

A focus group discussion with mothers of children aged under five years in Badimalika, Nepal



# Experiences implementing a rapid nutrition determinants assessment in Nepal



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## What we know:

An understanding of nutritional determinants and causal pathways is critical for designing contextualised and targeted programmes that address undernutrition in all its forms. Current assessment approaches are useful but may be time and resource intensive.

## What this adds:

As part of its broader work to support innovative solutions to respond to moderate wasting in children under five, the MWI, in partnership with Action Against Hunger, piloted a rapid nutrition determinants assessment (NDA) approach in Nepal. This article describes the development of this qualitative approach and challenges, opportunities, and lessons learned through the experience.

## Background

Most NDAs, also called nutrition causal analysis assessments (NCAs), seek to understand the multi-sectoral nature of nutrition determinants within a given area, to inform contextualised programmatic responses. In recent years, the Link NCA method – spearheaded by Action Against Hunger – has been a popular method for assessing nutrition determinants through a participative, mixed-method approach. A key strength of Link NCA has been its ability to not only show relationships between various factors but also to describe how determinants are related to each other and the relative importance of each to the risk of developing undernutrition. Although fruitful, this approach has proven to be time and resource intensive, reducing its accessibility, especially in emergency and/or underfunded contexts.

The Nutrition Determinants Working Group (NDWG), a sub-working group of the GNC's Nutrition Information Systems Global Thematic Working Group (GNC, 2024), discussed the need to develop a simple and affordable toolkit to help identify – and explain the relationship between – context-specific determinants, while promoting community engagement. The ultimate goal would be to encourage a more efficient and effective use of nutrition determinants data by programme implementers. This article describes the experiences of the GNC's MWI, in partnership with the NDWG and Action Against Hunger, with funding from Irish Aid, in developing and testing a rapid qualitative NDA in Nepal.

The MWI aims to contribute to addressing the challenges that nutrition stakeholders have in developing, accessing, and utilising feasible, effective, and innovative solutions to respond to moderate wasting in children under five years old at scale. It seeks to support the development of programmatic solutions through a range of contextualised options, including the current standard of traditional nutritional supplementation with the provision of specialised nutritious foods. The MWI aims to use the outputs of the Nepal experience to feed into a larger pilot that supports coun-

tries to diversify and better contextualise approaches for the management of moderate wasting.

## Rapid NDA

The Rapid NDA methodology was developed by Action Against Hunger and further contextualised in situ by the Action Against Hunger Nepal and MWI teams. The methodology aimed to fill specific information gaps, be quick to implement, be accomplished by a small team, and include a community validation exercise. Considering these specific needs, a qualitative approach was considered most appropriate.

The specific objectives of the assessment were to identify key determinants of undernutrition among the study population and to understand how determinants of wasting interact with each other, so as to determine which causal pathways are likely to explain most cases of wasting. The MWI in Nepal was specifically interested in moderate wasting. However, as communities could not differentiate causes of wasting and stunting, or the associated severity, the respondents were not asked to limit their responses to moderate wasting. Therefore, general undernutrition was considered in this setting.

## Sampling and data collection

Three pilot locations were selected in collaboration with Nepal's Nutrition Technical Committee and the Integrated Management of Acute Malnutrition Working Group. Locations were selected to represent the three different geographical areas of Nepal – the mountains, the hills, and the 'terai' (lowlands) – to compare nutritional determinants in these areas. This would provide a contextualised analysis for the design of locally resourced solutions to improve the relevance and efficiency of moderate wasting programming in these locations.

The assessment was designed to be quick and easy to implement. Therefore, the number of community consultations was reduced from that required by a Link NCA (table 1) while trying to maintain the scope of thematic areas covered for it to remain relevant for the multi-sectoral

	Rapid NDA	Link NCA
<b>Methodology</b>	Qualitative	Qualitative and quantitative, including a review of secondary data sources
<b>Timeframe (data collection and analysis)</b>	One or two weeks	20+ weeks
<b>Objective</b>	Studies the relationships between determinants for undernutrition	Studies potential differences in causal mechanisms of undernutrition and anaemia
<b>Data validation</b>	Community validation of data, with a focus on community priorities	Triangulation of data between several qualitative and quantitative sources, including community validation
<b>Implementation area</b>	Sub-district (municipality) level (samples one locality)	District level (samples four localities)
<b>Community consultations</b>	10–11 key informant interviews Nine focus group discussions	54 key informant interviews 48 focus group discussions
<b>Team</b>	Can be implemented by programme/local teams with training and specialised support	Can be implemented by local teams with training and specialised support
<b>Implementation reach</b>	One country and three finalised studies	29 countries and 52 finalised studies
<b>Proof of concept</b>	Promising but needs to be tested in more contexts and in contrast to other methods	Demonstrated reliability

