informal platforms (Figure 3.4). Women's participation from households in informal decision-making spaces nearly doubled, but in formal decision-making spaces, it declined from 10.3% to 4.1% compared to MTR. The detailed information is presented in Annex 3-Table 7.

Figure 3. 4: % of increased participation of community people, particularly women, in formal (government-led) and/ or informal (civil society-led, private sector-led) decision-making spaces

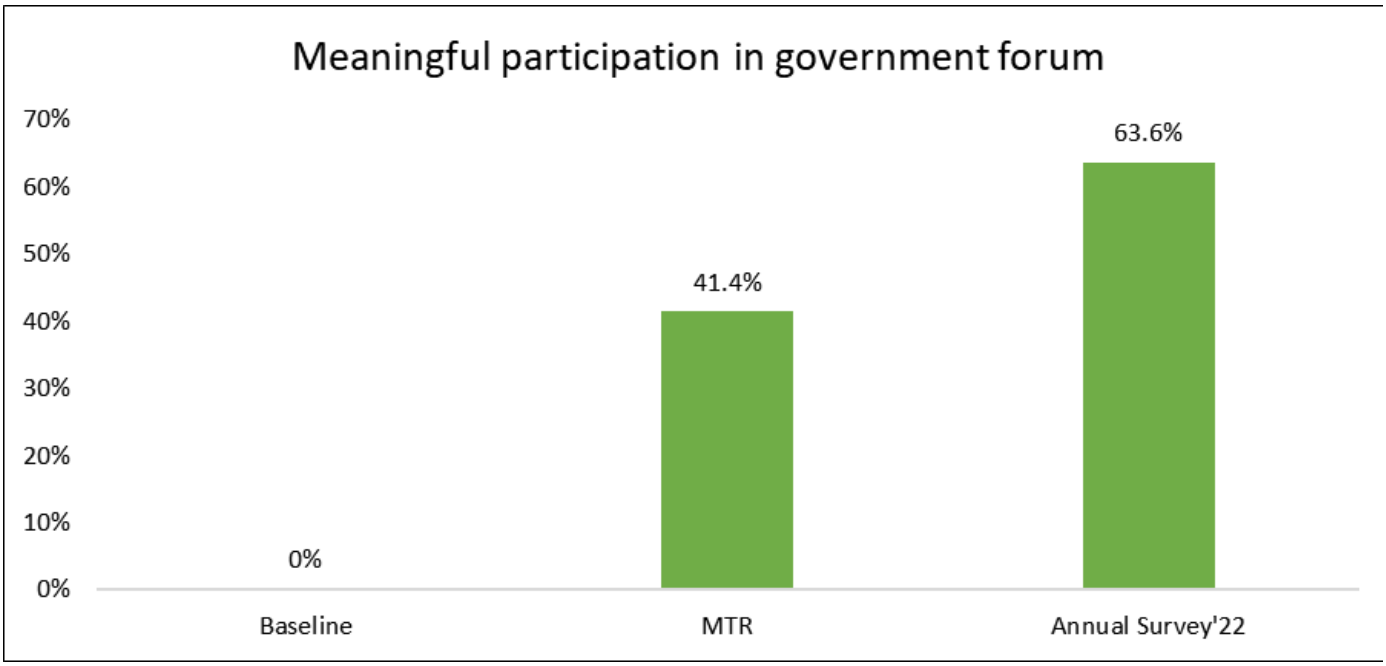


People who could exert influence politically, financially, and socially usually participate in these forums. The study explored the participation of women members in UNCC and UDCC, which were mostly political selection. The UNCC comprised 30 to 39 members; 3-7 are women (e.g., Upazila Vice Chairman, CSG members, Teachers from Secondary Schools, and women officers as available in different government departments). The UDCC comprised 39 members, of which 7-11 were women (e.g., 3 UP elected female members, community representative/housewife, FWA, primary education officer, NGO representative). It was found that almost all women members participate in UNCC and UDCC bi-monthly meetings (The last three meeting resolutions were checked and verified).

According to the UDCC, 5% of the voters must be present in Ward Shova, of which 30% are required to be women. Therefore, all categories of women were invited (including PLW, adolescent girls, disabled persons, destitute women, old-aged women, working women, etc., CG and CSG women members) to participate in Ward Shova. Findings also revealed that in the CG and CSG, about 35% to 47% were women members who actively participated in meetings and annual planning. However, only the CG and CSG of the Model CC were aware of the UDCC.

Regarding meaningful participation of women and adolescents in the nutrition action plan development and implementation process, the percentage was calculated by reviewing the last six meeting resolutions of UDCC, CG, and findings from participatory tools facilitation of CSG. The survey results showed that among the women members, about 64% were present in the meetings. Later, the participation was validated during the consultation with CSG, CG, and UDCC members. As a result, almost all the women said that they regularly participated in the meetings, placed their agendas, and included the agenda in the annual action plan. This indicates the meaningful participation of women in the nutrition action plan development and implementation process (Figure 3.5).

Figure 3. 5: % of women and adolescent girls of the target population in government forums (UDCC, CG, CSG) meaningfully participated in the nutrition action plan development and implementation process



The above findings indicate that women and girls' leadership at CSG and UDCC increased considerably as most participated in the meetings/forums/platforms.

In response to the forums and departments where the household members sought/received services during the last 12 months, over half received services from CSG, nearly 40% from CG, and another 39% from UDCC. In addition, a few of them were found to receive services from the health and family planning office, upazila-level offices of agriculture, social welfare, child affairs, etc. As a result, about 76% of the respondents were satisfied with the services.

A qualitative study also revealed that those who were members of different forums had the opportunity to raise agendas or provide opinions when they participated in the forum meetings. For example, CG members during FGD said, "Women CG members during CC planning meeting generally raised issues like normal delivery at the CC and transportation to take mothers to the hospital for child delivery." This reflects that women raised their demands in formal forums like CG. Besides, PLW regularly participated in CSG meetings and raised their issues.

In each CG and CSG, there were two adolescent (1 boy and one girl) members. However, in many cases, they could not participate in the meeting as their school time coincides with the meeting time. Nevertheless, some had the opportunity to participate in meetings and raise issues related to SRHR. For example, among the FGD participants, 16 girls and four boys were members of the School Cabinet. The School Cabinet was responsible for supervising the school's vegetable garden, keeping the school clean, preventing noise in the class, ensuring equal food distribution among the boys and girls, discussing safe drinking water and using sanitary toilets, and maintaining GEMS issues.

Regarding the meaningful participation of women, almost all the Key informants mentioned that women raised their voices in meetings and put forward their demands. Their mobility improved, and their presence in the meetings increased.

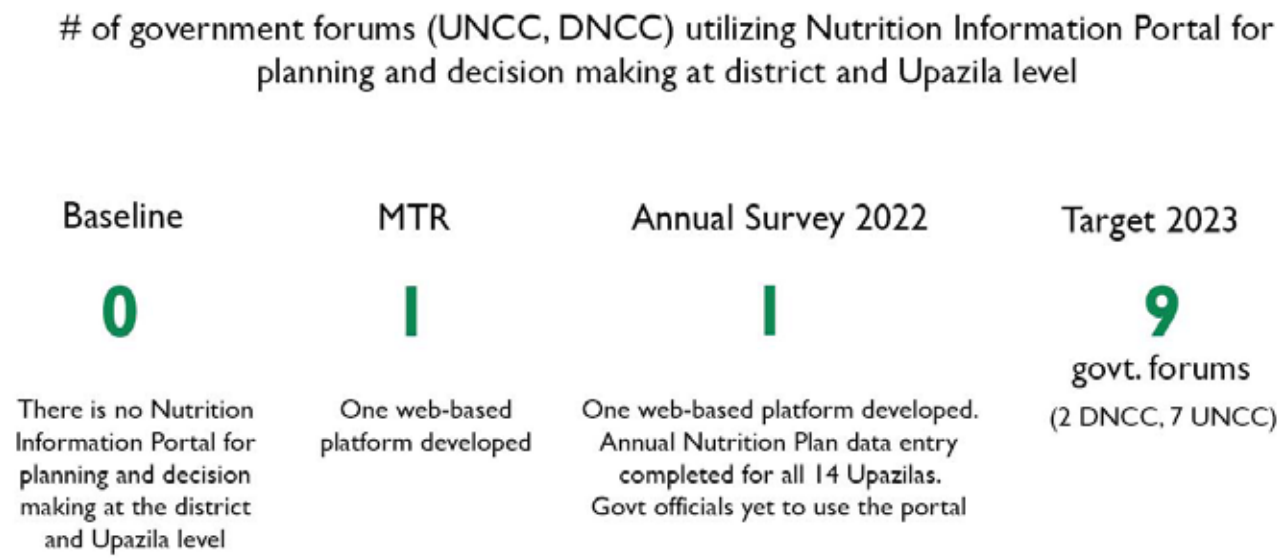
The UNCC president of Kaunia mentioned that women who wanted to be self-sufficient usually demanded skill development training for income generation, e.g., training on sewing machines. According to the UDCCs, CGs and CSGs discussed and identified issues in the CC that needed to be addressed to make community people CC-oriented. If these were identified before the Ward Shova, then CG/CSG members raised these issues in the Ward Shova. If they identified urgent issues related to CC after the Ward Shova, they placed their agenda in the UDCC meeting. Women got the opportunity to raise their demands in the Ward Shova, and in many cases, these demands were taken into consideration on a priority basis by the UP. In general, the most common need raised by women was safety net benefits (Maternity Allowance, VGD/VWB, VGF, Widow Allowance, etc., old age allowance, disability allowance, etc.), followed by the availability of medicines in the CC. Other needs raised by women included water supply/ installation of tube well, sanitation, and skill development (commonly focused on computer training and sewing machine).

The UP Secretary of the Gomnati Union Parishad mentioned that issues raised by women in Ward Shova were taken into consideration, and the UP Chairman invited women to the UDCC meeting to put her agenda and raise their demands in the meetings. If their demand was accepted, it was documented in the meeting resolution. He said, "Many farmers face pest infestation in their crops, but no one raises this issue in Ward Shova to get solutions. However, in the last Ward Shova, one female farmer raised the issue of pest infestation in her crops and sought solutions. The UP Chairman invited that woman to the UDCC meeting for solutions. The Chairman introduced the women to the DAE, who was present in that meeting. After the female farmer discussed her problem in the meeting, the DAE gave her solutions of what measures she can take to control pest infestation."

The UP Secretary of Barabhita Union Parishad, Kishoreganj, mentioned that in a Ward Shova, one of the female members demanded a tube well for her community. When the Chairman could not comply with her need due to budget limitations, the women debated with the Chairman why a community-based tube well was not given. So, when the next allocation came, the Chairman arranged to install a tube well in that woman's community.

3.5 Status of use of Nutrition Information Portal

ER-4: Indicator #16:

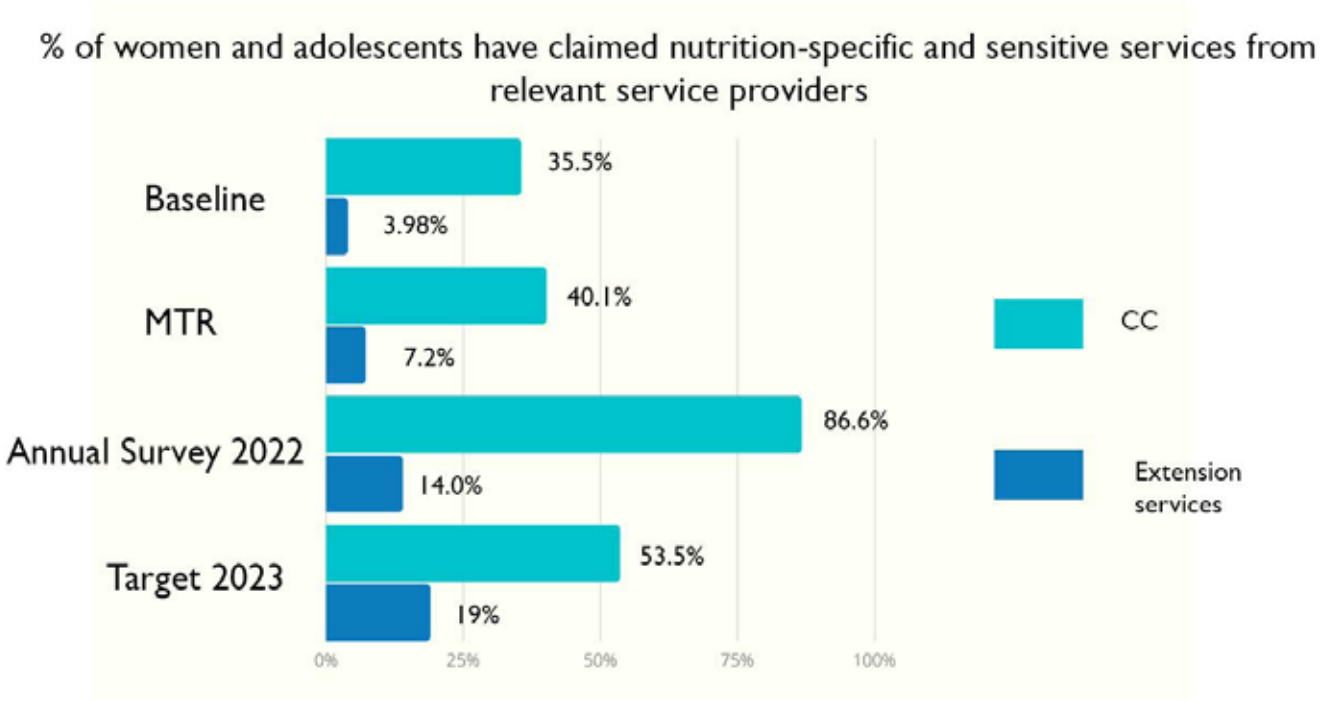


The number of government forums (UNCC, DNCC) utilizing the Nutrition Information Portal for planning and decision-making at district and upazila levels was evaluated by document review. One web-based platform was developed, and Annual Nutrition Plan data entry was completed for all 14 Upazilas. However, government officials were yet to use the portal (the target for 2023 is nine govt. forums, i.e., 2 DNCC and 7 UNCC) as all the data entry was not completed, and the concerned officials were not trained. During MTR, only the web-based portal was developed. The JANO project is running behind in achieving the target of this indicator and therefore needs extra effort to achieve this.

None of the UNCCs mentioned utilizing the Nutrition Information Portal. However, the UNCC Member Secretary (UN&FPO) mentioned that they used the DGHS web portal Dashboard.

3.6 Knowledge and Practices of Nutrition Sensitive and Specific Services

ER-1: Indicator #6:



PLWs were asked to report their knowledge of nutrition-specific and sensitive services. Nearly all reported that they had an idea about nutrition-specific services, while about 82% had an idea about nutrition-sensitive services (Annex-12.3.2). The findings indicate that about 84.4% of women, 17.6% of men, 59.6% of children, and 4.9% of adolescents received nutrition-specific services (treatment, ANC/PNC, vaccination, Vitamin-A, Zink, sanitation, etc.) during the last three months. And 86.6% of PLW were found to receive services from CC. About 21.1% of women, 17.3% of men, 10.0% of children, and 7.6% of adolescents have received nutrition-sensitive services from the relevant departments (agriculture, food, education, women's affairs, safety nets). The average number of nutrition-specific and sensitive services was 10.66 and 6.24, respectively, during the last 12 months. The analysis demonstrated that the service recipients for nutrition sensitive services varied nutrition-specific services (Annex-12.3.9). About 87% of women received nutrition-specific services from CC, and 14% received them from the extension department (DAE, DLS, DoF), which was higher than MTR and Baseline. Detailed information is available in Annex 3-Table 8.

A pregnant woman from Dakhkhin Kursha Mastar Para, Kursha, Taraganj, Rangpur quoted, **"I did not receive any kind of training. But I have learnt many things about nutrition and child marriage from theatre shows held by JANO project in our village."**

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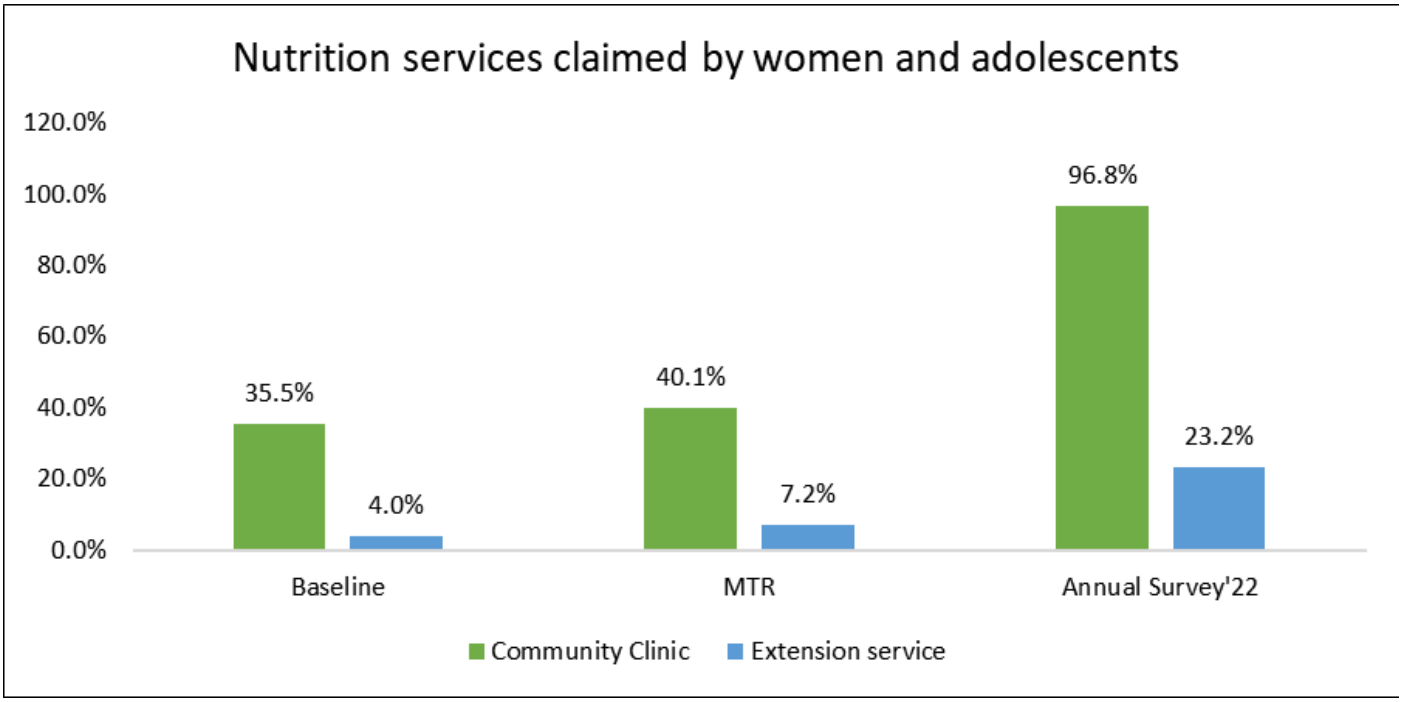
Figure 3. 6: Nutrition-specific and sensitive services claimed by women and adolescents (in %)



The main sources of nutrition-specific services were identified as health centers of the communities (CC/EPI Centre/Satellite Clinic/UH&FWC/RD etc.). On the other hand, the sources of nutrition-sensitive services were identified as UP, the Department of Agriculture, the Department of education, etc. KII with UNCC Member (Secondary Education Officer, Nilphamari Sadar Upazila) confirmed that adolescent girls had access to nutrition-specific services in school. He mentioned that Iron and Folic Acid (IFA Tab) was distributed among adolescent girls in secondary schools from March 2022. IFA tablet was given to each adolescent girl student once a week. The school sent the request to the CS office for a supply of IFA tablets for three months. In the last supply of IFA tablets, the request was made for 400,000 (4 lakhs), but they received 75,000, which was only 25% of the requirement. They received this supply on 6 Nov. 2022. The expiry date of this lot was in May 2023. He also mentioned that the IFA tablet supplied by CS before the last supply could not be used later than October 2022 because the expiry date was October 2022.

According to their work plan, the CSG was responsible for identifying PLWs in the area and motivating them to take ANC/PNC services from the CC. Accordingly, CSG identified three pregnant and three lactating women in their respective areas and motivated them to take ANC/PNC services from the CC. In addition, they encouraged these PLWs to grow vegetables on their homestead land to fulfill their and their respective family's nutritional needs and send the farmers of these households to the agriculture office for seeds and other agricultural inputs. Although, according to them, people were less likely to seek PNC services than ANC services. Two women members reported sending six pregnant women to the FWC to take ANC service as the CC was far from their area. In August 2022, the CSG female members sent 28 people, including PLW, adolescents, and other community members, to take health services as per need by the FWC and UHC. The food habits changed due to awareness-raising and counseling. However, poor PLWs could not change their food habits due to poverty.

Qualitative findings (IDIs and FGDs with PLW and FGDs with adolescent boys and girls) also revealed that the respondents received nutrition-specific and sensitive services. Women generally received health and nutrition education from the community clinic, courtyard meeting, health workers, and JANO project field workers. On the other hand, adolescent boys and girls were

educated in school by teachers and through the GEMS corner. To meet their nutritional needs, the adolescents were trained in vegetable gardening at school and at home. At school, they were actively involved in vegetable gardening. They applied the same at home gardening.

During FGDs and IDIs, it was found that women and adolescents had a clear concept of nutritional requirements during various stages of life. PLWs mentioned that every one required nutritious food to remain healthy, starting from childhood up to old age, but mothers needed additional nutritious food during pregnancy and the lactating period to keep themselves and their babies healthy; otherwise, the child would suffer from malnutrition. They mentioned that pregnant and lactating mothers should have at least one green leafy vegetable, milk, egg, fish, meat, and seasonal fruits in their daily diet. The women usually received this information during courtyard meetings and at the community clinic, and from the health workers.

Adolescent boys and girls learned that essential nutrients, such as carbohydrates, protein, fat, vitamins, and minerals, should remain in the food. According to them, during the adolescent period, many physical changes occur, so they should have nutritious food such as eggs, milk, fish, meat, pulses, and vegetables. To them, food was useful to remain healthy. Therefore, they should take these foods regularly to be protected from illness and maintain good mental and physical health. When asked what they ate the previous day, it was found that some had vegetables and meat, some had fish, and some had eggs, vegetables, and pulses (Dal).

Finally, it can be concluded from the findings of the fourth-year annual survey that women and adolescents claimed that they received more nutrition-specific (86.6% from CC) and sensitive services (14.0% from extension) from relevant service providers as compared to the mid-term annual survey (CC 40.1% and extension 7.2%). However, the percentage of adolescents who claimed nutrition-specific and sensitive services were 4.9% and 7.6%, respectively. Regarding nutrition-specific services from CC, the percentage in the Rangpur district was slightly higher (89.3%) than in the Nilphamari district (83.7%). On the other hand, in the case of nutrition sensitive services from extension services, the findings seem reversed in the intervention districts, i.e., 16.7% in Nilphamari vs. 10.9% in Rangpur district. The seeking of higher extension services in the Nilphamari district could be because this district is a more agriculture-prone area compared to the Rangpur district.

3.6.1 Findings from Outcome Harvesting

Substantiating outcomes from workshops: The result from group work revealed that participants mainly focused on indicators that did not perform well, including the low percentage of adolescents seeking nutrition-specific and sensitive services and the low percentage of women/ adolescents participating in government forums. Participants identified several reasons for the poor performance of nutrition-specific and sensitive services during group work. The following observations were made:

- The level of nutrition-specific services for PLW was reasonably good (86.6%). However, it should be 100%, as several PLWs visited CC twice a week.

- The seeking and receiving nutrition-specific services for adolescents were very low (4.9%). Several reasons were identified, including data collection techniques (data provided by mothers of adolescents), shyness of adolescents to seek services, time constraints to go to health centers, unavailability of service providers from same-sex at health centers, and not considering the iron/ folic tables as nutrition services.

- The performance of nutrition-sensitive services from different government departments, viz., agriculture, livestock, social welfare, and women's affairs, was low. The reasons for the poor performance of the nutrition-sensitive services from relevant departments appeared to be a lack of awareness of the services and benefits of services, time constraints for receiving services, etc.

Analysis and interpretation: The HH survey found a low percentage of nutrition-specific (4.9%) and sensitive (7.6%) services for adolescents. This indicator has several discrepancies, as it involved both PLW and adolescents. If the indicator were divided into two parts, PLW, and adolescents, then it would be easier to capture the actual scenario. In the future, this indicator for adolescents may be covered through the school survey. However, achieving the target for this particular outcome indicator also depends on further influence by the change agents. Change agents should focus on influencing service providers (school and CC), adolescents, and caregivers (parents and peer groups) to enhance counseling for services and access to information to bring about positive behavioral change among adolescents for demanding nutrition-specific and nutrition sensitive services. In addition, the professional skills of the CHCPs needed to be strengthened through training in modern technology related to healthcare services. The analysis of findings indicates that the women and adolescent girls in the communities were, to some extent, empowered to demand and utilize both nutrition-sensitive and nutrition-specific services. A detailed description of the outcome harvesting method is found in Annex 2.

Recommendations made by participants in Outcome Harvesting to improve the performance of nutrition-specific and sensitive services are presented in "Conclusions and Recommendations."

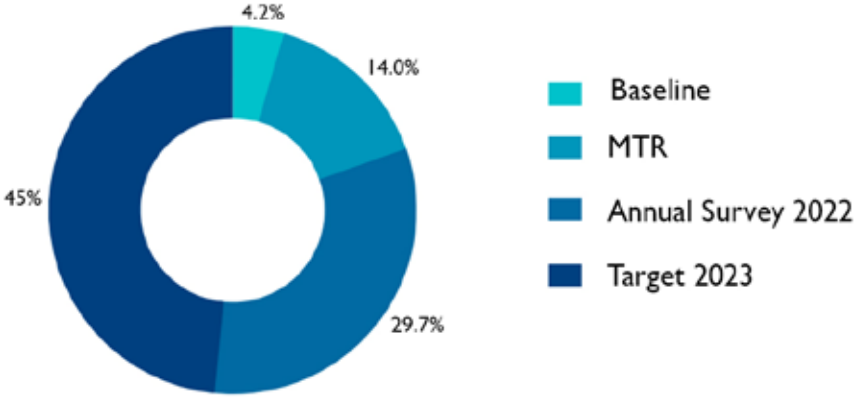
3.7 Use of ICT

ER-4: Indicator #17:

% of frontline workers and volunteers using the ICT based e-learning platform to support the community based on needs

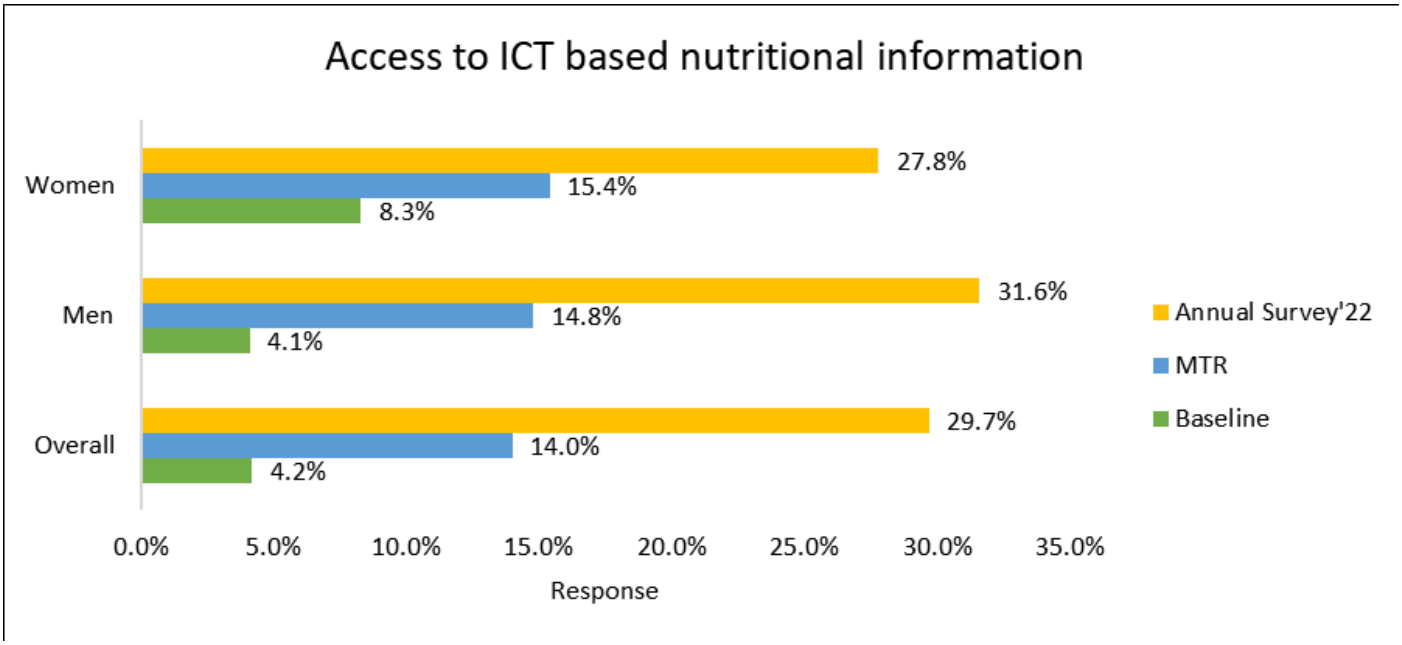
Baseline	MTR	Annual Survey 2022	Target 2023
0% Frontline workers	preparatory work completed	**60%** Volunteers Frontline workers: 0%	**50%** relevant govt. front line workers and volunteers

% of community members who have accessed or received ICT based nutritional information



Survey findings showed that about 30% of households' members (31.6(32% male and 27.828% female) received ICT-based nutrition information, which was markedly higher than the baseline (4.2%) and two MTR (14.0%) (Figure 3.7)

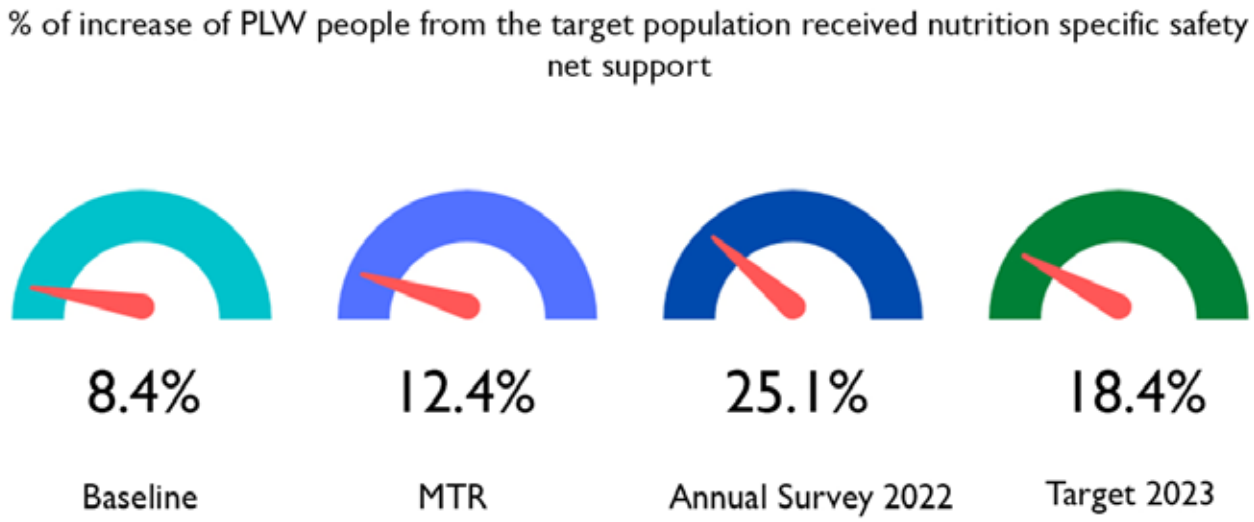
Figure 3. 7: Community members received ICT based nutritional information (in %)



Among frontline workers and volunteers, 60% of volunteers used the ICT-based e-learning platform to support community-based needs. This is good progress from the MTR, where only preparatory work was completed. Currently, apps are yet to be supplied to all health workers. Hence, in the 4th Year Annual Survey, this indicator was explored by reviewing the official documents of the JANO project. The survey found that JANO organized training for 208 volunteers on the use of ICT apps. Volunteers used these apps while facilitating courtyard sessions, individual counseling, etc. FGD with CG and KII with CHCP, and the hvousehold survey revealed that CHCP and Health Workers used ICT-based e-learning apps, although it was not sure about the sources of these apps were. Detailed information about access to ICT-based information is presented in Annex-12.6.1.

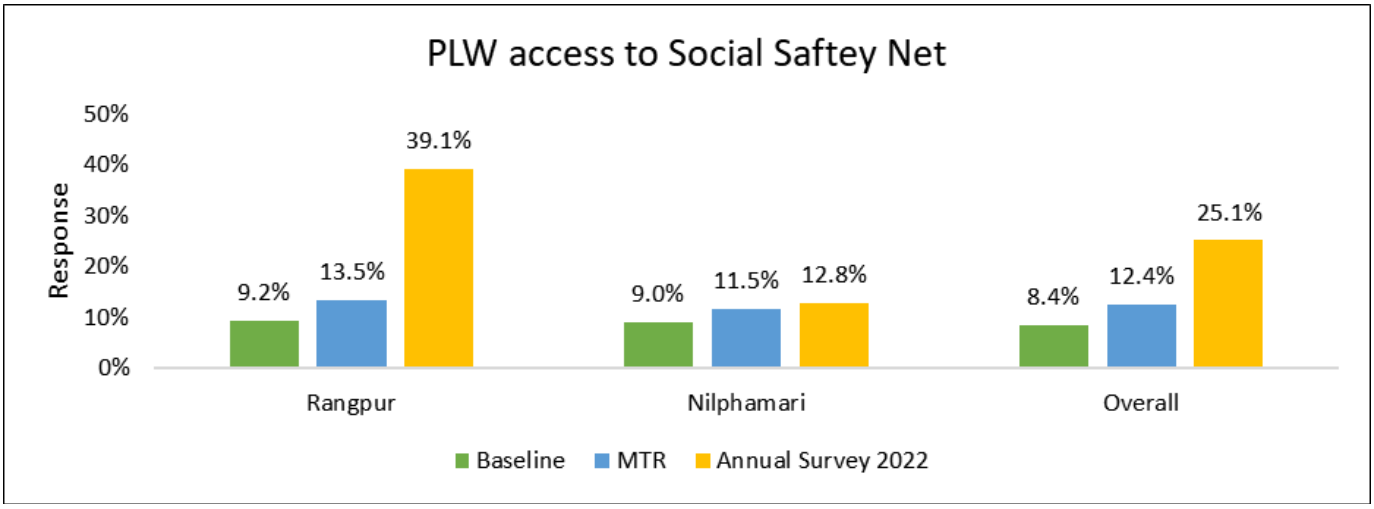
3.8 Access to Social Safety Net Programs

ER-2: Indicator #10:



The respondents were asked to report about benefits received from any social safety net programs. About 62% of households reported receiving benefits from the social safety net program during the last 12 months. About 25% of the PLW receive benefits from maternity allowance, VGD, and VGF programs combined, three times higher than the baseline and two times higher than the MTR.

