Measuring Livelihood Impacts:
A Review of Livelihoods Indicators

Livelihood Monitoring Unit (LMU)
Rural Livelihoods Program
CARE Bangladesh

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Research Tool

Prepared by TANGO International, Inc.
PREFACE

The Livelihoods Monitoring Unit (LMU) of the CARE Bangladesh Rural Livelihoods Programme was designed as a lesson-learning intervention to develop a system for monitoring change in the livelihoods and entitlements of the rural poor in the Northwest and Southeast regions of Bangladesh.

In order to monitor changes in livelihoods it is important to develop approaches to identify and monitor key livelihood indicators that enable us to understand how our programs impact upon the lives of the rural poor. These indicators need to represent the key components of livelihoods for the poor, measurement of which will allow organizations to effectively ascertain the program impact.

A workshop was organized in March 2004 by CARE-Rural Livelihood Program to review and assess the "competing Livelihood indicators" already in use by CARE, other donors and local NGOs to monitor changes in livelihoods. This report is the outcome of review and assessment of the current livelihood indicators used within CARE and also by other external organizations. The report gives details of the process involved in building a consensus and generating a set of best proxies as "Livelihood indicators". It also describes a finite and comprehensive set of indicators (26 livelihood indicators, organized around 9 livelihood outcome themes) that meet a number of standard criteria, such as, validity, measurability, relevance and flexibility. Please note that these set of indicators are a refined versions and the LMU is going to test these during the Northwest Livelihoods Survey 2004.

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Table of Contents

1.0 Introduction .................................................................................................................... 1
2.0 The Household Livelihoods Approach ................................................................. 1
3.0 Pre-Workshop Preparation ..................................................................................... 2
4.0 Workshop Organization and Process ................................................................. 2
5.0 Workshop Outcomes ............................................................................................ 3
  5.1. Food Security ................................................................................................... 3
  5.2. Nutritional Security ........................................................................................... 4
  5.3. Economic Security ............................................................................................ 6
  5.4. Shelter/Water and Sanitation Security .......................................................... 7
  5.5. Health Security ............................................................................................... 8
  5.6. Educational Security ....................................................................................... 9
  5.7. Gender Status ................................................................................................. 9
  5.8 Community Participation ................................................................................. 11
  5.9 Access to Institutions ...................................................................................... 11
6.0 Concluding Observations ........................................................................................ 12

List of Tables/ Figures

Table 1. Food Security Indicators .................................................................................. 5
Table 2. Indicators of Nutritional Security .................................................................... 5
Table 3. Indicators of Economic Security ..................................................................... 7
Table 4. Shelter and WATSAN Security ....................................................................... 8
Table 5. Health Security Indicators ............................................................................. 8
Table 6. Education Security Indicators ........................................................................ 9
Table 7. Gender Status Indicators ............................................................................... 10
Table 8. Community Participation Indicators ............................................................ 11
Table 9. Access to Institutions Indicators .................................................................... 12
Figure 1. Household Livelihood Security: A Framework for Analysis ....................... 13
Annex-A: Comparison of Indicators Used by CARE-Bangladesh and Other Organisation..14
Annex-B: Participant’s List ......................................................................................... 18

Measuring Livelihood Impacts: A Review of Livelihoods Indicators
Summary Report

1.0 Introduction

The Livelihoods Monitoring Project (LMP) is a component part of the larger CARE/Bangladesh Rural Livelihood Program (RLP) which also includes the GO-INTERFISH project in northwest Bangladesh and the SHABGE project in both the northwest and southeast regions of the country. The purpose of LMP is to assess the impacts on rural livelihoods of these two development projects and more broadly to monitor the well-being of rural livelihoods over time in these two targeted regions. Rather than the project-specific monitoring and evaluation of outputs (which the RLP projects have individually installed), LMP has the broader mission of measuring impact-level changes in livelihoods. In effect, it provides systematic documentation of livelihood development in the targeted regions and offers important insights on the determinants of livelihood change. As its central methodological framework, LMP has designed for each region a sequence of two baseline surveys spaced over time in order to capture the impacts of RLP project interventions on local livelihoods. The first baselines were completed in 2002-03, and the second set is under preparation. In addition, LMP has also carried out in-depth thematic studies on debt and migration—seen as livelihood strategies particularly relevant to development programming—and other thematic studies will be considered.

A major challenge to LMP effort is to identify and operationalize the appropriate set of robust indicators that can capture changes in livelihood well-being, especially those changes associated with project interventions. While the household livelihood system approach has been widely embraced by the donor community in Bangladesh, there remains a lack of general consensus over which specific livelihood indicators—consistent with the livelihoods approach—should be effectively and efficiently monitored through time. To move toward that consensus, the LMP project staff organized an livelihood indicators workshop which convened representatives of different CARE/Bangladesh programs as well as representatives of other donor and GOB agencies. The intent of the workshop was to review and assess the “competing” indicators already in use, then agree upon a comprehensive but finite set of indicators that would effectively measure change in livelihood well-being, and finally devise a strategy for measuring the selected indicators. This set of indicators are thus designed to serve as a systematic set of sensors that would periodically assess the progress of livelihood systems in the regions where CARE/Bangladesh has targeted its project interventions. At the same time, it was intended that these indicators would serve the entire development community in Bangladesh and provide a consistent basis for livelihood assessment across the country.