	Data collection and validation
<b>Day 1</b>	Initial community meetings 2x key informant interviews
<b>Day 2</b>	3x focus group discussions 3x key informant interviews
<b>Day 3</b>	3x focus group discussions 3x key informant interviews
<b>Day 4</b>	3x focus group discussions 3x key informant interviews
<b>Day 5</b>	Data synthesis and analysis
<b>Day 6</b>	Community validation

analysis of nutrition determinants. The Action Against Hunger research team was comprised of one supervisor and two research assistants. The team was further supported by a community mobiliser, with technical support provided by the MWI/Action Against Hunger team both in country and remotely. The team spent a maximum of six days in each location, which included three and a half days for data collection, one day for data synthesis and analysis, and one day for community validation (table 2). Government stakeholders were involved in the assessment preparation and as respondents during data collection.

In each location, the research team conducted 10 or 11 semi-structured interviews and nine focus group discussions. Focus group discussions were with community leaders, traditional healers, health staff, representatives of local organisations, and the carers of children aged under five years.

### Assessment tools

Interview guides covering the main determinant categories of undernutrition were developed for the semi-structured interviews and focus group discussions. These categories were: health and nutrition, mental health and care practices, food security and livelihoods, WASH, and gender. The interview guides were organised by sector but included questions for each determinant within that sector. Therefore, the team had the flexibility to ask questions according to feedback from the community. A variety of visual aids were used with the objective of assisting respondents to consider various determinants of undernutrition in the study area and to categorise them in terms of importance. Seasonal and historical calendars were used to identify temporal variations in determinants and their effect on child outcomes (figure 1).

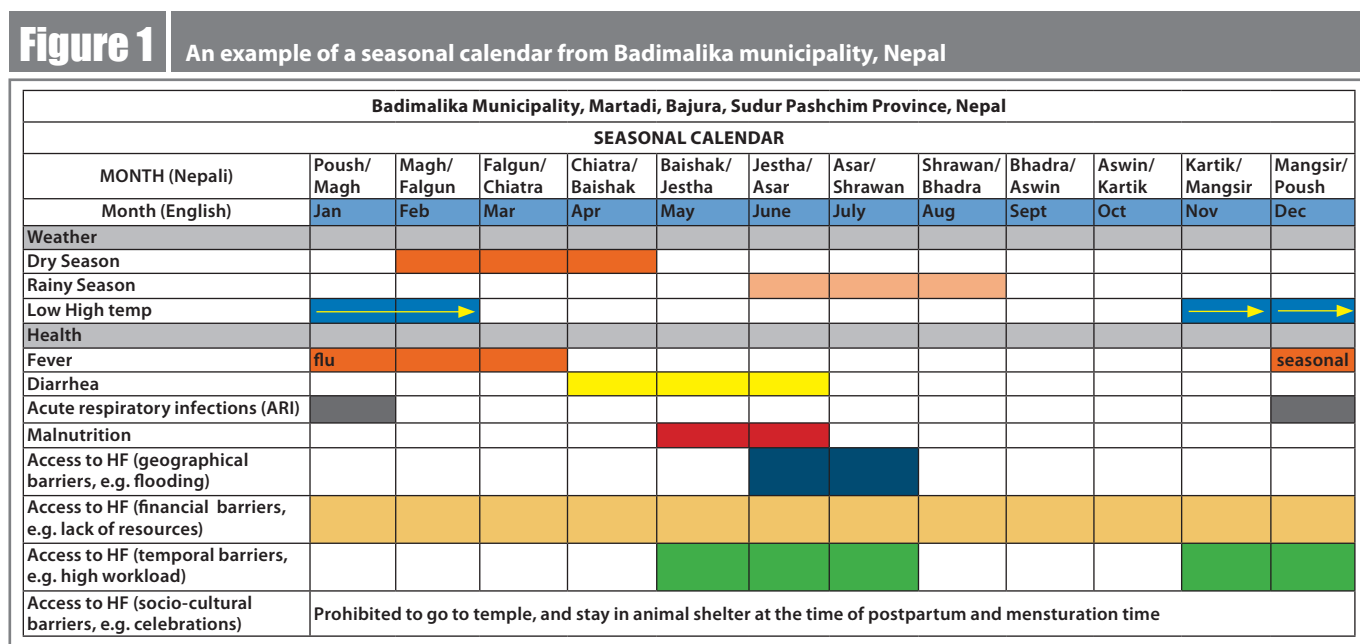
The community validation exercise remains a critical part of the data collection process and

