ePact
Strengthening evaluation effectiveness and impact

# CHILD DEVELOPMENT GRANT PROGRAMME EVALUATION

## Qualitative Baseline Report

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Oxford Policy Management

itad

ePact, is a consortium led by Oxford Policy Management and co-managed with Itad

In association with:

Institute for Fiscal Studies

# Acknowledgements

The evaluation team would like to thank all the community members who participated in the baseline for their time and openness. We are also grateful to everyone whose assistance made this study possible: community leaders, officials, and liaison people in all five Local Government Authorities (LGAs), as well as colleagues from Oxford Policy Management working on the quantitative survey.

The field research was carried out on behalf of ePact by the following team from the Theatre for Development Centre (TFDC) of Ahmadu Bello University (ABU), Zaria. This report, of course, draws heavily on their reports, transcripts and other contributions.

| Prof. Oga Steve Abah (Research Manager) | |
|---|---|
| *Zamfara State* | *Jigawa State* |
| Dr Raymond Bako (Team Leader) | Dr Binta Abdulkarim (Team Leader) |
| Ms Mary Okpe | Mr Sylvanus Dangoji |
| Dr Adele Garkida | Ms Margaret Bolaji |
| Ms Khadijah Umar | Ms Nkoro Bari |
| Mr Jerry Dock | Mr Esson Alumbugu |
| Mr Timothy Elisha | Mr Abah Abah |
| Ms Shade Olumeyan | |

The report has been authored by Kay Sharp, with input from the TFDC team (listed above) and incorporating material from the situation analysis report written by Jen Leavy, Melanie Punton, Steve Abah, Mosope Otulana, Florian Schatz and Claire Hughes. It has been strengthened by helpful comments on an earlier draft from Laura Camfield, Claire Hughes, Andrew Kardan and Laura Phelps.

The coding of transcripts was managed by Kate Hale, assisted by Shelby Musser, Katherine Green and Clément Habiyakare.

Lucie Moore and Femi Adegoke from the quantitative evaluation team provided invaluable data and advice on the sampling and case studies.

All photographs were taken by members of the TFDC team during the baseline fieldwork (September–October 2014).

# Disclaimer



This assessment is being carried out by ePact in partnership with the Theatre for Development Centre (Ahmadu Bello University, Zaria) as part of the evaluation of the Child Development Grant Programme. The project manager is Andrew Kardan (andrew.kardan@opml.co.uk) and the project director is Simon Hunt (simon.hunt@opml.co.uk). The remaining workstream team leaders for this evaluation are Kay Sharp (Qualitative Impact Evaluation), Lucie Moore (Quantitative Impact Evaluation) and Aly Visram (Process Evaluation). Claire Hughes is the deputy team leader for the Qualitative Impact Evaluation and Dr Imran Rasul is the technical director for the Quantitative Impact Evaluation workstream.

The contact point for the client is Simon Narbeth (s-narbeth@dfid.gov.uk).

# Executive summary

## The Programme

The Child Development Grant Programme (CDGP) is a five-year DFID funded programme (2013-2018) being implemented in Zamfara and Jigawa states in Northern Nigeria. The programme aims to address widespread poverty, hunger and malnutrition in Northern Nigeria, which affects the potential for children to survive and develop.

The programme will provide a cash transfer of NGN 3,500 (£14) per month for up to 60,000 pregnant women and women with children under the age of two years (selected during pregnancy) for a period of approximately 33 months, targeting the first 1000 days of a child's life. The cash transfer will be accompanied by behaviour change communication (BCC) that includes nutritional education, advice and counselling to support the feeding practices of pregnant women, infants and young children. The combination of these interventions is expected to contribute to the households having more food that is nutritionally more varied. The interventions are also expected to improve maternal and childcare practices. Ultimately, the programme is expected to lead to improvements in child nutrition within the households and to protect their children from the risks of stunting, illness and death.

The programme is implemented by Save the Children (SC) in Zamfara and Action Against Hunger (ACF) in Jigawa. In total the programme is targeting five Local Government Authorities (LGAs): Anka and Tsafe in Zamfara, and Buji, Gagarawa and Kiri Kasama in Jigawa.