Figure 3. 8: PLW (in %) received nutrition-specific safety net support during the last 12 months



The comparison between intervention districts indicates a significantly higher proportion of PLWs in the Rangpur district (39.1%) received SSNP benefits than that of the Nilphamari district (12.8%) (Figure 3.8 and Annex 3-Table 10).

However, only 6.2% of PLW received benefits from maternity allowance. It is to be noted that fresh enrolment for maternity allowance was stopped during the last year, as found by the KII with UP Chairman.

All the UDCC mentioned that the government had postponed the Maternity Allowance since last year. Therefore, there was no allocation for Maternity allowance in FY 2021-22. World Bank-supported VGD is ongoing in all unions. But World Bank supported VWB (Vulnerable women's benefit) safety-net support was ongoing only in Kundapukur Union. This scheme was 30 Kg micro-nutrient rice. (300 gm of micro-nutrient is mixed with 30 kg rice). Two hundred fifty poor and distressed PLWs were brought under this scheme in Kundapukur Union.

3.9 Healthcare Service Seeking Behaviour and WASH practice

3.9.1 Healthcare Service Seeking Behaviour

The healthcare service-seeking behavior of PLW has been analyzed and discussed in terms of the availability of health facilities in community clinics and knowledge of health and nutrition issues, the status of antenatal care visits and services, the status of delivery care, the status of postnatal care, knowledge on danger signs for mothers and new-borns, and healthcare for children (aged 6-23 months). The results and discussions on these issues have been categorically given in Annex 5 and Annex 3-Table 11 to 15. In addition, a summary of the findings is given below.

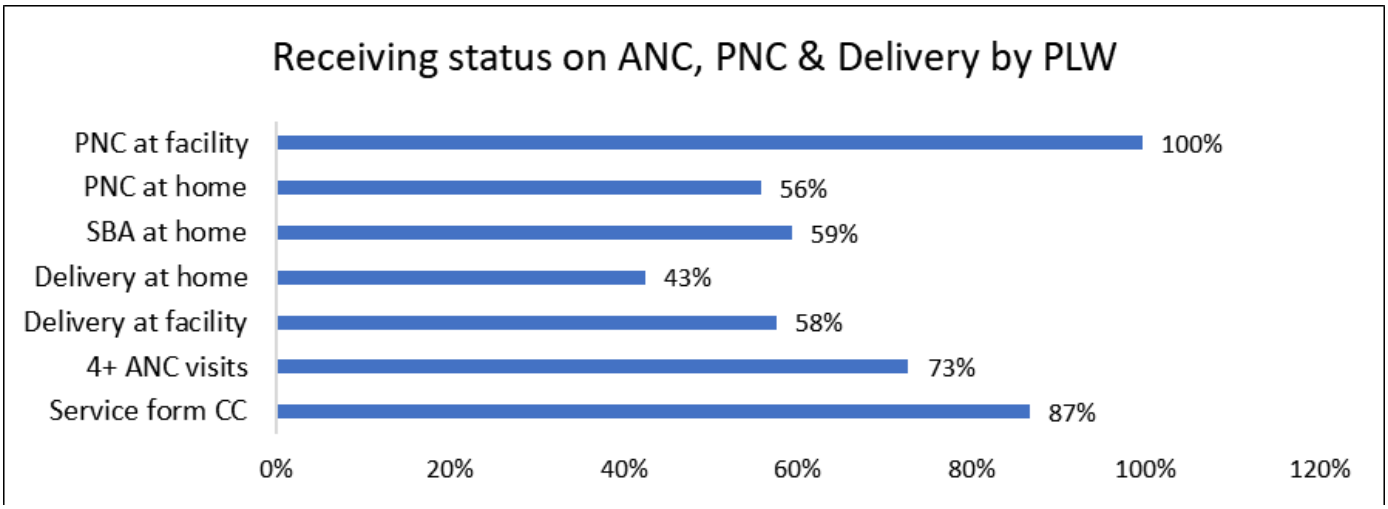
3.9.1.1 Services of CC

About 87% of the PLW claimed that they received services from the community clinic, and the average duration since the last visit was 46.63 days. The PLW stated that the quality of services of the community clinic was good and suggested increasing the supply of essential medicines and arrangements for periodic visits to a doctor. Qualitative surveys (FGDs and IDIs with PLW) found that the PLW had access to CC and UH&FWC near their villages (See figure 3.7).

3.9.1.2 Delivery Care

About 43% of deliveries took place at home, SBAs attended 59.3% of these births, 32.9% attended TBAs, and 7.8% attended by relatives. As reasons for not going to health centers for delivery, about 89% of them mentioned that they did not face any pregnancy complications. Among the facility deliveries, 57.7% were in private/NGO hospitals, and the rest (42.3%) were in government hospitals.

Figure 3. 9: Service received by PLW on ANC, PNC & Delivery



3.9.1.3 Antenatal Care

About 87% of LW and 43.8% of PW (3+ months of pregnancy) received 4+ ANC during pregnancy, combining 72.7% for PLW, which was remarkably higher than the national figure MTR and baseline of JANO. As places of ANCs, about 72% of PLW reported receiving services from the community clinic, 40% from private hospitals/clinics, 29.3% from UH&FWCs, and 19.7% from UHCs. Regarding ANC service providers, 84.3% of PLW reported receiving care from CHCP/HA/FWA and 59.1% from doctors.

Regarding tests during pregnancy, the majority of the women went through weight measurement (97.3%), blood pressure check-ups (96.4%), abdominal examination (72.6%), and ultrasonogram (70.9%). Detailed information is presented in Annex 3-Table 11.

3.9.1.4 Post-natal Care

About 77% of respondents reported that the health workers visited their homes during the last pregnancy. The percentages of mothers receiving postnatal care within 48 hours of delivery were 99.6% and 55.7% for facility and home delivery, respectively, combined with 82.1% for PLW. The qualitative surveys (FGDs and IDIs with PLW) revealed that the knowledge and practice of four times ANC is deemed as encouraging among the PLW, but PNC service was only taken if there was a problem with the mother or the baby. They took ANC services from the CC but preferred UH&FWC and UHC for delivery services where all sorts of facilities were available. However, most opted for child delivery at home to avoid hospital transport costs and medical expenses. The detailed information is presented in Annex 3-Table 11.

3.9.1.5 Knowledge of Danger Signs

The analysis of knowledge of PLW on danger signs for new-born indicates that 69.3% knew at least three danger signs, and 15.6% knew at least five danger signs. Regarding danger signs for mothers, 75.7% knew at least three danger signs, and 13.2% knew more than four danger signs during pregnancy. The FGD participants mentioned the five danger signs during pregnancy: a high temperature; extreme headache; convulsion; excessive bleeding; and prolonged labor pain. On the other hand, danger signs of the newborn were mentioned as a red rash on the skin; infection in the umbilicus/navel, and milk entering the newborn's trachea/airways. The detailed information is presented in Annex 3-Table 15.

3.9.1.6 Breastfeeding Practices

The knowledge and practice of breastfeeding and vaccination of the child were encouraging: 72% of the mothers maintained exclusive breastfeeding, and 95% of mothers stated that vaccination of the child was done properly. The detailed information is presented in Annex 3-Table 16.

3.9.1.7 Health Seeking Behaviour of Adolescent Girls

From the FGDs with adolescents, it was observed that adolescent girls sought health services/ advice from the Community Clinic when they faced any problems during their menstrual period. The adolescent girls mentioned that they used to go to the Upazila Health Complex if they did not get the desired services at the community clinic. They also took iron tablets and folic acids provided to them at the community clinic and schools. They took the TT vaccination at the community clinic. The detailed information is presented in Annex 3-Table 16.

3.9.2 Knowledge and Practices of WASH

3.9.2.1 Knowledge and Practices of WASH for PLW

The PLW was asked about hand wash practices at five critical times through the household survey. The findings are given in Annex-12.3.4. The five critical time points for hand washing are after using the g toilets, feeding the baby, taking food, cooking, and cleaning the baby's defecation. The practice of handwashing was found very encouraging as most PLWs practiced handwashing at the five critical times. It is found that the practice of handwashing using soap was highest for 'after cleaning baby's defecation' (96.9%), 'after defecation' (95.9%), followed by 'before breastfeeding or feeding baby (67.6%), and 'before taking food' (60.4%). Over nine in ten of the PLW have mentioned that they knew handwashing practices from JANO project interventions. About 8% of the PLW mentioned that they were habituated from earlier handwashing practices.

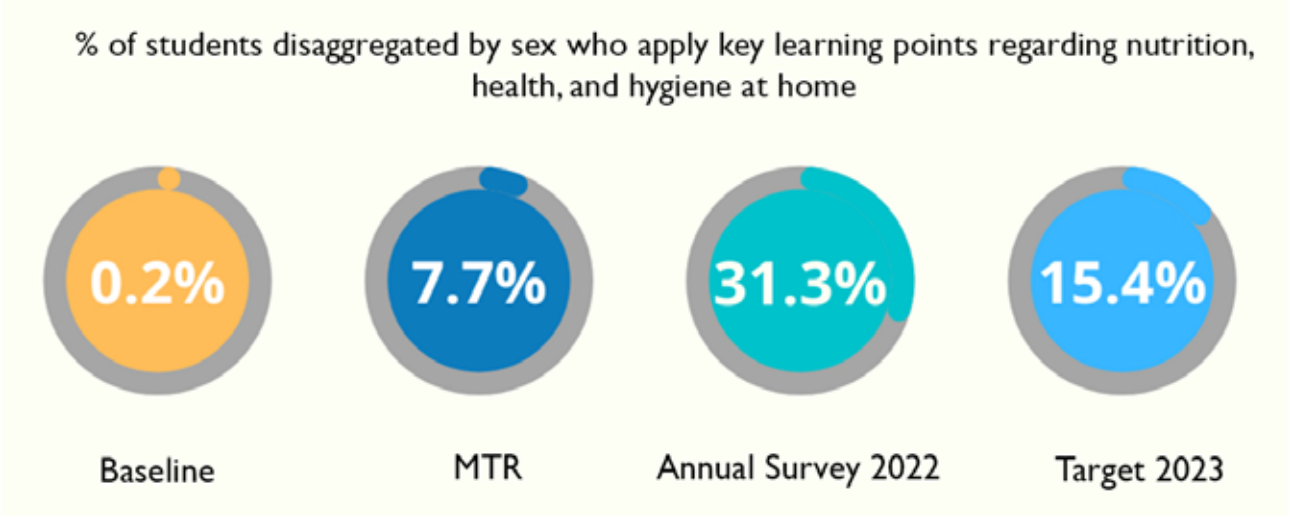
3.9.2.2 Knowledge and Practices of WASH for Adolescent

It was found that 52.2% of adolescents had a thorough knowledge of handwashing in critical times. Another 33.5% were well-known for handwashing in critical times (Annex 3-Table 14). Regarding practices of handwashing in critical times, it was found that 80.7% of adolescents practiced hand-washing regularly at critical times, such as after using toilets, before taking food, etc.

From the FGD with adolescents, it was found that they knew handwashing in critical times, such as washing hands with soap before and after having food, after using the toilet, after playing games, after returning home from outside, and after doing any work. All of them used sanitary latrines. They knew that boiled water, filtered water, and arsenic-free and iron-free tube-well water were safe to drink.

3.10 Health and Nutrition for Adolescents

ER-1: Indicator #5:



3.10.1 Health and Nutrition for Adolescents: Knowledge and Practice

Through the school survey, adolescents were asked about learning about gender, health, hygiene, and nutrition at school/madrasah. The student's responses on 13 issues are given in Annex-12.3.5. Over three-quarters of the students claimed they knew about hand washing, gender equality, and puberty/reproductive health issues. Another 70% of the students mentioned that they knew about nutrition and hygiene. Nearly half of the students mentioned that they knew about gardening, food nutrition management, and the use of sanitary latrines.

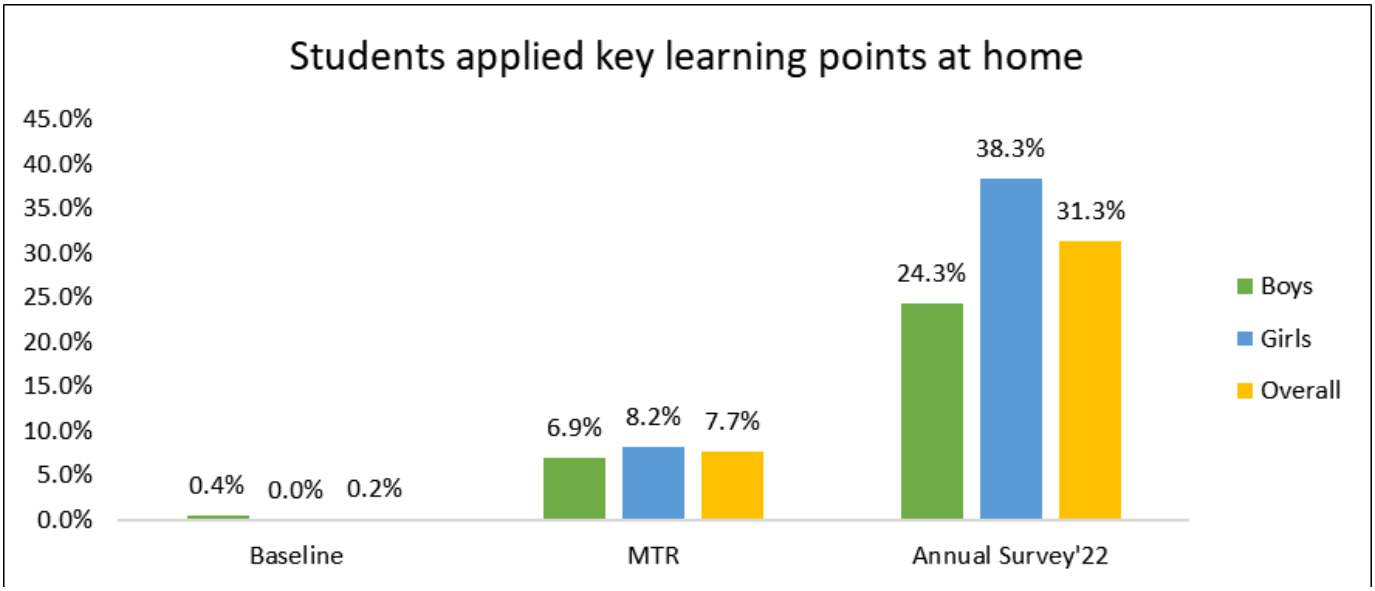
They were further asked whether they used the learned knowledge at home. About 84% and 60% of the students were found to apply hand washing and hygiene practices, respectively. About half of the students reported applying nutrition and gardening at home. The application of learned knowledge was higher for girls than boys on a few issues, like nutrition, food ingredients, adolescent health, and hygiene, apart from puberty/reproductive health.

It was found that the FGD participants (adolescent boys/girls) clearly understood puberty and adolescent reproductive health. At school, they received advice and information on puberty, adolescent reproductive health, and personal hygiene from the teacher and the Gender Equity Management System (GEMS) corner. The participants informed that many posters with messages on these issues were displayed in the GEMS corners. Adolescent girls maintained personal hygiene during their menstrual period and used sanitary pads instead of cloth as they were advised to prevent infection. In addition, they tried to take more nutritious food during menstrual periods to make up for blood loss. When asked what they ate the previous day, the boys and girls had a diverse diet like egg/meat/fish/vegetable/lentil. Boys also take counseling from the CHCP in the CC when they face puberty problems.

3.10.2 Practices on 5 Key Learning Points

The data from the student survey were analyzed to evaluate the status of adolescents' knowledge and application of key learning points regarding health, nutrition, and hygiene. The students were asked about their knowledge and application of at least five key learning points viz., (i) Food ingredients, preparation, and serving, ii) Health sciences and healthcare, iii) Adolescent health & hygiene, iv) Handwashing and v) Use of sanitary latrines. The findings indicate that 31.3% of adolescents applied the key learning points regarding health, nutrition, and hygiene. Furthermore, the findings indicate that the knowledge and application of adolescents did not differ very much in the intervening districts (Figure 3.10).

Figure 3. 10: Students applied five key learning points at home (in %)



The comparison by gender of adolescents indicates knowledge and application were higher for girls (38.3%) than boys (24.3%). In addition, the comparison indicates that the percentage of adolescents applying five key learning points was significantly higher in the 4th year annual survey (31.3%) than that of the mid-term (7.7%) review. The remarkable increase in the indicators is rational, as the students learned about these issues through the GEMs corner, adolescent club, session, etc. It is to be mentioned that the schools were closed for about two years due to the COVID-19 pandemic during 2019-2021. At those times, adolescents had limited opportunities to learn about health, hygiene, nutrition, and gender. Detailed information about five key learning points is presented in Annex 3-Table 14.

3.10.3 Knowledge and Practice on Gender Equity and Vegetable Gardening

3.10.3.1 Knowledge and Practice on Gender Equity

Almost all students (98.8%) reported learning about gender equity at school. They were asked what they had earned about gender equity. About 94% of the surveyed adolescents reported that they learned about equal opportunities for girls and boys, about 72% (69.2% boys and 75.2% girls) reported that they learned about the concept of gender equality and equity, and 61% (56.3% boys and 65.8% girls) learned about the gender divisions of labor (Annex 3-Table 14). The findings indicate that girls' knowledge was higher than boys' on different issues of gender equality. The other issues learned by many students were puberty and reproductive health, the interrelationship of men and women, adolescent health, hygiene, etc.

Regarding gender sensitivity, member of SMC from Kutipara Chengmari High School, Gangachara, Rangpur quoted,

" At present, the situation of sensitivity in our school is good. Now boys and girls equally participate in everything. Earlier girls were neglected. But now the girls are now ahead in terms of education. Today's children are our future. So, everyone should be given equal rights."

3.10.3.2 Knowledge and Practice on Vegetable Gardening

Almost all students (99.3%) reported a vegetable garden at their school. Regarding involvement in vegetable gardening at school, about 93% of students reported being involved in school gardening. In response to their involvement in the type of activities in school gardening, nearly four-fifths of them were found to engage in plantation, and 57.4% were found to engage in land preparation.

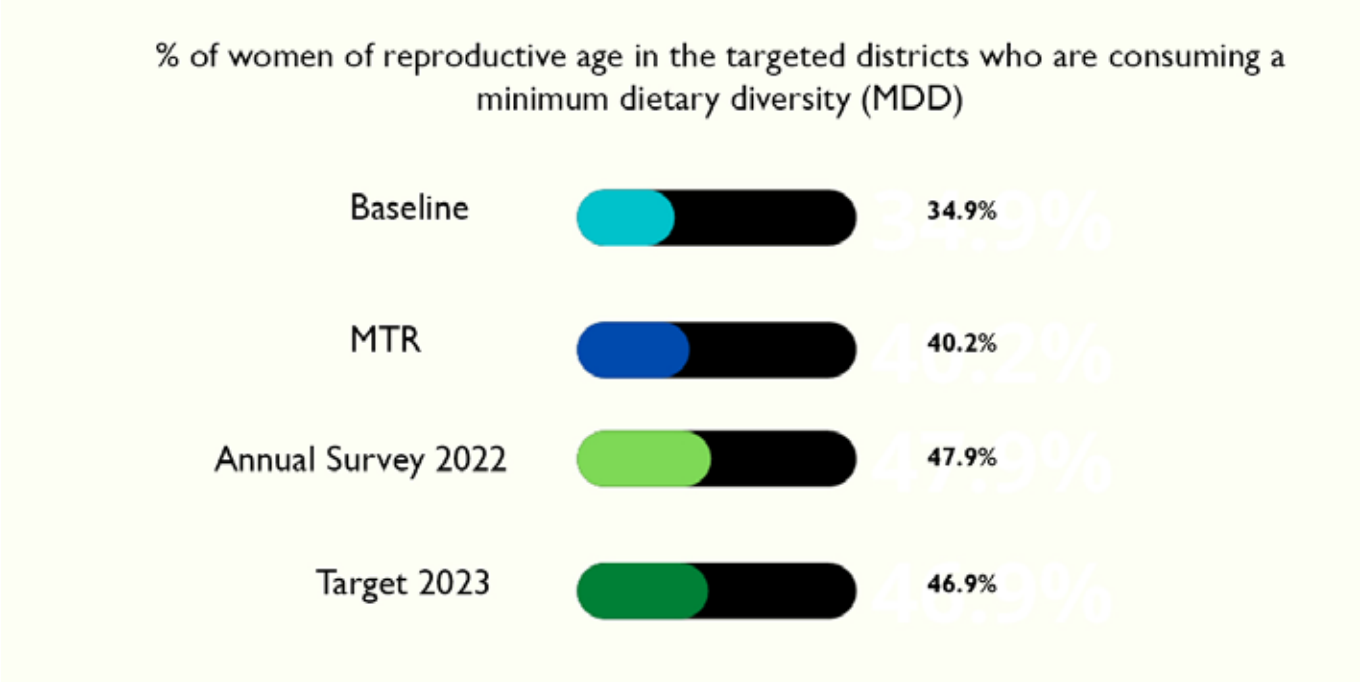
The students were asked about their involvement in home gardening. About 99% of students mentioned that they were involved in vegetable gardening at their home. They were found to engage in irrigation (93.1%), plantation (81.1%), land preparation (63.9%), fencing (47.4%), use of organic fertilizer (39.1%), etc. in their vegetable garden at home (Annex 3-Table 14).

Regarding vegetable gardening, member of SMC from Gomnati High School, Domar, Nilphamari mentioned,

"In every SMC meeting one of the agenda is vegetable gardening. There is a vegetable garden in our school. The students take care of that garden, and the teachers supervise if care is taken properly. We also provide support from time to time. JANO project has taught how to do vegetable gardening. The main objective of school's vegetable gardening is to encourage students to practice vegetable gardening at home to full fill their family's nutrition requirements."

3.11 Food Diversity for PLW and Children

ER-1: Indicator #1:



ER-1: Indicator #2:

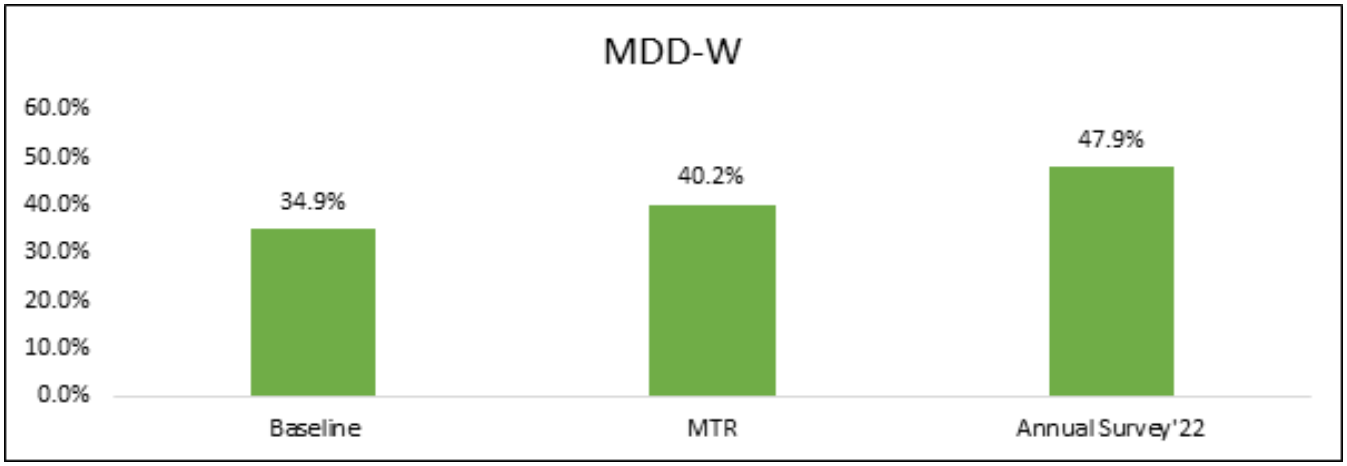
Proportion of children 6–23 months of age who receive foods from 4 or more food groups (based the MDD-C methodology) by sex (Percentage)

	Baseline	MTR	Annual Survey 2022	Target 2023
Boys	18.1%	22.9%	64.4%	
Girls	17.4%	24.8%	67.5%	
Overall	17.8%	23.7%	65.7%	30.2%

3.11.1 MDD for PLW

The MDD-W was sorted out by analyzing the responses given by the PLW on the consumption of several food items from a list of prescribed food items over the last 24 hours. About 48% of the PLW was found to take five or more food groups over the last 24 hours of the survey (Annex 3-Table 17). There was little difference between district data in the consumption of diversified food items. The comparison of food consumption data showed that the percentage of women with MDD increased in the 4th year annual survey (47.9%) than that of the baseline (34.9%) and mid-term (40.2%) review (Figure 3.11). The findings also indicate that MDD was significantly higher for pregnant women (54.5%) in comparison to lactating women (44.5%), which might be due to extra care by family members for pregnant women. Variation of MDD for pregnant and lactating women between the Rangpur and Nilphamari districts was identified.

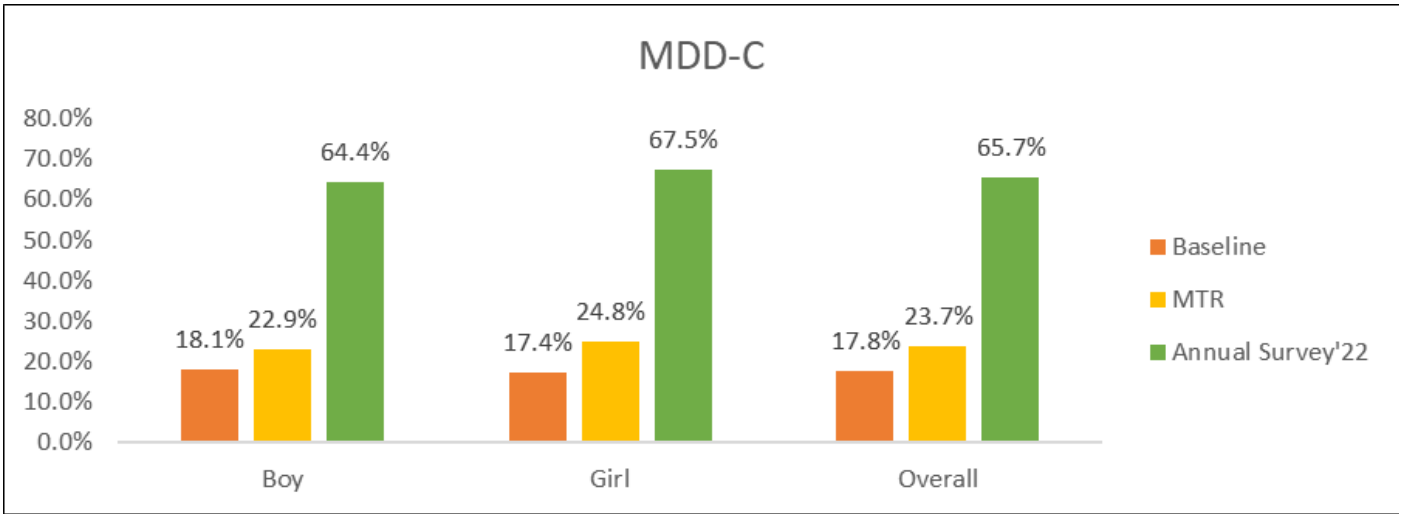
Figure 3. 11: MDD for women of reproductive age (in %)



3.11.2 MDD for Children

It is found that nearly two-thirds of the children aged 6-23 months received four or more food groups over the previous 24 hours. In addition, the food consumption rate was slightly higher among girls than boys.

Figure 3. 12: MDD for children 6-23 months of age (in %)



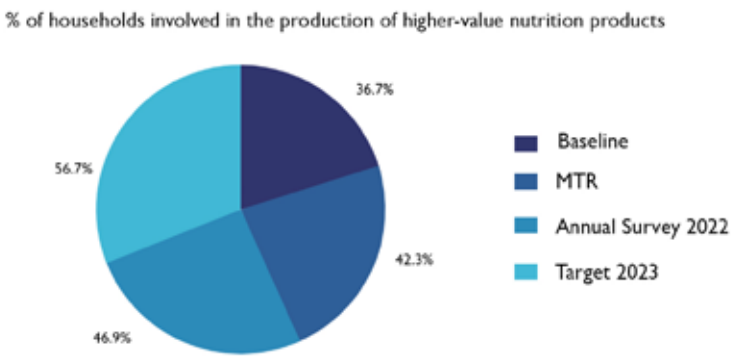
There was no remarkable variation in food consumption for children between the intervening districts, although the children of Nilphamari districts were observed to be slightly ahead in consuming diversified foods. The comparison of data shows minimum dietary diversity consumption for the children was significantly ($p<0.01$) higher in the fourth-year annual survey as compared to the baseline and mid-term review (Figure 3.12). The significant increase in the practice of MDD for children is very rational because 47.9% of PLW maintained MDD. The findings indicate that MDD-C did not vary much more in intervening districts. The detailed information is presented in Annex 3-Table. The increased dietary diversity for women and children might be due to the contribution of the JANO project, as the project facilitated a comprehensive learning process to raise awareness of PLWs regarding health, hygiene, and nutrition through various program activities such as courtyard meetings, home visits, theatres, information through ICT, etc.

3.11.3 MDD for Adolescent

MDD for adolescents was not covered in the “Students Survey” and “Household Survey.” However, during FGDs with adolescent boys and girls, it was found that they had a clear concept of nutritious food. They have learned that due to physical changes during puberty, they need to take healthy and nutritious food, such as food containing protein, carbohydrates, vitamins, and minerals, to be protected from illness and for good mental and physical health. Adolescent girls during FGDs mentioned that they tried to take more nutritious food during their menstrual period to make up for the loss of blood. When asked what food they had eaten the previous day, it was found that both the boys and girls had a diverse diet, such as egg/meat/fish/vegetable/lentil. According to them, they had acquired this knowledge from the Adolescent Corner and GEMS class.

3.12 Production of Crops

ER-3: Indicator #13:



The percentage of households cultivated crops/vegetables in their cultivable land is shown in Annex- 12.5.1. It is to be noted that 31.8% of the households were completely landless. The highest percentage of households (65.7%) cultivated bottle gourd, and it can be concluded that 65.6% of households cultivated any crop on their farm during the last 12 months. Apart from bottle gourd, cultivation of rice (62.1%), Malabar spinach (55.1%), and bean (52.1%) appeared as the prominent crops in the study areas. A remarkable proportion of households/farmers cultivated and produced red amaranth (39.1%), pumpkin (34.3%), and potato (20.2%). In addition, papaya, chili, corn/maize, ladies' fingers, bindweed, spinach, radish, and napa were produced by some (10-20%) of the households.

A farmer from Dakkhin Choura, Choura Bor Gacha, Nilphamari Sadar said during FGD, ***"Earlier we produced 30-40 Kg. of local variety Radish (mula) in 1 decimal land area. But at now we cultivate using improved technology and hybrid seeds and produce up to 100 kg. of Radish in 1 decimal land."***

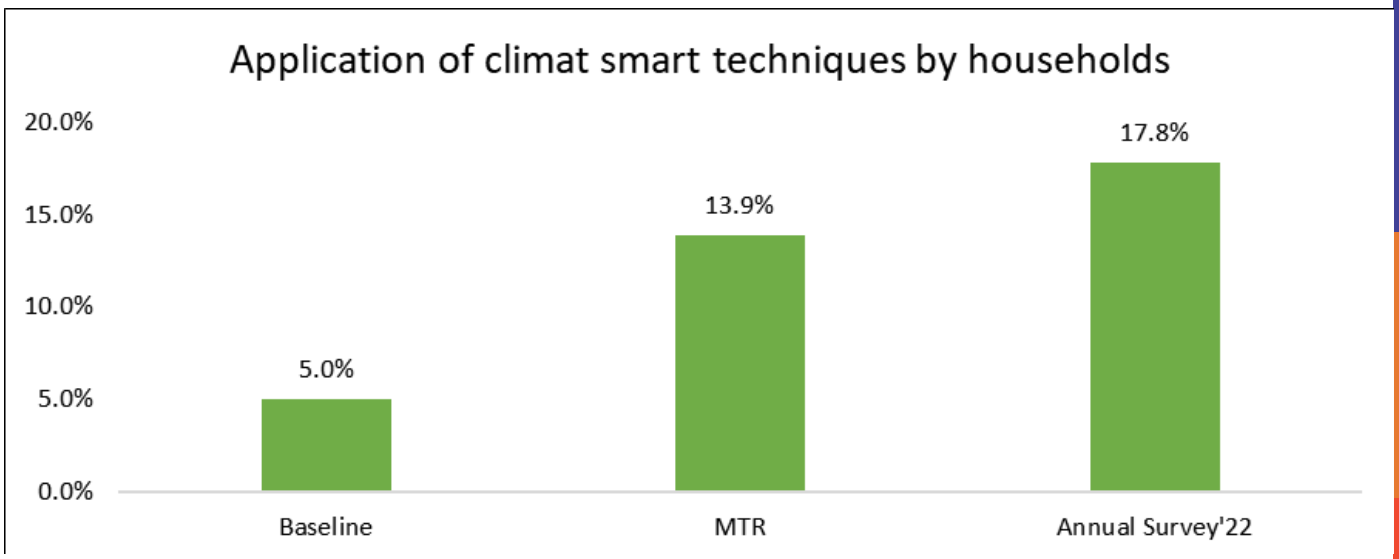
3.12.1 Practice of Homestead Gardening

In addition to the production of crops on cultivable land, the study analyzed the cultivation at homestead land (Annex 3-Table 18). The findings indicate that about 58% of the households produced vegetables on their homestead land. Homestead gardening was found to be slightly higher among the households of the Nilphamari district compared to the Rangpur district. The most common vegetables cultivated at the homestead land were bottle gourd (58.2%), bean (48.6%), Malabar spinach (46.4%), pumpkin (28.6%), and red amaranth (23.9%).