is intended to provide an additional level of sense-checking of the information emerging. For this process, active participants from the focus group discussions and key informant interviews are asked to come together and prioritise major and important determinants first through choosing individually (three stones for major and one stone for important) and then through group consensus. The outcome is intended to elucidate a more in-depth understanding of the community's experience of the determinants and the various pathways.

### Data analysis

Qualitative data was recorded manually in a notebook and reproduced electronically at the end of each data collection period in a sampled location, usually at the end of each day. The data was compiled in an Excel spreadsheet organised according to the five determinant categories to allow for an efficient analysis. Synthesis sheets (figure 2) allowed all determinants to be tracked to see the frequency with which they were raised throughout the sessions. All views were analysed using qualitative content analysis methods, whereby raw data was condensed into categories or themes and coded based on valid inference and interpretation.

For each location, the teams developed pathways based on how the community ex-



**Figure 2** Example of analysis framework

Determinant	FGD1 (Mothers)	FGD2 (Fathers)	FGD3 (Mothers)	FGD 4 (Mothers)	FGD 5 (Mothers)	FGD 6 (Fathers)	FGD 7 (Mothers)	FGD 8 (Mothers)	FGD9 (Fathers)	Total
A	Limited access to health services									0
B	Limited utilisation of health services									0
C	Low birth spacing/ early, repetitive or unwanted pregnancies		✓	✓						2
D	Low birth weight									0
E	Low nutritional status of women	✓								1
F	Caregiver well-being									0
G	Non-optimal breastfeeding practices									0
H	Non-optimal complementary feeding practices									0
I	Low quality of interactions between a child and a caregiver									0
J	Low access to quality diet	✓	✓							2
K	Low access to income sources	✓	✓	✓		✓		✓	✓	6
L	Low access to markets	✓		✓						2
M	Low coping capacities								✓	1
N	Inadequate accessibility, availability and, quality of water at household level									0
O	Poor sanitation practices					✓				1
P	Poor personal hygiene practices					✓		✓		2
Q	Poor food and environmental hygiene practices		✓			✓		✓		3
R	Heavy workload of women	✓			✓	✓				3
S	Low female autonomy/ decision-making	✓	✓		✓		✓			4
T	Low social support for women						✓			1

plained their experiences of the key nutrition determinants. These pathways were then confirmed with the community during the validation process.

**General findings**

The findings produced from the Rapid NDA include a weighted matrix of nutrition determinants and a series of pathways describing how the community experiences those determinants through to illness and/or wasting. The assessment produced municipality-specific determinants and pathways. However, the scope of this article does not cover these details. Instead, it

presents generalised findings to provide an example of the type of information produced.

Women’s workload and quality of diet were consistently ranked among the priority determinants of undernutrition in all three municipalities. Across the five determinant categories, the communities perceived gender to have the strongest influence on undernutrition, followed by food security/livelihoods, and WASH. Health and nutrition came next, followed by mental health and care practices. The dominance of gender across the three municipalities is an interesting finding and shows

its critical importance to the community and their perceptions of how it influences child nutrition outcomes. Unfortunately, gender issues such as female time poverty are often complex cultural issues with limited programming designed to address them.