## Evaluating this programme

The evaluation of the CDGP is intended to help understand the impact of the programme on households and communities that are supported by the programme. The findings of the evaluation will be communicated to the state and federal government in order for them to see the potential impact of the programme and in order to leverage their support for taking over the programme and expanding across their states. The evaluation draws on a number methods (mixed methods) and interlinked work streams for gathering evidence about the impact of the programme, including:

- An initial **situation analysis** that provided us with a strong contextual understanding of the poverty situation and the social and cultural dynamics within which households and communities in the two selected states operate. This study also identified other issues that we needed to consider and include in other parts of the evaluation.

- A **household survey** before the programme had started (baseline**)** and one towards the end (follow-up) in order to determine the effect of the programme on key impact and outcome indicators that measure child nutrition, as well as knowledge, attitudes and wellbeing of those reached by the programme.

- An **evaluation of the processes of the programme** that will: i) look at how the programme was implemented and identify the factors that supported or weakened implementation of the CDGP and its potential impact; ii) analyse data collected through the Management Information System (MIS) of the programme on its operations and beneficiaries to identify trends in implementation (annually); and iii) explore towards the end of the programme why it has or has not succeeded in achieving its outcomes.

- Following a small group of households receiving the programme over time and exploring through individual discussions (**a longitudinal qualitative module)** their views about the

programme and its impact on issues that are more difficult to capture in a household survey. This will be combined with a series of group discussions with community members to deepen understanding of the impact of the programme and whether it has led to changes in attitudes or behaviour.

## The audience of the evaluation

The evidence generated by the evaluation is intended to inform the Government of Nigeria, the Department for International Development (DFID) and other donors in their decision of whether to continue or scale up the CDGP after the five-year pilot phase is complete. The programme's experience will also inform the development of other social protection programmes worldwide.

## This report

This report is an output of the longitudinal qualitative evaluation. The baseline, the first of three planned rounds of fieldwork for the qualitative evaluation, was carried out in late September–October 2014, in seven selected Child Development Grant (CDG)-recipient communities across the five LGAs. The qualitative module of the evaluation is designed as a cohort study, and the same communities and households will therefore be visited in each subsequent round of fieldwork. The objectives of this first round were: to establish the purposive sample of communities and case study women who will be followed through the period of the evaluation; to build a rapport with them and gain their informed consent to participate in the research over the next three years; and to understand as much as possible about their current situation, practices and viewpoints in relation to the following key themes of the evaluation, before the beginning of CDG implementation:

1. Consumption patterns and dietary practices;
2. Household decision-making and resource management;
3. Knowledge, attitudes and practices (KAPs) relating to health and nutrition;
4. Livelihoods;
5. Negative coping mechanisms and risk-coping behaviour; and
6. Wellbeing.

## Methods used

To investigate the themes listed above, the baseline employed a combination of case study interviews, focus group discussions (FGDs) and key informant interviews (KIIs). Each case study focuses on an individual woman who is a potential direct beneficiary of the CDG: interviews were held with the woman herself and with two other members of her household, one woman and one man (usually the husband) to understand the dynamics of the household. We aimed to enrol 12 case study households in each community (making a total of 84), and succeeded in interviewing 82. Four FGDs (with older and younger women, and older and younger men) were held in each community, using flexible semi-structured checklists based around the six themes. The key informants in most cases included a traditional birth attendant (TBA), a local leader and a religious authority. Participatory and visual tools (maps, transects, calendars and diagrams) were used in the focus groups and KIIs.

At community and household (case study) levels, the qualitative evaluation sample is selected from the sampling frame of the quantitative survey: this intersection of samples will enable us to link the analysis at later stages of the evaluation. At both levels, the qualitative sampling is purposive. It aims to capture variation in factors that might be expected to affect the implementation and outcome of the CDG programme, so that the qualitative research can investigate and compare different contexts and experiences of the programme. The qualitative sample is not designed to be

representative of the CDG area as a whole, and care should be exercised in drawing generalisations or wider inferences from it.