3.12.2 Adoption of Climate-smart Technologies

The analysis of fourth-year survey data indicates that about 17.8% of households have practiced at least three climate-smart agricultural techniques (Annex 3-Table 19). The most common climate-smart agricultural techniques were organic vegetable farming, vegetable cultivation on raised beds, and crop diversification, as over 20% of households adopted these three techniques. The percentage of households practicing three or more climate-smart agricultural techniques was found to be higher in the 4th year survey in comparison to the mid-term (13.9%) and baseline (5%) study (Figure 3.13).

Figure 3. 13: Households practiced at least three climate-smart techniques (in %)



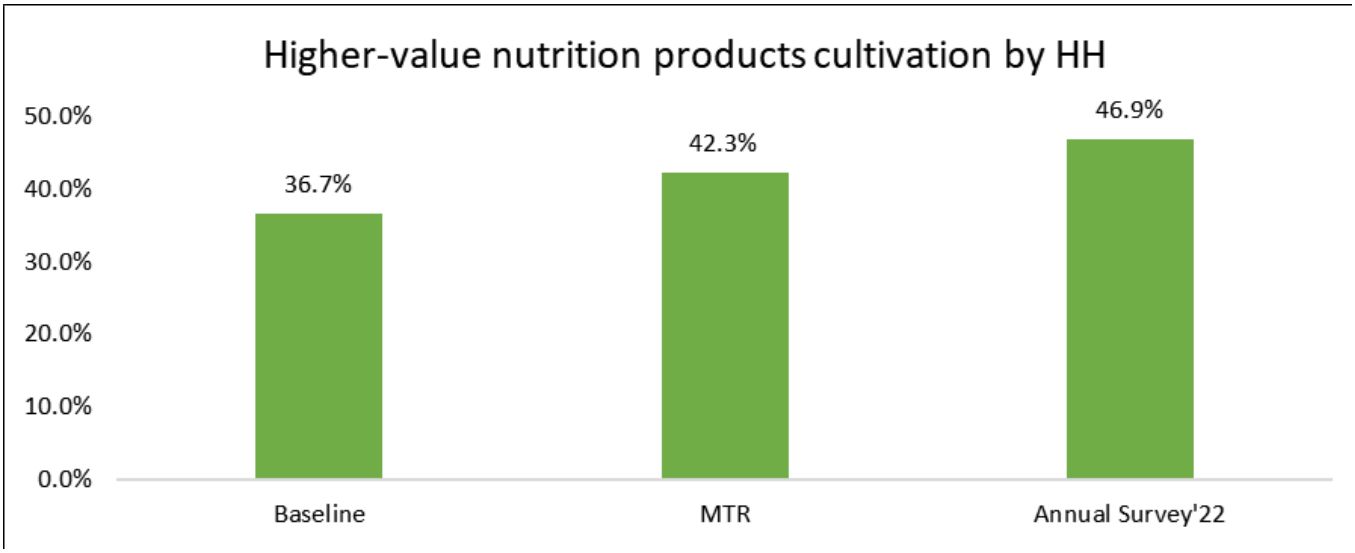
The findings indicate no significant variation in climate-smart agricultural techniques between the intervening districts. Therefore, JANO facilitated a tripartite engagement to promote climate-smart technology and improved production in agriculture for its intended beneficiaries. It was found that 11 initiatives were taken in four thematic areas (4 in Agriculture, 4 in Livestock, 2 in WASH, and 1 in micronutrients). In addition, JANO coordinated with line departments (DAE, DLS, Department of Women & Child Affairs) and the Private sector (ACI Seed, ACI Animal Health, Mega Feed, Nirapad Sanitary Napkin, SMC) for rolling out of these initiatives where the community at large benefited.

3.12.3 Production of High Nutrition-Value Crops

JANO, Private Sector, and DAE jointly worked under an informal tripartite agreement to promote higher-value nutritious crops among farmers. The particulars of the production of selected high-value nutritious crops are presented in Annex 3-Table 20. The higher-value nutrition products are categorized into five crops: Bio-fortified crops, Legumenuts and seeds, Fruits and vegetables, Colour vegetables, and Animal source food. Combination of all five categories of nutrition products, the survey found that about 47% of the households were involved in producing higher-value nutrition products. The findings also showed that 86.6% of households produced vegetables and fruits, followed by 84.9% animal source food, 80.8% dark yellow color vegetables, 66.1% legume nuts and seeds, and 6.2% bio-fortified crops, respectively.

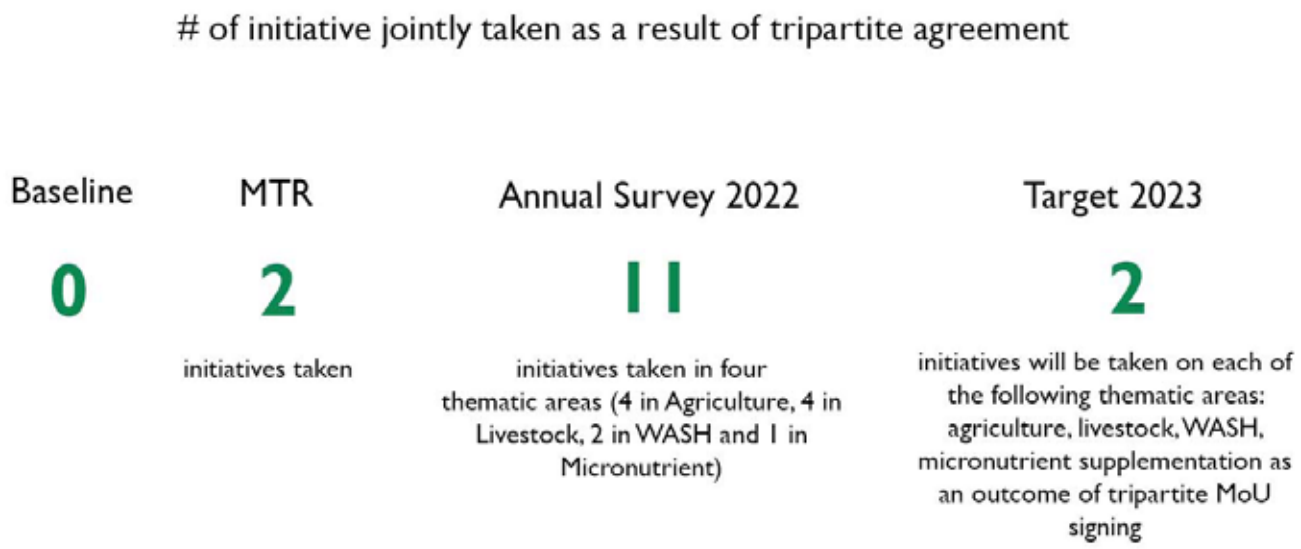
The reason for comparatively less production of high-value nutritious crops could be their landholdings (72% of households were functionally landless, with 32% having no cultivable land at all). The findings indicated that there is an opportunity to work more intensively to increase production and engagement of farmers with the support of respective line departments. The percentage of households (46.9%) involved in the production of higher-value nutrition products was higher in the 4th-year annual survey than that of MTR (42.3%). The comparison of this indicator between intervening districts indicates that a higher percentage of farmers in the Nilphamari district (49.9%) practiced high-nutrition value crops than in the Rangpur district (43.5%) (See figure 3.14). It is to be mentioned that the landholding size of the farmers in the study area was very poor, which is why it can be perceived that most of the study households practiced these techniques in small land sizes. About 59% of households received training on climate-smart agriculture technology, of which 34.9% were from DAE, and the rest (65.6%) were from NGOs & Private Sectors.

Figure 3. 14: Households produced higher value nutrition products (in %)



3.13 Initiatives are jointly taken as a result of a tripartite agreement

ER-3: Indicator#15:



The 4th Year Annual Survey found that, through tripartite agreement, eleven initiatives have been taken under four thematic areas (4 in Agriculture, 4 in Livestock, 2 in WASH, and 1 in micronutrients). This is remarkable progress compared to the MTR, where only two initiatives were taken.

The tripartite agreements took place among JANO, three departments (DAE, DLS, Department of Women & Child Affairs), and 5 Private sectors actors (ACI Seed, ACI Animal Health, Mega Feed, Nirapad Sanitary Napkin, SMC). Due to a tripartite agreement, the following joint initiatives have been taken in four thematic areas.

Agriculture - With the Department of Agricultural Extension (DAE) and Private Sector (ACI Seed), initiatives taken included i) Demonstration set up on homestead vegetable gardening applying climate-smart techniques; ii) Capacity development of women entrepreneurs; iii) Capacity development of private extension agents (agro-input retailers) and iv) Business meeting among women entrepreneur, private sector (ACI Seed) and dealers.

Livestock - With the Department of Livestock Services (DLS) and Private Sector (ACI Animal Health), initiatives taken included i) Capacity development of private extension agents (input retailers, para-vets, women vaccinators, AI workers) and ii) Vaccination and de-worming campaign for livestock. With the Department of Livestock Services (DLS) and Private Sector (Mega Feed), Initiatives taken included i) Capacity development of women entrepreneurs and ii) Business meetings among women entrepreneurs, private sector (Mega Feed), and dealers.

WASH - With the Department of Women Affairs (DWA) and private sector (Nirapad Sanitary Napkin); one initiative has been taken, i.e., Capacity development of women entrepreneurs. With the private sector (SMC) and Women Entrepreneurs, one initiative was taken, i.e., Establishing business linkages for sourcing products and services (sanitary napkins).

Micronutrient - With SMC and women entrepreneurs, one initiative was the task which also included establishing business linkages for sourcing products and services (micronutrients).

Key Informant, Zonal Sales Manager, ACI Animal Health, mentioned that during the capacity development program organized by JANO in Rangpur and Nilphamari, the Zonal Sales Manager from ACI Animal Health shared knowledge on proper cattle rearing, cattle feeding, cattle disease, treatment, etc., to the different stakeholders present in the program who included farmers, input retailers, and para-vets. The veterinary doctor from the Department of Livestock was also present. During this program, they provided free vitamins (ACBDV Gold) and deworming medicines (SP1) to the farmers. In 2019 there was a Lumpy Skin Disease (LSD) outbreak among the cattle population in many parts of Bangladesh, and the outbreak was controlled through the LSD vaccine in 2020. In 2020 JANO organized a camp in 3 upazilas in Rangpur (Kaunia, Gangachara, and Taraganj), where 100 infected cows in each camp were vaccinated with the LSD vaccine provided by ACI Animal Health. The government veterinary doctor vaccinated the cows. According to the Key Informant, this vaccine must be provided each year. But when the cows got cured, most farmers thought this to be a one-time disease and did not come to get their cows vaccinated again in 2021. Due to this, in 2022, the LSD outbreak became massive. To control this outbreak, there is not enough supply of LSD vaccine in the country. Now the demand is more, but the supply is less. The price of this vaccine has now increased, i.e., Taka 170/- per cow. Only farmers who were conscious of this disease vaccinated their cows.

Key Informant Area Sales Manager, Mega Feed, informed that Mega Feed held business meetings to develop the capacity of women entrepreneurs. Mega Feed promoted two of its products: Mega Feed Milk and Mega Feed Fattening. Women entrepreneurs were also linked with their local dealers. The aim was to reach farmers in remote areas. Implementation of this program has started in the current year (2022) in six upazilas of the JANO intervention area. The Key Informant reported that about 10-20 women in each upazila were present in the business meetings. About 50% are presently engaged in this business. Mega Feed provided one sack of Mega Feed Milk (25 Kg) and one sack of Mega Feed Fattening (25 Kg) to each women entrepreneur at wholesale price. Each sack can make a profit of Taka 70/-in the retail market. If they can sell two sacks daily, they can profit from Taka 150/- daily. Mega Feed Fattening is more in demand than Mega Feed Milk.

Challenge:

- The main challenge the community will face is a lack of information, as the linkage be tween the farmers and the private sector may be lost when the JANO project is gone.
- An inadequate supply of the LSD vaccine would be another challenge to holding the vac cination camps.
- Another challenge farmers face in remote areas is the overproduction of cow milk, which they cannot market at a fair price. Farmer's rear cows with the hope of generating income through selling cow's milk. Therefore, when they could not sell cow's milk, many farmers became discouraged and started to sell their cows.
- It is a challenge for the women entrepreneurs to increase their sales if they want to, as most of the farmers in the remote areas opt for local varieties of the cow as it is less ex pensive to raise because, as they produce less milk, they require less feed. While Frisian cow, which produces more than 3 Kg of milk daily, requires more feed and hence are more expensive to raise.
- When the JANO project is over, the Key Informant perceives that the women entrepre neur may continue their business if they can buy the feed at the wholesale price as they are linked with the dealer. However, they will still face the challenge of not being able to increase their sales.

3.14 Behavioural Change Departments and Stakeholders for Services

3.14.1 Behaviour Changes of Different Departments

The key informant's interviews were conducted with different tiers of officials from different departments, including the Upazila Social Welfare Officer, Upazila Livestock Officer, Upazila Agricultural Officers, and Upazila Women & Children Affairs Officer, to tap their views on services from their departments. All the relevant departments provided services to the producers on a priority basis. The field staff, including VFA and SAAO, conducted courtyard meetings periodically. They tried to advise the producers to adopt modern technology. For example, through courtyard meetings, campaigns, and other means, the VFAs motivated farmers to adopt artificial insemination, deworming, vaccination, fodder cultivation, etc. The discussion on various issues revealed that the relevant departments were very cordial in providing services to farmers/ producers.

3.14.2 Behaviour changes of related stakeholders for promoting CST for production

The key informants (UAO/SAAO) said they were ready to provide any agriculture-related services, and they tried to be present in the courtyard meetings. The farmers used to take services from respective SAAOs about fertilizer, pesticides, seeds, etc. According to the key informants, farmers hesitated regarding production while asking them to adopt modern technology, like climate-smart agricultural techniques. The household survey found that 58.9% of farmers received training on climate-smart techniques, and 47.1% practiced it in 2022. It was observed that the agriculture departments tried to boost-up farmers to adopt climate-smart techniques.

3.14.3 Private sector actors' behavior change

The key informants from the private sector mentioned that they have been working with JANO in collaboration with different government departments since 2019. They were very interested in involving themselves in the joint initiatives of JANO because it benefited their business expansion apart from social responsibility. According to the Area Manager of ACI Seed, one of their joint initiatives was to promote climate-smart agricultural techniques through "Demo Plots," which created interest and confidence among farmers to learn and apply the technique. The training to farmers on climate-smart agricultural techniques was usually provided by the SAAO, while ACI dealers exhibited the usefulness of different varieties of ACI hybrid seeds. According to the Area Manager, more than 300 farmers received hybrid seeds from ACI for homestead gardening. They also provided the phone numbers of the Agriculture Officer/SAAO to the farmers to contact them for technical support if required. This reflects the private sector's social responsibility by encouraging farmers/producers in livelihood activities.

3.15 Women and Adolescent Girl's Empowerment

To understand the status of women's empowerment, quantitative data were collected on women's participation in the decision-making of seven domains. The HH survey found that 96.7% of women participated in general decision-making in household matters, while 69.3% reported participating in financial matters. Regarding their extent of freedom of movement, 81.2% said that they could visit alone to the doctor and health center. About 79.5% said they were permitted to visit relatives/friends/neighbors, whereas 63.6% said they could participate in meetings of Villages/CG/CSG/UDCC. Nearly 59.3% said they could go alone to social events like school/union parishad/group meetings, and 57.4% said they could visit local bazaars to buy commodities (Annex 6). The details of women's participation and freedom of movement are given in Annex 12.3.10.

attempted to evaluate women's empowerment by considering the affirmative responses to three issues: freedom of movement to visit relatives/friends, participation in decision-making at households in financial affairs, and receiving healthcare services from CC alone. Combining these three issues, it was found that 20.5% of women were empowered to make decisions independently. There was not much variation in women empowerment between the two intervening districts.

Women's empowerment was also reflected through their increased participation in decision-making spaces in formal (86.5%) and informal forums (68.2%) and their meaningful participation in UDCC meetings related to nutrition action plan development and implementation. Let's consider women's access to resources as a criterion for empowerment. Their accessing nutrition-specific services and nutrition sensitive services (by 96.8% and 52.6% of women, respectively) and their accessing government safety net programs (25% of PLW received benefits) also indicates that the women in the JANO project intervention areas were to some extent, empowered in terms of decision-making and utilization of resources.

3.16 Food security and livelihoods: Impact of the Covid-19 Pandemic and Recent Price Hike on Livelihood and Nutrition Issues

3.16.1 Impact of Covid-19 Pandemic on Livelihood Issues

The Covid-19 pandemic affected our life and livelihood in various aspects. This section intends to analyze the households' economic behavior during the Covid-19 pandemic to know the extent to which the progress of the JANO project indicators was affected. Furthermore, the recent price hike of essential commodities affects the life and livelihood of the people. Therefore, it was important to know the coping mechanisms adopted by the people due to the price hike.

The respondents were asked about the change in their regular behavior (including movement) due to the Covid-19 pandemic. Regarding behavioral change due to Covid-19, about 96% mentioned increasing use of face masks, about 26% mentioned increasing handwashing practices, and 13.3% mentioned the increasing use of phones (Annex 3-Table 21). The household survey respondents were asked how the income of the households was affected during the Covid-19 pandemic. A vast majority (85.6%) of them mentioned that household income decreased during the Covid-19 pandemic. Regarding coping mechanisms due to Covid-19, the responses were multiple. Nine in ten surveyed households compromised the food quality and took less food than required. About half of the households had taken long-term loans to cope with the Covid-19 situation. One-in-ten households sold their valuable assets (land, gold, etc.) to cope with the situation. The respondents were further asked about the changes to their food menu due to the Covid-19 pandemic, and naturally, the responses were multiple. A quarter of the respondents mentioned that they are taking protein-rich foods, 78% mentioned taking vitamin-rich foods, and 86% mentioned that they are taking fresh vegetables.

The vaccination rate for Covid-19 was found to be very encouraging for the respondents and adult members of the households. Two dosages of the COVID vaccine were taken by 95.75% and 91.3% of men and women, respectively. However, vaccination coverage was poor for adolescent boys and girls, as only 7.9% of boys and 7.3% of girls had taken two dosages of vaccines. The respondents (PLW) were asked whether domestic violence increased during the COVID-19 pandemic. Nearly half of the PLW argued that domestic violence increased during Covid-19. They were further asked about the reasons for domestic violence, and multiple responses were found. Near nine in ten of them mentioned that decreasing income was the reason for domestic violence during the Covid-19 pandemic. The other prominent reasons for domestic violence appeared as rising commodity prices (46.8%), long-time staying at home (47.8%), mental unrest (38.1%), and unemployment (27.4%).

3.16.2 Impact of Recent Price Hike on Food Security

The respondents (PLW) were asked whether the households were affected by the recent price hike of essential commodities. About 87% of the respondents mentioned that their households were affected. As copying mechanisms, most of them relied on less expensive food (78%), compromised with taking meat and fish as these were expensive (56.7%), and compromised with the amount of food (62.5%). The findings indicate that three-fifths of these households suffered from moderate food insecurity as they took less food than required.

Chapter 4

4.1 Conclusion and Recommendations

JANO is working towards building the capacity of multiple government bodies in developing nutritional plans, budgets, and effective supervision at the union, upazila, and district levels, as well as building awareness among PLW, adolescents, and farmers/producers on receiving both nutrition-specific and nutrition-sensitive services. The fourth-year annual survey indicates that the interventions of JANO brought considerable changes in increasing women and adolescent girls' knowledge and practices of nutrition-specific and sensitive services. In addition, it was observed that all the government forums and bodies, e.g., CSG, CG, UDCC, UNCC, and DNCC, were functional in terms of their specific responsibilities, including regular meetings, coordination activities with relevant departments, preparation of annual nutrition plans, and budget allocation for nutrition services.

The findings revealed that nutrition-specific services from CC and nutrition-sensitive services from extension departments increased remarkably in 2022 compared to the MTR. It was notable that PLW was not used to going outside, other than for emergencies, in earlier years due to the Covid-19 pandemic. With the gradually improving situation, it became normal for them to access these services. Although the nutrition-specific services from CC increased remarkably, a considerable proportion of deliveries were still taking place at home, and the project should focus on promoting institutional delivery. It is universally accepted that everybody needs to receive nutrition-specific services, like healthcare, as and when necessary. Considering this fact, the project should provide extra effort to bring community people under nutrition-specific services properly. Concerning the projected target of JANO, significant progress was observed regarding the practices of nutrition-sensitive services for PLWs regarding homestead gardening, dietary diversity, and women's empowerment. However, extension services related to nutrition-sensitive issues need to be increased to adopt modern technologies by farmers/producers. Nutrition-sensitive services from different government departments, including agriculture, were not up to the mark compared to the need. Overall, crop variety was good considering the resources (such as cultivable land size), but involvement in homestead gardening was not encouraging.

Adolescents' knowledge and practice of at least five key learning points on nutrition, health, and hygiene increased significantly in 2022 compared to the MTR. In reality, the knowledge and practice of these issues, including gender equality, demerits of early marriage, and nutrition-specific services, should be universal for all adolescents. Students learned about these issues at schools through the Adolescent Corner and GEMs classes. The poor performance of these issues in the MTR might be because schools were closed for a long time due to Covid-19, and students had little scope to get knowledge on these issues at home.

The participation of women in informal decision-making spaces and the meaningful participation of women/adolescent girls in the development and implementation of nutrition action plans increased in 2022 compared to the MTR. But participation in formal decision-making spaces was not satisfactory as per the target. This indicator was calculated considering their participation in the last six meetings of UDCC and CG and participation in participatory tools facilitation with CSGs.

The progress of the indicators related to dietary diversity, access to social safety nets and practicing climate-smart agricultural techniques either achieved or exceeded the targets set for 2023. Considering the achievements of the log frame indicators, it can be concluded that the project is progressing well toward its aims. However, efforts should be continued to strengthen the system/forums/bodies to reach the services at the doorstep of the communities, particularly to the poor and vulnerable.

The progress of some indicators found in the 4th Year Annual Survey in 2022 was due to enhanced services from both the demand and supply side, with normal life being resumed by the end of 2021 following the restrictive Covid-19 situation. In previous years of the project, the nutrition-specific and sensitive services were limited due to the closure of schools, movement restrictions of the service recipients, as well as limitations of the service providers. Simultaneously, the project facilitated a comprehensive learning process to raise awareness of the community, particularly the PLWs, regarding health, hygiene, and nutrition through various program activities such as courtyard meetings, home visits, theatres, and information through ICT. It was also observed that the CSGs were proactive in ensuring nutrition-specific and sensitive services for community people and coordinating with the Union Parishad for safety net support for the PLWs. Moreover, increased coordination among different platforms (UDCC, UNCC, and DNCC, the private sectors) and joint initiates of government departments and private sectors extended their support to the doorsteps before.

4.2 Observation:

The 4th year annual survey observed that the targets of some of the indicators were not rational. For example, the target for the indicator related to nutrition-specific services should be 100%. Similarly, the target of the indicators related to knowledge and practice of hygiene should also be 100%. In addition, the data for indicators under Result 3 of the project need to be collected separately from the farmer/producer. Therefore, separate interview schedules should be incorporated into future studies.

In addition, the measurement methods of some of the indicators are vague and lack specific timeframes for which the indicators are to be measured. For example, the measurement of the indicator '% of women and adolescents have claimed nutrition-specific and sensitive services from relevant service providers' has no time limit as well as no clear-cut idea about the places of services.

The analysis of findings revealed that special attention is necessary for some of the indicators, for example, nutrition-specific and sensitive services for adolescents, nutrition sensitive services from extension, use of nutrition information portal for planning and decision-making by DNCC and UNCC, capacity building of frontline workers for using ICT Apps, nutrition-specific services in terms of institutional child delivery and assistance of delivery by SBA as the project could partially achieve the targets for these indicators. In addition, an increasing focus is essential for improving the six low-performing areas of CSGs for smooth functioning. The covid-19 situation may also be considered for the poor performance of some of the indicators. Moreover, the UDCC needs space to adapt and adjust the planning, budgeting, and implementation of nutrition activities, as UDCCs were recently reformed after the UP election held in 2021.

Because of the above scenarios, JANO should continue its efforts for consolidation of pending works and sustainability of project results. The survey team feels that one year will not be sufficient to complete the pending activities and therefore recommends extending the project period.

"We shall stumble over due to lack of fund but shall try to standup to continue the nutrition activities in the absence of JANO project. Nevertheless, continuation of JANO project is vital to further strengthen coordination between UDCC and UNCC in order to sustain nutritional activities effectively."

-Referring to UDCC coordination of nutrition related future programme activities, one of the UP Chairman of Nilphamari quoted.

4.3 Recommendation

The following recommendations were made from the findings of the study, which are organized according to project result areas:

Expected Result-1:

- Institutional child delivery should be promoted extensively through awareness-raising sessions at the community level. For example, regularly more courtyard meetings should be held every month so that community people are aware and sensitized about the importance of health and nutrition for PLW and children.

- More counseling is necessary to sensitize adolescents to seek nutrition-specific services (iron/folic acid) to remain healthy. Discussions with adolescents indicated that they were not taking medicines (iron/folic acid) properly (every day and for the full period as prescribed by health workers). Therefore, disseminating Iron tablets/folic acid need to be considered a nutrition-specific service. The little Doctor program initiated by the government in primary schools may be replicated in high schools to ensure the distribution of iron tablets/folic acid among adolescent girls. Screening of nutritional/iron deficiency among adolescent girls is necessary. Iron and Folic Acid (IFA) supplementation programs may be initiated for adolescent girls in high schools.

- An adequate supply of medicines always increases health workers' availability, and CG's strengthened supervision mechanisms are necessary to improve CC's service quality.

- The CC may have both male and female health workers to make the services user-friendly for adolescent girls to provide nutrition-specific and, at the same, overcome social stereotypes. Simultaneously, nutrition-specific services may be initiated in schools for adolescent boys and girls because school time coincides with CC office time.

- The Education Officer was aware that some schools maintain vegetable gardens, but he did not have any list. He suggested that if a list of schools doing vegetable gardens and a monitoring format is provided, he can include this issue during school visits for progress monitoring. JANO project can provide this list.

Expected Result-2:

- JANO project accelerated UNCC and DNCC and performed the nutritional activities by connecting UDCC as a grass root platform. Therefore, taking the necessary initiatives through these platforms is required for the possible inclusion of UDCC in NPAN-2 to provide a sense of ownership to UDCC.

- The UNCC president of Kishoreganj upazila, Nilphamari, said that there could be challenges to holding the bi-monthly meetings of UNCC in the absence of the JANO project. Still, if there is a directive from the Ministry, then the Upazila Parishad will be bound to hold the UNCC meetings, and all the UNCC members from the different departments will be compelled to be present in the meeting. JANO project can advocate at the Ministry level to issue this directive from the Ministry.

Expected Result-3:

- Sellers received information and training from the private sector that helped sellers and the private sector run businesses and reach more farmers in rural areas. Farmers are more connected with sellers than government officials as they directly collect input and advice from them frequently. Capacity building of sellers on higher value nutrition products, climate-smart technology is essential and effective to disseminate and aware more farmers. Thus, the private sector may take more initiative to improve the seller's skills to support farmers in the long run.

- More agricultural plot demonstrations should be organized at the UP level to create a spillover effect among the farmers. In the absence of JANO, the concerned UP can perform this activity.

Expected Result-4:

- The project should continue its effort to sensitize government forums (UNCC, DNCC) on utilizing the Nutrition Information Portal for planning and decision-making at district and upazila levels. In addition, system strengthening and governance for the functioning of CSGs, CGs, UDCCs, UNCCs, and DNCCs require more coordination for sustaining nutritional activities. Therefore, advocacy initiative is critical to mainstream the Nutrition Information Portal at the upazila and district level. Furthermore, the project supports UNCC and DNCC in updating the annual nutrition plan and progress to the portal because, currently, the platforms have no human resources. So, BNNC and relevant ministries should explore further to adapt this online monitoring system for data-informed decision-making on nutrition-sensitive and nutrition-specific services.

- JANO should develop the capacity of frontline workers and motivate them to use ICT-based e-learning platforms to disseminate nutrition-specific and sensitive issues to the community effectively.

Cross-cutting (Measurement, Targeting, Sustainability)

- The data collection for PLW and adolescents needs to be covered by separate surveys to measure the indicator regarding the empowerment of women and adolescents to demand and utilize both nutrition-sensitive and nutrition-specific services.
- The data for indicators under Result-3 of the project need to be collected separately from the farmer. Therefore, separate interview schedules for farmers should be incorporated into future studies.
- According to the observation of the evaluation team, the rest of the project period may not be sufficient to complete the pending activities and to make the system sustainable, and, therefore, recommends an extension of the project.

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Annexure

Annex 1A: Logframe Indicators Progress

SL	Level	Indicators	Baseline (incl. reference year)	MTR 2021	Annual Assessment 2022	Targets (incl. reference year)
1.	Outcome	% of women of reproductive age in the targeted districts who are consuming a minimum dietary diversity (MDD)	Nilphamari 30.9% Rangpur 41.8% Overall 34.9% (February-19)	Nilphamari 35.7% Rangpur 45.5% Overall 40.2% (June-21)	Nilphamari 49.7% Rangpur 46.3%% Overall, 47.9% (August-22)	46.9% (2023)
2.	Outcome	Proportion of children 6–23 months of age who receive foods from 4 or more food groups (based the MDD-C methodology) by sex (Percentage)	Boys 18.1% Girls 17.4% Nilphamari 18.1% Rangpur 17.2% Overall 17.8% (February-19)	Boys 22.9% Girls 24.8% Nilphamari 23.3% Rangpur 24.3% Overall 23.7% (June-21)	Boys 64.4% Girls 67.5% Nilphamari 66.5% Rangpur 64.8% Overall, 65.7% (August-22)	30.2% (2023)
3.	Outcome	# of UNCC and UDCC spent budget effectively on nutrition-specific or nutrition-sensitive actions	Nilphamari 0 (DNCC, UNCC, UDCC) Rangpur 0 (DNCC, UNCC, UDCC) Overall 0 (February-19)	2 DNCC, 14 UNCC, 64 UDCC (80 plans) (Source: KII and Consultation meeting) (August 2021)	7 UNCC from project areas and 7 UNCC from non-project areas 64 UDCC from project targeted areas Nilphamari: 3 UNCC and 20 UDCC Rangpur: 4 UNCC and 44 UDCC	7 UNCC, 64 UDCC (will be monitored from 2nd year to 5th year) (2023)

SL	Level	Indicators	Baseline (incl. reference year)	MTR 2021	Annual Assessment 2022	Targets (incl. reference year)
4.	Outcome	% of increased participation of community people, particularly women, in formal (government-led) and/ or informal (civil society-led, private sector-led) decision-making spaces	Participation in meeting discussion Formal: Nilphamari 1.79% Rangpur 1.81% Overall 1.79% Informal: Nilphamari 1.79% Rangpur 1.81% Overall 1.79% (February-19)	Participation in meeting discussion Formal: Nilphamari 10.9% Rangpur 9.7% Overall 10.3% Informal: Nilphamari 9.5% Rangpur 9.9% Overall 9.7% (June-21)	Participation in meeting discussion Formal: Nilphamari 6.3% Rangpur 1.7% Overall, 4.1% Informal: Nilphamari 22.1% Rangpur 14.3% Overall, 18.4%	Formal 11.79% Informal 11.79%
5.	ER-1	% of students disaggregated by sex who apply key learning points regarding nutrition, health, and hygiene at home	Nilphamari 0.22% Rangpur 0% Boys 0.44% Girls 0.0% Overall 0.15% (February-19)	Nilphamari 7.2% Rangpur 8.6% Boys 6.9% Girls 8.2% Overall 7.7% (June-21)	Nilphamari 33.1% Rangpur 29.3% Boys 24.3% Girls 38.3% Overall 31.3% (August-22)	15.4% (2023)
6.	ER-1	% of women and adolescent have claimed nutrition specific and sensitive services from relevant service providers	CC: Nilphamari 37.8% Rangpur 30.7% Overall 35.5% Extension services: 3.98% (February-19)	CC: Nilphamari 43.5% Rangpur 36.4% Overall 40.1% Extension services: 7.2% (June-21)	CC: Nilphamari 83.7% Rangpur 89.3% Overall 86.6% Extension services: Nilphamari 16.7%, Rangpur 10.9%, Overall 14.0%	CC=53.5% Extension services=19% (2023)
7.	ER-1	% of CSGs in targeted communities are functional	0% (February-19)	73%	Nilphamari 80.0% Rangpur 68.8% Overall, 74.20%	60% (2023)

SL	Level	Indicators	Baseline (incl. reference year)	MTR 2021	Annual Assessment 2022	Targets (incl. reference year)
8.	ER-1	# of School Management Committees set agenda for nutrition specific and sensitive services for adolescents in the SMC meeting	Nilphamari 6 Rangpur 1 Overall 7 (February-19)	330 SMCs (Source KII)	Nilphamari 216 Rangpur 114 330 SMC (Source FGD)	330 SMCs (2023)
9.	ER-2	# of Multi-sectoral plans at district, upazila and union level have allocated budget to support nutrition interventions in the two target districts	Nilphamari 0 Rangpur 0 Overall 0 (February-19)	80 plans 2 DNCCs 14 UNCCs 64 UDCCs	80 plans 2 DNCCs 14 UNCCs 64 UDCCs	73 plans with allocated budget (64 unions, 7 upazilas, 2 districts in each year)
10.	ER-2	% of increase of PLW people from the target population received nutrition specific safety net support	Nilphamari 8.0% Rangpur 9.2% Overall 8.4% (February-19)	Nilphamari 11.5% Rangpur 13.5% Overall 12.4% (June-21)	Nilphamari 12.8% Rangpur 39.1% Overall 25.1% (August-22)	18.4% (2023)
11.	ER-2	% of women and adolescent girls of target population in government forums (UDCC, CG, CSG) meaningfully participated in the nutrition action plan development and implementation process	Nilphamari 0 Rangpur 0.6% Overall 0.2% (February-19)	Nilphamari 43.4% Rangpur 39.3% Overall 41.2% (June-21)	Nilphamari 64.3% Rangpur 63.0% Overall, 63.6% (From Participatory Tools Facilitation and minutes from UDCC, CG	60% (2023)
12.	ER-2	# of platforms in the target districts which allow effective feedback mechanisms for service receivers	Nilphamari 0 (DNCC, UNCC UDCC, CC) Rangpur 0 (DNCC, UNCC UDCC, CC) Overall 0 (February-19)	64 Unions and 208 CCs	DNCC=02 UNCC=14 UDCC=64 CC=208	64 Unions and 208 CCs

SL	Level	Indicators	Baseline (incl. reference year)	MTR 2021	Annual Assessment 2022	Targets (incl. reference year)
13.	ER-3	% of households involved in the production of higher value nutrition products	Nilphamari 34.5% Rangpur 41.0% Overall 36.7% (February-19)	Nilphamari 37.4% Rangpur 48.0% Overall 42.3% (June-21)	Nilphamari 49.9% Rangpur 43.5% Overall 46.9% (August-22)	56.7% (2023)
14.	ER-3	% of households practicing climate smart agricultural techniques	Nilphamari 3% Rangpur 8% Overall 5% (February-19)	Nilphamari 12.6% Rangpur 15.5% Overall 13.9% (June-21)	Nilphamari 19.4% Rangpur 16.0% Overall 17.8% (August-22)	25% (2023)
15.	ER-3	# of initiative jointly taken as a result of tripartite agreement	Nilphamari 0 Rangpur 0 Overall 0 (February-19)	2 initiatives taken	11 initiatives taken in four thematic areas (4 in Agriculture, 4 in Livestock, 2 in WASH and 1 in Micronutrient) among JANO, line department (DAE, DLS, Department of Women & Child Affairs) and Private sector (ACI Seed, ACI Animal Health, Mega Feed, Nirapad Sanitary Napkin, SMC) (August-22)	At least 2 initiatives will be taken on each of the following thematic areas: agriculture, livestock, WASH, micronutrient supplementation as an outcome of tripartite MoU signing. (2023)
16.	ER-4	# of government forums (UNCC, DNCC,) utilizing Nutrition Information Portal for planning and decision making at district and 48 upazila level	There is no Nutrition Information Portal for planning and decision making at district and 35 upazila level (February-19)	One web-based platform developed	One web-based platform has been developed. Annual Nutrition Plan data entry has been completed for all 14 Upazilas. But Govt officials yet to using this portal. (August-22)	9 govt. forums (2 DNCC, 7 UNCC) (2023)

SL	Level	Indicators	Baseline (incl. reference year)	MTR 2021	Annual Assessment 2022	Targets (incl. reference year)
17.	ER-4	% of frontline workers and volunteers using the ICT based e-learning platform to support the community based on needs	0% Frontline workers (February-19)	Preparatory work completed	Government Frontline: worker: Nilphamari 0% Rangpur 0% Overall, 0% Volunteers: Nilphamari 64% Rangpur 56% Overall, 60% Both volunteer and frontline workers: Nilphamari 64% Rangpur 56% Overall 60% (August-22)	50% of relevant govt. frontline workers and volunteers (2023)
18.	ER-4	% of community members who have accessed or received ICT based nutritional information	Nilphamari 2.4% Rangpur 7.8% Male 4.1% Female 8.3% Overall 4.2% (February-19)	Nilphamari 13.5% Rangpur 14.5% Male 14.8% Female 15.4% Overall 14.0% (June-21)	Nilphamari 43.6% Rangpur 13.9% Male 31.6% Female 27.8% Overall 29.7% (August-22)	45% of community members (2023)

Annex-1B: Indicators calculation notes

Indicator 1: % of women of reproductive age in the targeted districts who are consuming a minimum dietary diversity (MDD)

Calculation notes:
Followed standard procedure of MDD calculation. To calculate the indicator's value, we divided the number of pregnant and lactating women whose diet consisted of at least 5 food groups by the total number of surveyed pregnant and lactating women (excluding those for which the caregiver could not provide the required information). The result multiplied by 100 to convert it to a percentage. Data was disaggregated by districts, pregnant and lactating women.