The importance of the determinants to undernutrition are weighted twice: once through the focus group discussions and key informant interviews, and then again through the community validation. This two-stage process is important for providing a full picture of how the determinants are related to each other and to child

**Figure 3** Summary of nutrition determinants and their ranking for Rolpa district

Category of determinant	Determinant	No. of times mentioned in FGD and KIs	Ranking from FGS and KIs	Community Validation ranking
Food security & livelihoods	Low access to income sources	13	1	6
Gender	Heavy workload of women	12	2	3
Food security & livelihoods	Low access to markets	5	3	2
Gender	Low female autonomy/decision-making	5	3	8
Health and nutrition	Low nutritional status of women	4	4	10
Food security & livelihoods	Low access to quality diet	4	4	1
Water, sanitation & hygiene	Inadequate accessibility, availability and quality of water at household level	4	4	5
Health and nutrition	Limited utilisation of health services	2	5	9
Health and nutrition	Low birth spacing/early, repetitive or unwanted pregnancies	2	5	13
Health and nutrition	Low birth weight	2	5	14
Mental health & care practices	Caregiver well-being	2	5	11
Mental health & care practices	Non-optimal complementary	2	5	15
Water, sanitation & hygiene	Poor personal hygiene	2	5	12
Water, sanitation & hygiene	Poor food and environmental hygiene	2	5	4
Health and nutrition	Limited access to health services	1	6	7
Mental health & care practices	Non-optimal breastfeeding practices	1	6	0
Mental health & care practices	Low quality of interactions between a child and a caregiver	1	6	0
Food security & livelihoods	Low coping/resilience capacities	0	0	0
Water, sanitation & hygiene	Poor sanitation practices	0	0	0
Gender	Low social support for women	0	0	0

nutrition outcomes. Figure 3 shows an example findings framework from Sunil Smriti Rural Municipality, Rolpa district. Here, while focus group discussions and key informant interview respondents rated *low access to quality diet* within the fourth level of importance for undernutrition, the community validation process rated it as top priority. Even when sufficient income is available for food purchases, nutritious foods are not always available in the local market and/or not prioritised for purchase. This clarifies the importance of this determinant when seeking to address the local wasting burden.

## Challenges, opportunities, and learnings

### Logistical and linguistic challenges

The standard challenges with implementing an assessment in a country like Nepal applied, particularly with respect to the geographical terrain and difficulties in accessing certain areas. In addition, Nepal's linguistic diversity meant that composition of data collection teams needed to be carefully planned to ensure adequate knowledge of the local language within the team, as well as an appropriate gender balance.

### Unfamiliarity with identifying causal pathways

The data collection teams were familiar with the conceptual framework for nutrition (UNICEF, 2021) but unaccustomed to identifying causal pathways, meaning this step took a significant amount of support. During training, data collectors and supervisors need enough time to understand the basic theory behind causal pathways. Support, supervision, and monitoring should be planned until teams are well versed in this aspect of the assessment.

### Skills for qualitative data collection and analysis

The analysis of qualitative data requires setting aside assumptions and biases regarding behav-

iours, practices, and motivations; this proved challenging for some team members. Time needs to be invested in equipping teams with the skills required for the impartial collection and analysis of data, and it should not be assumed that those with previous data collection experience necessarily have these skills. A strong and experienced supervisory structure is required to control for bias and to promote deeper probing and triangulation of potentially important causal factors that might be missed by less experienced technicians.

### Practical training sessions and pre-testing

Time constraints meant that there were no practical sessions or pre-testing during training. This led to some misunderstandings on how to conduct the community feedback and validation sessions in the first location. Therefore, this exercise was done differently in each location until the methodology was mastered. Sufficient practical sessions are standard good practice and should not be compromised in any training schedule.

### Balancing time, capacity, and quality

In theory, a key strength of this type of assessment is the shorter implementation time frame, and that it can be accomplished by regular programme teams. However, the assessment demands were strenuous for such a small team implementing an unfamiliar methodology in the required timeframe. They worked long hours to find and organise the participants, conduct the data collection, and carry out data entry and analysis. The small team felt significant pressure to move quickly and, in some cases, did not take enough time to probe further on some issues that could have deepened the analysis. Once a team is familiar with the methodology it is unlikely that the time pressures will be so great. However, extending the assessment by a few more days would limit staff burn-out and ensure enough time for the proper probing required in qualitative research.

### Depth of information required

Historical and seasonal calendars were developed to record significant religious, socio-cultural, climatic, and economic events and other phenomena over the past 10–15 years. However, these tools were not used adequately at the analysis stage, largely due to the time investment required to develop pathway maps with teams unfamiliar with the concept. It remains to be determined if these tools deepen the general understanding of the context in the specific area, or if the other data collection is sufficient for analysis.