## Our baseline findings

## Consumption patterns and dietary practices

The main staple foods across the evaluation communities are locally-produced millet and sorghum. A range of supplementary foods in all the food groups of the dietary diversity score, including pulses, animal proteins, vegetables and fruits (both cultivated and wild) are known and used in sauces to accompany the staples, and in a variety of local dishes: however, access to these foods is seasonal, depends to a large extent on household purchasing power, and varies from place to place. Very few if any farmers produce enough cereals to sustain their household for the whole year. In most cases household stocks run out during the *bazara* land preparation season (from March onwards) and the quantity and quality of the diet then depends on what people are able to buy or gather. Households with cattle or goats, particularly in the mainly pastoralist Fulani communities, may have higher consumption of milk products. Generally, the poorer the household, the less diverse the diet is likely to be.

No special foods are prescribed or avoided during pregnancy. Women eat the same as other family members while pregnant and breastfeeding, which means whatever is available or what they can afford. Girls and boys are also given the same food, and when it is plentiful they eat as much as they like from the shared pot. However, boys and older children were said to eat more because they are bigger and do more work. At meal times, children are usually fed first, then grandparents, then the husband, and the mother last. Nutritious snacks such as bean cakes are often produced by women at home (for sale or consumption), and are eaten between meals to supplement the diet of children and women who can afford them.

Wild foods, particularly fruits and vegetables, are a valued part of the diet especially during the rainy season when they are abundant. Some are dried and kept as cooking ingredients for the dry season. Both the quantity and quality of food are seasonal, with the best time for diets and health being in the harvest *(kaka)* season between September and January. The rainy season *(damina)*, between June and September, is the time when cereal stocks are lowest and prices are high, but it is a good time for dietary diversity because of the availability of fresh foods and the income opportunities which enable men to provide a range of foodstuffs from the market.

## Knowledge, attitudes and practices relating to health and nutrition

Breastfeeding is the norm in all the communities, but the customary practice is not to breastfeed immediately or exclusively. New-borns are often given cow, goat, or powdered milk for the first two days of life before being put to the breast: in the case of first babies, this period is extended to a week. The mother's first milk (colostrum) is traditionally considered 'dirty' and harmful to the baby, so it is believed that the new mother needs to go through cleansing treatments before starting to nurse. However, as the situation analysis also found there seems to be a generational shift in this practice in some places, with younger women increasingly likely to breastfeed immediately and to understand the benefits of the colostrum, in response to information campaigns and advice from health centre staff.

Exclusive breastfeeding, by contrast, is almost unknown and no sign of a change in practice was observed in the seven communities visited. We found that almost all babies were given water, and sometimes animal milk or other liquids, alongside the mother's milk. Respondents (and field researchers) were adamant that it is essential to give babies water in this climate, because they will otherwise suffer from thirst and cry. Some younger women said they had been told by clinic

staff not to give water, but even if they wanted to follow this advice other household members would over-ride them and give the baby water.

Access to health services varies by location. Not surprisingly, women appear more likely to attend ante-natal and post-natal care, and to take sick children to a health facility, if there are functioning facilities nearby. If not, the cost and difficulty of transport can add significantly to the total cost of medical care. Due to the practice of female seclusion, women need permission from their husbands to attend health facilities. Although cost may not be the only reason for permission being refused, it is more likely to be given if the husband (or sometimes the woman herself) can afford to pay for transport and treatment.

Information and advice on pregnancy, child-care, and nutrition are often sought from older, more experienced women within the family (especially mothers-in-law, who live in the same patrilocal household and are therefore more accessible than a wife's own mother). However, the husband's voice is often the decisive one in these matters. Traditional birth attendants (TBAs) appear to have a very limited role and are not widely regarded as sources of advice.

## Household decision-making and resource management

Polygamy is the norm, or at least the aspiration of most men, in all the communities visited. Having more than one wife confers social status and is considered a sign of relative wealth, and larger households are likely to be better off. More than half the married women are in currently monogamous marriages, but in most cases this reflects a difference in life stage or wealth rather than in culture or attitudes. Women of child-bearing age are always part of a male-headed household (either their husband's, or in the case of divorce their father's): the very few female household heads in these communities are elderly widows.