This indicator captures the percent of women of reproductive age (15-49) in the population (Pregnant and Lactating women) who are consuming a diet of minimum diversity (MDD-W). A woman of reproductive age is considered to consume a diet of minimum diversity if she consumed at least five of 10 specific food groups during the previous day and night. The 10 food groups included in the MDD-W indicator are:
1. Grains, white roots and tubers, and plantains
2. Pulses (beans, peas, and lentils)
3. Nuts and seeds16 (including groundnut)
4. Dairy
5. Meat, poultry, and fish
6. Eggs
7. Dark green leafy vegetables
8. Other vitamin A-rich fruits and vegetables
9. Other vegetables
10. Other fruits

The numerator for this indicator is the sample-weighted number of women 15-49 years in the sample who consumed at least five out of 10 food groups throughout the previous day and night. The denominator is the sample-weighted number of women 15-49 years of age in the sample with food group data.

- Unit: Percent
- Type: Outcome
- Disaggregate by: District, Pregnant and lactating women
- Direction of change: Higher is better

Data source: Household survey

Indicator 2: Proportion of children 6–23 months of age who receive foods from 4 or more food groups (based the MDD-C methodology) by sex (Percentage)

Calculation notes:
Followed standard procedure of MDD-C calculation. To determine the indicator's value, we divided the number of children 6-23 months age whose diet consisted of at least 4 food groups by the total number of surveyed children 6-23 months age (excluding those for which the mother/caregiver could not provide the required information). The result multiplied by 100 to convert it to a percentage. Data was disaggregated by districts and gender of children.

Minimum dietary diversity for breastfed children 6-23 months is defined as four or more food groups out of the following 7 food groups (refer to the WHO IYCF operational guidance document cited below):
1. Grains, roots, and tubers
2. Legumes and nuts
3. Dairy products (milk, yogurt, cheese)
4. Flesh foods (meat, fish, poultry, and liver/organ meats)
5. Eggs
6. Vitamin-A rich fruits and vegetables
7. Other fruits and vegetables

Indicator 3: # of UNCC and UDCC spent budget effectively on nutrition-specific or nutrition-sensitive actions

This is qualitative indicator. This indicator aims to explore what and how the budget of UNCC and UDDC spent on account of nutrition specific and nutrition sensitive services. Both platforms must have annual plan and budget of current and previous year. The plan and budget of UNCC should represent the cumulative or collation of budgetary information from respective departments as per NPAN-2 or project definition. For measuring two mandatory conditions:

1. For UNCC: implementation of at least 50% of planned actions
2. For UDCC: spending of at least 30% of the fiscal year budget on nutrition-specific or nutrition-sensitive actions

Data collection process:

- Collect annual plan, budget from sampled UNCC and UDCC. The plan and budget should be for at least three fiscal years because it gives a trend of both budget allocation and burn rate.
- Analyze the opinion of UNCC and UDCC members on how they develop plan and spent money. What percent of budget allocation increased/decreased in current fiscal year than previous? Why and why not? What is overall expenditure status? What was key focus of expenditure? What percent of budget they spent exclusively for nutrition sensitive and nutrition specific.

Analysis process: Compile all budgetary record and prepare table that show the budget record of three fiscal year. Do this process for UNCC and UDCC.

Indicator 4: % of increased participation of community people, particularly women, in formal (government-led) and/ or informal (civil society-led, private sector-led) decision-making spaces

Calculation step:
For informal decision-making spaces:

- This indicator measures the women's presence in informal forum through participation and decision making in meeting.
- To calculate the indicator's value two mandatory conditions must be satisfied. The woman must be member of an informal forum and she attends in meeting regularly or often OR she participates in discussion during meeting regularly or often. The informal forums are Village savings and loan association (VSLA), Youth group, Women empowerment group, Local club, Farmers field school (FFS), Adolescent club, Theatre for development (TFD), etc.
- Disaggregation: None
- Unit: Percent
- Type: Outcome
- Direction of change: Higher is better

- Data source: Households survey
- Measurement notes: Collect data on membership of informal forum (listed above) of five category of members. These are adult female, adult male, adolescent boy, adolescent girl, no membership. Respondent could be women of reproductive age, but she should be able to provide information of other household members.

For formal decision-making spaces:

- This indicator measures the women's presence in formal forum through participation and decision making in meeting.
- To calculate the indicator's value two mandatory conditions must be satisfied. The woman must be member of a formal forum and she attends in meeting regularly or often OR she participates in discussion during meeting regularly or often. The formal forums are Community group (CG), Community support group (CSG), School management committee, Union development coordination committee, Family welfare center management committee.
- Disaggregation: None
- Unit: Percent
- Type: Outcome
- Direction of change: Higher is better
- Data source: Households survey

Measurement notes: Collect data on membership of formal forum (listed above) of five category of members. These are adult female, adult male, adolescent boy, adolescent girl, no membership. Respondent could be women of reproductive age, but she should be able to provide information of other household members.

Indicator 5: % of students disaggregated by sex who apply key learning points regarding nutrition, health, and hygiene at home

Calculation step:

This is composite indicator. The indicator measures the applied knowledge of students at least five out of eight selected learning topics. These are as follows:

- Food ingredients, food preparation, and food serving: The following three issues considered: Whether the respondents applied learning on two issues i.e., a. Food ingredients, food preparation and food serving, b. Food & food nutrition management
- Intake of diversified food (MDD for adolescents): For this variable, ten questions were asked as per FANTA II guideline.
- Home gardening: Whether the respondent has home gardening?
- Safe drinking water: Whether the respondent has safe drinking water facilities at home
- Adolescent health and hygiene: Whether the respondent have applied learning on three issues i.e., hygiene, puberty, adolescent health, and hygiene
- Handwash in key times: Whether the respondent do handwash before taking food, after using toilet, before food preparation?
- Use of sanitary latrines: Whether the respondent use sanitary latrine at home?
- Information about health service providers: Whether the respondent practical knowledge on health, health care?

A total of 23 questions (dichotomous i.e., Yes/No) were asked to students to collect the information for measuring this indicator. The number of adolescent boys and girls from school who participate in learning session and subsequently applied their learning at home in the last 12 months is expressed as percentage of total respondent's students.

For the calculation of this indicator, the following formula is applied:

Applied learnings= (Intake diversified food + food ingredient + home gardening + safe drinking water + adolescent health hygiene + handwashing + use sanitary latrine + info health service).

- Disaggregation: Sex, district
- Unit: Percent
- Type: Outcome
- Direction of change: Higher is better
- Data source: Student survey

Indicator 6: % of women and adolescent have claimed nutrition specific and sensitive services from relevant service providers

The indicator measures two different category of nutrition services received by both women and adolescent girls. Services received from Community clinics or Union health and family welfare centre for last 12 months by women and adolescent is considered as nutrition specific service. Service received from department of agriculture extension, department of livestock and department of fisheries for last 12 months by women and adolescent is considered as nutrition sensitive services. The following variable used to measure the indicator.

For nutrition specific services:

At least one condition meet:

- Women received ANC services from CC
- Women received counseling or information on importance of PNC from CC
- Women received counseling or information on nutrition and health care from CC

Both condition meet:

- Adolescent received services on health care and nutrition
- Adolescent received services from CC

Claiming services on nutrition service meet if women or adolescent fulfil above mentioned condition.

For nutrition sensitive services:

Two conditions must meet

- Women or adolescent received services from Department of agricultural extension or Department of fisheries or livestock
- Measurement and presentation of indicator value on nutrition specific and nutrition sensitive services presented separately.
- Disaggregation: District
- Unit: Percent
- Type: Outcome
- Direction of change: Higher is better
- Data source: Households survey

Indicator 7: % of CSGs in targeted communities are functional

This is composite indicators. To measure the indicator, JANO has developed tool i.e., Participatory tools facilitation. The data collection method follows both qualitative and quantitative. The performance of CSGs was evaluated based on 11 issues which included:

i) Understanding on CSG group objectives.

ii) Group operational nutrition and gender sensitive plan
iii) Team cohesion and leadership; iv) Learning sharing space
iv) Record keeping; vi) Access to and use of services/external relationship
v) Regular interaction with community; viii) Stopping harmful social phenomena
vi) CSG encouragement of community to provide suggestions for better service delivery/modification of CC and up service
vii) Gender equity
viii) Support Community People for Resource Mobilization.

To evaluate the overall performance of CSGs, a 0-3 scale score has been assigned on each of the issues. Aggregating the scores of 11 issues, a final score has been computed for each of the CSGs. Based on the total scores, CSGs were categorized in four groups. These are poor (Score below 16), moderate (Scores 16-18), fair (Scores 19-24), excellent (Scores 25-33).

Indicator 8: # of School Management Committees set agenda for nutrition specific and sensitive services for adolescents in the SMC meeting

This is qualitative indicator. Opinion from member of school management committee (SMC) collected through focus group discussion. For facilitating discussion, a checklist has used. The following subjective information sought from SMC, the homogenous and difference in opinion were analysed and compline to present findings of this indicator.

- Meeting record of SMA (Hint: how, when, minutes, decision execution)
- Important responsibilities played by SMC. (Hint: fund use, operation, student enrolment, monitoring of academic performance, nutrition-health-hygiene)
- Agenda for nutrition specific and sensitive services (Hint: how they set agenda, how they implement, how adolescent become benefited?)
- Involvement with development organization (focus on gender, health, nutrition, and hygiene)
- SMC capacity on gender, health, nutrition, and hygiene issues (did they receive training, how they apply learning etc.?)
- Current scenario of gender sensitivity in school (Hint: How SMC perceive gender sensitivity?)

Indicator 9: # of Multi-sectoral plans at district, upazila and union level have allocated budget to support nutrition interventions in the two target districts

This is qualitative indicator. The indicator explores what and how platform allocate budget to support nutrition interventions. The platforms are DNCC, UNCC and UDCC. These platforms shall have annual plan and budget (compilation of budget and plan from different department) as per NPAN-2 guidelines. A checklist has used for collecting information for this indicator from member of DNCC, UNCC and UDCC. The key information that was sought are as follows:

- Proof of annual plan
- Budget copy of last three fiscal years
- Opinion collection on:
- How they develop annual nutrition plan and how they coordinate among all department, CSO etc.?
- How does platform monitor the implementation, budget expenditure etc.?
- How do they ensure the nutritional needs, aspects of women, adolescent, children etc.?
- How do they maintain feedback mechanism?
- How shall the platform continue their role after project phase out?

Indicator 10: % of increase of PLW people from the target population received nutrition specific safety net support

The indicator explores receiving benefit from social safety net program of Pregnant and Lactating Women. To meet the requirement of the indicator PLW must have received at least one benefit over the last 12 months as follows:

- Maternity allowance
- One thousand days
- Supplementary feeding
- Maternal health voucher
- Area-based community nutrition scheme
- VGF
- VGD
- Iron folic acid supplementation

For the 4th annual survey, we considered variable Maternity allowance, 1000 days, VGF and VGD only. The following variables only considered out of 10 regular social safety net programs:

- Disaggregation: District
- Unit: Percent
- Type: Outcome
- Direction of change: Higher is better
- Data source: Households survey

Indicator 11: % of women and adolescent girls of target population in government forums (UDCC, CG, CSG) meaningfully participated in the nutrition action plan development and implementation process

To measures the indicator the meeting minutes of last 12 months and opinion from sampled UDCC, CG, CSG reviewed and consider following conditions:

- Total number of women and adolescent member of the forums
- Identify average attendance of women and adolescent in the meeting of last 12 months
- How women and adolescent participate in these meetings i.e., whether they raise agenda, take participation in discussion
- What decisions taken against proposed agenda in the meeting
- Any example of implementation of decision which was raised by women and or adolescent?

Indicator 12: # of platforms in the target districts which allow effective feedback mechanisms for service receivers

This is qualitative indicator. To measure this indicator the following information should consider while interviewing with DNCC, UNCC, UDCC, CC:

- Availability of a complain box/hotline number/or any other mechanism
- Open complaint box regularly for addressing in the monthly meeting.
- Register all submitted complain
- Public hearing meeting

- Discussed in the regular meeting about the

To support the qualitative findings, relevant information collected from household survey. The variables are as follows:

- Awareness of PLW where to complaint?
- Did PLW make any complaint in last 12 months
- Did PLW receive response from authority on complain she made?

Other

- Disaggregation: District
- Unit: Percent
- Type: Outcome
- Direction of change: Higher is better
- Data source: Households survey and KII with platforms

Indicator 13: % of households involved in the production of higher value nutrition products

Higher value nutrition products refer the five categories of crops. These are as follows:
1. Is bio-fortified
2. Is a legume, nut, or some seeds
3. Is an animal source food, including dairy products
4. Is a dark yellow or orange-fleshed root or tuber
5. Is a fruit or vegetable

To measure the indicator, information on production of crops (a list of 40 crops produced in homestead and crop field, animal rearing i.e., goat, sheep, cow, buffalo, biproduct). The indicator definition (JANO logframe) did not clarify whether do a household must meet all five criteria or any one criterion. For the 4^{th} annual survey, we consider if a household produce crops of four categories except bio-fortified is considered a household involvement in the production of higher value nutrition products.

- Disaggregation: District
- Unit: Percent
- Type: Outcome
- Direction of change: Higher is better
- Data source: Households survey

Indicator 14: % of households practicing climate smart agricultural techniques

The indicator measures household practice at least 3 climate smart agricultural techniques out of 13 (although indicator definition 20 techniques but, it is 13).
The climate smart techniques are

- Submergence-resistant varieties (BRRI 51, BRRI 52)
- Zinc Enriched variety of rice (BRRI Dhan 62, 72)
- Disease-resistant varieties (blast)
- Conservation agriculture (Zero/ Minimum tillage)
- Solar-powered irrigation
- Intercropping

- Year-round aquaculture
- Biogas
- Crop diversification
- Fodder production
- Vegetable Cultivation on raised bed
- Organic vegetable farming
- Mulching

Calculation process: Number of households that practices 3 or above climate smart agricultural techniques divided by total respondents.

- Disaggregation: District
- Unit: Percent
- Type: Outcome
- Direction of change: Higher is better
- Data source: Households survey

Indicator 15: # of initiative jointly taken because of tripartite agreement

This is qualitative indicator. It measures the joint initiative taken by three parties i.e., JANO, Private sectors and Relevant ministry of Bangladesh government. The initiates cover four thematic areas that directly link with nutrition sensitive services. The initiative collectively contributed to production of higher value nutrient crops and adaptation of climate smart techniques.

Data sources: Project record, Opinion of private sector and representative from respective department.

Indicator 16: # of government forums (UNCC, DNCC,) utilizing Nutrition Information Portal for planning and decision making at district and 57 upazila level

The indicator refers number of government forum that uses the web portal of BNCC. To measures the indicator, project document reviewed, opinion collected from DNCC and UNCC.
Conditions for the indicator

- Provision of web-based portal developed by BNCC with project support
- Access to the portal for government official at district and upazila level
- Government officials provide data to the web portal as required

Indicator 17: % of frontline workers and volunteers using the ICT based e-learning platform to support the community based on needs

Project record used to measure the indicator. The information has validated from project focal and frontline workers i.e., CHCP.

Indicator 18: % of community members who have accessed or received ICT based nutritional information

The indicator measures status of access to nutritional information from the mobile-based learning apps and receive text messages by community members. The following conditions were applied to measure the value of the indicator

- Households must have access to smartphone and received E-learning apps from JANO project. OR
- PLW received message in mobile on feeding of children under five for the last 12 months

Annex 2: Detailed Methodology

Study context

Despite significant improvements, malnutrition remains a major public health problem world-wide, particularly in low-income developing countries (World Health Organization, 2022). Globally, undernutrition is cause for 45% death of under-5 children which mostly occur in low and middle-income countries (WHO, 2022) including Bangladesh (Talukder, 2017). According to BDHS 2017-2018, death of under 5 children is 45/1000 in Bangladesh and 47/1000 in Rangpur division. Globally in 2020, 149 million children of under 5 years of age were estimated to be stunted (too short for age), 45 million were estimated to be wasted (too thin for height), and 38.9 million were overweight or obese (WHO, 2022). Every country in the world is affected by one or more forms of malnutrition. Combating malnutrition in all its forms is one of the greatest global health challenges (WHO, 2022). According to the report on the State of the Food Security and Nutrition in Bangladesh 2016, majority 55% of the adult women (20-59 years) do not consume adequate (five or more food groups of 10) diversified diets (Helen Keller International, Bangladesh, 2021). Prevalence of inadequate dietary diversity was found higher among girls (55·4 %) than for the boys (50·6 %) in almost all the socioeconomic condition (Akter et al., 2021).

Implementation of an Enhanced Homestead Food Production (EHFP) programme in Nepal and Hill Tract area of Bangladesh showed increases year-round availability and intake of diverse micronutrient-rich foods and promotes optimal nutrition and hygiene practices among poor households which also reduced stunting among children, 10.5% in Nepal and 18% in Bangladesh (Haselow, Stormer, Pries, & Nutrition, 2016). A study has documented that land ownership, women's literacy, access to media, and women's freedom to access the market significantly reduce the risk of food insecurity and improve dietary diversity (Harris-Fry et al., 2015) in Bangladesh. Another study done in similar context found intensive nutrition education significantly improves the status of moderately malnourished children with or without supplementary feeding (Roy et al., 2005).

Several socioeconomic factors are found to responsible for malnutrition (Talukder, 2017). It is documented that the underlying causes of malnutrition for the children in Bangladesh are high poverty level, lower food security, untreated diarrhoea, untreated acute respiratory infections, low per capita calorie intake and share of total dietary energy from cereals is high, lower minimum acceptable diet for women and children, poor water quality, lack of sanitary facilities and lower access to improved sanitation facilities, unhygienic behaviours, low female literacy rate, poor coverage of Social Safety Net programs, high food expenditure as a share household income (BNNC, 2020).

Nutrition Governance in Bangladesh and Plan of Actions

Bangladesh National Nutrition Council (BNNC) was established in 1975 to address malnutrition through multisectoral approach. The implementation of the first National Plan of Action on Nutrition from 1997 to 2015, have contributed a lot in improving health and nutrition indicators over the last decade. During 2007-2017, the prevalence of stunting fell from 43% to 31% and wasting declined from 17% to 8% (BDHS, 2017). According to the MICS (2019), the level of underweight has declined significantly from 31.9% in 2012-13 to 22.6% in 2019. The Government of Bangladesh is trying to ensure food and nutrition security for its people, especially for the vulnerable groups, pregnant and lactating mothers, and children through a comprehensive Second National Plan of Action for Nutrition (NPAN-2) from 2016 to 2025. NPAN-2 has successfully engaged 22 nutrition relevant ministries in implementing its activities to turn it into a real multisectoral program which have been able to incorporate Annual work plans of those ministries with their own budget. The NPAN-2 is implementing considering 6 major thematic areas, viz., Nutrition for all following lifecycle approach; Agriculture and diet diversification and locally adapted recipes; Social protection; Integrated and comprehensive social and behaviour change communication; Monitoring,

evaluation, and research; and Capacity building. In addition, the key strategies were considered as improve the nutritional status of all citizens, including children, adolescent girls, pregnant women, and lactating mothers; ensure availability of adequate, diversified and quality safe food and promote healthy feeding practices; strengthen nutrition-specific, or direct nutrition, interventions; strengthen nutrition-sensitive or indirect interventions; and strengthen multi-sectoral programs. For implementing NPAN-2, emphasis has been given on nutrition governance, institutionalization, and coordination at different tiers.

BNNC continued its efforts to implement the NPAN-2 through improving the nutrition governance both at national and sub-national level by increasing horizontal (inter-sectoral coordination with various line ministries, platforms, the executive committee and the standing technical committee, SUN Networks, etc.) and vertical coordination (with DNCC and UNCC); advocacy for resource mobilization (internal and external), developing a monitoring system to monitor the functionality of sub-national committees. CARE Bangladesh along with some fellow partners has taken the initiative to establish a role model for implementation of NPAN-2 through Joint Action for Nutrition Outcome (JANO) Project.

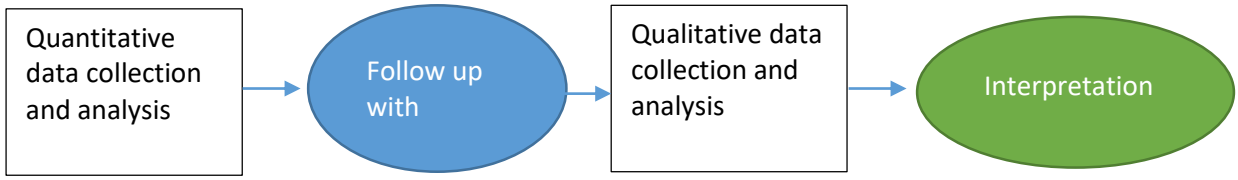
Methodological Approach

The study adopted both quantitative and qualitative techniques to gather the necessary data and information to assess the status of log frame indicators. Quantitative methods were applied to gather data and information from pregnant and lactating women, adolescent girls/boys, household heads/farmers on several nutrition specific and sensitive issues including healthcare, hygiene, and food consumption behaviour following MDD methodology for women and children. In addition, the relevant household-level data on the status of production of high-value nutritious crops and adoption of climate smart technology were collected through quantitative survey. On the other hand, qualitative methods were applied to assess the performance of CSGs and gather the views of beneficiaries (lactating women, pregnant women, adolescent boys/girls) on empowerment to demand and utilize nutrition sensitive and specific services along with the views of stakeholders on project achievements with respect to goals.

Considering the diversified respondents (pregnant women, lactating mothers, adolescent girls, and boys studying at secondary level in schools and Madrasah, agricultural farmed households, and stakeholders from different bodies) and multidimensional data and information, the study has adopted the following techniques to gather the necessary data and information:

- Household Survey
- Student's Survey
- Participatory Tools Facilitation
- Focus Group Discussion (FGD)
- Key Informant's Interviews (KII)
- In-depth Interviews (IDIs)
- Meeting/ Group Discussion
- Outcome Harvesting
- Case Studies, and
- Documents Review

The study team prepared the research design based on 'explanatory sequential design' of a mixed method research approach (Creswell, 2012). An explanatory sequential mixed methods design consists of first collecting quantitative data and then collecting qualitative data to help explain or elaborate on the quantitative results.



Methodological Framework

The key indicators/issues, level of inquiry (outcome/expected results), data collection methods and respondents/participants have been identified in the methodological framework (Table 1).

Table 1: The methodological framework of the assessment

	Indicators	Associated with Outcome and Results	Survey techniques	Respondents/ Participants/ Stakeholders
1	% of women of reproductive age in the targeted districts who are consuming a minimum dietary diversity (MDD)	Outcome	Household survey	Women aged 15 to 49 years
2	Proportion of children 6-23 months of age who received foods from four or more food groups (based the MDD-C methodology) by sex	Outcome	Household survey	Lactating Women
3	# of UNCC and UDCC spent budget effectively on nutrition-specific or nutrition-sensitive actions	Outcome	Documents review, Meeting, KII	Member of UNCC and UDCC
4	% of increased participation of community people, particularly women, informal (government led) and/or informal (civil society led, private sector led) decision making spaces	Outcome	Household survey, Student's survey, FGD, KII, IDI	PLW, Adolescent girls/boys, Member of UNCC and UDCC
5	% of students disaggregated by sex who apply key learning points regarding nutrition, health, and hygiene at home	ER-1	Student's survey, FGD, KII	Adolescent students aged 10 to 19 years, UEO/AUEO/DEO
6	% of women and adolescents have claimed nutrition-specific and sensitive services from relevant service providers	ER-1	Outcome harvesting, Household survey, Student's survey, FGD	Women aged 15 to 49 years and Adolescent Girls/Boys
7	% of CSGs in targeted communities are functional	ER-1	Participatory tools facilitation	CSG members

	Indicators	Associated with Outcome and Results	Survey techniques	Respondents/ Participants/ Stakeholders
8	# of School Management Committees set agenda for nutrition-specific and sensitive services for adolescents in the SMC meeting	ER-1	FGD	SMC members
9	# of multi-sectoral plans at district, Upazila, and union levels have allocated budget to support nutrition interventions in the two target districts	ER-2	KII, Meeting, Documents review	Representatives of DNCC, UNCC, UDCC
10	% of increase of PLW people from the target population received nutrition specific safety net support	ER-2	Household survey, FGD, IDI	Women aged 15 to 45 years
11	% of women and adolescent girls of target population in government forums (UDCC, CG, CSG) meaningfully participated in the nutrition action plan development and implementation process	ER-2	Household survey, Student's Survey, FGD, Meeting, KII	Women aged 15 to 45 years, Adolescent girls aged 10 to 19, Members of CG, CSG & UDCC
12	# of platforms in the target districts which allow effective feedback mechanisms for service receivers	ER-2	Household Survey, Meeting, KII	Women aged 15 to 45 years, Representatives of UNCC, UDCC
13	% of households involved in the production of higher-value nutrition products	ER-3	Household survey, FGD, KII	Producers or farmers, SAAO, Livestock Officer, Private sector delegates
14	% of households practicing climate smart agricultural techniques	ER-3	Household survey, FGD, KII	Producers or farmers, SAAO
15	# of initiative jointly taken as a result of tripartite agreement	ER-3	KII, Documents review	Private sector, Government officials from livestock and agriculture, project
16	# of government forums (UNCC, DNCC) utilizing Nutrition Information Portal for planning and decision making at district and Upazila level	ER-4	Meeting, KII, Documents review	Representatives of UNCC, UDCC
17	% of frontline workers using the ICT based e-learning platform to support the community based on needs	ER-4	KII	Government and Non-govt officials working in intervention area

	Indicators	Associated with Outcome and Results	Survey techniques	Respondents/ Participants/ Stakeholders
18	% of community members who have accessed or received ICT based nutritional information	ER-4	Household survey, Student's survey, FGD	Women aged 15 to 45 years; Adolescent girls aged 10 to 19

Sampling Techniques and Approaches

Sampling technique and sample size estimation are the key activities undertaken when designing any research study. An adequate estimate (not less and not more) of sample size is important for ethical, scientific, and logistic reasons.

This study has conducted Household Survey, Student's survey, Participatory tools facilitation, Focus group discussion (FGD), Key Informant's Interviews (KII), In-depth Interviews (IDIs), Meeting/Group Discussion, outcome harvesting and Case Studies to achieve its objectives. The sample size and sampling techniques in line with the data collection approaches are different as required to represent the statistically valid results. The following sections represent the sample size and sampling techniques associated with different survey techniques for this evaluation study:

(a) Sampling design for Household Survey

It is noted that the data and information collected through household survey was used to assess the indicators viz., % of women of reproductive age in the targeted districts who are consuming a minimum dietary diversity (based on MDD-W), Proportion of children 6-23 months of age who receive foods from 4 or more food groups (based on MDD-C methodology) by sex (percentage), % of increased participation of community people, particularly women, informal (government led) and/or informal (civil society led, private sector led) decision making spaces, % of increase of PLW people from the target population received nutrition specific safety net support, % of women and adolescent girls of target population in government forums (UDCC, CG, CSG) meaningfully participated in the nutrition action plan development and implementation process, % of households involved in the production of higher-value nutrition products, % of households practicing climate smart agricultural techniques, % of frontline workers using the ICT based e-learning platform to support the community based on needs, % of community members who have accessed or received ICT based nutritional information.

Sampling Technique:

The study has adopted stratified cluster sampling design where intervention districts (Rangpur and Nilphamari) will be considered as strata and intervention villages will be considered as clusters. The study has covered 30 clusters in implementation of household survey, because thirty clusters are regarded as the minimum number of clusters needed to have a statistically representative sample of a population by internationally recognized survey designs, such as WHO's EPI cluster sampling design[1]. The clusters (intervention villages) have been selected using PPS (Probability-proportional-to-size) systematic sampling procedure where total population was used as weights in order to get a balanced sample.

[1] Turner, A.G, Magnani, R.J., & Shuaib, M. (1996). A Not Quite as Quick but Much Cleaner Alternative to the Expanded Programme on Immunization (EPI) Cluster Survey Design. International Journal of Epidemiology, 25, 198.

Sample Size:

The study has considered the following recognized sample size determination formula to estimate its sample size for household survey:

$$n = \frac{p(1-p)Z^2}{d^2} \times Deff$$

Where, p is the indicator percentage (% of women of reproductive age consuming a minimum dietary diversity), Z is the normal variate value at 95% confidence interval, d is the error margin, and Deff is the assumed design effect for cluster sampling. It is expected that 46.9% women of reproductive age (15-49 years) will consuming a minimum dietary diversity in 2023 (ToR) and this study has considered this indicator to determine the sample size. The sample size determination based on this key indicator is expected to fulfil the required sample sizes for other indicators under household survey.

Based on 46.9% indicator percentage (% of women of reproductive age expected to consume a minimum dietary diversity by 2023), Z value as 1.96 (at 95% confidence interval), error margin as 0.05 and highest response distribution with an assumed design effect 1.30, the above-mentioned sample size determination formula yields that at least 497 women of reproductive age are required to cover to assess the key quantitative indicators of the study. This sample size is adequate to evaluate the food security status in a sub-population and such numbers were suggested by many documents, like Idealistic Approach of Maxwell and Caldwell[2].

Since several project indicators is related with lactating and pregnant women, the sample size for both groups of women should be reasonable. Taking this fact in consideration, the study increases the sample number of women from 497 to 630. Among 630 sample women, 420 was covered from lactating mother and 210 was covered from pregnant women. Thus, 14 lactating mother (with a children aged 6-23 months) and 7 pregnant (3+months of pregnancy) were covered in a cluster to assess the performance indicators of JANO project.

To identify the eligible women (lactating mother with a child aged 6-23 months and pregnant women with 3+months of pregnancy), the study has planned to prepare a list of households in each cluster. It was perceived that the visiting of 100 households in a cluster might fulfil the required number lactating mothers with children (aged 6-23 month), pregnant mothers along with agricultural farm households. For smooth implementation of the household survey, the list of all the households of the selected villages/clusters was prepared first and required number of respondents of each of categories (lactating mothers, pregnant women, children aged 6-23 month, and agricultural farm households) was identified from the list. Finally, the targeted households covering lactating mothers, pregnant women, children aged 6-23 month, and agricultural farmer was selected for interview. The list of sample villages (selected using PPS systematic procedure) is given in following table.