### Conclusion

The value of the assessment approach is evident. Overall, both the implementers and the local authorities have found the information generated by the Rapid NDA to be relevant and useful and intend to use the results for a determinants-centred programme design process. From the causal pathways developed, the municipal governments involved in Nepal stated having a clearer appreciation of the multisectoral facets to undernutrition.

The NDA tools package itself was found to be simple, affordable, and efficient, and ensured a community engagement process for validation of the results. This study indicates that Rapid NDA is a potential approach to qualitatively study determinants of undernutrition when resources are limited. As with the introduction of any new methodology, a balance between timeframe, capacity, and quality is needed. Although developed within the context of supporting determinants-based programming for moderate wasting, the methodology itself and findings generated have a much broader relevance to all forms of undernutrition. This Rapid NDA methodology may be particularly useful in ongoing programme locations to fully understand the evolving needs and priorities of communities and ensure interventions are designed accordingly. Since completion of the MWI's support for the initial pilot, the team at Action Against Hunger Nepal is continuing to expand to new areas so that they may better understand their context and programme effectively.

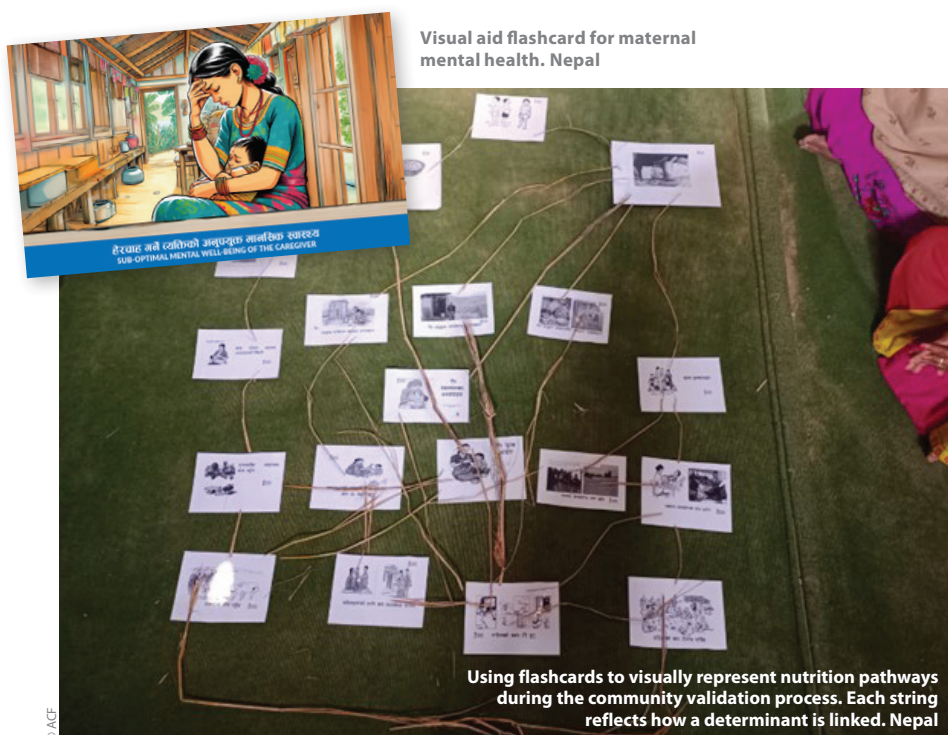
### Next steps

The piloting process for Rapid NDA has helped to: refine the assessment preparation; determine an ideal team size and assessment timeframe; contextualise the tools; define the analysis procedures; strengthen the local team's experience of this type of qualitative assessment; and, of course, generate usable information on nutrition determinants to support programme planning purposes. The MWI and Action Against Hunger intend to share the tools and methodology widely once a second phase of implementation of the assessment approach concludes.

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### References

- GNC (2024) Thematic areas – Nutrition information systems. [nutritioncluster.net](https://nutritioncluster.net)
- UNICEF (2021) Conceptual framework on maternal and child nutrition. [unicef.org](https://www.unicef.org)



Visual aid flashcard for maternal mental health. Nepal

Using flashcards to visually represent nutrition pathways during the community validation process. Each string reflects how a determinant is linked. Nepal