In this context, gender norms of decision-making and resource management within the household are clearly defined. The male head has authority over his wife or wives and children, and is responsible for providing for them. The production and purchase of food, particularly staple grains and other major food items, are primarily the man's responsibility. However, women are usually responsible for supplying the supplementary foods that accompany the staple cereal dishes, and may use their own earned income to supplement the household diet with spices, sauce ingredients, and other purchased or gathered items such as vegetables. When needed, and if they have money, they may also "support" their husbands by buying staples to fill gaps in the household food supply.

Household stocks of foodstuffs are controlled and distributed by the husband, while cooked meals are served to household members by the woman who prepared them (in polygamous households, wives take turns to cook). Women also distribute snacks, and may give extra food to children in the kitchen while they are cooking.

Women are able to earn and retain their own (relatively small) incomes, mostly from home-based petty trade, services and food processing activities. It is from this money that women normally buy the supplementary foods, snacks and sauce ingredients to accompany or 'sweeten' the main foodstuffs: they may also re-invest in their businesses, or spend their earnings on other things such as weddings or gifts. Some informants suggest that unearned income is treated differently and may be more likely to be given to the husband and/or shared with other household members, but this is not supported by the quantitative baseline findings. Discussions with research participants so far suggest that the dynamics of intra-household decision-making are complex and nuanced, not least in the way people describe them, and are likely to vary from one household to another. Cash transfers may be less likely to be diverted for other uses if their purpose is clearly communicated to both the women beneficiaries and their husbands.

## Livelihoods, risks and coping

Crop and livestock production are the mainstay of the local and household economy in all the communities visited, but they are highly seasonal and do not provide enough food or income for the whole year for most people. Other opportunities to smooth and diversify incomes vary by location, but for men they generally include local agricultural labour in the planting, growing and harvest seasons; urban labour migration in the dry season; trading (mostly in food commodities and livestock); and the usual range of crafts and services (blacksmithing, house construction and repair, firewood collection, crafts like basketry, and so on). Women in all seven communities can earn their own income through home-based petty trade, food processing and sales, producing craft items, and services such as hairdressing and pounding grain for others. Fulani women have more freedom of movement, and can earn income from selling milk.

The main stresses and risks to livelihoods and food security are due to the inherent seasonal pattern of agricultural production, market supplies, and income opportunities. Additional stress is caused by recurrent natural shocks (mainly flooding, drought and crop damage) that are also seasonal. Cattle raids were described as the most common man-made shock, and are also a regular seasonal occurrence. The main types of coping behaviour in response to these risks are seasonal diversification of income sources, reduction in quantity and variety of food consumption, drawing on social support, and borrowing.

## Wellbeing

Discussions of what it means to people in these communities to live well, and what they aspire to for their children and families, underlined the perception that poverty and wealth are about more than money, although money is of course a key means of accessing not only goods but also social standing and resilience (in terms of assets and claims to fall back on). The quantity, quality, and reliability of food supplies in the household were seen as a key element of wellbeing. However, social harmony and family life were also important, alongside ownership of key assets (houses, land and livestock). Having “no-one to help” was described as a feature of the “worst form of poverty”. Suggested pathways out of poverty and towards wellbeing *(wadata)* included jobs and other economic opportunities, education, community support, cash, farm inputs, access to markets, and health services.

The findings have a number of implications for CDG implementation and the evaluation.

- **Advice on nutrition and infant and child young feeding (IYCF) needs to reach the whole household – including males, older female relatives and, in polygamous households, more senior wives, as well as influential community members**. Husbands are key decision-makers and advisers on the care and feeding of children in the household, and if they are convinced of the benefits of the changes recommended, they will in turn advise their wives to adopt them.

- **The CDG cash transfer could reduce financial barriers to using health facilities, and enable more women to access health care for themselves and their children.** Women need permission from their husbands to attend health facilities, including ante-natal and post-natal care (PNC), but when permission is refused it is often on grounds of cost.

- Shortage of money is also the most frequent reason for people not eating more of preferred or nutritious foods. The baseline discussions tend to support the assumption that **the CDG cash transfer is likely to be spent, at least partly, on food, especially by poorer households.** If so, it will be important to analyse *which* foods are purchased and to understand their nutritional value.