Table 2: List of Sample Villages

District	Upazila/Thana Name	Union/Ward Name	Village Name
Rangpur	Gangachara Upazila	Alam Biditar Union	Paikan
		Barabil Union	Uttar Pana Pukur Giri
		Gangachara Union	Mandrain Paschimpara
			Gangachara
		Lakshmitari Union	Paschim Ichli

[2] Maxwell, D., & Caldwell, R. (2008). The Coping Strategies Index. Second Edition. Field Methods Manual, USAID, Care, WFP, Feinstein International Center and TANGO.

		Gajghanda Union	Telitari
		Nohali Union	Char Nohali
	Kaunia Upazila	Haragachh Union	Thakurdas (Part)
		Kursha Union	Gadadhar
		Sarai Union	Udaynarayan Machhari
		Tepa Madhupur Union	Rajib
	Taraganj Upazila	Ekarchali Union	Hajipur
		Hariarkuti Union	Paschim Kismat Menanag
		Sayar Union	Damodarpur
Nilphamari	Domar Upazila	Bhogdabari Union	Purba Bhogdabari
		Gomnati Union	Uttar Gomnati
		Anga Matukpur Union	Melapanga
	Jaldhaka Upazila	Balagram Union	Salangram
		Golna Union	Kaliganj
		Kanthali Union	Uttar Deshibai
		Shimulbari Union	Ghugumari
	Kishoreganj Upazila	Barabhita Union	Melabar
		Kishoreganj Union	Gada
		Nitai Union	Nitai
		Ranachandi Union	*Ranachandi
	Nilphamari Sadar Upazila	Chaora Bargachha Union	*Kanchan Para
		Kachukata Union	*Dondari
		Kunda Pukur Union	*Suti Para
		Ramnagar Union	*Bishmuri
		Tupamari Union	*Dolua Dogachhi

(b) Sampling design for Student's Survey

The study has conducted Student's Survey in 30 selected high schools located in the intervention areas to assess whether the adolescent girls/boys in communities are empowered to demand and utilize both nutrition sensitive and nutrition specific services in addition to assess their perception on key learning points related to nutrition, health, hygiene, gender etc. These schools have been selected from the schools adjacent or nearby to the villages selected for household survey (Table 3). In each of the selected schools, a total of 20 students were selected for interview covering all the grades/classes. Thus, 600 students (adolescent girls/boys) were covered from 30 selected high schools under Student's Survey.

Table 3: List of sample schools

Upazila	Union/Ward Name	School name
Gangachara	Alam Biditar Union	Boraibari BL High School
	Barabil Union	Bakpur Kadiria Dakhil Madrasha
	Gangachara Union	Changmari Mandrain BL High School
		Kutipara changmari High School
	Lakshmitari Union	Chor Eshorkol Junior school
	Gajghanta Union	Taluk Habu BL High School
	Nohali Union	Kochua Nohali Bagdahora ML High School
Kaunia	Haragachh Union	Emamgonj School & College

	Kursha Union	Dhormeshwar Mohesha BL high School
	Sarai Union	Uday Narayon Mashari High School
	Tepa Madhupur Union	Tepamodhupur BL High School
Taraganj	Ekarchali Union	Lakhsmipur Birabari Hat High School
	Hariarkuti Union	Dangirhat School & College
	Sayar Union	Chilapak High school & College
Domar	Bhogdabari Union	Uttor Vogdabari High School
	Gomnati Union	Gomnati High School
	Panga Matukpur Union	Panga Mohesh chandra Lala High School
Jaldhaka	Balagram union	Chaowradangi High School
	Golna Union	Golna Kaligonj Shahidsmriti High School
	Kanthali Union	Uttor Deshibai High School
	Shimulbari Union	Ghughumari BL High School
Kishoreganj	Barabhita Union	Melabar Dwimukhi High School
	Kishoreganj Union	Kishoregonj M/L Model High School
	Nitai Union	Nitai High School
	Ranachandi Union	Ranachandi School and College
Nilphamari Sadar	Chaora Bargachha Union	Kanchonpara FA BL High School
	Kachukata Union	Kochukata BL High School
	Kunda Pukur Union	Fultola ML High school
	Ramnagar Union	Bishmuri Chaderhat High School
	Tupamari Union	Tupamari BL High School

The sample plan of a school for Student's Survey is given below:

Class	Number of boys	Number of girls
VI	2	2
VII	2	2
VIII	2	2
IX	2	2
X	2	2
Total	10	10

(C) Sampling design for Qualitative Surveys

The sampling design for several qualitative surveys are given below. The distribution of different qualitative surveys with sub-groups of participants/stakeholders is also given in following table 4.

Table 4: List of qualitative tools and respondents

Qualitative Surveys	Number	Distribution of qualitative surveys with sub-groups of participants/stakeholders
Participatory tools facilitation	64	Community support groups (CSG)
Focus Group Discussion (FGD)	55	PLW =5 Adolescent Boys=5 Adolescent Girls=5 Farmers/HH Heads =5 CG=5 SMC=30 (in schools selected for Student's survey)
Key Informant Interviews (KII)	40	Civil Surgeon=2 UEO/AUEO/DEO=5 CHCP/FWA/HA/UH&FPO=10 SAAO/ Agriculture service provider =7 Upazila Livestock officer=5 Upazila Women Affairs Officer=4 Private sectors representative=4 Representative from civil society=3
Meeting/Group discussion/KII	20	UDCC =7 UNCC =7 DNCC =2 Local Government Representative of =4
In-depth Interviews (IDIs)	10	PLW/Adolescent girls/Relevant stakeholders for outcome harvesting
Case studies	04	Relevant beneficiaries/Groups
Outcome harvesting	01	Multi-stakeholders

Selection of CSGs for Participatory Tools Facilitation

The study has conducted Participatory *Tools Facilitation* in 30 selected clusters located in the intervention areas. The Household survey, Student's survey and *Participatory Tools Facilitation* were conducted in the same clusters. As the study targeted to conduct 64 *Participatory Tools Facilitation* with 64 selected Community Support Groups (CSGs), the selection of CSGs must be unbiased. Taking this fact in consideration, the CSGs has been selected using systematic Probability Proportional to Size (PPS) sampling procedure where population of the CSGs was used as weighted factor. Among 640 CSGs, 290 are found in the selected 30 clusters. From the list of the 290 CSGs, 64 sample CSGs were selected using systematic PPS sampling procedure. The list of selected CSGs is given in the following table 5.

Table 5: List of selected Community Support Groups (CSGs)

District	Upazila	Union	Name of Community Clinic	CSG	CSG #
Rangpur	Gangachara	Alam Biditar	Alambiditor Community Clinic	Jamuna	CSG-3
Rangpur	Gangachara	Alam Biditar	Dangi PaikanCommunity Clinic	Jamuna	CSG-3
Rangpur	Gangachara	Barabil	Maniram Community Clinic	Jamuna	CSG-3
Rangpur	Gangachara	Barabil	Barabil Community Clinic	Jamuna	CSG-3
Rangpur	Gangachara	Barabil	Barabil Community Clinic	Padma	CSG-1
Rangpur	Gangachara	Gajaghanta	Kishamat Habu Community Clinic	Jamuna	CSG-3
Rangpur	Gangachara	Gajaghanta	Joydeb Community Clinic	Meghna	CSG-2
Rangpur	Gangachara	Gajaghanta	Kishamat Habu Community Clinic	Padma	CSG-1

Rangpur	Gangachara	Gangachara	Chengmari Community Clinic	Padma	CSG-1
Rangpur	Gangachara	Gangachara	Chengmari Community Clinic	Jamuna	CSG-3
Rangpur	Gangachara	Gangachara	Araji Niyamat Community Clinic	Meghna	CSG-2
Rangpur	Gangachara	Gangachara	Gannarpar Community Clinic	Padma	CSG-1
Rangpur	Gangachara	Lakshmitari	Anur Bazar Community Clinic	Padma	CSG-1
Rangpur	Gangachara	Nohali	Purba Kachua Community Clinic	Meghna	CSG-2
Rangpur	Gangachara	Nohali	Purba Kachua Community Clinic	Padma	CSG-1
Rangpur	Kaunia	Haragachh	Sonaton CC	Golap	CSG-1
Rangpur	Kaunia	Haragachh	Sonaton CC	Nargis	CSG-3
Rangpur	Kaunia	Haragachh	Bokultola CC	Kumartari	CSG-2
Rangpur	Kaunia	Kursha	Ramnath CC	Ramnath	CSG-1
Rangpur	Kaunia	Kursha	Shibu Chawrapara CC	Boruahat	CSG-3
Rangpur	Kaunia	Kursha	Ramnath CC	Gopal	CSG-3
Rangpur	Kaunia	Sarai	Dhumerkuthi CC	Dhumer Kutthi Modhopara	CSG-3
Rangpur	Taraganj	Ekarchali	Hazipur CC	Lal	CSG-2
Rangpur	Taraganj	Ekarchali	Menanagar Matiyalpara CC	Anaros	CSG-2
Rangpur	Taraganj	Hariarkuti	Sayedpur CC	Amm	CSG-1
Rangpur	Taraganj	Hariarkuti	Hatibanda CC	Kadbel	CSG-3
Rangpur	Taraganj	Hariarkuti	Nrayanjon CC	Shapla	CSG-2
Rangpur	Taraganj	Kursha	Rahimapur Chakla CC	Komola	CSG-2
Rangpur	Taraganj	Kursha	Rahimapur Chakla CC	Appale	CSG-1
Rangpur	Taraganj	Kursha	Daskkin Kursha Dangapara Community Clinic	pui	CSG-1
Rangpur	Taraganj	Sayar	Sayamganj Alahi Bazer CC	Shapla	CSG-2
Nilphamari	Domar	Bhogdabari	Niz Bhogdabari CC	Meghna	CSG-1
Nilphamari	Domar	Bhogdabari	Shahapara CC	Golap	CSG-2
Nilphamari	Domar	Gomnati	Dhakkin Ambari CC	Joba	CSG-3
Nilphamari	Domar	Gomnati	Uttar Gomnati CC	Jamuna	CSG-3
Nilphamari	Domar	Panga Motukpur	Mouja Panga Community Clinic	Sheuli Ful	CSG-1
Nilphamari	Domar	Panga Motukpur	Mouja Panga Community Clinic	Jobaful	CSG-3
Nilphamari	Jaldhaka	Balagram	Poschim Balagram Dolapara Cc	Shalik	CSG-1
Nilphamari	Jaldhaka	Balagram	Dhukdhuki CC	Kathal	CSG-1
Nilphamari	Jaldhaka	Balagram	Dhukdhuki CC	Jaam	CSG-2
Nilphamari	Jaldhaka	Golna	Poschim Chiraviza Community Clinic	Shapla	CSG-1
Nilphamari	Jaldhaka	Golna	Taluk Golna Community Clinic	Jui	CSG-3
Nilphamari	Jaldhaka	Golna	Khariza Golna Community Clinic	Bokul	CSG-3
Nilphamari	Jaldhaka	Kathali	Dr. Sofiot Hossain Community Clinic	Shapla	CSG-2
Nilphamari	Jaldhaka	Kathali	Ranger Bazar Community Clinic	Niharika	CSG-3

Nilphamari	Kishoreganj	Baravita	Uttor Baravita CC	Togor	CSG-3
Nilphamari	Kishoreganj	Baravita	Uttor Baravita CC	Joba	CSG-2
Nilphamari	Kishoreganj	Baravita	Malabor CC	Jui	CSG-2
Nilphamari	Kishoreganj	Kishoreganj	Modho Razib CC	Jamuna	CSG-2
Nilphamari	Kishoreganj	Kishoreganj	Musha CC	Golap	CSG-1
Nilphamari	Kishoreganj	Kishoreganj	Pusna CC	Golap	CSG-2
Nilphamari	Kishoreganj	Nitai	Foruwa Para CC	Golap	CSG-2
Nilphamari	Kishoreganj	Nitai	Nitai Up Sanlogno cc	Shapla	CSG-3
Nilphamari	Kishoreganj	Nitai	Nitai CC	Golap	CSG-1
Nilphamari	Kishoreganj	Ranachandi	Phathanpara CC	Doyel	CSG-1
Nilphamari	Kishoreganj	Ranachandi	Phathanpara CC	Moyna	CSG-3
Nilphamari	Kishoreganj	Ranachandi	Bafla CC	Bulbuli	CSG-3
Nilphamari	Sadar	Chowra Barogacha	Kanchon Para Community Clinic	Jamuna	CSG-3
Nilphamari	Sadar	Chowra Barogacha	Dhokhin ChowraCommunity Clinic	Meghna	CSG-2
Nilphamari	Sadar	Kochukata	Mahabbat Bajit para cc	Meghna	CSG-2
Nilphamari	Sadar	Kochukata	Banyapara cc	Doyel	CSG-2
Nilphamari	Sadar	Kundopukur	Sutipara CC	Amra	CSG-3
Nilphamari	Sadar	Kundopukur	Gurguri CC	Shalik	CSG-1
Nilphamari	Sadar	Ramnagor	Bahali Para CC	Rajani Gondha	CSG-2
				64	

Development of tools and finalization

Several survey instruments/tools were used to gather the necessary data and information from the targeted respondents/participants/stakeholders. The survey instruments/tools were developed by accumulating all the relevant issues/queries and cross-checked by pertinent experts. The steps of finalizing the tools were as follows:
Step-1: Development of Tools for Quantitative and Qualitative Surveys
Step-2: Piloting of Tools at Field
Step-3: Finalization of Tools

Step-1: Development of Tools for Quantitative and Qualitative Surveys

The study team has reviewed the questionnaires for quantitative surveys and checklists/guidelines for qualitative surveys that JANO project has used in its previous surveys. The team has developed fresh two questionnaires for two quantitative surveys and a number of checklists/guidelines for different qualitative surveys to gather the required data and information considering the log-frame indicators of the project.

Tool for Household Survey:

A structured interview schedule was prepared by accumulating questions for data and information on various issues including minimum dietary diversity for women (MDD-W) and children (MDD-C), health seeking behaviour for women and children, farming behaviour considering climate smart agriculture and production of high-value nutritious products, background characteristics of households, demographic and

socio-economic information of household members including lactating mother, pregnant women, children of age 6 to 23 months, adolescent girls and boys, etc.

Tool for Student's Survey:

A structured interview schedule was used to collect the data through the student's survey. In developing the interview schedule, all the relevant questions have taken into consideration to assess whether the adolescent girls/boys in communities are empowered to demand and utilize both nutrition sensitive and nutrition specific services in addition to assess their perception on key learning points related to nutrition, health, hygiene, gender etc.

Tools for Qualitative Surveys:

Different checklists/guidelines have been developed to conduct different qualitative surveys with a view to substantiate the findings of quantitative surveys in addition to explore the coordinated activities by different relevant departments to perform the strategies of NPAN-2. The draft survey instruments/tools were shared with the relevant officials of the consortium for their review and revised the tools by accumulating their valuable inputs.

Step-2: Piloting of Tools at field

The revised survey instruments/tools were tested in the field and modified/adjusted after accommodating the feedback from the field-testing. DMA has invited CARE and Partners M&E staff for observing the field test and refining the tools.

Step-3: Finalization of Tools

The revised draft survey instruments/tools were finalized based on the feedback from field test and accommodating the suggestions by the consortium. The final instruments/tools for quantitative surveys were set-up in SurveyCTO for smooth data collection activities.

Data Collection and Ethical Issue

DMA has selected 27 enumerators to perform the data collection activities. DMA has employed a separate team for conducting qualitative and quantitative surveys. A total of 6 staff were employed for conducting Participatory Tools Facilitation with CSGs; FGDs with PLW, adolescents, CGs, SMCs; KIIs with private sector, health workers, and stakeholders; IDIs with PLW, meeting/KII with UDCC. In addition, the key study members conducted the upper-tier qualitative surveys including facilitation of workshops for outcome harvesting.

Three teams were employed to collect the quantitative data through Household and School Survey. The household survey and student's survey were conducted simultaneously. Four Supervisors and a Field Coordinator were employed for smooth implementation of the fieldwork. The study used tablets and an online platform known as SurveyCTO for collection and storing of the data electronically. Data collection for household survey, student's survey and Participatory Tool Facilitation were undertaken using tablets. The ethical issues were duly considered during surveys. A consent form was incorporated in each of the tools and the interview/discussion was started only after getting permission from the pertinent respondents/participants/stakeholders. During interview /discussions, the comfort of participants was taken into consideration.

Data Management and Data Analysis Framework

The study has used SPSS and Excel for data management and analysis. It is to be mentioned that separate templates in XLS form were developed using SurveyCTO for electronic data management of quantitative

surveys and participatory tools facilitation with CSGs. The data editing was performed using several logical arguments in SPSS.

Step-1: Analysis of quantitative data

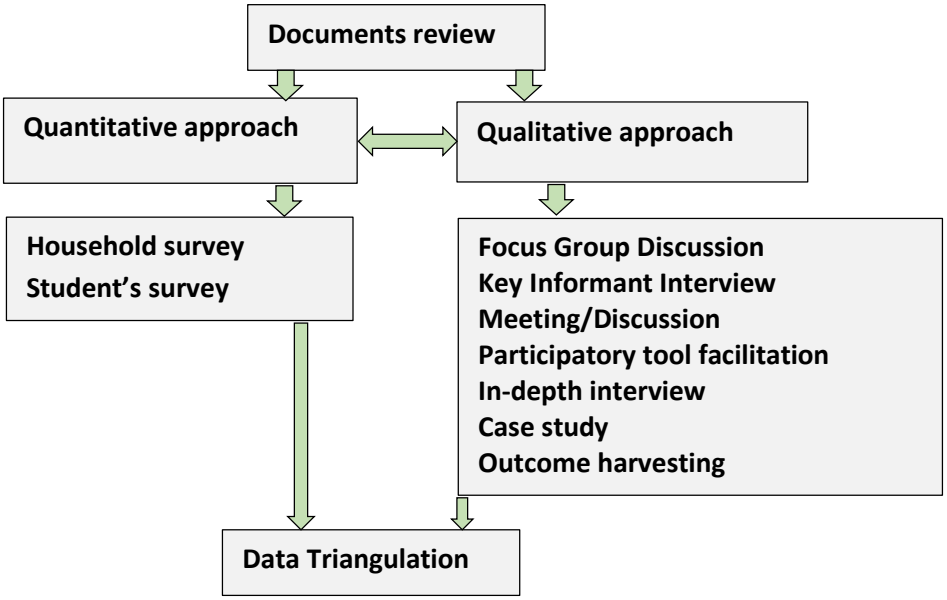
The study has used several descriptive and inferential statistical tools and techniques to analyze the data. At first, frequency distributions were generated, and graphical representations were performed for the variables of interest. Among the statistical tools, percentage, frequency distribution, average, standard deviation, quantiles, cross-tabulation, Chi-square test, t-test and F-test were used to analyze the data. The main outcome variables of the study were analyzed by gender of household heads, intervention districts, intervention Upazilas using cross-tabulation analysis (with Chi-square test). Finally, the results were presented for intervention districts, segregating by gender of the students and household heads.

Step-2: Analysis of qualitative data

The information of the qualitative surveys was transcribed and analyzed meticulously. The findings that come from group discussions and interviews with different stakeholders were analyzed descriptively.

Step-3: Triangulation of findings

Triangulation involves the conscious combination of quantitative and qualitative methodologies as a powerful solution to strengthen a research design where the logic is because a single method can never adequately solve the problem of rival causal factors (Turner & Turner, 2009). To check the consistency of specific and factual data items, quantitative data were triangulated within study variables, as well as with the qualitative data collected through KIIs, IDIs, FGDs, meetings and case studies. Following matrix were applied for triangulating and compiling the findings collected from different methods and approaches.



Outcome Harvesting

Research Issue: Whether the women and adolescent girls in the communities are empowered to demand and utilize both nutrition-sensitive and nutrition-specific services?

About Outcome Harvesting:

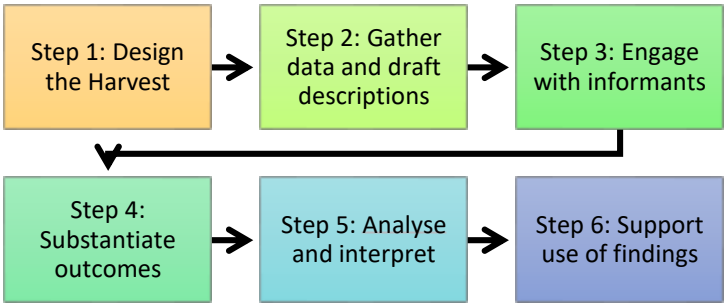
Outcome harvesting is a monitoring and evaluation methodology used to identify, describe, verify, and analyze the changes brought about through a development intervention. It is designed to collect evidence of change, and then work backwards to assess contribution to that change[3].

In the fourth-year annual survey of JANO project, "Outcome Harvesting" is applied to understand *"Whether the women and adolescent girls in the communities are empowered to demand and utilize both nutrition-sensitive and nutrition-specific services."*

The purpose of the harvest is

- To collect evidence and understand the process of achievement of the outcome i.e., how women and adolescent girls become informed and empowered to demand services for their nutritional well-being and who are the influencers here and how they contribute to bring about this change.
- To share and substantiate fourth annual survey results related to this outcome, with multi stakeholders and community representatives (PLW and adolescents)
- To facilitate learning about the change (intended and unintended) in a collaborative manner and make recommendation
- To share Outcome Harvesting results among the Change Agents (CARE Bangladesh and its consortium partners Plan International and ESDO) to make decisions to improve future performance of the outcome

The "Outcome Harvesting" has been conducted following 6 steps shown in the diagram below.



Step 1 - Designing the harvest

During design phase of the harvest following queries were made:

- Who are the change agents?
- Whom do they want to change?
- What have they changed?
- When and where?
- What has been the collective effect of JANO on making communities more empowered in terms of nutrition-sensitive and nutrition-specific services?

CARE Bangladesh ESDO, Plan International are the change agents who worked as consortium partners to implement the JANO project to bring about a change among Women, adolescent girls/boys, and farmers together with CSG, CC, UDCC, UNCC. They particularly focused on the behavioral change of PLW and

[3] Wilson-Grau, R. (2015) *Outcome Harvesting*. Better Evaluation.
Retrieved from http://betterevaluation.org/plan/approach/outcome_harvesting

adolescents on nutrition sensitive issues for empowering the women and adolescents to demand and utilize nutrition sensitive and nutrition specific services. JANO projects is implemented in seven Upazilas of Rangpur and Niphamari Districts during the period 2018 to 2022.
Following key questions have been developed to guide the harvesting process:

- ❑ What were the collective efforts made by Change Agents to ensure collaboration of community groups (CSG and CG) with government platforms (UDCC, UNCC and DNCC) at union, upazila and district level to lead to **transformative changes among women and adolescent girls** to demand and utilize both nutrition-sensitive and nutrition-specific services
- ❑ What has been the collective effect of the JANO project on making the UDCC, UNCC and DNCC more active (To what extent it worked/did not work to ensure meaningful participation of women and adolescents?)
- ❑ How have JANO project influenced the UDCC, UNCC and DNCC for effective planning, budgeting, and implementation of nutrition programs

Step 2: Data gathering and drafting description

In 2018 CARE Bangladesh with consortium partners Plan International and Eco-Social Development Organization (ESDO) has initiated Joint Action for Nutrition Outcome (JANO) project to improve the nutritional status of Pregnant and Lactating Women (PLW), children under five years of age, and adolescent girls/boys through a gender transformative and multi-sectoral approach.

Description of the outcome:

Influenced by JANO, evidence based behavioral change is observed among social actors (women and adolescent girls) to become informed decision makers in terms of seeking nutrition-sensitive and nutrition-specific services from service providers, adopting a diversified nutritious daily diet and using ICT platforms as a source of nutrition and health information with the support of community service providers (CC & agri. extension), community-based support groups (CG, CSG) and other duty bearers (SMC, health providers). JANO has partnered with both the public and the private sectors to achieve its objective. JANO works with the government platforms (UDCC, UNCC and DNCC) at local and regional levels to strengthen the implementation of inclusive and accountable nutritional programs. JANO's, partnerships with the local private actors are focused on encouraging producer groups' business investment in local markets.

Significance of the outcome:

This outcome demonstrates how community groups' active engagement can be combined with mobilization of government platforms at union, upazila and district level to lead to transformative changes in community people in terms of their health and nutrition seeking behaviour particularly for pregnant and lactating women, children under 5 years and adolescent girls/boys.

Contribution of JANO:

There must be a reasonable contribution of JANO to the outcome. The contribution may be direct or indirect, intended or not. The scope of the harvest was outcomes that materialized from the start of the project (September 2018) to the time of the harvest (September 2022) and had the following contribution from JANO between that time of its operation:

- JANO facilitates participation of women in decision-making spaces in social, group activities at community level and service seeking from health and agriculture department.
- JANO has worked for capacity building for CC in terms of formation/activation of CSGs/CGs.
- JANO has motivated SMC members for implementing awareness programs on health, hygiene, and nutrition issues/ services for adolescent girls/boys in schools.
- JANO has organized courtyard meetings, street drama etc. to motivate people on necessity of nutrition sensitive and nutrition specific services and necessary actions for receiving services.

- JANO has worked to establish ICT platform to disseminate necessity of nutrition for PLW and adolescent, as well as link with relevant government departments.
- JANO has worked with government platforms such as UDCC, UNCC and DNCC to support the effective implementation of the National Plan of Action for Nutrition (NPAN)-2.

Data Gathering – Findings from HH Survey

To understand the process of achievement of the outcome regarding empowerment of women and adolescent girls to demand services for their nutritional well-being and how the influencers contributed to bring about this change the following data gathered during fourth annual household survey has been taken into consideration as evidence for the assessment to be made in Outcome Harvesting.

- 84.4% women and 4.9% adolescents received nutrition specific services and overall, 86.6% received nutrition specific services from CC. Average number of CC services taken in a year is 10.66 (± 7.1) and average duration of last visit to CC is estimated at 46.63 days (Rangpur:63.28 days and Nilphamari: 31.60 days)
- 21.1 for women and 7.6% adolescents claimed to receive nutrition sensitive services which included UP (77%), agriculture (23.2%), education (16.8%) and livestock/ fisheries/social welfare/women & child affairs (11.5%). Average number of services in a year is 6.24 (± 3.4)
- 47.9% of women of reproductive age in the targeted districts who consumed five or more food groups (based on MDD-W) over the last 24 hours.
- 65.7% of children 6-23 months of age who received foods from four or more food groups (based on MDD-C) over the last 24 hours.
- 38.3% of girls and 24.3% boys were found to apply key learning points regarding nutrition, health, and hygiene at home (School Survey).
- 46.9% households engaged in high nutrition-value crops production
- 29.7% of community members who have accessed or received ICT based nutritional information.

Step 3: Engaging Informants

This was implemented by engaging change agents / social actors / stakeholders directly in the Outcome Harvesting workshops. The main advantage over harvesting with participation of CARE and its consortium partners was that they were the direct implementers and closest to the outcomes closest to the action. Participation of the project beneficiaries, community groups, government and private actors and other duty bearers was also crucial because they had experienced or been responsible for outcomes directly or indirectly and could provide their views from the experience. Two workshops were convened one in Nilphamari district (2nd October 2022) and the other in Rangpur district (4th October 2022). There were 30 participants in each workshop. The participants were invited by CARE Bangladesh/JANO project. Participants were selected critically with the view that they were available, knowledgeable of the project were willing to give time and participate actively in the workshop. The workshop was facilitated by external evaluators (Data Management Aid) supported by CARE Bangladesh.

Objective of the workshop

- Validation of findings of quantitative and Qualitative surveys on nutrition specific and sensitive issues.
- Substantiate the findings through Group Works as well as overall discussion
- Drawing conclusions

Step 4: Substantiating outcomes

Draft report of fourth annual survey of JANO project was shared during the workshop for validation from workshop participants. The participants were from diversified groups including PLW, adolescent, service providers from different departments (health, agriculture, local govt etc.) and govt. officials from different departments, like UH&FPO, UAO, UEO, Women Affairs Officer, Social welfare officer etc. Three groups were formed in each of the workshops and asked them to review the findings, substantiate the findings

and making recommendations based on data particularly related to nutrition specific and sensitive issues (see Step 2). The result from group works revealed that participants mainly focused on indicators which did not perform well including low percentage of adolescents in seeking nutrition specific and sensitive services as well as low percentage of women/adolescents in participation in government forums.
Several reasons for poor performance of nutrition specific and sensitive services were identified by participants during group work. Following observations have been made:

- The level of nutrition specific services for PLW was good (86.6%). However, it should be 100% as several PLW used to visit CC several times in a week.
- The seeking and receiving of nutrition specific services for adolescent was observed very low (4.9%). Several reasons were identified as data collection techniques (data provided by mother of adolescents), shyness of adolescents to seek services, time constraint to go to health centers, unavailability of service providers from both sex at health centers, not considering the iron/folic tables as nutrition service.
- Regarding nutrition sensitive services, the level of service for adolescent was observed low, might be due to data collection techniques as data provided by mother of adolescents.
- The performance of nutrition sensitive services from agriculture, livestock, social welfare, women affairs were observed low. The reasons for poor performance of the nutrition sensitive services from relevant departments are appeared as lack of awareness of the services and benefits of services, time constraint of receiving services etc.

Recommendations made by participants in Outcome Harvesting to improve performance of nutrition specific and sensitive services are presented in Chapter VIII (Conclusions and Recommendations).

- During HH survey the respondents were PLW and not adolescents, and data was collected what the PLW informed. Data collection technique for this composite indicator need to be changed
- Adolescents' unawareness of the CC services related to adolescent reproductive health is a matter of concern. Therefore, information on the significance of nutrition specific services for adolescents and where these services are available should be disseminated through IEC materials (poster/leaflet) in schools and other relevant public places.
- Adolescents may be less sensitized about the importance of seeking nutrition specific services (iron/folic acid) to remain healthy Therefore, proper counselling of adolescents in this regard is necessary in schools and out of school.
- Adolescents feel shy to seek services from CC when the CHCP is of opposite sex. Necessary measures should be taken to make the services user friendly for adolescent girls by ensuring availability of a female CHCP for providing nutrition specific services in the CC.
- In most cases service quality is good in CCs as informed by respondents of this survey. However, government and non-government organizations should take necessary measures towards further improvement of the service quality and adequacy of responsive nutrition specific services.
- School time coincides with CC office time, therefore adolescents, mostly who are students do not get the opportunity to seek CC services because by the time school is over CC service is already closed. Therefore, nutrition specific services may be initiated in schools.
- Iron tablets/folic acid need to be considered as nutrition specific services. Little Doctor program initiated by the government in primary schools may be replicated in high schools for ensuring distribution of iron tablets/folic acid among adolescent girls. Screening of nutritional/iron deficiency among adolescent girls is necessary. Iron and Folic Acid (IFA) supplementation program may be initiated for adolescent girls in high schools.

- In the HH survey, percentage of nutrition sensitive services sought from the agriculture sector is low (23.2%). This could be since respondents of the HH survey were women. In the HH survey men should also be included to get actual data.
- Low percentage of nutrition sensitive services sought from the agriculture sector may indicate that there is inadequacy on the availability of agricultural inputs and services. This area needs to be addressed.

Step 5: Analysis and interpretation

Low percentage of nutrition specific (4.9%) and sensitive (7.6%) services for adolescents found in the HH survey. There are several discrepancies in this indicator as it involves both PLW and adolescent together. If the indicator is divided into two parts, viz **PLW** and **Adolescents** then the actual reflection will come. In future, this indicator for adolescent may be covered through school survey. However, achieving the target for this particular outcome indicator is also depended on further influence by the change agents. Change agents should focus on influencing service providers (school and CC), adolescents and care givers (parents and peer groups) in terms of enhancing counselling services and access to information to bring about a positive behavioral change among adolescents for demanding nutrition specific and nutrition sensitive services. In addition, professional skills of the CHCPs need to be strengthened.