2.0 The Household Livelihoods Approach

The household livelihoods approach is a conceptual model of household decision making within wider contexts of constraints and opportunities. The core analytical unit is the household, membership in which is defined in terms of regular roles, rights, and responsibilities distributed across gender and age. As demonstrated in Figure 1, households mobilize access to packages of assets, often depicted as different types of capital (human, economic, physical, etc.). How these assets are acquired is highly variable ranging from such mechanisms as biological reproduction, participation in markets, inheritance practices, and in other public and private institutions. Since households exist within physical and institutional environments (or Context in the Figure), which are themselves subject to change (e.g., the occurrence of a stress event such as a flood or conflict), household access to assets can vary in time. Households also make decisions about the allocation of assets between consumption, production and income generation, and exchange activities. In the
case of rural households, decisions are made with regard to crop choice and technology, the
division of household labor between production and income generation (including out-
migration), the enhancement of human capital through education, and the distribution of both
product and income. In its entirety, the set of mobilization and allocation decisions result in
outcomes, which constitute categories of well-being, such as food security, nutritional
security, economic security, and so on. The strength of the livelihood approach lies in its
comprehensiveness. Well-being, as determined by livelihood outcomes, encompasses not
only the standard food and income indicators, but also those related to health, education,
human capital, labor migration and human capital, food security, and so on. In this holistic
perspective, the process of evaluating and monitoring household livelihoods requires an integrated focus on all these well-being dimensions and the complex
relationships among them.

Consistent with this approach, then, the strategy of the workshop was to identify those
livelihood indicators which, as a group, would allow development agencies and other
stakeholders to monitor complex changes in livelihoods and to understand the processes
(i.e., the decisions and their motives) that have produced such change.

3.0 Pre-Workshop Preparation

In preparation for the indicator workshop, the LMP team examined several sources to
compile a large set of outcome indicators currently in use in Bangladesh. These indicators
were drawn from those that are employed within the various development programs of
CARE/Bangladesh, from those used in Bangladesh by other donors, including national
NGOs, and from the set or recommended indicators generated by past consultancies with
the RLP program. Examples of these indicators are provided in Annex A. The indicators
from each source were organized into the livelihood outcome categories presented in Figure
1, thus providing a framework for comparison. The team looked for commonalities among
these indicators and assessed them in terms of their “robustness” (i.e., how adequately they
reflected actual household well-being) and their feasibility with regard to the constraints of
data collection. This process identified a set of “candidate” indicators that were presented to
the workshop participants.

4.0 Workshop Organization and Process

The workshop was held on March 21, 2004 and was attended by CARE/Bangladesh
program staff, other NGO staff and management, and GOB representatives (see Annex B
for a list of participants). The stated goal of the workshop was to achieve a group consensus
in identifying a finite, manageable list of robust livelihood indicators and to develop for each
indicator a strategy for measurement. At the beginning of the workshop, the group discussed
the eligibility requirements that would define a viable indicator. It was agreed that the final
set of indicators must meet the following set of standards:

1. **Validity**: The indicator must be a valid representation of a change in household well-
   being, as determined by the categories of livelihood outcomes (i.e., food security,
   economic security, shelter, etc.).
2. **Measurability**: The indicator must be amenable to measurement within the
   constraints of time and resources.
3. **Relevance**: The indicator must be relevant to program objectives.
4. **Flexibility**: The indicator must be flexible enough to be applied to different contexts
   and livelihood systems.
It was further agreed that the set of indicators—taken as a whole—should be comprehensive in the sense that they holistically address all the different dimensions (i.e., outcome categories) of the household livelihood approach.

During the initial sessions of the workshop, the different CARE/Bangladesh indicators, organized by outcome category, were presented to the participants, then the indicators used by other donor organizations were presented. Following the presentation, the participants were invited to brainstorm other indicators that would best capture change in the livelihood well-being. All suggested indicators were recorded according to their respective livelihood outcome category. In a following session the participants split into break-out groups representing each of the livelihood categories in order to review and evaluate the potential indicators in light of the standards established above. Each group presented their recommendations in a plenary session, including the preferred set of indicators and the respective strategies for measurement. A final plenary session sought to reduce the total number of candidate indicators and to achieve the desired consensus.

5.0 Workshop Outcomes

The consensus-building process engaged during the workshop identified a set of 26 livelihood indicators organized around 9 livelihood outcome “themes.” The workshop participants recognized and focused on the fact that the objectives of a given development program and the indicators of successful performance of the program are often indirectly related. For example, a desirable food security impact of “adequate quantity of food consumed” is not directly measurable. Rather it must be approached indirectly, or “operationalized” by selecting components of the reality (i.e. food security) that can in fact be measured and which do accurately depict food security. Since, of course, food security or even “adequate amount of food” cannot be directly measured, it is necessary to identify the operational variables that can measure it. In some cases, it is necessary to measure a behavior that is thought to strongly correlate with the specific component, in other words, a proxy variable. The use of vegetable oil, for example, is considered to be a strong proxy for protein consumption, since the oil is mostly used to fry fish or meat. Consequently, the following workshop outcomes are presented according to each livelihood theme (or outcome in Figure 1), with a discussion of the several components of each theme and the operational and/or proxy variables that have been chosen to measure each component.

5.1. Food Security

One widely-accepted conceptual framework defines food security in terms of food availability, access, and utilization (Riley et al. 1999). From a household livelihood perspective, food security is thus a function of whether food is available either on-farm or in the market, whether households have access to the food, and whether patterns of food utilization, including intra-household distribution, are such that the nutritional needs of all household members are met. In essence, a livelihood analysis of food security at the impact level assesses the quantity and quality of food available to households throughout the year and the distribution food among all household members. Often, it is the case that the food security is effectively measured by a household’s capacity to cope with stress periods—either seasonal or interannual. Thus, the indicators that capture these components of food security (summarized in Table 1) are as follows:

1) **Duration of the lean period**: In Bangladesh, as elsewhere, many rural households are confronted with a regular seasonal period of stress. The occurrence of seasonal stress is usually related to the cropping cycles (food stocks from previous harvest are low, but current crop is not yet ready) or to seasonal fluctuations in the rural employment market. In Bangladesh the lean period is a commonly-recognized component phenomenon of
food insecurity, and it is measured in terms of the specific months of the year that a household is forced to alter the quantity and quality of food that it consumes. More food secure households have a reduced lean period or none at all, while severely food insecure households may constrict consumption all year long. This indicator is measured directly in a questionnaire format, and assumes that the information reflects a normal year.