- Marked **seasonal variations in the quantity, price and diversity of food available** (whether purchased, home-grown or gathered) are likely to have a significant impact on the value of the cash transfer in nutritional terms, and the feasibility of following nutrition advice about dietary composition, at different times of year. These seasonal variations should be taken account of in the behavioural change communication (BCC) messages.

- **Malnutrition, specifically wasting or acute (short-term) malnutrition, is also highly seasonal**. Children were said to be thinnest at the peak of the rainy season in August, before the early harvest starts to come in.

- **Chronic food insecurity and pronounced seasonality in incomes, health, food access and risks** characterise people's lives in the study communities, and the coping strategies they describe are mainly seasonal patterns of behaviour (diversifying income sources, reducing the quantity or quality of food consumed, drawing on social support, and borrowing), rather than exceptional or distress strategies such as sales of major productive assets.

- **Women can generally earn and control their own money**. Concerns raised during the situation analysis that an unearned cash grant may be appropriated by the husband and divided among the household, or used for other purposes, are not borne out by the quantitative baseline findings. Future rounds of qualitative fieldwork will investigate what the cash transfers are actually spent on, and how these decisions are reached in case-study households. Findings from the qualitative baseline suggest that effective communication by CDG about the purpose and intended uses of the cash transfer might have a significant effect on how the money is used.

- As it is mainly men who purchase food for the household and women have limited access to markets, it is **not necessarily a negative thing for men to spend the CDG cash transfer,** as long as their decisions about what to buy are informed by the nutrition education messages and the grant does not lead to conflict and an erosion of overall household wellbeing.

- Finally, there is **considerable variation among communities within the CDG area in key factors which are likely to affect the impact of the programme**. These include overall levels of wealth, livelihood opportunities and income sources, access to food markets, diversity of locally available foods, safe water supplies, and physical access to functioning health facilities. Preliminary findings also suggest that Fulani pastoralist communities differ in their household organisation and gender norms, in ways which may also affect the transmission mechanisms and therefore the impacts of the CDG. These factors will be further investigated in future rounds of qualitative fieldwork.

# Table of contents

# List of tables, figures, boxes and photos

# List of abbreviations

| | |
|---|---|
| ABU | Ahmadu Bello University |
| ACF | Action Contre la Faim (Action Against Hunger) |
| ANC | Ante-Natal Care |
| BCC | Behavioural Change Communication |
| CDG | Child Development Grant |
| CDGP | Child Development Grant Programme |
| DFID | Department for International Development |
| FGD | Focus Group Discussion |
| HEA | Household Economy Analysis |
| IYCF | Infant and Young Child Feeding |
| KAP | Knowledge, Attitudes and Practice |
| KII | Key Informant Interview |
| LGA | Local Government Authority |
| PPI | Progress out of Poverty Index |
| PNC | Post-Natal Care |
| RCT | Randomised Control Trial |
| SC | Save the Children |
| T1, T2 | 'Treatment' 1 and 2 (BCC approaches in the CDGP) |
| TBA | Traditional Birth Attendant |
| TFDC | Theatre for Development Centre, ABU |
| ToC | Theory of Change |