Annex 3: Data table

Annex 3-Table 1: Household size and gender of household head

Comparison	**2019**	**2020**	**2022**
Household size	4.3	5	4.88
Sex of Household head			
Male	99.1%	48.6%	98.6%
Female	0.9%	51.4%	1.4%

Annex 3-Table 2: Age, gender, marital status, occupation and education of HH members

Characteristics of Household Members	**Male**		**Female**		**Overall**	
	No	**%**	**No**	**%**	**No**	**%**
20 Years or less	601	40.07	778	49.49	1379	44.89
21 - 30 Years	363	24.2	387	24.62	750	24.41
31- 40 Years	255	17	121	7.7	376	12.24
41 - 50 Years	91	6.07	117	7.44	208	6.77
51 - 60 Years	103	6.87	113	7.19	216	7.03
61 - 70 Years	67	4.47	47	2.99	114	3.71
More than 71 Years	20	1.33	9	0.57	29	0.94
Total (n)	**1500**	**100**	**1572**	**100**	**3072**	**100**
Male	672	49.3	828	48.44	1500	48.83
Female	691	50.69	881	51.55	1572	51.17
Total (n)	1363	100	1709	100	3072	100
Marital Status (Age 15 years or more)						
Married	852	87.84	891	86.25	1743	87

Unmarried	100	10.31	48	4.65	148	7.4
Widow/Widower	15	1.55	92	8.91	107	5.3
Divorced	2	0.21	2	0.19	4	0.2
Live separately	1	0.1	0	0	1	0
Total (n)	**970**	**100**	**1033**	**100**	**2003**	**100**
Occupation (Age 15 years or more)						
Farmer (Own land/ Sharecropping)	288	29	27	2.61	315	15.55
Agricultural workers	112	11.28	2	0.19	114	5.63
Self-employed (Livestock production and Handicraft)	7	0.7	7	0.68	14	0.69
Student	63	6.34	50	4.84	113	5.58
Housewife	0	0	909	88	909	44.87
Job/Professional/Merchant	163	16.42	16	1.55	179	8.84
Small traders/ Hawker/ Vendor	85	8.56	3	0.29	88	4.34
Fisherman	3	0.3	0	0	3	0.15
Non-agri and industrial laborer	225	22.66	5	0.48	230	11.35
Unemployed	45	4.53	14	1.36	59	2.91
Other (Specify)	2	0.2	0	0	2	0.1
Total (n)	**993**	**100**	**1033**	**100**	**2026**	**100**
Years of schooling (Age 7 years or more)						
Have no formal education	101	8.54	121	9.88	222	9.22
Can sign only	113	9.56	111	9.06	224	9.31
Class 1-5	473	40.02	383	31.27	856	35.56
Class 6-9	260	22	390	31.84	650	27
SSC/HSC	170	14.38	176	14.37	346	14.37
Honors/Masters	65	5.5	40	3.27	105	4.36
Other (Specify)	0	0	4	0.33	4	0.17
Total (n)	**1182**	**100**	**1225**	**100**	**2407**	**100**

Annex 3-Table 3: Profile of household heads

	Male		**Female**		**Overall**	
	No.	**%**	**No.**	**%**	**No.**	**%**
20 Years or less	4	0.6%	0	0.0%	4	0.6%
21 - 30 Years	221	35.6%	2	22.2%	223	35.5%
31- 40 Years	210	33.9%	2	22.2%	212	33.7%
41 - 50 Years	75	12.1%	2	22.2%	77	12.2%
51 - 60 Years	66	10.6%	3	33.3%	69	11.0%
61 - 70 Years	35	5.6%	0	0.0%	35	5.6%
More than 71 Years	9	1.5%	0	0.0%	9	1.4%
Marital Status of Household Heads						
Married	616	99.4%	4	44.4%	620	98.6%
Unmarried	0	0.0%	0	0.0%	0	0.0%

Widow/Widower	4	0.6%	5	55.6%	9	1.4%
Divorced	0	0.0%	0	0.0%	0	0.0%
Live separately	0	0.0%	0	0.0%	0	0.0%
Earning Status of Household Heads						
Yes	618	99.7%	6	66.7%	624	99.2%
No	2	0.3%	3	33.3%	5	0.8%
Education of Household Heads						
Have no formal education	56	9.0%	2	22.2%	58	9.2%
Can sign only	79	12.7%	2	22.2%	81	12.9%
Class 1-5	234	37.7%	2	22.2%	236	37.5%
Class 6-9	135	21.8%	3	33.3%	138	21.9%
5. SSC/HSC	83	13.4%	0	0.0%	83	13.2%
Honors/Masters	33	5.3%	0	0.0%	33	5.2%
Occupation of Household Heads						
Farmer (Own land/ Sharecropping)	218	35.2%	4	44.4%	222	35.3%
Agricultural workers	86	13.9%	0	0.0%	86	13.7%
Self-employed (Livestock production and Handicraft)	3	0.5%	0	0.0%	3	0.5%
Housewife	0	0.0%	3	33.3%	3	0.5%
Technician	3	0.5%	0	0.0%	3	0.5%
Employment	52	8.4%	2	22.2%	54	8.6%
Professional (Doctor, Engineer, Lawyer, Teacher)	8	1.3%	0	0.0%	8	1.3%
Merchant (Entrepreneurs and Contractors)	38	6.1%	0	0.0%	38	6.0%
Small traders/ Hawker/ Vendor	57	9.2%	0	0.0%	57	9.1%
Fisherman	2	0.3%	0	0.0%	2	0.3%
Construction workers	28	4.5%	0	0.0%	28	4.5%
Transport workers	67	10.8%	0	0.0%	67	10.7%
RMG workers	5	0.8%	0	0.0%	5	0.8%
Non-agricultural laborer	52	8.4%	0	0.0%	52	8.3%
Unemployed	1	0.2%	0	0.0%	1	0.2%
Total	**620**	**100.0%**	**9**	**100.0%**	**629**	**100.0%**

Annex 3-Table 4: Housing condition of the households

	Rangpur		**Nilphamari**		**Overall**	
	No.	%	No.	%	No.	%
Number of rooms						
Single room	64	21.8%	100	29.9%	164	26.1%
Two rooms	115	39.1%	92	27.5%	207	32.9%
Three rooms	72	24.5%	80	23.9%	152	24.2%

Four or more rooms	43	14.6%	63	18.8%	106	16.9%
Different kitchen						
Yes	245	83.3%	312	93.1%	557	88.6%
No	49	16.7%	23	6.9%	72	11.4%
Cooking facilities						
Wood	172	58.5%	93	27.8%	265	42.1%
Gas	13	4.4%	5	1.5%	18	2.9%
Straw/ Leaves/ Rice husk	104	35.4%	235	70.1%	339	53.9%
Cow Dung	5	1.7%	2	0.6%	7	1.1%
Electricity facility						
Electricity	290	98.6%	335	100.0%	625	99.4%
Solar power	4	1.4%	0	0.0%	4	0.6%
Sources of water for drinking and household work						
Supplied water	1	0.3%	2	0.6%	3	0.5%
Tube Well	293	99.7%	333	99.4%	626	99.5%
Ownership of toilet						
Yes	265	90.1%	309	92.2%	574	91.3%
No	29	9.9%	26	7.8%	55	8.7%
Types of toilets						
Sanitary toilet	88	29.9%	148	44.2%	236	37.5%
Pacca toilet (water sealed)	99	33.7%	81	24.2%	180	28.6%
Pacca toilet (no water sealed)	99	33.7%	79	23.6%	178	28.3%
Open pit	1	0.3%	6	1.8%	7	1.1%
Open toilet	7	2.4%	21	6.3%	28	4.5%
Households have cultivable land						
Yes	197	67.0%	232	60.3%	429	68.2%
No	97	33.0%	103	30.7%	200	31.8%
Total	**294**	**100.0%**	**335**	**100.0%**	**629**	**100.0%**

Annex 3-Table 5: Landholdings of the households

	Cultivable land	Homestead land	Homestead land for vegetable production
None	200	0	92
1-10 decimal	53	500	379
11-50 decimal	199	124	6
51-199 decimal	166	5	0
200+ decimal	11	0	0
Mean	39.77	7.92	1.35
Median	22	5	1
SD	55.51	9.09	1.93
Total	**629**	**629**	**477**

Annex 3-Table 6: Effective feedback mechanism

	Rangpur	Nilphamari	Overall
Households' idea about budget on nutrition of CC, UDDC			
Yes	9.5%	27.2%	18.9%
No	90.5%	72.8%	81.1%
Households' members participated in a meeting on budget on nutrition of CC, UDDC			
Yes	4.1%	10.7%	7.6%
No	95.9%	89.3%	92.4%
Households received services from different line department (multiple)			
Community Support Group (CSG)	43.9%	67.5%	56.4%
Community Group (CG)	27.2%	49.9%	39.3%
School Management Committee (SMC)	0.7%	6.3%	3.7%
Union Development Coordination Committee (UDCC)	42.2%	36.1%	39.0%
Upazila Nutrition Coordination Committee (UNCC)	2.7%	4.8%	3.8%
District Nutrition Coordination Committee (DNCC)	0.0%	6.0%	3.2%
Family Welfare Center	9.9%	4.5%	7.0%
Department of Agriculture Extension	3.7%	4.5%	4.1%
Upazila livestock Office	0.0%	1.5%	0.8%
Health and Family Welfare Office	13.9%	6.9%	10.2%
Upazila Family Planning Office	4.4%	0.9%	2.5%
Department of Public Health Engineering (DPHE)	0.7%	1.2%	1.0%
Upazila Social Services Office	11.2%	3.6%	7.2%
Upazila Women Affairs Office	6.8%	0.6%	3.5%
No Service taken from any office or department	2.4%	2.4%	2.4%
Level of satisfaction on services received from different line department			
Very satisfied	5.2%	20.8%	13.5%
Satisfied	59.2%	66.1%	62.9%
Fairly satisfied	33.8%	13.1%	22.8%
Not satisfied	1.7%	0.0%	0.8%
Total (n)	287	327	614
Household knew where to complain or give feedback to different line department (multiple)			
Community Support Group (CSG)	33.3%	38.8%	36.2%
Community Group (CG)	24.5%	29.6%	27.2%
School Management Committee (SMC)	1.4%	5.1%	3.3%
Union Development Coordination Committee (UDCC)	25.2%	16.1%	20.3%
Upazila Nutrition Coordination Committee (UNCC)	1.7%	0.9%	1.3%
District Nutrition Coordination Committee (DNCC)	0.7%	2.1%	1.4%
Family Welfare Center	1.4%	1.2%	1.3%
Department of Agriculture Extension	1.0%	0.6%	0.8%

Upazila livestock Office	0.3%	0.3%	0.3%
Health and Family Welfare Office	6.5%	0.0%	3.0%
Upazila Family Planning Office	0.7%	0.0%	0.3%
Department of Public Health Engineering (DPHE)	0.3%	0.0%	0.2%
Upazila Social Services Office	1.0%	0.6%	0.8%
Upazila Women Affairs Office	1.4%	0.2%	1.6%
Don't know	23.5%	41.8%	33.2%
Household complaint or gave feedback to different line department			
Yes	7.1%	4.1%	5.7%
No	92.9%	95.9%	94.3%
Total (n)	225	195	420
Household received response feedback given to different line department			
Yes	43.8%	62.5%	50.0%
No	56.3%	37.5%	50.0%
Total (n)	16	8	24
Total (n)	294	335	629

Annex 3-Table 7: Status of increased participation of women and adolescent in informal and formal platform

	Rangpur	Nilphamari	Overall
% of increased participation of community people, particularly women, in formal (government-led) decision-making spaces			
Yes	1.7%	6.3%	4.1%
No	98.3%	93.7%	95.9%
Total (n)	294	335	629
% of increased participation of community people, particularly women, in informal (civil society-led, private sector-led) decision-making spaces			
Yes	14.3%	22.1%	18.4%
No	85.7%	77.9%	81.6%
Total (n)	294	335	629
% of women and adolescent girls of target population in government forums (UDCC, CG, CSG) meaningfully participated in the nutrition action plan development and implementation process			
Yes	63.0%	64.3%	63.6%
No	37.0%	35.7%	36.4%
Total (n)	402	364	765

Note: Data source of UDCC, CG and SMC is qualitative, meeting minutes. Data source of civil society led platform is from household survey, module 10 (M1008 to M1011, First nine platform). Data source of CSG is from Participator Tools Facilitation.

Annex 3-Table 8: Overview of status of nutrition specific and sensitive services

	Rangpur	Nilphamari	Overall
PLW have general idea on nutrition specific services			

Yes	100.0%	99.4%	99.7%
No		0.6%	0.3%
PLW have general idea on nutrition sensitive services			
Yes	87.1%	76.7%	81.6%
No	12.9%	23.3%	18.4%
Total (n)	294	335	629
PLW received services on nutrition specific and nutrition sensitive services during last 12 months			
Mean ± SD (#) Nutrition specific services	10.76 ± 7.9	10.57 ± 6.3	10.66 ± 7.1
Mean ± SD (#) Nutrition sensitive services	5.79 ± 2.8	6.77 ± 3.8	6.24 ± 3.4
For whom the nutrition specific services have received (multiple)			
Adult Female	84.4%	84.5%	84.4%
Adult Male	16.3%	18.8%	17.6%
Adolescents	4.4%	5.4%	4.9%
Children	58.5%	60.6%	59.6%
Total (n)	294	335	629
Adult Female	84.4%	84.5%	84.4%
For whom the nutrition sensitive services have received (multiple)			
Adult Female	20.4%	21.8%	21.1%
Adult Male	18.4%	16.4%	17.3%
Adolescents	6.5%	8.7%	7.6%
Children	4.4%	14.9%	10.0%
Total (n)	294	335	629
Adult Female	20.4%	21.8%	21.1%
Sources of the nutrition specific services (multiple)			
UH&FWC/RD/CC/EPI Centre/Satellite Clinic etc	99.7%	98.8%	99.2%
DPHE	1.0%	0.6%	0.8%
Other	0.2%	0.6%	0.8%
Total (n)	294	333	627
Sources of the nutrition sensitive services (multiple)			
Department of Agriculture	16.8%	29.6%	23.2%
Department of Fisheries	0.4%	0.0%	0.2%
Department of Livestock	0.4%	1.2%	0.8%
Department of Education	12.1%	21.4%	16.8%
Department of Women and Children Affairs	8.2%	4.3%	6.2%
Department of Social Welfare	5.5%	3.1%	4.3%
Union Parishad	78.5%	75.5%	77.0%
Other	0.0%	0.4%	0.2%
Total (n)	256	257	513
Total (n)	294	335	629

Annex 3-Table 9: Access to information and use of ICT

	Rangpur	Nilphamari	Overall
Households have mobile phone in general			

Yes	100.0%	99.1%	99.5%
No	0.0%	0.9%	0.5%
Households have smartphone			
Yes	47.6%	41.5%	44.4%
No	52.4%	58.5%	55.6%
Ownership of mobile			
PLW (respondent)	50.3%	46.3%	48.2%
Others	49.7%	53.7%	51.8%
Basic phone			
Mean ± SD (#)	1.54 ± 0.91	1.85 ± 1.1	1.7 ± 1.0
Smartphone			
Mean ± SD (#)	0.64 ± 0.81	0.58 ± 0.86	0.61 ± 0.84
Who used mobile phone most in households			
Men	85.7%	84.3%	85.0%
Women	14.3%	14.5%	14.4%
Adolescent girls	0.0%	0.6%	0.3%
Adolescent boys	0.0%	0.6%	0.3%
Total (n)	294	332	626
Households' members knew getting message of agriculture, health, nutrition through mobile/tab/computer			
Yes	65.6%	77.0%	71.7%
No	22.4%	16.1%	19.1%
Don't know	11.9%	6.9%	9.2%
Respondent knew getting message of agriculture, health, nutrition through mobile/tab/computer			
Yes	73.80%	87.20%	80.90%
No	26.20%	12.80%	19.10%
Households' members received message on agriculture, health, nutrition through mobile/tab/computer (multiple response)			
Agriculture	22.4%	35.2%	29.3%
Livestock	3.4%	5.4%	4.5%
Health	51.0%	63.3%	57.6%
Nutrition	48.6%	68.4%	59.1%
Child feeding	3.1%	21.8%	13.0%
Don't know	0.3%	0.0%	0.2%
Not received	28.2%	19.1%	23.4%
Health worker visited households for sharing message of agriculture, health, nutrition (multiple)			
Family Welfare Assistant	43.9%	42.4%	43.1%
Health Assistant	4.4%	22.1%	13.8%
Family Welfare Visitor	3.7%	10.1%	7.2%
Community Healthcare Provider	5.8%	11.6%	8.9%
NGO Health Worker	73.1%	76.7%	75.0%

Nobody	1.0%	2.4%	1.7%
Purpose of visit to household of Health Worker (multiple)			
Counselling (Feeding, Hygiene, Handwashing etc.)	77.3%	83.2%	80.4%
Iron Folic Acid	74.6%	59.3%	66.5%
Micronutrient Powder	12.7%	2.1%	7.1%
Growth Monitoring (height, weight)	31.3%	30.6%	30.9%
Feeding infants	62.2%	51.1%	56.3%
Family planning products	26.1%	41.3%	34.1%
De-worming	7.2%	13.1%	10.4%
Vitamin A Capsule	25.4%	31.5%	28.6%
Referred	3.1%	10.7%	7.1%
Total (n)	291	327	618
Health Worker used ICT equipment while facilitating session on health, health care, family planning, nutrition etc			
Yes	95.6%	94.3%	94.9%
No	4.4%	5.7%	5.1%
Total (n)	294	335	629
Health Worker used E session apps while facilitating session on health, health care, family planning, nutrition etc			
Yes	93.2%	76.7%	84.4%
No	6.8%	23.3%	15.6%
Respondent access to E learning apps of JANO project			
Yes	3.1%	15.0%	9.4%
No	96.9%	85.0%	90.6%
Respondent knew about Talking Book of JANO project			
Yes	95.2%	86.0%	90.3%
No	4.8%	14.0%	9.7%
Total (n)	291	327	618
Household benefited by different message through use of E learning apps, E session apps, Talking book (multiple)			
Food and nutrition of PLW	74.6%	86.8%	80.8%
Services and health care of PLW	50.2%	63.4%	56.9%
Malnutrition symptom of child, child vaccine, child food and nutrition, supplementary food	65.9%	70.3%	68.1%
Prevention way of malnutrition of child, adolescent and pregnant	48.8%	57.4%	53.2%
Family vegetable garden to improve nutrition	63.4%	52.5%	57.8%
Safe water, sanitation, and sewerage	44.6%	40.6%	42.5%
Others (specify).	0.0%	1.0%	0.5%
Total (n)	287	303	590
Women received message in mobile for CU5 on child feeding			
Yes	13.3%	38.5%	26.7%
No	86.7%	61.5%	73.3%
Household received services from Union Information Center			

Yes	77.9%	75.5%	76.6%
No	21.8%	22.7%	22.3%
Total (n)	294	335	629
% of volunteers using ICT based e-learning platform to support the community based on needs			
Yes	56%	64%	60%
No	46%	34%	40%
Total (n)	66	142	208
% of frontline workers using ICT based e-learning platform to support the community based on needs			
Yes	0%	0%	0%
No	0%	0%	0%
Total (n)	410	548	958

Annex 3-Table 10: Access to social safety net program

Social Safety Net	Rangpur	Nilphamari	Overall
Household received benefit on any sort of Social Safety Net Program			
Yes	75.2%	49.9%	61.7%
No	24.8%	50.1%	38.3%
% of PLW received benefit from Social Safety Net Program (VGD, VGF, Maternity Allowance)			
Yes	39.1%	12.8%	25.1%
No	60.9%	87.2%	74.9%
Household received benefit from Social Safety Net Program (multiple)			
Food for work (Kabikha)	0.0%	1.2%	0.5%
Allowance for financially indigent, inmates	0.9%	5.4%	2.8%
Vulnerable Population Development (VGD)	5.9%	5.4%	5.7%
Maternity allowance for poor nursing mothers	6.3%	6.0%	6.2%
Secondary Education Scholarship	5.9%	8.4%	7.0%
Allowance for widows, deserters and distressed women	7.7%	9.6%	8.5%
Old Age Allowance	9.0%	15.0%	11.6%
Primary Education Scholarship	18.6%	39.5%	27.6%
Food for Vulnerable Populations (VGF)	45.2%	16.8%	33.0%
Ration Card	30.8%	35.9%	33.0%
Total (n)	**294**	**335**	**629**

Annex 3-Table 11: Status of maternal and new-born health indicators for lactating mothers in the intervention districts

Characteristics	Rangpur	Nilphamari	Overall
Pregnancy related indicators			

Received any ANC			
Yes	97.4%	99.1%	98.3%
No	2.6%	0.9%	1.7%
ANC coverage of lactating mother			
No visit	2.6%	0.9%	1.7%
2 visits	3.1%	0.9%	1.9%
3 visits	9.2%	9.4%	9.3%
4+ visits	85.2%	88.8%	87.1%
Total (n)	196	224	420
ANC coverage of pregnant women			
0 visit	3.1%	0.9%	1.9%
1 visit	17.3%	8.0%	12.4%
2 visits	23.5%	12.5%	17.6%
3 visits	26.5%	22.3%	24.3%
4+ visits	29.6%	56.3%	43.80%
Total (n)	98	112	210
ANC coverage of PLW			
0 visit	2.7%	0.9%	1.7%
1 visit	5.8%	2.7%	4.1%
2 visits	9.9%	4.8%	7.2%
3 visits	15.0%	13.7%	14.3%
4+ visits	66.7%	77.9%	72.7%
Total (n)	294	335	629
Place of ANC visits of lactating mother (multiple)			
Medical College Hospital	1.0%	1.4%	1.20%
District Sadar Hospital	2.6%	7.7%	5.30%
Mother and Child Health Centre	1.0%	4.1%	2.70%
Upazila Health Complex	33.0%	13.1%	22.30%
UH&FWC/Sub Centre/RD	27.2%	32.4%	30.00%
Community Clinic	72.8%	74.8%	73.80%
Satellite Clinic/EPI Centre	1.0%	4.1%	2.70%
NGO Health Centre	5.2%	18.5%	12.30%
NGO Hospitals	0.0%	.9%	0.50%
Private Hospital/clinic	29.8%	58.1%	45.00%
Doctor Chamber	18.8%	1.8%	9.70%
Other	.5%	1.8%	1.20%
Total (n)	191	222	413
Place of ANC visits of pregnant women (multiple)			
Medical College Hospital	3.2%	0.9%	1.9%
District Sadar Hospital	1.1%	11.7%	6.8%
Mother and Child Health Centre	0.0%	2.7%	1.5%
Upazila Health Complex	20.0%	9.9%	14.6%
UH&FWC/Sub Centre/RD	31.6%	25.2%	28.2%
Community Clinic	62.1%	72.1%	67.5%

Satellite Clinic/EPI Centre	1.1%	3.6%	2.4%
NGO Health Centre	5.3%	20.7%	13.6%
NGO Hospitals	1.1%	0.0%	0.5%
Private Hospital/clinic	21.1%	35.1%	28.6%
Doctor Chamber	12.6%	4.5%	8.3%
Other	1.1%	1.8%	1.5%
Total (n)	95	111	206
Place of ANC visits of PLW (multiple)			
Medical College Hospital	1.7%	1.2%	1.5%
District Sadar Hospital	2.1%	9.0%	5.8%
Mother and Child Health Centre	0.7%	3.6%	2.3%
Upazila Health Complex	28.7%	12.0%	19.7%
UH&FWC/Sub Centre/RD	28.7%	29.8%	29.3%
Community Clinic	69.2%	74.1%	71.8%
Satellite Clinic/EPI Centre	1.0%	3.9%	2.6%
NGO Health Centre	5.2%	19.0%	12.6%
NGO Hospitals	0.3%	0.6%	0.5%
Private Hospital/clinic	26.9%	50.6%	39.6%
Doctor Chamber	16.8%	2.7%	9.2%
Other	0.7%	1.8%	1.3%
Total (n)	294	335	629
ANC provider (Multiple)			
CHCP/HA/FWA	88.0%	83.3%	85.5%
CSBA/PCSBA	16.2%	31.5%	24.5%
Paramedics	2.1%	7.7%	5.1%
Nurse	35.6%	16.7%	25.4%
Doctor	58.6%	69.8%	64.6%
Village Doctor	1.6%	.9%	1.2%
Other	.5%	2.3%	1.5%
Total (n)	191	222	413
Name of ANC tests/services (received) (Multiple)			
Weight monitoring	96.3%	98.2%	97.3%
Blood pressure checking	95.8%	96.8%	96.4%
Blood grouping	72.8%	63.5%	67.8%
Routine urine test	59.7%	48.6%	53.8%
Ultrasonogram	63.4%	77.5%	70.9%
Per abdominal check-up	68.1%	76.6%	72.6%
Total (n)	191	222	413
Summary of received service			
Received 1-2 services	5.2%	9.6%	7.6%
Received 3-4 services	48.3%	39.2%	43.4%
Received 5+ services	46.5%	51.2%	49.0%
Mean ± SD (ANC services)	4.0 ± 0.65	4.2 ± 0.62	4.1 ± 0.63
Home visit of health workers (FWA, HA, NGO worker) **for ANC**			

Yes	71.70%	80.60%	76.50%
No	28.30%	19.40%	23.50%
Frequency of home visits for ANC within 6 months			
1-3 times	58.20%	58.50%	58.30%
More than 4 times	41.80%	41.50%	41.70%
Mean ± SD of visits	2.6 ± 1.1	3.1 ± 1.8	2.9 ± 1.6
Total (n)	196	224	420
Coverage of TT injection during pregnancy			
Yes	78.60%	75.40%	76.60%
No	21.40%	24.60%	23.40%
Total (n)	196	224	420
Place of taking TT injection			
Medical College Hospital	0.00%	0.60%	0.30%
Mother and Child Health Centre	0.00%	1.20%	0.60%
Upazila Health Complex	4.50%	2.40%	3.40%
UH&FWC/Sub Centre/RD	3.20%	5.30%	4.30%
Community Clinic	26.00%	32.50%	29.40%
Satellite Clinic/EPI Centre	66.20%	57.40%	61.60%
Private Hospital/clinic	0.00%	0.60%	0.30%
Total (n)	154	169	323
Delivery related indicators			
Place of delivery			
Home	42.90%	42.00%	42.50%
Facility	57.10%	58.00%	57.50%
Total (n)	225	305	530
Attendant in home delivery			
SBA	56.30%	62.10%	59.30%
TBA	43.80%	23.00%	32.90%
Relatives	0.0%	14.9%	7.8%
Total (n)	80	87	167
Place of facility delivery			
Medical College Hospital	1.7%	1.5%	1.6%
District Sadar Hospital	6.0%	10.9%	8.7%
Mother and Child Health Centre	1.7%	1.5%	1.6%
Upazila Health Complex	22.4%	7.3%	14.2%
UH&FWC/Sub Centre/RD	6.9%	14.6%	11.1%
Community Clinic	5.2%	3.6%	4.3%
Satellite Clinic/EPI Centre	0.9%	0.0%	0.4%
Private Hospital/clinic	55.2%	59.9%	57.7%
Other (Specify)	0.0%	0.7%	0.4%
Total (n)	116	137	253
Postnatal care related indicators			
PNC coverage for mothers at facility delivery	100.0%	99.3%	99.6%
PNC coverage for newborn at facility delivery	100.0%	98.5%	99.2%

Total (n)	116	137	253
PNC coverage for mothers at home delivery	51.3%	59.8%	55.7%
PNC coverage for newborn at home delivery	50.0%	59.8%	55.1%
Total (n)	80	87	167
PNC received by mothers	**80.1%**	**83.9%**	**82.1%**
PNC received by child	**79.6%**	**83.5%**	**81.7%**
Time of getting PNC in home			
Less than 2 hours	42.9%	21.8%	30.9%
2-6 hours	21.4%	21.8%	21.6%
7-12 hours	11.9%	20.0%	16.5%
More than 12 hours	23.8%	36.4%	30.9%
Mean ± SD (hours)	11.9 ± 18.4	18.7 ± 22.8	15.8 ± 21.2
PNC provider at home			
CHCP/HA/FWA	52.4%	56.4%	54.6%
CSBA/PCSBA	28.6%	27.3%	27.8%
Paramedics	2.4%	1.8%	2.1%
Nurse	4.8%	1.8%	3.1%
Doctor	11.9%	7.3%	9.3%
Village Doctor	16.7%	27.3%	22.7%
Total (n)	42	55	97
Staying time in facility after delivery			
Less than 2 hours	6.0%	3.6%	4.7%
3 hours to 12 hours	12.1%	27.7%	20.6%
13 hours to 24 hours	12.1%	3.6%	7.5%
More than 24 hours	69.8%	65.0%	67.2%
Mean ± SD (hours)	68.4 ± 42.9	73.0 ± 58.8	84.4 ± 71.6
Total (n)	116	137	253
Total	**196**	**224**	**420**
% of PLW attended in courtyard session on MHCN			
Yes	97.6%	96.4%	97.0%
No	2.4%	3.6%	3.0%
Session providers in courtyard session on MHCN			
CSBA/CHCP	14.3%	23.8%	19.3%
PCSBA/Paramedics	0.3%	5.0%	2.8%
Nurse/FWV	30.7%	9.6%	19.5%
Doctor	1.0%	1.2%	1.1%
CG	7.0%	18.6%	13.1%
CSG	36.9%	69.7%	54.3%
JANO	92.7%	90.1%	91.3%
Total	**287**	**323**	**610**

Annex 3-Table 12: Facilities in Community Clinic

	Rangpur	Nilphamari	Overall
Available services in Community Clinic			
ANC	95.6%	85.4%	90.1%
PNC	47.6%	53.1%	50.6%
Delivery	21.8%	13.7%	17.5%
Immunization	40.8%	71.3%	57.1%
Medicine	58.8%	71.0%	65.3%
Tests	6.8%	7.8%	7.3%
Health Education	17.7%	26.9%	22.6%
Proper referrals	5.8%	6.6%	6.2%
Treatment of common illness	74.1%	62.1%	67.7%
Childcare	28.9%	39.4%	34.5%
Nutrition	58.2%	47.8%	52.6%
Don't know	0.7%	0.9%	0.8%
Community Clinic remain open in week			
Mean ± SD (#)	5.93 ± 0.46	5.73 ± 1	5.82 ± 0.83
% of PLW received service from CC			
Yes	83.7%	89.3%	86.6%
No	16.3%	10.7%	13.4%
Average days of last visit of PLW in Community Clinic			
One week	11.1%	24.1%	17.9%
Two weeks	10.0%	23.4%	17.1%
One month	25.3%	33.8%	29.7%
More than a month	53.6%	18.8%	35.3%
Mean ± SD (#)	63.28 ± 65.6	31.60 ± 45.7	46.63 ± 58.2
Level of satisfaction of PLW on services of Community Clinic			
Very good	94.2%	94.0%	94.1%
Not good	5.1%	4.5%	4.8%
Don't know	0.7%	1.5%	1.1%
% of PLW knew complaint and feedback mechanism in Community Clinic			
Yes	62.9%	65.7%	64.4%
No	20.7%	8.4%	14.1%
Don't know	16.3%	26.0%	21.5%
PLW's suggestion to improve services of Community Clinic			
Ensuring presence of health workers at all times	34.4%	40.6%	37.7%
Arranging the presence of a doctor on a fixed day of the week	60.5%	61.2%	60.9%
Arrange to increase the supply of essential medicines	68.0%	74.9%	71.7%

Strengthening supervision of higher authority and CG	6.8%	23.9%	15.9%
Total (n)	**294**	**335**	**629**

Annex 3-Table 13: Practice of handwashing in 5 critical times for PLW

	Rangpur	Nilphamari	Overall
After using toilet			
Use Soap	95.6%	96.1%	95.9%
Use soil or ash	3.7%	3.3%	3.5%
Use water	0.7%	0.6%	0.6%
Before taking food			
Use Soap	61.6%	59.4%	60.4%
Use water	38.1%	40.0%	39.1%
Don't do anything	0.0%	0.3%	0.2%
Not Applicable	0.3%	0.3%	0.3%
Before cooking			
Use Soap	43.9%	50.4%	47.4%
Use water	52.4%	46.6%	49.3%
Don't do anything	3.7%	3.0%	3.3%
Total (n)	294	335	629
After cleaning the baby's stool or changing the diaper			
Use Soap	96.9%	96.8%	96.9%
Use soil or ash	1.5%	2.7%	2.2%
Use water	1.5%	0.0%	0.7%
Not Applicable	1.5%	0.0%	0.7%
Before breastfeeding or feeding baby			
Use Soap	70.3%	65.3%	67.6%
Use soil or ash	0.0%	0.9%	0.5%
Use water	25.1%	23.9%	24.5%
Don't do anything	4.6%	9.9%	7.4%
Total (n)	195	222	417
Sources of knowledge on handwashing practices			
JANO project	90.5%	92.8%	91.7%
Government training	0.0%	0.3%	0.2%
Media	0.7%	0.3%	0.5%
Social media	0.3%	0.0%	0.2%
Use since previous	8.5%	6.6%	7.5%
Total (n)	294	335	629

Annex 3-Table 14: Adolescent knowledge, practice, and attitude of different learning points at school and home

	Boys	Girls	Overall
Students learned on Gender, health, hygiene, and nutrition at school/madrasha			
Concept of Gender equality & Equity	86.0%	85.3%	85.7%
Nutrition	61.0%	79.7%	70.3%
Food ingredients, food prepare and food serving	24.7%	43.3%	34.0%
Health sciences and healthcare	6.0%	11.0%	8.5%
Hygiene	70.0%	69.7%	69.8%
Puberty and reproductive health	70.3%	80.3%	75.3%
Food & food nutrition management	45.7%	46.7%	46.2%
Child Development, Family Relations, and personal safety	13.0%	24.3%	18.7%
Adolescent health & Hygiene	28.3%	55.7%	42.0%
Hand wash	91.0%	92.7%	91.8%
Use of sanitary latrines	51.0%	61.0%	56.0%
Child Marriage	19.7%	20.3%	20.0%
Gardening (Vegetable)	60.0%	68.7%	64.3%
Students applied learning from Gender, health, hygiene, and nutrition at home			
Concept of Gender equality & Equity	36.9%	41.1%	39.0%
Nutrition	45.0%	62.3%	53.6%
Food ingredients, food prepare and food serving	13.4%	27.3%	20.3%
Health sciences and healthcare	0.7%	3.4%	2.0%
Hygiene	60.4%	58.6%	59.5%
Puberty and reproductive health	28.9%	56.9%	42.9%
Food & food nutrition management	30.2%	31.3%	30.8%
Child Development, Family Relations and personal safety	5.4%	5.7%	5.5%
Adolescent health & Hygiene	14.1%	33.7%	23.9%
Hand wash	83.9%	83.5%	83.7%
Use of sanitary latrines	39.9%	49.5%	44.7%
Child Marriage	8.7%	9.4%	9.1%
Gardening (Vegetable)	47.7%	51.5%	49.6%
Students applied 5 key learning points on Gender, health, hygiene and nutrition at home			
Yes	24.3%	38.3%	31.3%
No	75.7%	61.7%	68.7%
Hand washing knowledge in the critical points			
Know very well	41.7%	62.7%	52.2%
Known	41.7%	25.3%	33.5%
Somewhat Know	16.7%	12.0%	14.3%
Hand washing practice in the critical points			
Always Practice	79.3%	82.0%	80.7%
Somewhat Practice	20.7%	18.0%	19.3%
Knowledge about using Hygiene latrine			

Know very well	36.7%	51.3%	44.0%
Known	46.7%	36.0%	41.3%
Somewhat Know	16.3%	12.7%	14.5%
Do not know	0.3%		0.2%
Practicing use of Hygiene latrine			
Always Practice	86.0%	85.7%	85.8%
Somewhat Practice	13.7%	14.0%	13.8%
Do not Practice	0.3%	0.3%	0.3%
Students knew about gender equality			
Yes	98.3%	99.3%	98.8%
No	1.70%	0.70%	1.20%
Students learnt about gender equality			
Concept of Gender equality & Equity	69.2%	75.2%	72.2%
Labour divisions of men and women	56.3%	65.8%	61.0%
Interrelationship of men and women	30.8%	47.7%	39.3%
Equal opportunities for girls and boys	92.9%	95.6%	94.3%
Puberty and reproductive health	53.2%	72.5%	62.9%
Adolescent health & Hygiene	42.7%	56.0%	49.4%
Child Development, Family Relations, and personal safety	8.5%	21.5%	15.0%
Conflict management	5.8%	12.1%	8.9%
Effective Communication	5.1%	5.0%	5.1%
Total (n)	**279**	**314**	**593**
Garden available at school			
Yes	99.3%	99.3%	99.3%
No	0.7%	0.7%	0.7%
Students engaged in school gardening			
Yes	96.3%	90.3%	93.3%
No	3.7%	9.7%	6.7%
Total (n)	298	298	596
Willingness of student to be engaged in school gardening in future			
Yes	99.7%	99.3%	99.5%
No	0.3%	0.7%	0.5%
Students have vegetable garden at home			
Yes	97.3%	97.7%	97.5%
No	2.7%	2.3%	2.5%
Students have engagement in vegetable garden at home			
Yes	97.9%	99.3%	98.6%
No	2.1%	0.7%	1.4%
Total (n)	292	293	585
Type of activities performed by students in school garden			
Land preparation	62.9%	51.7%	57.4%
Sowing/Plantation	80.6%	77.7%	79.2%
Nursery	15.2%	27.1%	21.0%
Use needs base organic fertilizer	28.6%	29.0%	28.8%