2) **Quantity of food consumed per day during the lean period:** This indicator reinforces the first one and provides a more in-depth assessment of household food security. It measures the quantity of meals consumed per day during the lean period and identifies the months in which the amount of food prepared per meal is reduced. While the first indicator measures the number of “problem-months”, this indicator provides a more refined measure of severity of food insecurity. It is measured directly in a questionnaire format.

3) **Share of household budget spent on food items:** It has been well-documented in the development literature that as a household increases its income, a smaller share of the household budget is spent on food items. Following this logic, the household budget share allocated to food becomes a proxy variable of food security. In other words, the household that spends less of total annual income on food is considered to be more food secure relative to one that spends more. This indicator is measured in a standard questionnaire format that asks for estimated percentage allocations of household expenditures within a small set of budget categories (food, health, education, production inputs, shelter, etc.). It is assumed that this information represents a normal year.

4) **Quality of the diet:** Frequently, food security does not result from inadequate quantities of food, but from a lack of protein, vitamins, and minerals. This indicator is a proxy variable of diet quality in two ways. First of all, vegetable oil is a major source of calorie intake in the diet; second, in Bangladeshi homes, oil is used to fry protein and vitamin-based foods. Since soybean oil is more expensive and nutritious than mustard oil, the consumption of both is measured, under the assumption that a family consuming larger amounts of soybean oil (per capita) has a higher quality diet—thus more food secure—relative to households with a lesser per capita oil consumption.

5) **Diet diversity by type of household member.** This indicator records the number of days in which meat, fish, eggs, and dhal were consumed during the past month or week by four categories of households members—male adults, female adults, male children, and female children. This indicator is, in effect, a proxy variable that measures both food utilization, particularly the intra-household distribution of food, and quality of diet. The underlying assumption is that the household with the greater diversity of diet and more equal distribution of food among individual members can be judged more food security relative to a household with less diet diversity or with certain categories of members regularly excluded from the consumption of quality foods. Information for this indicator, as in the case of oil consumption, is measured in a standard questionnaire format.

5.2. **Nutritional Security**

Nutritional security is a livelihood outcome closely related to food security, particularly the food utilization component. The conventional components of nutritional security are child and maternal nutritional status, since these are two of the most vulnerable groups in Bangladesh (and elsewhere in the world) and because of the long-lasting damage that even temporary malnutrition can cause in child-bearing women and children. The indicators that measure nutritional security in women and children are well-known and widely-accepted (Table 2).
6) **Stunting and wasting among children 6-59 months of age**: This indicator is the commonly used measure of moderate and severe malnutrition in a population. Children whose ages fall within the range of 6-59 months are weighed and measured for height. The three variables—weight, height, and age—are then used to create ratios of height to age (stunting) and weight to height (wasting), which are compared with a reference population to establish the incidence of severe or moderate malnutrition. Weight and height are recorded using specialized equipment, and field staff require substantial training. In some parts of Bangladesh, the age of children may not be readily known.

7) **Body mass index for women of reproductive age**: This indicator is equally robust and widely used in measure maternal nutritional status for women between the ages of 14 and 50 (estimated reproductive age). Height and body weight are used to calculate a body mass index that identifies severely underweight (i.e., malnourished) mothers. This indicator also requires specialized equipment and trained field staff.

### Table 1. Food Security Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Justification</th>
<th>Means of Measurement</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Duration of the lean period (in months/year)</td>
<td>Food security inversely related to length of lean period</td>
<td>Table within a standard questionnaire format in a household survey.</td>
<td>Need to specify the situation of a “normal year”</td>
</tr>
<tr>
<td>2. Meals/day and quantity/meal during the lean period</td>
<td>Measures severity of the lean period</td>
<td>HH survey: table above has column for # meals per day</td>
<td>Need to specify the situation of a “normal year”</td>
</tr>
<tr>
<td>3. Share expenditure on food items</td>
<td>Share of expenditure on food less in food security household</td>
<td>HH survey: Inquire into shares of major expenditure items</td>
<td>Proxy variable; need to specify normal year</td>
</tr>
<tr>
<td>4. Oil Consumption</td>
<td>Per capita oil consumption closely related to quality of diet</td>
<td>Per capita consumption for soybean and mustard oil</td>
<td>Proxy variable</td>
</tr>
<tr>
<td>5. Diet diversity</td>
<td>Diversity a measure of diet quality and intra-household utilization</td>
<td>Per month consumption of meat, fish, eggs, and dhal per adult and children, male and female</td>
<td>Proxy variable; need to adjust to recall capacity</td>
</tr>
</tbody>
</table>

### Table 2. Indicators of Nutritional Security

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Justification</th>
<th>Means of Measurement</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Incidence of stunting and wasting among children 6-59 months</td>
<td>Effect measure of severe and moderate malnutrition in children</td>
<td>Nutritional component in HH survey: measurement of height, weight, age for all children in age bracket</td>
<td>Robust, well-accepted indicator; requires specialized equipment and trained field staff</td>
</tr>
<tr>
<td>7. Body mass index for women of reproductive age</td>
<td>Effective measure of maternal malnutrition</td>
<td>Measurement of weight and height for all women between 14 and 50 years of age</td>
<td>Widely-used; requires specialized equipment and trained field staff</td>
</tr>
</tbody>
</table>
5.3. **Economic Security**

Although economic security is intimately related to household livelihood security, the economic status of poor households is notoriously difficult to measure directly. Household income among poor families is often derived from multiple informal sources, and labor is sometimes compensated in non-monetary units (such as food). Wage work itself is irregular and sporadic, making wage income difficult to remember and measure. Moreover, income from agricultural sales is equally resistant to regular accounting. To evaluate economic security, three components of economic security are addressed.