# Glossary of local foods and other terms

## Foods

| | |
|---|---|
| Agino | monosodium glutamate |
| Alale | seasoned and steamed bean paste |
| Alayehu | spinach |
| Alkaki | sweet wheat cakes |
| Awara | cake made from fried soya bean paste |
| Baba dogo | brand name for spice/seasoning for soup |
| Bambara nut | nutritious legume widely grown in West Africa (*vigna subterranea L.*) |
| Beniseed | pumpkin seeds |
| Bula | balls made from maize flour and stored in water for weeks |
| Chin-chin | fried doughnuts made with wheat and sometimes cow-pea flour |
| Daddawa | soup condiment made from locust bean seeds |
| Dagedage | tomato stew |
| Danbu | couscous |
| Dankali | sweet potatoes |
| Danwake | bean-flour dumplings |
| Dawa | sorghum |
| Dinya | fruit of the black cherry birch tree (*vitex doniana*) |
| Doya | yam |
| Fete | porridge made from grains and vegetables |
| Fura | drink made from sorghum or millet |
| Fura da nono | drink made from millet meal with milk/yoghurt |
| Ganye | vegetables (general term) |
| Gari | corn flour |
| Garri | flakes made of ground and fried cassava |
| Gero | millet |
| Girido | wild food, leaves |
| Goji | pumpkin |
| Goruba | doum palm fruit (*hyphaene thebaica*) |
| Guinea corn | sorghum |
| Gurasa | bread |
| Gwate | porridge made from ground maize and vegetables |
| Hatsi | grains (general term) |
| Hoche | cake or bread baked from sorghum (eaten more during *bazara* season/food scarcity) |
| Indomie | instant noodles (brand name) |
| Kabewa | pumpkin |
| Kakan wara | made from maize and beans |
| Kantu | sweet sesame cake |
| Kanwa | potash |
| Kanya | wild fruit (*diospyros mespiliformis*) |
| Kanzo | edible burnt part of food; remnant of millet paste soaked and scraped from the pot, dried as food |

| | |
|---|---|
| Kawuri | wild grass/leaves |
| Kenaf | *hibiscus cannabinus* |
| Kifi | fish |
| Kindirmo | yoghurt |
| Kirinya | pickles; *bridelia spp.* |
| Koko | pounded millet, moistened and moulded into balls |
| Kosai | deep-fried bean cake |
| Kosan rogo | deep-fried cassava cake |
| Kubewa | okra |
| Kudaku | *traditional food in Doka Gama* (*Anka*) |
| Kuka | baobab-leaf |
| Kuli kuli | groundnut cakes |
| Kunu | gruel made from maize or millet |
| Kunun kanwa | gruel made of millet and potash |
| Kunungyeda | pap made from groundnut paste and rice |
| Kwado | salad made of moringa, kenaf (hibiscus) and peanut cake |
| Locust bean | seeds of the locust bean tree or néré (*parkia biglobosa*) |
| Maggi | seasoning/stock cube (brand name) |
| Moi moi | steamed bean pudding made with cow peas |
| Man shanu | locally-made butter (from cow's milk) |
| Maiwa | red sorghum |
| Maltina | a soft drink/soda (brand name) |
| Masa | corn (maize) cake |
| Miyan kuka | soup/sauce made from baobab leaves |
| Nakiya | sweet rice cakes |
| Nama | meat |
| Namam kaza | chicken |
| Namam shanu | cow meat (beef) |
| Nono | cow milk |
| Okro | okra/ladies' fingers |
| Onga | brand name for seasoning (monosodium glutamate) |
| Pate | porridge made from ground maize and vegetables |
| Peak milk | powdered milk (brand name) |
| Rake | sugar cane |
| Rama | kenaf leaves (*hibiscus cannabinus*) |
| Riddi | sesame |
| Rogo | cassava |
| Sakwara | pounded yam |
| Shasshaka | grits eaten with oil and pepper |
| Shinkafa | rice |
| Shinkafa da kaza | rice and chicken (celebration food) |
| Shinkafa da miya | rice and stew (celebration food) |
| Shuwaka | bitter leaf |
| Star | brand name for spice/seasoning |
| Suya | grilled meat/kebabs |
| Tafasa | edible green leaves of a shrub |

| | |
|---|---|
| Taliya | local spaghetti made from wheat flour |
| Taushe | vegetable soup enriched with pumpkin and groundnut or sesame seeds |
| Tiger nut | nutritious tuber, member of the sedge family (*cyperus esculentus*) |
| Tsaba | grains (generic name) |
| Tsamiya | tamarind |
| Tsire | roasted skewered meat |
| Tubani | maize and bean paste mixed with potash |
| Tuwo | pounded grain served as a paste |
| Tuwon dawa | sorghum (guinea corn) paste |
| Tuwon gero | millet paste |
| Tuwon masara | maize paste |
| Tuwon shinkafa | rice paste |
| Waina | rice or maize cake |
| Wake | beans (cowpeas) |
| Yadiya | wild creeper, 'leaves from the bush'; gathered in *bazara* season and dried |
| Yakuwa | *hibiscus sabdariffa* leaves |
| Zobo / zoborodo | *hibiscus sabdariffa* flowers |
| Zogale | leaves of the moringa tree (*moringa oleifera*) |