Use climate smart technology	9.5%	11.5%	10.5%
Fencing	48.1%	33.5%	40.9%
Irrigation	83.4%	91.8%	87.5%
Total (n)	283	269	552
Type of activities performed by students in garden at home			
Land preparation	67.4%	60.5%	63.9%
Sowing/Plantation	79.6%	82.5%	81.1%
Nursery	12.3%	24.7%	18.6%
Use needs base organic fertilizer	37.9%	40.2%	39.1%
Use climate smart technology	8.1%	15.5%	11.8%
Fencing	53.7%	41.2%	47.4%
Irrigation	92.3%	93.8%	93.1%
Total (n)	285	291	576
Students' membership in any club			
Yes	18.0%	23.3%	20.7%
No	82.0%	76.7%	79.3%
Total (n)	300	300	600
Students' membership in different club			
Student council	14.8%	21.2%	17.8%
Little doctor	5.3%	19.9%	12.1%
Student cabinet member	59.2%	43.8%	52.1%
Class captain	40.2%	50.0%	44.8%
Total (n)	300	300	600
Students' membership in any forum or committee (Private or government led)			
Yes	18.0%	23.3%	20.7%
No	82.0%	76.7%	79.3%
Total (n)	300	300	600
Students' membership in different forum or committee (Private or government led)			
CSG	1.9%	0.0%	0.8%
UDCC	9.4%	2.9%	5.7%
NGO	11.3%	11.4%	11.4%
CBO	5.7%	0.0%	2.4%
TFD	1.9%	15.7%	9.8%
Cabinet or Council	22.6%	10.0%	15.4%
Adolescent forum	75.5%	87.1%	82.1%
Total (n)	54	70	124
Type of position in committee			
EC Body	16.70%	15.70%	16.10%
General member	83.30%	84.30%	83.90%
Total (n)	54	70	124
Students raised agenda in meeting of forum			
Yes	77.80%	90.00%	84.70%
No	22.20%	10.00%	15.30%
Total (n)	54	70	124

Students participated in planning and decision making of the forum committee			
Yes	90.70%	94.30%	92.70%
No	9.30%	5.70%	7.30%
Total (n)	54	70	124
Students participated in decision making of household and healthcare affairs			
Yes	79.70%	87.30%	83.50%
No	20.30%	12.70%	16.50%
Total (n)	300	300	600
Students participated in decision making of financial affairs of family			
Yes	53.00%	51.70%	52.30%
No	47.00%	48.30%	47.70%
Total (n)	300	300	600
Total (n)	**300**	**300**	**600**

Annex 3-Table 15: Knowledge on danger signs for mothers and newborn

	Rangpur	Nilphamari	Overall
Knowledge on danger signs for mothers during pregnancy			
Yes	99.0%	99.4%	99.2%
No	1.0%	0.6%	0.8%
Total (n)	294	335	629
Name of danger signs			
Excessive bleeding	77.7%	79.6%	78.7%
Headaches/blurred vision	79.7%	73.3%	76.3%
High fever	58.1%	62.5%	60.4%
Prolong labor	28.2%	36.3%	32.5%
Convulsion	70.1%	85.6%	78.4%
Total (n)	294	335	629
Knowledge summary			
Don't know	1.0%	0.6%	0.8%
Knew 1-2 danger signs	26.5%	20.9%	23.5%
Knew 3-4 danger signs	61.6%	63.3%	62.5%
Knew more than 4 danger signs	10.9%	15.2%	13.2%
Mean ± SD (#)	3.14 ± 1.0	3.20 ±1.0	3.26 ± 1.0
Place of getting knowledge about mother's danger signs (Multiple response)			
Medical College Hospital	1.0%	0.0%	0.5%
District Sadar Hospital	1.4%	5.1%	3.4%
Mother and Child Health Centre	0.0%	2.4%	1.3%
Upazila Health Complex	16.2%	10.5%	13.1%

Union Health and Family Welfare Centre/Sub Centre/RD	19.6%	25.5%	22.8%
Community Clinic	66.0%	67.3%	66.7%
Satellite Clinic/EPI Centre	8.9%	11.1%	10.1%
NGO Health Centre	6.5%	17.4%	12.3%
NGO Hospitals	0.3%	0.6%	0.5%
Private Hospital/clinic	7.6%	14.7%	11.4%
Doctor's Chamber	6.5%	2.4%	4.3%
CG	10.3%	17.7%	14.3%
CSG	50.2%	71.8%	61.7%
Total (n)	291	333	624
Knowledge on danger signs for newborn			
Yes	98%	96%	97%
No	2%	4%	3%
Total (n)	294	335	629
Name of danger sign (Multiple response)			
No feeding/stop feeding	32.5%	40.4%	36.8%
Convulsion	58.0%	61.7%	60.0%
Fast/difficult breathing	44.9%	62.3%	54.2%
Fever/Hypothermia	43.8%	37.7%	40.5%
Weakness/Lethargy	12.0%	8.5%	10.1%
Omphalitis	21.2%	27.1%	24.3%
Jaundice	25.4%	58.4%	43.1%
Pneumonia	55.8%	61.4%	58.8%
Total (n)	283	329	612
Knowledge summary			
Don't know	4%	2%	3%
Knew 1-2 danger signs	38%	19%	28%
Knew 3-4 danger signs	50%	57%	54%
Knew 5-6 danger signs	8%	21%	15%
Knew 6+ danger signs	0%	1%	1%
Mean ± SD (#)	2.92 ± 1.0	3.57 ±1.2	3.27 ± 1.2
Place of knowing danger sign (Multiple response)			
Medical College Hospital	0.7%	0.3%	0.5%
District Sadar Hospital	0.0%	5.2%	2.8%
Mother and Child Health Centre	0.0%	2.7%	1.5%
Upazila Health Complex	19.8%	8.2%	13.6%
Union Health and Family Welfare Centre/Sub Centre/RD	19.1%	24.6%	22.1%
Community Clinic	66.4%	66.6%	66.5%
Satellite Clinic/EPI Centre	9.2%	11.2%	10.3%
NGO Health Centre	5.7%	13.1%	9.6%
NGO Hospitals	0.4%	1.2%	0.8%
Private Hospital/clinic	5.3%	14.9%	10.5%
Doctor's Chamber	3.9%	2.7%	3.3%

CG	11.0%	18.5%	15.0%
CSG	50.2%	73.3%	62.6%
Total (n)	283	329	612
Total	294	335	629

Annex 3-Table 16: Breastfeeding and immunization of newborn

	Rangpur	Nilphamari	Overall
Gender of last child			
Male (boy)	53.44%	45.58%	49.25%
Female (girl)	46.60%	54.40%	50.80%
Average age of last child (month)			
First feed of newborn			
Colostrum	100.00%	97.30%	98.60%
Honey/water	0.00%	1.79%	0.95%
Formula milk or others	0.00%	0.89%	0.48%
Knowledge about exclusive breastfeeding of mothers			
Yes	99.50%	98.20%	98.80%
No	0.50%	1.80%	1.20%
Prevalence of exclusive breastfeeding up to 6 months			
Yes	65.10%	78.60%	72.30%
No	34.87%	21.36%	27.71%
Child immunization status			
Yes	89.80%	99.10%	94.80%
No	10.20%	0.90%	5.20%
Place of child immunization			
Mother and Child Health Centre	0.6%	0.5%	0.5%
Upazila Health Complex	4.0%	2.3%	3.0%
Union Health and Family Welfare Centre/Sub Centre/RD	2.8%	4.5%	3.8%
Community Clinic	17.0%	38.9%	29.2%
Satellite Clinic/EPI Centre	79.0%	68.8%	73.3%
NGO Health Centre	0.0%	0.5%	0.3%
Private Hospital/clinic	0.0%	0.5%	0.3%
Total (n)	176	221	397
Total	**196**	**224**	**420**

Annex 3-Table 17: MDD-W and MDD-C of PLW and Children 6-23 months of age

	Rangpur	Nilphamari	Overall
MDD-W			
Baseline	41.8%	30.9%	34.9%

MTR	45.5%	35.7%	40.2%
Annual survey 2022	49.7%	46.3%	47.9%
Lactating women	49.9%	40.2%	44.5%
Pregnant women	50.0%	58.6%	54.5%
Total (n)	**294**	**335**	**629**
MDD-C			
Baseline	17.20%	18.10%	Boys 18.1%, Girls 17.4%, Overall 17.8%
MTR	24.30%	23.30%	Boys 22.9%, Girls 24.8%, Overall 23.7%
Annual survey 2022	65.30%	66.50%	Boys 64.4%, Girls 67.5%, Overall 66.0%
Total (n)	**196**	**224**	**420**

Annex 3-Table 18: Type of crops produced by households during last 12 months

Crops	Cultivable land		Homestead land	
	Count	%	Count	%
Rice	388	62.1%	0	0.0%
Corn	107	17.1%	1	0.2%
Wheat	1	0.2%	0	0.0%
Jute	54	8.7%	16	2.5%
Nut	2	0.3%	0	0.0%
Sweet potato	8	1.3%	4	0.6%
Cauliflower	12	1.9%	5	0.8%
Cabbage	8	1.3%	4	0.6%
Ladies finger	68	10.9%	42	6.7%
Radish	70	11.2%	42	6.7%
Tomato	32	5.1%	17	2.7%
Bitter gourd	41	6.6%	35	5.6%
Cucumber	41	6.6%	27	4.3%
Eggplant	68	10.9%	31	4.9%
Pointed gourd	2	0.3%	2	0.3%
Pumpkin	214	34.3%	180	28.6%
Chili	89	14.3%	53	8.4%
Bottle gourd	410	65.7%	366	58.2%
Tobacco	60	9.6%	0	0.0%
Mustard	6	1.0%	0	0.0%
Potato	126	20.2%	8	1.3%
Onion	52	8.3%	24	3.8%
Dal	1	0.2%	0	0.0%
Garlic	59	9.5%	28	4.5%

Ginger	21	3.4%	18	2.9%
Bean	325	52.1%	306	48.6%
Carrot	5	0.8%	2	0.3%
Napa	94	15.1%	53	8.4%
Red amaranth	244	39.1%	150	23.9%
Pea	1	0.2%	0	0.0%
Yardlong bean	37	5.9%	27	4.3%
Ridge gourd	36	5.8%	34	5.4%
Snake gourd	53	8.5%	45	7.2%
Data	22	3.5%	17	2.7%
Malabar spinach	344	55.1%	292	46.4%
Spinach	84	13.5%	43	6.8%
Bindweed	106	17.0%	57	9.1%
Papaya	123	19.7%	108	17.2%
Drumstick	49	7.9%	41	6.5%
Banana	56	9.0%	45	7.2%
Total (n)	629		629	

Annex 3-Table 19: HHs involved in climate smart techniques & production of higher value nutrition products, training etc.

	Rangpur	Nilphamari	Overall
Household involved in crop production in land			
Yes	70.9%	61.0%	65.6%
No	29.1%	39.0%	34.4%
Household involved in crop production at homestead			
Yes	62.9%	54.0%	58.2%
No	37.1%	46.0%	41.8%
Household involved in production types of higher value nutrition products			
Legume, nut or some seeds	66.0%	66.3%	66.1%
Fruits or vegetable	86.1%	87.2%	86.6%
Dark yellow or orange fleshed root or tuber	76.2%	84.8%	80.8%
Animal source food, including dairy products	84.0%	85.7%	84.9%
Bio-fortified	5.8%	6.6%	6.2%
Overall	**43.5%**	**49.9%**	**46.9%**
Household practices at least three climate smart agriculture techniques			
Yes	16.0%	19.4%	17.8%
No	84.0%	80.6%	82.2%
Household received training on climate smart agriculture techniques			
Yes	31.6%	82.7%	58.9%

No	68.4%	17.3%	41.1%
Sources of training on climate smart agriculture techniques			
DAE	17.3%	40.4%	34.4%
NGO and Private sector	82.7%	59.6%	65.6%
Total (n)	294	335	629

Annex 3-Table 20: HHs involved in production of higher value nutrition crops

HHs involved in production of higher value nutrition crops in cultivable land			Mean land used for cultivation	Frequency of cultivation	Crops produced in last 12 months
Crops	Count	%	Decimal	Times	Kg
HHs involved in production of higher value nutrition crops (10) in cultivable land promoted by JANO					
Banana	56	9.0%	0.93	1.0	72.3
Ladies finger	68	10.9%	1.44	1.0	36.3
Papaya	123	19.7%	0.48	1.0	33.6
Pumpkin	214	34.3%	0.61	1.0	29.1
Tomato	32	5.1%	1.14	1.0	28.4
Kangkong	106	17.0%	0.93	1.1	28.2
Red amaranth	244	39.1%	1.13	1.2	27.1
Spinach	84	13.5%	0.86	1.0	23.0
Malabar spinach	344	55.1%	0.52	1.1	22.0
Moringa/Drumstick	49	7.9%	0.20	1.0	14.1
Legume nut or some seeds					
Bean	325	52.1%	0.4	1.0	15.78
Moringa/Drumstick	49	7.9%	0.2	1.0	14.08
Ridge gourd	36	5.9%	1.4	1.0	25.03
Mustard	6	1.0%	11.7	1.0	97.17
Nut	2	0.3%	17.0	1.0	67.50
Yardlong bean	37	0.2%	0.5	1.0	20.00
Fruits or vegetable					
Malabar spinach	344	55.1%	0.5	1.1	22.0
Pumpkin	214	34.3%	0.6	1.0	29.1
Papaya	123	19.7%	0.5	1.0	33.6
Kangkong	106	17.0%	0.9	1.1	28.2
Chili	89	14.3%	2.8	1.0	129.1
Spinach	84	13.5%	0.9	1.0	23.0
Radish	70	11.2%	1.3	1.0	34.7
Ladies finger	68	10.9%	1.4	1.0	36.3
Eggplant	68	10.9%	4.1	1.0	123.9
Banana	56	9.0%	0.9	1.0	72.3
Snake gourd	53	8.5%	0.4	1.0	15.3

Bitter gourd	41	6.6%	0.4	1.0	10.9
Cucumber	41	6.6%	0.9	1.1	21.6
Tomato	32	5.1%	1.1	1.0	28.4
Data	22	3.5%	0.6	1.0	17.6
Cauliflower	12	1.9%	6.6	1.0	185.9
Cabbage	8	1.3%	1.4	1.0	24.6
Pointed gourd	2	0.3%	1.0	0.0	16.5
Pea	1	0.2%	0.5	1.0	20.0
Dark yellow or orange fleshed root or tuber					
Potato	126	20.2%	44.3	1.0	1300.9
Sweet potato	8	1.3%	7.4	1.0	227.5
Carrot	5	0.8%	0.7	1.0	16.8

Annex 3-Table 21: Impact of Covid-19 on household

	Rangpur	Nilphamari	Overall
Impact of Covid-19 on household income			
No change in income	11.9%	14.6%	13.4%
Income has decreased	88.1%	85.1%	86.5%
Income has increased		0.3%	0.2%
Total (n)	294	335	629
Household coping mechanism for Covid-19 (multiple)			
Have to sell land/gold/resources	10.3%	10.2%	10%
Have to eat less or compromise with food quality	92.7%	87.6%	90%
Long -term loan has to be made	51.9%	50.4%	51%
Total (n)	262	274	536
Changes in food menu due to Covid-19 infection (multiple)			
Taking more protein-rich foods	23.2%	27.1%	25%
Eating more vitamin C rich foods	78.7%	78.0%	78%
Eating fresh vegetables	81.5%	91.0%	86%
Total (n)	254	227	629
Impact of Covid-19 on behaviour and attitude (multiple)			
Have to use a mask cultivation	94.6%	96.4%	95.6%
Have to wash my hands more than before cultivation	21.7%	30.2%	26.4%
Visiting among relatives has decreased cultivation	0.0%	0.5%	0.2%
Increased use of mobile, internet and distance education cultivation	12.5%	14.0%	13.3%
Total (n)	184	222	406
Status of double dose Covid-19 vaccination			
Men	98.3%	93.4%	95.7%
Women	92.9%	89.9%	91.3%

Adolescent boy	9.5%	6.6%	7.9%
Adolescent girl	8.8%	6.0%	7.3%
Nobody has taken	1.0%	2.1%	1.6%
Total (n)	294	335	629
% of household affected with increased domestic violence and family dispute during Covid-19			
Yes	42.5%	51.9%	47.5%
No	57.5%	48.1%	52.5%
Total (n)	294	335	629
Reason of increased domestic violence and family disputes during Covid-19 (multiple)			
Mental unrest	36.0%	39.7%	38.1%
Staying at home for long periods of time	42.4%	51.7%	47.8%
Decrease in income	92.8%	86.2%	89.0%
Unemployment	22.4%	31.0%	27.4%
Rising commodity prices	48.0%	46.0%	46.8%
Worry about future of children	11.2%	9.8%	10.4%
Total (n)	125	174	299
% of household affected by recent price hike			
Yes	90.1%	85.1%	87.4%
No	9.9%	14.9%	12.6%
Total (n)	294	335	629
Coping mechanism of household due to recent price hike			
Eating less food than before	68.7%	56.8%	62.5%
Eating less fish and meat	54.0%	59.3%	56.7%
Eating two meals	17.7%	2.5%	9.8%
Relying more on less expensive food	85.7%	70.9%	78.0%
Total (n)	265	285	550
Total (n)	294	335	629

Annex 4: Performance of CSG

The evaluation of the performance of different platforms/forums and their participation is immensely important for assessing the progress of the project indicators. The roles and participation of different forums/bodies and frontline workers, key stakeholders have been analyzed in addition to the performance of the platforms stated in NPAN-2.

Performance of Different Platforms/Bodies

The performance of different platforms/forums have been evaluated based on Participatory Tools Facilitation with CSG, FGD with SMC, CG, PLW, adolescent girls/boys, farmers/household heads, KII with frontline workers, meeting with UDCC, UNCC and DNCC. The analysis was done in terms of functionality, budgeting, coordination, and feedback mechanism of the forums. Following sections presents the findings from different qualitative surveys on different forums.

Community Support Groups (CSGs)

A total of 62 Community Support Groups (CSGs) were evaluated through Participatory Tools Facilitation. Though it was planned to evaluate 64 CSGs, 2 could not be done due to unavoidable circumstances. Each CSG is formed with 17 members who are community people. Both male and female are members of CSG. The CSG functions under the Community Clinic (CC). There are 3 CSGs under each CC. CSGs existed before JANO project intervention but were not much active. One of the activities of the JANO project was activation of the CSGs.

Table 3.2.3.1: Composition of CSGs

	Rangpur	Nilphamari	Overall
Total member	17±0	17±0	17±0
Average number of Men (Mean ± SD)	5.4±1.9	6.8±1.9	6.1±2
Average number of women (Mean ± SD)	11.6±1.9	10.2±1.9	10.9±2
Average number of men present at session (Mean ± SD)	2.7±1.4	4.1±1.5	3.3±1.6
Average number of women present at session (Mean ± SD)	7.1±1.5	6±1.61	6.6±1.6
Total (n)	32	30	62

The performance of CSGs have been evaluated based on 11 issues which included: i) Understanding on CSG group objectives; ii) Group operational nutrition and gender sensitive plan; iii) Team cohesion and leadership; iv) Learning sharing space; v) Record keeping; vi) Access to and use of services/ external relationship; vii) Regular interaction with community; viii) Stopping harmful social phenomena; ix) CSG encourage community to provide suggestions for better service delivery/modification of cc and up service; x) Gender equity; and xi) Support Community People for Resource Mobilization.

A 0-3 scale score has been assigned on each of the issues. Aggregating the scores of 11 issues, a final score has been computed for each of the CSG. Based on the total scores, CSGs were categorized in four groups. Table 6.2 shows the performance of CSG based on their achieved scores. The findings indicate that the performance of 74% CSGs were excellent and 24% CSGs were fair. CSG performance was found to be better in Nilphamari where 80.0% scored excellent compared to Rangpur which was 68.8%.

Table 3.2.3.2: Performance of CSG

	Rangpur	Nilphamari	Total
Moderate (Scores 16-18) (Poor and Average)	3.1%	0.0%	1.6%
Good (Scores 19-24)	28.1%	20.0%	24.2%
Excellent (Scores 25-33)	68.8%	80.0%	74.2%
Total	32	30	62

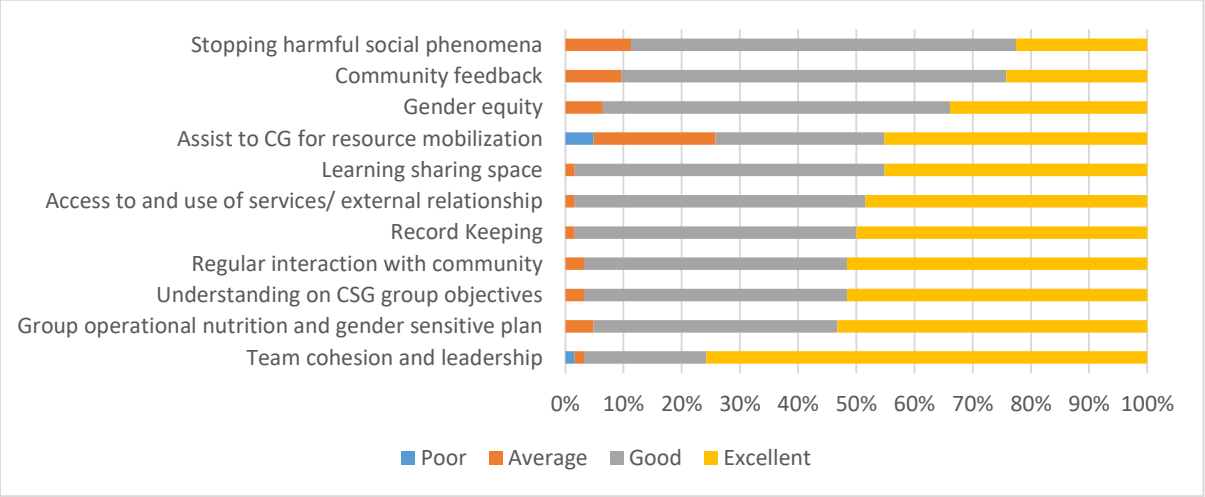
A wide variation has been observed in achieving the scores by CSGs in 11 performance areas as evaluated by Participatory Tools Facilitation (Appendix Table 3.2). It was found that highest percentage of CSGs (75.8%) obtained marks in excellent category for the issue 'Team cohesion and leadership'. On the other hand, 22.6% and 24.2% CSGs obtained marks in excellent category for the issue 'Stopping harmful social

phenomena' and 'Community feedback' respectively. In consideration to excellent category, CSGs obtained poor scores (<50%) in 6 performing areas, which included *access to and use of services, learning sharing space, assistance to CG for resource mobilization, gender equity, community feedback, and stopping harmful social phenomena (Figure 3.1)*.

Table 3.2.3.: Performance of CSG in 11 areas by four categories

Performance area	Poor	Average	Good	Excellent
Understanding on CSG group objectives		3.2%	45.2%	51.6%
Group operational nutrition and gender sensitive plan		4.8%	41.9%	53.2%
Team cohesion and leadership	1.6%	1.6%	21.0%	75.8%
Learning sharing space		1.6%	53.2%	45.2%
Record Keeping		1.6%	48.4%	50.0%
Access to and use of services/ external relationship		1.6%	50.0%	48.4%
Regular interaction with community		3.2%	45.2%	51.6%
Stopping harmful social phenomena		11.3%	66.1%	22.6%
Community feedback		9.7%	66.1%	24.2%
Gender equity		6.5%	59.7%	33.9%
Assist to CG for resource mobilization	4.8%	21.0%	29.0%	45.2%
Total (n)=62				

Figure 3.2.3.1: CSGs Performance in Eleven Areas



According to the CSG members, the CSGs' main responsibility is the dissemination of health and nutrition information to community people (source: participatory tools facilitation). If they find that services of CC are not satisfactory, then they make a complaint in the Complain Box. They advocate and arrange for various social safety net support from the UP for eligible people. CSGs also initiate resource mobilization such as they request the service recipients to contribute some money as much as they can and also collect funds during harvesting time for CC maintenance; and they apply for funds to the UP Chairman for CC repair/boundary wall construction purposes**.** Generally, the CSGs use the money contributed by the service recipients for paying CC's electricity bill and cleaning the CC.

i) Understanding on CSG Objectives: More than half of CSG members scored excellent. They mentioned that the primary objective of CSG is to replenish nutritional deficiencies in pregnant and lactating mothers, <5-year children and adolescent boys and girls. The CSG members work by sharing their responsibilities according to action plan. Some CSGs mentioned that there were some shortfalls/gaps in the action plan.

ii) Group operational nutrition and gender sensitive plan: More than half of CSG members scored excellent. They are aware of their action plan. The CSG members prepared and implemented the action plan in a coordinated effort. None of the CSGs mentioned that they required external support for developing the action plan. They also updated planning and program activities as and when required. According to them, CSG prioritized and implemented program activities according to development needs. Most of the CSGs mentioned that their action plan focused on the following activities:

- Advising to grow vegetables in homestead land
- Making people understand that vegetables grown in homestead land contains more nutrients
- Encouraging people on poultry rearing to meet nutritional needs of the family
- Advising adolescent girls to take iron and folic acid once a week
- Sensitizing on equal food distribution to boys and girls
- Sensitizing on equal educational opportunity for boys and girls
- Sensitizing men to help their pregnant wife during household chores

iii) Team cohesion and leadership: Most of the CSG (75.8%) CSG scored excellent. According to them one who could give more time and had the ability to influence people was selected as the group leader in consultation with all members. The leadership status was removed if any leader did not attend in 3 consecutive meeting and new leader was selected again in consultation with the members. The CSGs held bi-monthly meeting and group formation occurred every 2 years. In order to ensure that services reached every place in the area, CSG groups were formed with members from all communities (Para) in the area.

iv) Learning and sharing space: Less than half (45.2%) scored excellent According to all the CSGs, during CSG meeting everyone listened to everyone meticulously. If any issue was not clear to any member, it was explained again and again. When any member was absent during a meeting, discussion topics and decisions of the meeting and agenda for the next meeting was shared with that person either by making home visit or when they met the person on the road. If anyone in the group performed well then they used his/her experience.

v) Record keeping: The CSG maintained records of all activities such as - Prepared yearly Action Plan; Maintained regulation register and notice ledger, wrote meeting minutes and decisions in presence of all; Documented number of PLW and adolescents in their jurisdiction and service providers name and mobile number; and Prepared a community map. However, some CSGs said that all group members did not have all the records.

vi) Access to and use of services/external relationship: Most of the CSG group members were aware of the existing service providers who provided service in the community. They had the service providers name and mobile number and gave out this information to the community people as and when required. They sent list of beneficiaries name to the Union Parishad and advocated for different type of social safety net allowance for them. In case of unavailability of any services or medicines in the CC, the CSG members informed the concerned service providers to provide support to the CC.

vi) Regular interaction with community: CSGs interacted with the community people on a regular basis. Such as they provided advice to community people through home visit, courtyard meetings, on the road, markets and tea stalls. They also provided advice in groups of 3-4 women and to other family members if present during home visit. About one-third of the CSGs (20) mentioned that many people in the community came to the group member's house to take advice.

vii) Stopping harmful social phenomena: The CSGs also worked to stop harmful social incidents child marriage, dowry and violence against women. According to all the CSGs, child marriage has reduced significantly in their area. But many girls got married at an early age as their family increased their age through affidavit in the court. Violence against women and family disputes have also reduced compared to before. But dowry exchanges took place in secret which they were not aware of.

ix) CSG encourage community to provide suggestions for better service delivery/modification of cc and up service: The CSG worked as a pressure group to improve the service quality of CC and UP as per community demand. The CSGs supervised if CC provided services properly to community people. If they found that services are not given then they made complain in the Complain Box. If they saw negligence by any service providing organization, then they spoke out to them. The CSGs provided budget to the UP Chairman for community development. They arranged for various social safety net support from the UP and advocated for those people who were needy and eligible for the allowances. When community people came to them for not getting any service, the CSGs made written complaint to the service provider or direct complaint through mobile.

x) Gender equity: The CSG maintained gender equity within their group. Male or female were selected as CSG leaders based on their capability. There were no discrimination between male and female in the group. In CSG, male and female equally took group decision. All community people had equal opportunity to contact group members. Gender equality in the community perceived by most of the CSGs are that at present everyone considered boys and girls equally and did not discriminate in terms of education and food distribution, husband and wife took joint decision and shared their role and responsibilities.

xi) Support Community People for Resource Mobilization: Almost two-third (40) of the CSGs reported that they initiated resource mobilization in the following way:

- They request the service recipients to contribute some money as much as they can
- They collected some fund during harvesting time for CC expenses/repair
- They applied for fund to the UP Chairman for CC repair and boundary wall construction
- Generally the CSG uses the money contributed by the service recipients for paying CC's electric bill and cleaning the CC.

Table 3.2.3.4: Performance of CSG in eleven domains

Performance of CSG			
Moderate (Poor and Average)	3.1%	0.0%	1.6%
Good	28.1%	20.0%	24.2%
Excellent	68.8%	80.0%	74.2%
Total (n)	32	30	62
Understanding on CSG group objectives			
Average	6.3%		3.2%
Good	50.0%	40.0%	45.2%
Excellent	43.8%	60.0%	51.6%

Group operational nutrition and gender sensitive plan			
Average	3.1%	6.7%	4.8%
Good	40.6%	43.3%	41.9%
Excellent	56.3%	50.0%	53.2%
Team cohesion and leadership			
Poor	3.1%		1.6%
Average		3.3%	1.6%
Good	21.9%	20.0%	21.0%
Excellent	75.0%	76.7%	75.8%
Learning sharing space			
Average	3.1%		1.6%
Good	62.5%	43.3%	53.2%
Excellent	34.4%	56.7%	45.2%
Record keeping			
Average	3.1%		1.6%
Good	65.6%	30.0%	48.4%
Excellent	31.3%	70.0%	50.0%
Access to and use of services/ external relationship			
Average	3.1%		1.6%
Good	43.8%	56.7%	50.0%
Excellent	53.1%	43.3%	48.4%
Regular interaction with community			
Average	6.3%		3.2%
Good	53.1%	36.7%	45.2%
Excellent	40.6%	63.3%	51.6%
Stopping harmful social phenomena			
Average	12.5%	10.0%	11.3%
Good	53.1%	80.0%	66.1%
Excellent	34.4%	10.0%	22.6%
CSG encourage community to provide suggestions for better service delivery/modification of CC and UP service			
Average	6.3%	13.3%	9.7%
Good	65.6%	66.7%	66.1%
Excellent	28.1%	20.0%	24.2%
Gender equity			
Average	9.4%	3.3%	6.5%
Good	53.1%	66.7%	59.7%
Excellent	37.5%	30.0%	33.9%
Total (n)	**32**	**30**	**62**

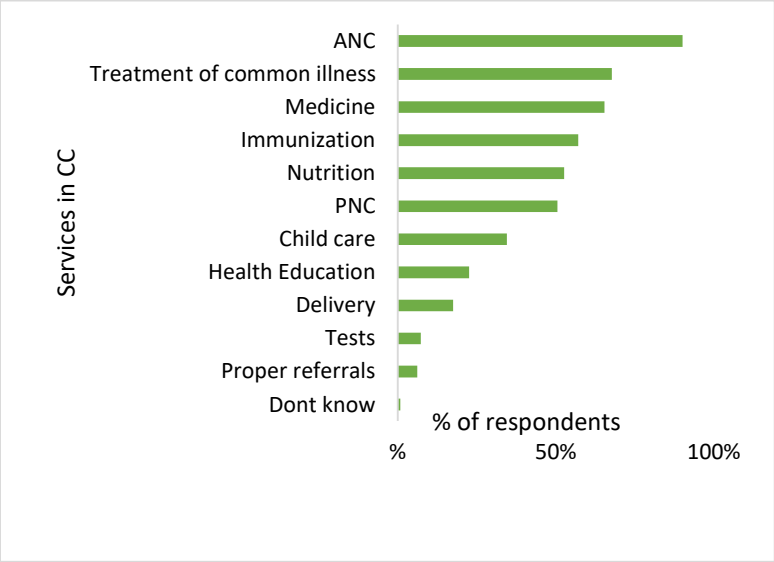
Annex 5: Health Seeking Behaviour for PLWs and Child aged 6-23 Months

This section discusses health service seeking behaviour and status of receiving the maternal and child health cares in particular.

Available Services of community Clinic

The respondents of household survey were asked to report the available services in the community clinic. The responses have been shown in Figure 4.1 and Appendix Table 4.4. Regarding the services of community clinic, about nine-in-ten of the PLW mentioned that antenatal care service, about 70% mentioned that treatment for illness and medicine are the available services of the community clinic. About 50-60% of the respondents stated that vaccination, post-natal care, and nutrition services are available at the community clinic. Childcare, health education, and delivery service were also mentioned by a reasonable number of respondents as the available services of the community clinic.