First, annual household income, if available, is a valuable measure of economic security. In most cases, however, the sales of agricultural and animal products occur over multiple events; wage labor is similarly irregular; and because households must struggle to obtain cash in many different ways, diversity of income sources is an uncertain measure of security. Second, the value of key household assets can serve an effect proxy variable. In rural Bangladesh, the ownership of land and livestock tend to be effective measures of the comparative economic status of households. But even if land and livestock are not considered, there are key durable consumer goods, such as radio, jewelry, and bicycles which reflect economic differences in a robust way. Third, levels of savings and debt can effectively establish the economic status of households. Within these components of economic security, the following indicators were chosen (Table 3).

8) **Annual household income stream**: This indicator assumes that the more economic secure household will have a greater annual cash income stream. It is acknowledged that the actual overall income stream will tend to be underestimated due to several reasons, including recall, but that the error will be randomly distributed across the sample. Thus, small changes in this indicator through time cannot be interpreted as significant change in the economic status. This indicator is measured as part of a household survey, and the data should include the estimated cash income earned by every member of the household. When one member has engaged in several wage-earning episodes, the annual value of each should be computed. Only the value of agricultural and livestock sales, not consumed products, should enter into the calculation. Questionnaire tables organized by income-earning episode throughout the year have proven to be an effective measurement strategy.

9) **Household asset index**: The assumption underlying this indicator is that households with a greater investment in key consumer durables are more economically secure, i.e., they have access to more income. The set of key assets can change from one rural context to another, but generally it includes means of transportation, agricultural equipment, fishing equipment, televisions, radios, sewing machines, jewelry, etc. The final composition of the asset list should reflect distinct consumer preferences for items that are expensive enough that not all households can obtain them. Once the list is compiled, a monetary unit values is attributed to each of the assets, then the index is calculated as the total value of all assets owned by the household. It has been argued that the value of land and livestock should be included in this calculation; however, in a society where many households are landless, the high value of land (and livestock) may overwhelm the overall index, creating a bimodal distribution of index values between landed and landless. Household asset lists can be gathered as part of a household survey.¹

¹ This component of economic security has its inherent dangers, since the actual value of any asset cannot always be taken into consideration without burdensome data collection (e.g., new bicycle vs. used bicycle; color TV vs. black-and-white TV).
10) **Household debt levels**: Household debt is an important indicator of economic security only when compared to other household characteristics. The level of debt for one household may represent an important investment in rural infrastructure, such as the purchase of land or equipment; the same level of debt for another household may indicate an excessive financial burden and a situation of dependency. Debt is an indicator that is easily measured in a survey format, but it should be calculated against a comparative base, such as a debt/asset ratio or a debt/annual income level.

11) **Household savings levels**: The level of savings of a household is an effective indicator of economic resiliency to contextual shocks and stresses. The households with higher levels of savings demonstrate a higher level of economic security. Savings information is normally gathered in a household survey.

Table 3. **Indicators of Economic Security**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Justification</th>
<th>Means of Measurement</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Annual household income stream</td>
<td>Cash income levels differentiate economic status</td>
<td>In a household survey, use a table of earning episodes by member</td>
<td>Results tend to be indicate true relative income positions of households</td>
</tr>
<tr>
<td>9. HH assets index</td>
<td>Presence of key durable consumer goods reflects economic status</td>
<td>Compile assets lists in survey, attribute a unit value to each asset</td>
<td>Land and livestock values can also be included</td>
</tr>
<tr>
<td>10. HH debt levels</td>
<td>Can reflect access to financial capital or excessive burden</td>
<td>Debt levels can be gathered in household surveys</td>
<td>Debt levels must have a base of comparison; debt to income; debt to assets</td>
</tr>
<tr>
<td>11. HH savings levels</td>
<td>Savings reflects resiliency</td>
<td>Household survey: current savings</td>
<td>Robust measure of livelihood vulnerability</td>
</tr>
</tbody>
</table>

5.4. **Shelter/Water and Sanitation Security**

This livelihood category is considered critical in the context of Bangladesh due to the high population density, the lack of sanitation infrastructure, particularly in rural areas, and the high levels of arsenic intrusion in wells. The components of this category include the quality of housing, access to latrines, and access to drinking water that is safe from both bio-contamination and arsenic (Table 4).

12) **Housing condition**: This indicator is measured by a proxy variable: the type of roofing material used in the residence. More permanent roofing, such as zinc sheeting, reflects a better standard of housing relative to grass roofing materials. Another aspect of this indicator is the presence of electricity in the house.