## Seasons

**Note**: *Correspondence to the European months is approximate: the actual timing of the seasons varies from year to year and from place to place.*

| | |
|---|---|
| Rani | hot, dry season/harmattan (Jan/Feb/Mar) |
| Bazara | land preparation/early rainy season, hot and humid (Apr/May/Jun) |
| Damina | rainy season (Jul/Aug/Sep) |
| Kaka | harvest/early dry season, cold and windy (Oct/Nov/Dec) |

## Other local terms

| | |
|---|---|
| Ambaliyan ruwa | flood |
| Burtsatse | borehole |
| Cirani | temporary male migration |
| Fadama | wetland or irrigable land – usually low-lying plains underlaid by shallow aquifers found along major river systems, which also provide water for livestock during the dry season[1] |
| Hakimi | district head |
| Inna wuro | 'mother of the house' |
| Karamin karfi | someone with little power |
| Mai angwa | village head |
| Mai gida | owner or head of compound |

[1] Information source: www.worldbank.org/en/news/feature/2010/07/28/fadama-iii-rural-agriculture-project-fast-becoming-a-household-name-in-nigeria.

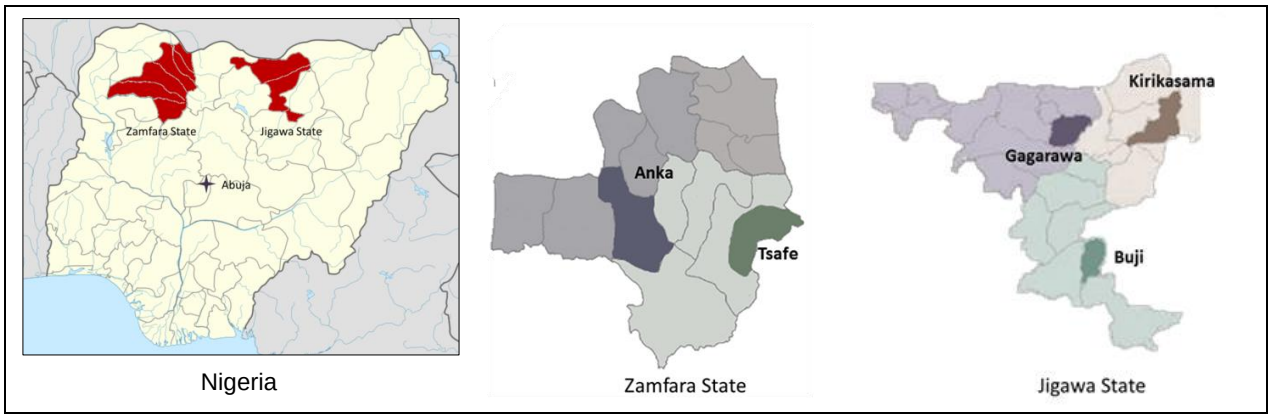
| | |
|---|---|
| Okada | commercial motorcycle/motorcycle taxi |
| Randa | clay water-storage pot |
| Rigiya | well |
| Rubutu | extracts from the qur'an written on slates, and sometimes washed off and drunk for healing ('prayer water') |
| Ruga | fulani hamlet |
| Rumbu | grain store or silo |
| Tsinka-tsinka | eclampsia (illness affecting pregnant women and babies, associated with the cold of the rainy season) |
| Tamowa | thinness, not growing |
| Wadata | wellbeing or wealth |
| Wahala | problem, hardship or distress |
| Wakili | aide to the village head |

# 1 Introduction

## 1.1 The CDGP

The CDGP is a five-year, DFID-funded programme (2013–2018) that will be implemented in Zamfara and Jigawa States in Northern Nigeria. The programme aims to address widespread poverty, hunger and malnutrition, which affect the potential for children to survive and develop, through a combination of an unconditional cash transfer (aimed at tackling the economic causes of inadequate dietary intake), and a counselling and behaviour change campaign (aimed at influencing maternal and child-care practices). The programme is implemented by SC and ACF in five LGAs: Anka and Tsafe in Zamfara State, and Buji, Gagarawa and Kiri Kasama in Jigawa State (see Figure 1).