Figure 4.1: Available services in the community clinic (multiple response)

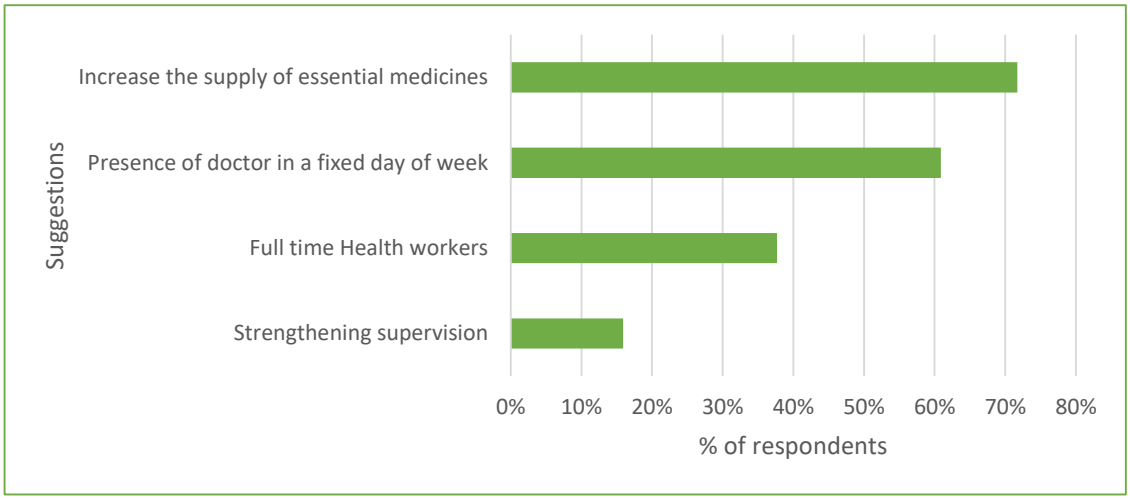


The respondents were asked to report the services of the community clinic along with quality of services. Table 4.1 shows the perception of the PLWs on the services of community clinic. Regarding the number of days the community clinic remains open in a week, it is estimated that on average 5.82 days the community clinic was opened. If the average number of days are rounded, it is observed that the community clinic of Rangpur and Nilphamari district was opened 6 days in a week. About 97% of the surveyed households have reported that the have received services from the community clinic for PLWs or any household members (Appendix Table 4.4). Regarding the last visit in the Community Clinic, it is estimated that on average they (respondents or any household member) have visited the Community Clinic before 46.63 days from the survey point. The average duration of visiting community clinic was estimated remarkably higher for the respondents of Rangpur district (63.28 days) than that of Nilphamari district (31.60 days). About 94% of the respondents (PLW) stated that the quality of services of the community clinic is good. Nearly two-thirds of the respondents mentioned that the provision for feedback and complain are available in the community clinic.

The respondents (PLW) were asked about to put their suggestions to improve the quality of the services as well as to continue the existing services of the community clinic. Figure 4.2 shows the suggestions made by PLW to improve the services of community clinic. About 70% of the PLW have given emphasis to increase the supply of essential medicines in the community clinics. About 60% of the PLW have urged for visiting of a doctor at least one day in the week in the community clinics. The presence of health workers

at all times and strengthening supervision were suggested by a number of respondents in order to improve the services of community clinics.

Figure 4.2: Suggestions of PLW to improve the services of community clinic



Status of Antenatal Care Visits and Services

Antenatal care (ANC) begins from the early stages of pregnancy that is extremely important for the survival and well-being of both the mother and her newborn baby. This section discusses the number visits for ANC, place of ANC services, tests performed as ANC and status of home visit by healthcare service providers. Appendix Table 4.1 shows the maternal healthcare indicators in the Intervening district of JANO Project.

Profile of Birth

The profile of birth given by the lactating mothers is analysed first before going to the ANC services. The respondents (PLWs) were asked about number of pregnancies that she experienced at the survey point. It is reported that about 37% of the respondents have become pregnant once, about 32% have become pregnant twice, about 20% have become pregnant thrice and the rest (11.2%) have become pregnant four times or more. The average number of pregnancies at survey point is estimated at 2.08 per woman. The respondents (PLWs) were asked about the status of last child. Among the 629 sample PLWs, 13.5% did not given any birth earlier, that is this is their first pregnancy. Among the women who had given birth earlier, the last child was alive for 97.4% cases and the rest were died after birth. Among the last child, 49.2% are found male and the rest were female. In response to the place of delivery for last birth, it is reported that 42.5% delivery have taken place at home. As reasons for not going to health facilities/centres for delivery, about 89% respondents have mentioned that they did not face any pregnancy complicacy, 7.3% have mentioned that they had financial hardship, about 3.4% have mentioned that communication system was poor.

Number of Visits

Separate analysis was performed to see the difference of ANC visits between lactating and pregnant women (3+ months of pregnancy). Figure 4.3a and 4.3b shows the overview of number of visits for antenatal care during pregnancy of the lactating women and pregnant women respectively. The percentage of lactating women attending at least one antenatal care during pregnancy by medically trained service providers is estimated at 98.3%, which is higher than the national figure (81.1% women

received any sort of antenatal care during pregnancy) as reported by the BMMS-2016. On the other hand, 96.4% of the lactating women are found to receive at least 3 antenatal cares during pregnancy by medically trained service providers, which is remarkably than the national level estimates (48.6% for rural population received 3 cares) reported by the BMMS-2016 (Appendix Table 4.1).

It is to be mentioned here that a pregnant woman should have at least four antenatal care visits under normal circumstances as per the recommendation of the World Health Organization (WHO, 2007). The analysis of fourth-year annual survey data indicates that 87.1% lactating women and 43.8% pregnant women received four or more antenatal care during pregnancy (Figure 4.3), combining 72.7% for PLW, which is remarkably higher than the national figures (33.1% and 42.7% women belonging to rural areas attended 4 or more ANC according to the BMMS-2016 and BDHS-2017/18 respectively). It is estimated that 94.2% PLW received 2 or more ANCs. In comparison to previous studies of JANO project, the 4th year survey findings indicate that the receiving status of antenatal care in the intervention areas has increased remarkably than the previous studies (84.3% and 79.6% PLW received 2 ANCs as reported in baseline and 2nd year evaluation respectively).

Figure 4.3a: Number of ANC Visits made by the Lactating Women

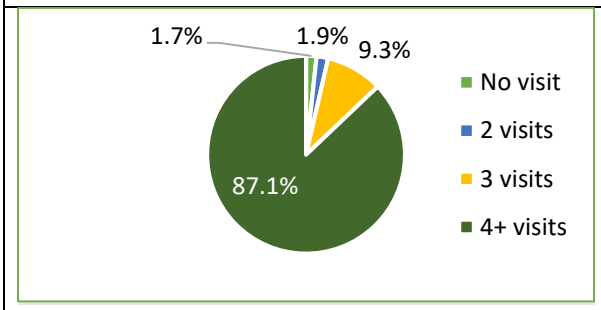
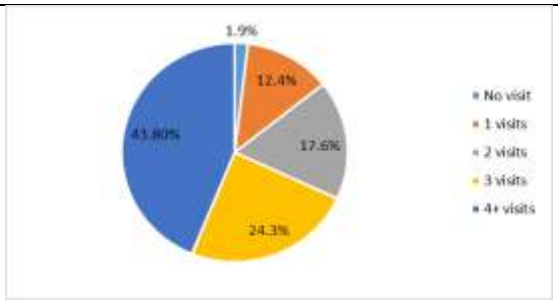


Figure 4.3b: Number of ANC Visits made by the Pregnant Women



Places of ANCs and Service Providers

The respondents were asked about the places from where they sought the antenatal cares during pregnancy. Since the respondents had scope to receive services from different places, hence multiple responses were found to this question. About 72% PLW reported that they received services from community clinic, 40% from private hospital/clinic, 29.3% from UH&FWCs, and 19.7% from UHCs (Appendix Table 4.1). It is observed that percentage of women receiving ANC services from government health facilities is remarkably higher than that of private health facilities.

The respondents were asked to report the persons who provided the antenatal care during pregnancy. The responses to this question were multiple. It is found that 84.3% PLW received antenatal cares from CHCP/HA/FWA, and 59.1% PLW received antenatal cares from doctors (Appendix Table 4.1).

Qualitative findings: Access to health facilities

Qualitative surveys (FGDs and IDIs with PLW) found that the PLW have access to CC and UH&FWC which is nearby their villages. Generally, the CC provides ANC services while the UH&FWC provides ANC/PNC/Child Delivery services. TheyThey argued that the behaviors and services of CHCP and other health staffs are very good, but CC could not provide even the very essential medicines.

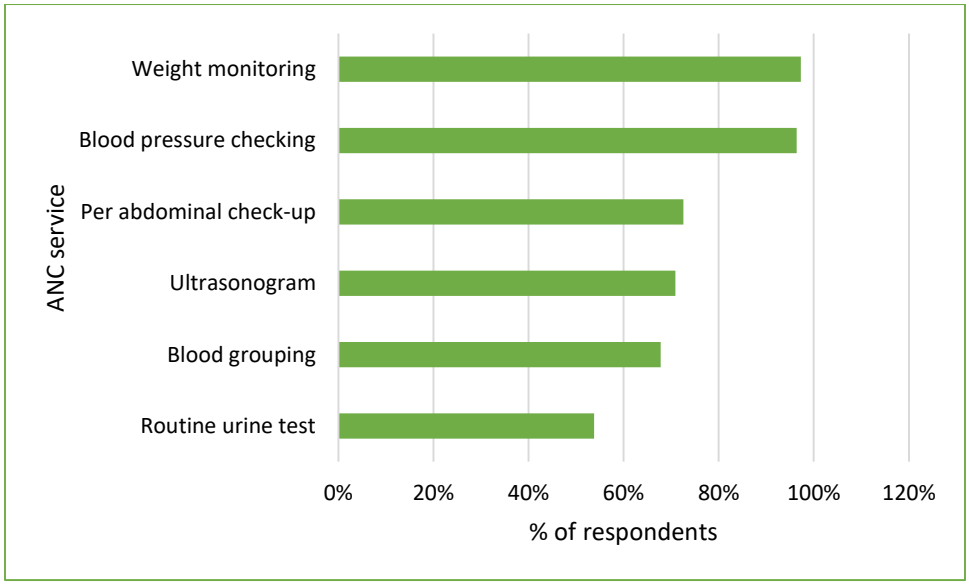
A very few IDI respondents mentioned that there is a 10-bed government hospital named “Matrishodon Hospital” nearby their village where a MBBS doctor provides treatment twice a week and the FWV

provides service twice a week. In this hospital ANC, PNC and Child Delivery services are provided. According to the respondents, the service quality in this government hospital is good. They do not face any problems to take health services from this hospital, and since it is nearby the mothers can go alone to take service from there. The Upazila Health Complex (UHC) is quite far from their village.

Tests/Services for ANC

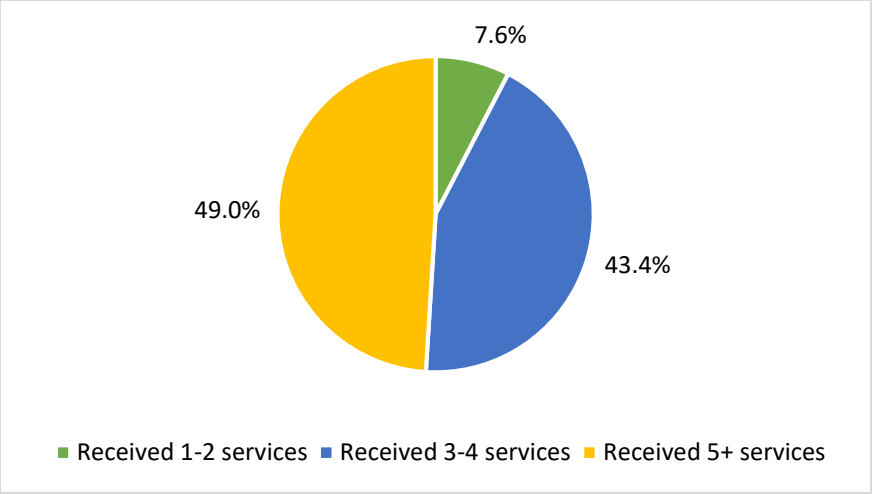
The respondents were asked to mention the tests/services those she received as a part of ANCs. Naturally, the responses to this question were multiple. Figure 4.4 visualised their responses. Majority of the mothers are found to perform weight measure (97.3%) and blood pressure check-up (96.4%) along with and per abdominal examination (72.6%) and ultrasonogram (70.9%).

Figure 4.4: Percentage of Mothers by the Number of Tests/Services as Part of ANC Service



The received tests/services by the respondents during their pregnancy are summarized to have a clear view of number of services that they received. Figure 4.5 shows the percentage of mothers by number of tests/services (available at CC & UHFWCs) done during pregnancy as part of ANCs. It is found that only about 7.6% of the mothers received 1-2 ANC services, 43.4% of the mothers received at least 3-4 ANC services, and the rest (49.0%) mothers received 5 or more ANC services during her last pregnancy. The average number of ANC services is estimated at 4.1 with standard deviation 0.63 services.

Figure 4.5: Percentage of Mothers by ANC Services



The respondents were asked whether they received TT vaccination as a part of antenatal cares. About 77% of the respondents reported that they received TT during last pregnancy (Appendix Table 4.1). They were further asked about the place of TT vaccination. It is found that about 61.6% of the respondents received TT from satellite clinic/EPI centre, 29.4% received from community clinic and the rest received TT vaccine from other health facilities, viz., UH&FWC, UHC, MCHC etc.

Home Services for ANC

The respondents were asked whether any health workers visited the home for providing ANC services during pregnancy. About 77% of the respondents reported that the health workers visited their home to provide ANC during last pregnancy (Appendix Table 4.1). The respondents were further asked about how many times the health workers visited their home during last six months of the survey. About 58% of them reported that health workers visited their home 1-3 times during the last six months for providing ANC services. About 42% of the respondents reported that the health workers visited their home 4 or more times (Appendix Table 3.3). The average number of home visits by health worker is estimated at 2.9 with standard deviation 1.6 during the last six months.

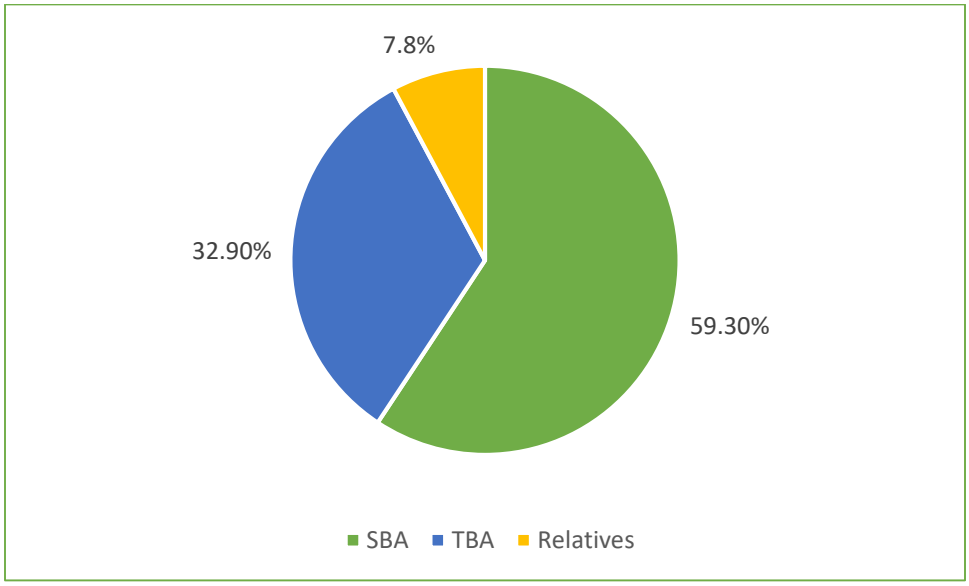
Status of Delivery Care

Literature suggests that lack of proper medical attention and hygienic conditions during delivery may cause death or serious illness for both mother and newborn. Therefore, it is essential to deliver each birth in a safe environment under the supervision of a skilled health professional. The value of the main indicators regarding delivery care along with the national level statistics is given in Table 4.2. The analysis of fourth-year annual survey data indicates that 57.5% of deliveries were took place at heath facility in the intervention areas (Appendix Table 4.1). It is anticipated that all the births at health facility were attended by skilled birth attendant (Appendix Table 4.1). Among the home delivery, it is found that 59.3% births were attended by skilled birth attendants, 32.9% births were attended by traditional birth attendant (TBA) and 7.8% of the births were attended by relatives in the intervention areas (Figure 4.6 and Appendix Table 4.1). At national level, about 50% births of the rural area have taken place at facility (BDHS 2017-18). Regarding skilled birth attendance, about 53% births of the rural area are reported to attend by the medical personnel and another 10% births attend by trained TBA (BDHS 2017-18). On the other hand, the report of Bangladesh sample vital statistics 2020 has documented that about 55.5% birth had taken place at facility and 73.9% births were attended by skilled birth attendant (BBS, 2021).

The analysis of places of facility delivery indicates that about 57.7% deliveries have taken in private/NGO hospitals, 14.2% deliveries at UHC, 11.1% deliveries at 11.1% and 17% deliveries have taken place in other

government hospitals (district hospitals/community clinic) (Appendix Table 4.1). It is to be noted that only 2.6% deliveries of the intervention areas were occurred at community clinic. The reason for high percentage of deliveries in private clinics and NGO hospitals is that the delivery facility is better in the private clinics in comparison to government health facilities. Usually economically well-off households used to go to private clinics for safe delivery and poor/ food insecure households are bound to go to private clinics in complicated delivery cases. The overall findings indicate that an effort is necessary to bring all the pregnant women to the health facility for their safe delivery.

Figure 4.6: Percentage of Home Deliveries by Types of Birth Attendants



Status of Postnatal Care

The percentage of mother receiving postnatal care within 48 hours by medically trained service provider is estimated at 99.6% and 55.7% for facility and home delivery respectively (Appendix Table 4.1). The postnatal care for newborn was found almost equal as found for mother. Combining the postnatal care for facility and home delivery, the percentage of mother receiving postnatal care within 48 hours by medically trained service provider is estimated at 82.1%, which is higher than the national figure reported by BMMS-2016 (66% women are found to receive PNC).

The findings indicate that post-natal care for home delivery was higher in the surveyed households (55.7%) in comparison to the estimates of BDHS-17/18 (only 7% received PNC for home delivery and 97% received PNC for facility delivery as reported by BDHS 2017-18). The overall findings indicate that an effort is still necessary to bring all the mothers and children for postnatal check-ups, particularly in case of home delivery.

The respondents were asked about the time to receive PNC after delivery. About 31% reported to receive PNC within 2 hours after delivery, about 22% reported to receive PNC in-between 2 and 6 hours after delivery, and about 31% reported to receive PNC after 12 hours of delivery (Appendix Table 4.1). The average time to receive postnatal care for mothers is estimated at 15.8 hours with standard deviation 21.2 hours. The average time to receive postnatal care for mothers was found significantly higher for the mother of Nilphamari districts (18.7 hours) than that of Rangpur district (11.9 hours).

The respondents, who delivered at home, were asked about the service providers of PNCs. About 55% of them reported that CHCP/HA/FWA have provided them PNC services (Appendix Table 3.3). Another 28%

mothers reported that CSBA/PCSBA have provided them PNC services. It is to be noted that about 23% mothers reported that village doctor has provided them PNC services.

Regarding staying time in health centres for PNC, about 5% of the mothers reported that they stayed in hospital two hours or less time and 20.6% of the mothers have reported that they stayed 3-12 hours after in hospital after delivery. About two-thirds of the mothers reported that they stayed in hospital for more than 24 hours (Appendix Table 4.1); maybe a lion shares of them had caesarean operation.

Table 4.2: Status of key indicators related to maternal healthcare

[1]*Authors:* **BBS 2021** (BSVS 2020); **NIPORT 2019** (BDHS 2017-18)

Indicators	Annual survey 2022	Secondary sources1	
		National	Rangpur Division
% of PLW received 4+ ANC service	72.7	42.7% (Rural, BDHS 2017-18) 33.1% (Rural, BMMS 2016)	-
% of deliveries in facilities	57.5	(55.5%+4% births outside SRVS area) (BSVS 2020) 49.6% (BDHS 2017-18)	(57.8%+3.25% births outside SRVS area) (BSVS 2020) 47.5% (BDHS 2017-18)
% of deliveries attended by SBA	59.3 (for home delivery)	73.9% (Rural; BSVS 2020) (52.7%+10% Trained TBA) (BDHS 2017-18)	(49.1%+10% Trained TBA) (BDHS 2017-18)
% of mother received PNC service within 48 hours of delivery	55.7 (for home delivery)	66% (BMMS 2016) 52.2% (BDHS 2017-18)	63% (BMMS 2016)

Qualitative findings: Knowledge and practice of ANC and PNC

ANC knowledge and practice among the FGD participants (PLW) can be deemed as encouraging. They mentioned that during pregnancy at least 4 times check-up should be done i.e. first check-up at 4th month, second check-up at 6th month, third check-up at 8th month and fourth check-up at 9th month.

Pregnant women in the area usually take ANC and PNC services from the CC and UH&FWC. At the UH&FWC child delivery is done by a trained/skilled birth attendant. After delivery the health of the mother and newborn are examined, and the mother is advised to take family planning services. If mothers cannot get the service at CC, they are referred to the UHC. ANC services provided in the CC include blood pressure and weight check of pregnant women and check baby's position. The service is provided by the CHCP. They are also provided iron and calcium tablets. In addition, child and TT immunization and birth control pills are also provided at the CC. However, the respondents said that CCs do not have adequate supply of medicine and therefore sometimes they do not get the medicines at the CC. PNC services in the CC include weight check of the baby and immunization and mothers are provided calcium and vitamins. In the village delivery at home are usually done by a trained/skilled birth attendant. Among the lactating women most of them have made ANC visits at least 4 times. FGDs with CG and CSG also found that they ensured ANC for pregnant women and PNC for post-delivery mothers and newborns by advising them to take health services from CC, sending pregnant and lactating mothers to CC for necessary maternal health services and supervised health services provided at the CC.

Regarding child delivery, most of them preferred to do it at home by the skilled birth attendant or at the FWC. The main reason they avoided going to the hospital was transportation cost and medical expenses. They only went to the Upazila hospital/UHC if they had any complications or referred by the CHCP/CC or FWA. FGD participants also mentioned that the CSG advised pregnant women to prepare for medical emergencies (E.g. keeping a donor ready if blood transfusion is required, keeping a van ready for transportation to the hospital/health center and keeping money aside for medical expenses and transportation cost etc.). Sometimes CSG/CG arranged transportation for them to be taken to the UHC.

Their knowledge on PNC focused on check-up of the mother at least 4 times after the birth of the baby until 6 weeks of the baby. These included within 0-24 hours, within 2-3 days, within 7-14 days and within 40-42 days. However, very few among the respondent were found to have taken PNC services unless it was necessary. They were aware that the lactating mother should eat nutritious food and that she should continue taking iron tablets until the baby is 3 months old.

Knowledge on Danger Signs for Mother and Newborn

The most common danger signs for mother are: (a) bleeding during pregnancy and/or excessive bleeding during or after delivery, (b) headaches and/or blurred vision, (c) high fever, (d) prolong labour and/or coming out other parts of body first before head, and (e) convulsion. On the other hand, the knowledge on danger signs for newborn might be helpful to save the life of the newborn as well as getting healthy baby. The danger signs of newborn are somewhat different to the danger signs for mothers. The danger signs for newborn are: (a) not feeding since birth or stopped feeding, (b) convulsion, (c) fast/difficult breathing, (d) fever or hypothermia, (e) weakness or lethargy (only moves when stimulated or not even when stimulated), (f) Omphalitis, (g) jaundice, and (h) pneumonia. The perception of the respondents on danger signs for mother and newborn are discussed below.

Findings on danger signs for mother

The respondents of both groups (lactating and pregnant women) of the household survey were first asked whether they have any idea about danger signs during pregnancy, at the time of birth, and after delivery. Out of total 629 respondents of household survey, about 99% reported to have knowledge on danger signs for pregnant women. The respondents were further asked to mention the danger signs those are known to them. Among danger signs for pregnant women, highest percentage of the respondents mentioned the signs as excessive bleeding (78.8%), followed by convulsion (78.4%), headaches and/or blurred vision (76.3%), high fever (60.4%) Appendix Table 4.2). FGD participants also mentioned about the 5 danger signs during pregnancy viz., i) High temperature; ii) Extreme headache; iii) Convulsion/Seizure; iv) Too much bleedings; and v) Labor pain for more than 12 hours.

The correct responses on danger signs for mothers during pregnancy are counted and the knowledge summary is presented as percentage in Figure 11 and Appendix Table 5.1. It is found that about 99% of the respondents had correctly mentioned the name of at least 2 danger signs, about three-quarters of the respondents were correctly reported at least 3 danger signs, and about 13% of the respondents were correctly reported more than 4 danger signs during pregnancy.

Findings on danger signs for newborn

The pregnant and lactating women were asked whether they have any idea about danger signs for newborn. They were further asked to mention the danger signs for newborn that they know. The responses of 629 respondents were analysed and the results are presented in Appendix Table 4.2. The findings indicate that 97% of the respondents mentioned that they had idea on danger signs for newborn. Among danger signs for newborn, convulsion, pneumonia fast/difficult breathing were mentioned by more than half of the respondents.

The correct responses on danger signs were counted and presented as knowledge summary (Appendix Table 4.2). The distribution of knowledge summary indicates that 69.3% of the respondents knew at least 3 danger signs and 15.6% of the respondents knew at least 5 danger signs for newborn. FGDs with PLW mentioned the danger signs of the newborn like, i) Red rash on the skin; ii) Infection in umbilicus /navel; and iii) Milk entering into the newborn's trachea/airways. Their knowledge and practice of breastfeeding and child immunization is also encouraging.

Sources of knowledge on danger signs for mothers and newborn

The respondents were asked about the places or persons from where/whom she received the knowledge on danger signs for newborn and pregnant women. The responses are found multiple, and the findings are presented in Appendix Table 4.2. Two-thirds of the respondents mentioned that they knew about danger signs for mother from community clinic. Another 61.7% respondents mentioned that they knew about danger signs for mother from CSG. The other notable sources for knowledge on danger signs for mother appeared as UH&FWC (22.7%), UHC (13.1%) and CG (14.3%). It is found that about 29% of the respondents knew about danger signs for mother from private hospital, NGO health centre and doctor's chamber. Regarding sources of knowledge on danger signs for newborn, almost similar responses were found as it was found for mothers.

Healthcare for Children (Aged 6-23 months)

This section discusses the feeding practices of newborn and status of child vaccination.

Breastfeeding of Child

The respondents were asked about the first feed of the newborn (last child) that they have given after birth. Among the respondents, 98.6% have reported that they had given colostrum to the newborn. It is found that about 99% of the respondents have knowledge on exclusive breastfeeding to the child. Near 72% of the respondents have reported that they had maintained exclusive breastfeeding up to 6 months of age for their children (Appendix Table 4.3).

Immunization of Child

The mothers were asked about the immunization status of their child. About 95% of the respondents affirmed that the vaccination of their children was being done in right way (Appendix Table 4.3). Regarding the place of child immunization, satellite clinic/EPI centre was mentioned by 73.3% of the respondents and community clinic was mentioned by 29.2% of the respondents. Only a few respondents mentioned UHFWC/Sub-centre/RD and upper tiers of hospital (district hospital/UHC) for vaccination centre of their child.

Annex 6: Women empowerment and decision making

Overall dimension of household decision making focused on particularly 12 issues, viz., food menu choice, grocery purchase, buying cosmetics, buying clothes for children and herself, spending of own income, buying main household assets (land, animal, grain), purchase and sale of jewellery, taking loan and use of savings, children's education, marriage of son and daughter, treatment of children and herself, and adoption of family planning methods.

In case of taking decisions alone by women, the highest response was found for food menu choice and preparation (71.9%), followed by buying cosmetics (50.2%), grocery purchase (48.2%), buying clothes for children and own (29.3%), treatment of children and herself (25.1%), children's education (12.9%), spending own income (12.6%) and family planning (7.6%). However, it was less than 5% for the rest of

the domains such as buying the main resources of the household (land, animal, and grains), purchase and sale of jewellery and taking loan and use of savings.

In case of joint decisions by women and her husband, the highest response was obtained for family planning (90.3%) followed by purchase and sale of jewellery (73.4%), taking loan and use of savings (70.4%), buying the main resources of the household (land, animal, grain) (69.5%), treatment of children and herself (62.3%) buying clothes for children and own (61.0%), children's education (39.6%), and spending own income (30.4%). The joint decision taking in discussion with other family members was found very low in most cases i.e., less than 20% except for buying the main resources of the household (land, animal, grain) which was 22.4%.

Qualitative findings validate the above quantitative findings. During FGDs and IDIs with PLW, respondents mentioned that in most cases of decision making in family matters wife took decision jointly with her husband. However, she could independently take decision in matters related to cooking, going to the doctor/health center for her children's and own health services. A few of them said that they could take decision in education affairs of their children. Almost all the respondents mentioned that they are permitted to go out of the house alone as well as have the scope of going out to buy necessary things for the family.

	Rangpur	Nilphamari	Overall
Participation in decision making (% of yes) in different domain			
Household work and health care	98.0%	95.5%	96.7%
Household financial affairs	70.4%	68.4%	69.3%
Participate in meeting of Villages, CG, CSG, UDCC	54.4%	71.6%	63.6%
Local bazars visit for buying commodity	60.5%	54.6%	57.4%
Doctor or health center visit alone	81.3%	81.2%	81.2%
Permission to visit relatives, friends, neighbour	85.7%	74.0%	79.5%
Go alone to attend social event, school/union parishad/group meeting	48.6%	68.7%	59.3%
Total (n)	294	335	629
Dimension of decision making			
Take decision alone in 12 domains (Food -making items, Grocery purchase, Buying cosmetics, Children and own cloth, Spending own income, Buying main resources (land, animal, grain), Purchase and sale of jewellery, Taking loan and use of savings, Children's education, Marriage of son and daughter, Treatment of children and myself, Family planning)	**17.3%**	**25.9%**	**21.9%**
Food menu choice and preparation			
Take decisions alone	70.1%	73.4%	71.9%
Take decisions after discussion with husband	16.3%	6.6%	11.1%
Discuss with other members of the family and make decisions	13.6%	19.1%	16.5%

Women have no involvement in decision making		0.9%	0.5%
Not applicable			
Grocery purchase			
Take decisions alone	39.8%	55.5%	48.2%
Take decisions after discussion with husband	43.9%	29.0%	35.9%
Discuss with other members of the family and make decisions	16.0%	12.2%	14.0%
Women have no involvement in decision making	0.3%	3.3%	1.9%
Not applicable			
Buying cosmetics			
Take decisions alone	46.3%	53.7%	50.2%
Take decisions after discussion with husband	49.7%	39.7%	44.4%
Discuss with other members of the family and make decisions	4.1%	4.2%	4.1%
Women have no involvement in decision making		2.4%	1.3%
Not applicable			
Buying clothes for children and own			
Take decisions alone	12.6%	43.9%	29.3%
Take decisions after discussion with husband	77.9%	46.3%	61.0%
Discuss with other members of the family and make decisions	5.8%	3.3%	4.5%
Women have no involvement in decision making		2.1%	1.1%
Not applicable	3.7%	4.5%	4.1%
Spending own income			
Take decisions alone	5.1%	19.1%	12.6%
Take decisions after discussion with husband	36.4%	25.1%	30.4%
Discuss with other members of the family and make decisions	4.8%	2.4%	3.5%
Women have no involvement in decision making		0.3%	0.2%
Not applicable	53.7%	53.1%	53.4%
Buying the main resources of the household (land, animal, grain)			
Take decisions alone	1.4%	2.1%	1.7%
Take decisions after discussion with husband	73.5%	66.0%	69.5%
Discuss with other members of the family and make decisions	20.4%	24.2%	22.4%
Women have no involvement in decision making	2.0%	3.0%	2.5%
Not applicable	2.7%	4.8%	3.8%
Purchase and sale of jewellery			
Take decisions alone	2.0%	2.7%	2.4%
Take decisions after discussion with husband	76.9%	70.4%	73.4%
Discuss with other members of the family and make decisions	16.0%	16.1%	16.1%
Women have no involvement in decision making	0.3%	2.7%	1.6%
Not applicable	4.8%	8.1%	6.5%

Taking loan and use of savings			
Take decisions alone	3.1%	3.6%	3.3%
Take decisions after discussion with husband	65.6%	74.6%	70.4%
Discuss with other members of the family and make decisions	16.3%	16.1%	16.2%
Women have no involvement in decision making	1.4%	2.7%	2.1%
Not applicable	13.6%	3.0%	7.9%
Children's education			
Take decisions alone	4.8%	20.0%	12.9%
Take decisions after discussion with husband	42.2%	37.3%	39.6%
Discuss with other members of the family and make decisions	2.0%	0.3%	1.1%
Women have no involvement in decision making	51.0%	42.4%	46.4%
Not applicable			
Marriage of son and daughter			
Take decisions alone	0.3%	1.2%	0.8%
Take decisions after discussion with husband	9.9%	17.0%	13.7%
Discuss with other members of the family and make decisions	1.0%	0.6%	0.8%
Women have no involvement in decision making	0.3%		0.2%
Not applicable	88.4%	81.2%	84.6%
Treatment of children and myself			
Take decisions alone	20.1%	29.6%	25.1%
Take decisions after discussion with husband	69.7%	55.8%	62.3%
Discuss with other members of the family and make decisions	5.8%	3.6%	4.6%
Women have no involvement in decision making		2.1%	1.1%
Not applicable	4.4%	9.0%	6.8%
Family planning			
Take decisions alone	5.4%	9.6%	7.6%
Take decisions after discussion with husband	92.9%	88.1%	90.3%
Discuss with other members of the family and make decisions	0.3%	0.6%	0.5%
Women have no involvement in decision making	1.4%	1.8%	1.6%
Not applicable			
Total (n)	294	332	626

Annex-7: Household Survey Questionnaire (Bengali and English)-Separate 4 files in word and pdf
Annex 8: Students Survey Questionnaire (Bengali and English)-Separate 4 files in word and pdf
Annex 9: All Qualitative Checklist (English)-Separate 2 files in word and pdf
Annex 10: Participatory Tools Facilitation (CSG)
Annex 11: Database (HH Survey, Students Survey, CSG, HH Prelisting)-SPSS and Excel
Annex 12: Syntax (JANO Logframe, HH and Student Survey)-SPSS
Annex 13: Survey CTO tool (HH survey, Student Survey, CSG, HH Prelisting)-Excel

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