13) **WATSAN infrastructure**: This is a key indicator that includes the type of latrine used by the household, ranging from no latrine (open defecation) and hanging latrines (unsanitary) to covered pit latrines; and the type of drinking water system, ranging from an open water body (e.g. river or pond) to a community well or an individual deep tubewell. Other aspects of indicator quality include the distance to the water source and the number of families that share the source. Finally, the indicator captures whether the water source is arsenic-free.
5.5. Health Security

Several components of health security are considered to be critical in livelihood security assessment. The first is the frequency of illness among all household members. In highly vulnerable households, illness episodes can severely compromise the productiveness of family members, reducing already-low levels of incomes and production, thereby affecting food and nutritional security. The second component is access to primary health care. The health security of rural families is directly related to their level of access to appropriate medical care. In Bangladesh, a third component of health security is the incidence specifically of diarrhea episodes, particularly among children. Diarrhea is, in fact, a proxy variable of the quality of the health and sanitation environment in which the family resides, and it is highly responsive to development interventions (e.g., ORS treatments), thus eminently treatable. The indicators of health security are summarized in Table

14) **Family illness episodes over last month**: This indicator measures the number of illness episodes over the last month, recording the type of illness, days sick, days of productivity lost, and type of treatment sought—for every member of the household. This information is gathered during the household survey. It is a strong indicator of health security, if it can be assumed that illness does not have a strong seasonal pattern. If so, then the period of recall will have to be expanded.

15) **Incidence of diarrhea episodes over last month**: this indicator is also gathered during the household survey, and it includes detailed information on the length of sickness, the days lost to work (if applicable), and the form of treatment.

Table 5. Health Security Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Justification</th>
<th>Means of Measurement</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Family illness episodes over the last year</td>
<td>Detailed information on health situation of the household by member</td>
<td>Household survey gathers data on each episode during the last month, including work days lost, treatment source, cost</td>
<td>Captures age and gender differences; time frame must be altered if there is a seasonal illness pattern</td>
</tr>
<tr>
<td>15. Incidence of diarrhea</td>
<td>Diarrhea a “signal” condition of poor health situation; responsive to treatment</td>
<td>Household survey provides information on each episode by member</td>
<td>Captures age and gender differences; time frame must be altered if there is a seasonal illness pattern</td>
</tr>
</tbody>
</table>
5.6. Educational Security

This livelihood category is comprised of several components, including the overall level of education of the household, gender differences in educational access, and the overall literacy rates of adults in the household. Workshop participants acknowledged that educational quality, while important, is a component that is generally overlooked in livelihood assessments, usually due to the difficulty of measurement. The education security indicators are summarized in Table 6.

16) *Family members with completed primary*: This indicator, combined with the following one, is a measure of the amount of education in the household. The highest educational level for this indicator is the situation in which all members within the appropriate age category have completed primary school. This information is gathered in the demographic section of the household survey questionnaire.

17) *Family members with completed secondary*: This indicator, when taken with the first, provides a measure of the level of education within the household. Again, the highest educational level for this indicator is all members of the appropriate age category having completed secondary school.

18) *Adult literacy rates*: This indicator is often used to measure the lowest level of educational achievement—adult illiteracy. This information is gathered in the demographic section of a household survey questionnaire.

Table 6. Education Security Indicators

<table>
<thead>
<tr>
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<th>Justification</th>
<th>Means of Measurement</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Children completed primary level of school</td>
<td>Measure of the level of education within the household</td>
<td>Survey of household members over 15 years of age with primary complete</td>
<td>Assumes no 15 year olds in primary school, does not measure drop-outs; captures gender differences</td>
</tr>
<tr>
<td>17. Children completed secondary level of school</td>
<td>Measure of the level of education within the household</td>
<td>Survey of household members over 20 years of age with secondary complete</td>
<td>Assumes no 20 year olds in secondary school, does not measure drop-outs; captures gender differences</td>
</tr>
<tr>
<td>18. Adult literacy</td>
<td>Illiteracy often a measure of the lowest level of security</td>
<td>Survey of all adults</td>
<td>Strong negative indicator</td>
</tr>
</tbody>
</table>

5.7. Gender Status

One of the critical categories of household livelihood security in Bangladesh is the status of women. Gender status in Bangladesh is part of the livelihood focus on basic rights and justice, since women have been traditionally cloistered and their movement in society highly restricted. Moreover, women have been the victims of structural oppression, including violence. The major components that reflect gender status include the incidence of violence against women, the participation of women in household decision-making, marriage age for girls, and dowry levels. The relevant indicators are presented in Table 7.
19) **Violence against women reduced**: Structural violence against women, especially husbands against wives, is a critical problem in Bangladeshi rural society. The livelihood approach places great emphasis on justice and physical security, and reduction in violence is a strong livelihood goal. Measurement of this highly sensitive indicator is very difficult, just as the interventions designed to reduce violence toward females produce only gradual change. Household surveys are not the appropriate strategy of investigating violence against women, and it is suggested that tools of community analysis be employed. These include focus group discussions with men and women, key informant interviews with salish members, local political leaders, and local NGOs.

20) **Female participation in household decision-making**: It is assumed that as women obtain more voice with households (and within village society) that their status will improve. This indicator must be measured through a series of proxy variables, such as questions regarding participation in specific decision contexts (e.g., land purchase, migration, marriage of children, dowry, etc.) or questions regarding freedom of movement to particular places (market, relative’s home, etc.).

21) **Age at marriage**: Traditionally women are obliged to marry very young, often forcing them to abandon their studies. This indicator compares the ages at marriage of the adult females in the household with the ages at marriage of their sons and daughters. Indications of a pattern toward marriage at later age are assumed to represent an improved status for women.

22) **Dowry**: Dowry is considered to be a symbol of the oppression of women and is often associated with violence against young wives. The absence of dowry at marriage and symbolically low values of dowry are considered indicators of improved status for women. Again, the dowries of the adult females in the household are compared with those of their sons and daughters.

**Table 7. Gender Status Indicators**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Justification</th>
<th>Means of Measurement</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. VAW decreased</td>
<td>Violence against women widespread, directly related to status</td>
<td>Community analysis: FGDs, KIIIs, salish interviews—attempt to measure quantities of violence episodes</td>
<td>Necessary to do some background work on conflict resolution institutions: salish, mosque committee, etc.</td>
</tr>
<tr>
<td>20. Participation in household decision-making</td>
<td>Status related to participation household decisions, village society</td>
<td>Household survey (female respondents) on mobility of women, participation in decisions</td>
<td>Interview must be done in non-threatening context</td>
</tr>
<tr>
<td>21. Marriage age</td>
<td>Status related to early marriage</td>
<td>Household survey of marriage ages</td>
<td>Adult women compared to ages of married children</td>
</tr>
<tr>
<td>22. Dowry incidence</td>
<td>Dowry a critical social issue, associated with female violence</td>
<td>Household survey of dowry incidence and levels</td>
<td>Compares adult women with married children</td>
</tr>
</tbody>
</table>
5.8 Community Participation

This livelihood outcome category focuses on the level of participation of households in wider village society. In essence, this category attempts to assess the flows of social capital within a village and how individual households are able to mobilize and access these networks. In Bangladesh, village society is organized around traditional and formal social groups. In the former category are such institutions as local samities, mosque committees, and other informal associations. The more formal groups include the union parishad, NGOs, and CBOs. It is assumed here that household livelihood security is enhanced by the density of social relations, i.e., the amount of social capital available to households, especially the vulnerable ones. While fairly subtle and elusive, the following indicators (in Table 8) are designed to capture this livelihood dimension.

23) **Effective presence of village groups**: This indicator seeks to measure the amount of nature of social relations in the village as determined by the number and type of social groupings. The roles of the respective groups are also assessed. It is assumed that a village with a more numerous and diverse set of social groups will enjoy higher levels of social capital.

24) **Participation of vulnerable households in community activities**: As a complement to the previous indicator, this one focuses on the inclusiveness of the village groups. It seeks to assess if vulnerable households (such as female-headed or lower-caste households) actively participate and benefit from participation. Both these indicators are measured through a combination of community-level inquiry (FGDs and other qualitative tools) and household-level inquiry. Furthermore, in the household surveys, men and women are interviewed separately in order to capture gender differences in participation.

Table 8. Community Participation Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Justification</th>
<th>Means of Measurement</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>23. Effective presence of community groups</td>
<td>Active local groups increase level of community solidarity</td>
<td>Household survey determines household knowledge of social groups. FGDs with community leaders another important source of data</td>
<td>Community analysis can be done on pre-survey visit</td>
</tr>
<tr>
<td>24. Vulnerable households participate in social activities</td>
<td>Indicator of inclusiveness in village society</td>
<td>Household survey asks about level of participation, benefits of the different groups</td>
<td>Open-ended questions in survey form</td>
</tr>
</tbody>
</table>

5.9 Access to Institutions

Household livelihood well-being is influenced by extent to which a household is integrated into a wider socio-political system. In Bangladesh, most rural villages are serviced by various types of external agents, who represent wider public or private institutions. For example, there are government representatives that serve local populations, including health agents, rural extensionists, local NGO staff, school teachers and so forth. The access of individual households (and within households of men and women) to such external services have an impact on livelihood security, and it is assumed that livelihood well-being is enhanced by more effective access patterns. Also, where a larger number of institutions are present, the resource flow to the village is assumed to be greater. The relevant indicators are summarized in Table 9. 
25) Uses of external services: This indicator measures the number of external agents in the village and the use of their services by individual households. It includes government offices, NGOs, and, in some cases, representatives of private institutions. This information is gathered through the household survey.

26) Evaluation of external services: This indicator elicits the household’s evaluation of the value of the external service. If the previous indicator seeks to evaluate the intensity of the external presence in the village, this indicator seeks to assess the impact of this presence, from the household perspective. Men and women in the households are interviewed separately for these indicators.

### Table 9. Access to Institutions Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Justification</th>
<th>Means of Measurement</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>25. Use of external services</td>
<td>Level of integration in wider system a source of resources</td>
<td>Household survey elicits from men and women their use of these services</td>
<td>Open-ended questions</td>
</tr>
<tr>
<td>26. Impacts of external services</td>
<td>Level of integration in wider system a source of resources</td>
<td>Household survey elicits evaluations of impacts from both men and women</td>
<td>Open-ended questions</td>
</tr>
</tbody>
</table>

6.0 Concluding Observations

The result of the livelihood indicators workshop demonstrated that a consensus around a core set of livelihood indicators is possible. It further reinforced the argument that the holistic household livelihood framework is a useful, integrative one for assessing change among the target populations where development programs are operative. The list of 26 indicators that was generated during the workshop is comprehensive and realistic, but it reveals many of the gaps that still challenge our understanding of household dynamics and well-being. For example, the dynamic discussions that characterized the workshop underlined how difficult it is to measure some of the more subtle forms of livelihood change, such as the status of women or the participation of vulnerable households. One might wish that these concepts could be measured as easily as a baby is weighed, but it would be wrong to assume that difficulty of measurement makes the indicator less important or less insightful. To measure the process of change is a daunting order, especially the type of change that can slip by unperceived. The success of this workshop notwithstanding, there is still much work to be done in refining the indicators and in adapting appropriate and effective methodologies.

A second gap that the workshop could not address was that of the relationship between different livelihood outcome categories and indicators. The group did not have the time to ask if economic security always meant food security, or health security. How these component parts interrelate is ultimately a critical piece of the livelihood puzzle. At some point in time, the LMP team will need to address how the livelihood components reinforce one another. Does increasing women’s economic security change their status?

Finally, this final set of indicators, while robust and refined, should be considered as prototypes, waiting to be tested and ready to undergo another round of modifications. As livelihoods change, so will the set of indicators have to adjust. For now, they are an improved version, not yet perfect, but one that can be distributed and set to the test.
Figure 1. HOUSEHOLD LIVELIHOOD SECURITY: A FRAMEWORK FOR ANALYSIS

- Natural Capital
- Political Capital
- Human Capital
- Social Capital
- Economic Capital

- Production & Income Activities
- Consumption activities

- Rights to:
  - Food Security
  - Nutritional Security
  - Health Security
  - Shelter Security
  - WatSan Security
  - Education Security
  - Community Participation
  - Gender equity
  - Access to Institutions

- Natural Resources
- Institutions
- Infrastructure
- History
- Economic, Cultural, and Political Environment
- Demography

- CONTEXT
- LIVELIHOOD STRATEGY
- LIVELIHOOD OUTCOMES

Measuring Livelihood Impacts: A Review of Livelihoods Indicators
## Annex A: Comparison of Indicators Used by CARE-Bangladesh and Other Organisation

<table>
<thead>
<tr>
<th>Indicators</th>
<th>CARE indicators</th>
<th>Indicators used by other organization</th>
</tr>
</thead>
</table>
| **A. Nutritional Security** | • % children of 6-59 months old < -2 standard deviation from the mean (stunting, wasting)  
• % women have BMI of at least 18.5  
• Appropriate breast feeding and weaning practices for new-borns. | • % children with low birth rate (UNICEF)  
• % HHs consuming Vitamin A, iodized salt (UNICEF)  
• Per capita food intake (Kcal) (PROSHIKA)  
• % cereal, roots, tubers as part of dietary energy supply (CFS) |
| **B. Food Security** | • # meals per day during lean period  
• Duration of lean period (# months)  
• Consumption of cooking oil; consumption of staple  
• % HHs increased food intake (# meals with dietary diversity)  
• Intra-HH allocation improved to meet specific needs of women and children  
• % income used to procure food decreases | • HHs with homestead gardens (HKI)  
• Dependency ratio (HKI)  
• Cropping intensity (FAO)  
• Wage rate variability (FAO)  
• Gross crop and livestock income (HKI)  
• Net value of crop and livestock production  
• Crop handling and storage losses  
• Income diversity  
• Household asset index  
• Debt-to-asset ratio  
• Household expenditures on specific items  
• Dietary diversity  
• Number of daily eating occasions  
• Farming system diversity (HKI)  
• Months of adequate food stock  
• Perceived food security  
• Coping strategies index (HKI) |
| **C. Economic Security** | • Average #/% of women income earners per household  
• % HHs using loans for business enterprise activities | • % HHs with manual labor as principal occupation (HKI)  
• Wage levels for day labor (ag and non-ag) (CEGIS) |
<table>
<thead>
<tr>
<th>Indicators</th>
<th>CARE indicators</th>
<th>Indicators used by other organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% women with adequate income equal to wage or ag labor index</td>
<td>Amount cultivated land/land ownership (HKI)</td>
</tr>
<tr>
<td></td>
<td>% women with accumulated savings/ investment above mandatory savings</td>
<td>Level of outmigration to bosti (HKI)</td>
</tr>
<tr>
<td></td>
<td>% HHs with increasing assets</td>
<td>Male out-migration (CEGIS)</td>
</tr>
<tr>
<td></td>
<td>% HHs (at least 10% of those headed by women) with increased monthly cash income</td>
<td>%HHs with less than $1/day income (UNICEF)</td>
</tr>
<tr>
<td></td>
<td>Increased level of savings used for productive activities rather than for crisis management</td>
<td>HHs dependent on manual labor (HKI)</td>
</tr>
<tr>
<td></td>
<td>% increase in the value of key household assets and services purchased</td>
<td>Income from agricultural sales</td>
</tr>
<tr>
<td></td>
<td># vulnerable HHs identified several alternative livelihood options (income diversity)</td>
<td>Less dependence on mohajon loans</td>
</tr>
<tr>
<td></td>
<td>Source(s) of cooking fuel</td>
<td>#HH working days per year (FAO/CEGIS/SIFAR)</td>
</tr>
</tbody>
</table>

D. Health Security
- Annual average HH expenditures on health decreased
- # work days lost to illness among HHs
- % mothers with increase in antenatal nutrition
- #/% TB cases with access to facilities
- % decrease in general diseases
- % decrease in neonatal mortality, morbidity rates
- % decrease in maternal mortality, morbidity rates
- # children with access to immunisation
- Level of outmigration to bosti (HKI)
- Male out-migration (CEGIS)
- %HHs with less than $1/day income (UNICEF)

E. WATSAN Security
- % HHs using functional latrines
- % children under five with at least one episode of diarrhoea in last two weeks
- % incidence of diarrhoea among workers
- % HHs with access to safe water (drinking.
- % HHs affected by salinity (CEGIS)
- % HHs affected by arsenic (CEGIS)
<table>
<thead>
<tr>
<th>Indicators</th>
<th>CARE indicators</th>
<th>Indicators used by other organization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>cooking, bathing and washing)</td>
<td></td>
</tr>
<tr>
<td>F. Education Security</td>
<td>• % women with basic numeracy skill</td>
<td>• % children enrolled in primary</td>
</tr>
<tr>
<td></td>
<td>• % adults literate</td>
<td>• % children enrolled in secondary</td>
</tr>
<tr>
<td></td>
<td>• Increased access to improved learning environment for students</td>
<td>• Adult literacy rates (CEGIS)</td>
</tr>
<tr>
<td></td>
<td>• # children graduated basic education (girls and boys)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• # SMC functioning and playing active role to ensure quality learning</td>
<td></td>
</tr>
<tr>
<td>G. Shelter</td>
<td>• Housing: roof materials, wall materials, floor materials, number of living rooms</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Access to electricity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• % HHs with shelter compatible to climate change</td>
<td></td>
</tr>
<tr>
<td>H. Community participation</td>
<td>• % vulnerable households participating in Community Resource Management Committee (CRMC) activitie</td>
<td>• NGO membership</td>
</tr>
<tr>
<td></td>
<td>• % women engaged in community organizations</td>
<td>• Membership in local groups (savings, gardening, etc.) (HKI)</td>
</tr>
<tr>
<td></td>
<td>• % women invited to more social (community) events and gatherings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• # community groups managing development projects</td>
<td></td>
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<tr>
<td></td>
<td>• # mother groups with greater role for community development beyond the school</td>
<td></td>
</tr>
<tr>
<td>I. Access to Institution/</td>
<td>• # extreme poor with increased access to savings services</td>
<td></td>
</tr>
<tr>
<td>service</td>
<td>• # women with complications received EmOC</td>
<td></td>
</tr>
<tr>
<td>Indicators</td>
<td>CARE indicators</td>
<td>Indicators used by other organization</td>
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<tr>
<td></td>
<td>services at available health facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• # of community groups that dialogue with Upazila, UP and District level GoB, and other public institutions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Access to and use of government and other services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• # NGOs active in the community</td>
<td></td>
</tr>
<tr>
<td>J. Justice</td>
<td>• Increased access to local services (law enforcement, psychological, health and legal) for VAW victims</td>
<td>• Improved bargaining for wage rates</td>
</tr>
<tr>
<td></td>
<td>• Access to khas and other natural resources</td>
<td>• Access to khas and other natural resources</td>
</tr>
<tr>
<td>K. Gender</td>
<td>• Women’s access to institutions and services Increased</td>
<td>• Marriage and dowry practices</td>
</tr>
<tr>
<td></td>
<td>• Women involved in decision making regarding marriage, education, mobility, and control related to their children and assets at HH level</td>
<td>• Women participate in decisions over HH investments</td>
</tr>
<tr>
<td></td>
<td>• % decrease in violence against women (VAW)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mobility of women expanded</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Increase in female leadership in VAW forum, shalish UP in upholding women rights</td>
<td></td>
</tr>
</tbody>
</table>
# Annex B: Participant’s List

## Livelihood Indicator Workshop
### Rural Livelihood Program
#### CARE-Bangladesh

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Organization</th>
<th>Name &amp; address</th>
</tr>
</thead>
</table>
| 1             | HKI          | Ms Gudrun Stallkamp  
Nutrition program officer, Hellen Keller International  
House #340 Road 5 DOHS  
Baridhara, Dhaka |
| 2             | DFID         | Gerard Hendriksen  
DFID, Bangladesh |
| 3             | PDO-ICZM     | Md. Sayed Iftekhar  
Program Development Office  
Integrated Coastal zone management program  
Saimon Centre House # 4/A Road # 22,  
Gulshan 1 Dhaka 1212 |
| 4             | CEGIS        | Atiq Kainan Ahmed, Anthropologist  
House 6, Road 23/C  
Gulshan 1, Dhaka 1212 |
| 5             | FAO          | Julia Wolf  
Rural Institution and Participation service  
FAO, Rome Italy |
| 6             | RDRS         | Sattya Roy  
PM (Fish)  
Rangpur Dinajpur Rural Service (RDRS), Dhap, Rangpur |
| 7             | CBSG         | M. Obaidul Islam  
3/3 Block –B, Lalmatia  
Dhaka 1207 |
| 8             | DFID Fourth Fish Fisheries | Niaz Ahmed Apu  
Social-Economist, Fourth Fisheries Project  
Department of Fisheries  
Matshya Bhaban  
Ramna, Dhaka-1000 |
| 9             | RLEP         | Esha Husain  
Rural Livelihoods Evaluation Partnership  
House # 10, Road # 135  
Gulshan –1  
Dhaka 1212 |
| 10            | World Fish Centre | A.K.M Firoz Khan  
Research Associate World Fish Centre  
Road # 22 B House # 7, Block- F, Banani, Dhaka 1213 |
| 11            | Action Aid   | Partha Hefaz Sheikh  
Action Aid Bangladesh |
<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Organization</th>
<th>Name &amp; address</th>
</tr>
</thead>
</table>
| 12            | CARE Bangladesh | Dr. Ziya Uddin Ahmed  
                  Health Sector |
| 13            |              | Dr. Syed Asif Altaf  
                  HIV Coordinator, NSDP |
| 14            |              | Jagannath K Dutta  
                  Senior Advisor D M&E, CBHQ |
| 15            |              | M. Rafiqul Islam (TC_M&E) |
| 16            |              | Gender Coordinator, CBHQ |
| 17            |              | Loretta Payne,  
                  RLP Coordinator |
| 18            |              | Sarah Gillingham,  
                  Livelihood Advisor, RLP |
| 19            |              | Claudia Schaefer  
                  PC-RVCC |
| 20            |              | H J M Kamal  
                  PC-RLP |
| 21            |              | Sajeda Begum  
                  PC-LIFT |
| 22            |              | Abdus Sobhan  
                  PC-RLP |
| 23            |              | Abdul Awal  
                  PC, RLP |
| 24            |              | Abdul Wadud |
| 25            |              | M. Zakaria  
                  TC-LMU |
| 26            |              | Mehrul Islam  
                  PC, RLP |
| 27            |              | ABDUL Wadud  
                  PM-RLP |
| 28            |              | Faruk Ahmed  
                  PDO-INCOME |
| 29            | TANGO        | Tim Finan  
                  TANGO Consultant |