**Figure 1 Location of the CDGP States and LGAs**




Source: edited from maps retrieved from Wikimedia Commons and the Nigerian Chamber of Commerce website

The programme will provide an unconditional cash transfer of 3,500 Naira (about £14) per month for up to 60,000 women from the time they are pregnant until their child is two years old (a period of approximately 33 months, targeting the critical first 1,000 days of the child's life). This predictable cash transfer is expected to contribute to increased food security and improved intake of more nutritious food, leading to improvement in child nutrition within 60,000 households.

Alongside the cash transfer, communities in the programme will be provided with education and advice about nutrition and health, through a BCC component. This campaign is intended to influence key areas of knowledge and practice, including breastfeeding and infant diets, and is designed to address men and influential members of the community as well as the women who are direct beneficiaries of the cash transfer. The programme will test two different designs of the behaviour change component:

1. 'low-intensity' BCC delivered through posters, radio messaging, text messaging and theatre; and
2. 'high-intensity' BCC delivered through support groups and one-to-one counselling for women receiving the transfer, in addition to all components of the 'low-intensity' BCC.

These two approaches will be applied in different communities, and are labelled 'Treatment 1' (T1) and 'Treatment 2' (T2) respectively for the purposes of the evaluation (see Section on sampling).

## 1.2 Overview of the evaluation design

The evaluation of the CDGP is intended to help understand the impact of the programme on households and communities that are supported by the programme. The findings of the evaluation will be communicated to the state and federal government in order for them to see the potential impact of the programme and in order to leverage their support for taking over the programme and expanding across their states. The evaluation draws on a number of methods (mixed methods) and interlinked work streams for gathering evidence about the impact of the programme, including:

1. A qualitative **situation analysis,** carried out by TFDC in September 2013, in all five CDGP LGAs. This provided a contextual understanding of poverty and socio-cultural dynamics in the programme area and informed the evaluation design. The present qualitative baseline report draws on the findings of the situation analysis (Leavy et al. 2014) as well as the literature review commissioned by ePact during the inception phase of the evaluation (Otulana and Schatz 2013).

2. A **quantitative impact evaluation**, employing a clustered RCT design to determine the causal effect of the programme on key pre-defined impact and outcome indicators. The quantitative team will conduct a large-scale, statistically representative household questionnaire survey before and after programme implementation (i.e. at the baseline and the endline of the evaluation). It is in the nature of an RCT that the quantitative evaluation sample includes both 'treatment' communities (which will receive the CDGP during the evaluation period) and 'control' communities (which will not – although the intention is to roll out the CDG in the control communities at a later stage).

3. The **qualitative impact evaluation** complements the quantitative component by investigating the 'how' and 'why' questions, and providing explanations of people's attitudes and behaviour in relation to nutrition, health, food security and livelihoods, including whether and how these are changed by the CDGP. It aims to identify and explore any unexpected effects of the programme (whether positive or negative), and any unforeseen factors which may affect its success. The evaluation will also help to explain or investigate the reasons behind the quantitative findings.

   Given these aims, the qualitative evaluation will be carried out in a smaller number of communities than the quantitative RCT, and in recipient ('treatment') communities only, in order to provide sufficient depth of information on the effects of the CDGP: details of the sampling strategy are explained in Section 2.3. Three rounds of qualitative fieldwork will be carried out in the same communities (at baseline, midline and endline), in addition to the initial situation analysis.

   There will be a two-way dialogue between the qualitative and quantitative components: the qualitative research may identify questions for analysis by the quantitative team, while the quantitative baseline analysis may also highlight issues or findings for the qualitative teams to investigate in subsequent rounds.

4. A process evaluation, due to begin in 2015, will assess how the CDGP is implemented. The midline and endline rounds of qualitative fieldwork may include questions relating to the process evaluation at community and beneficiary level.

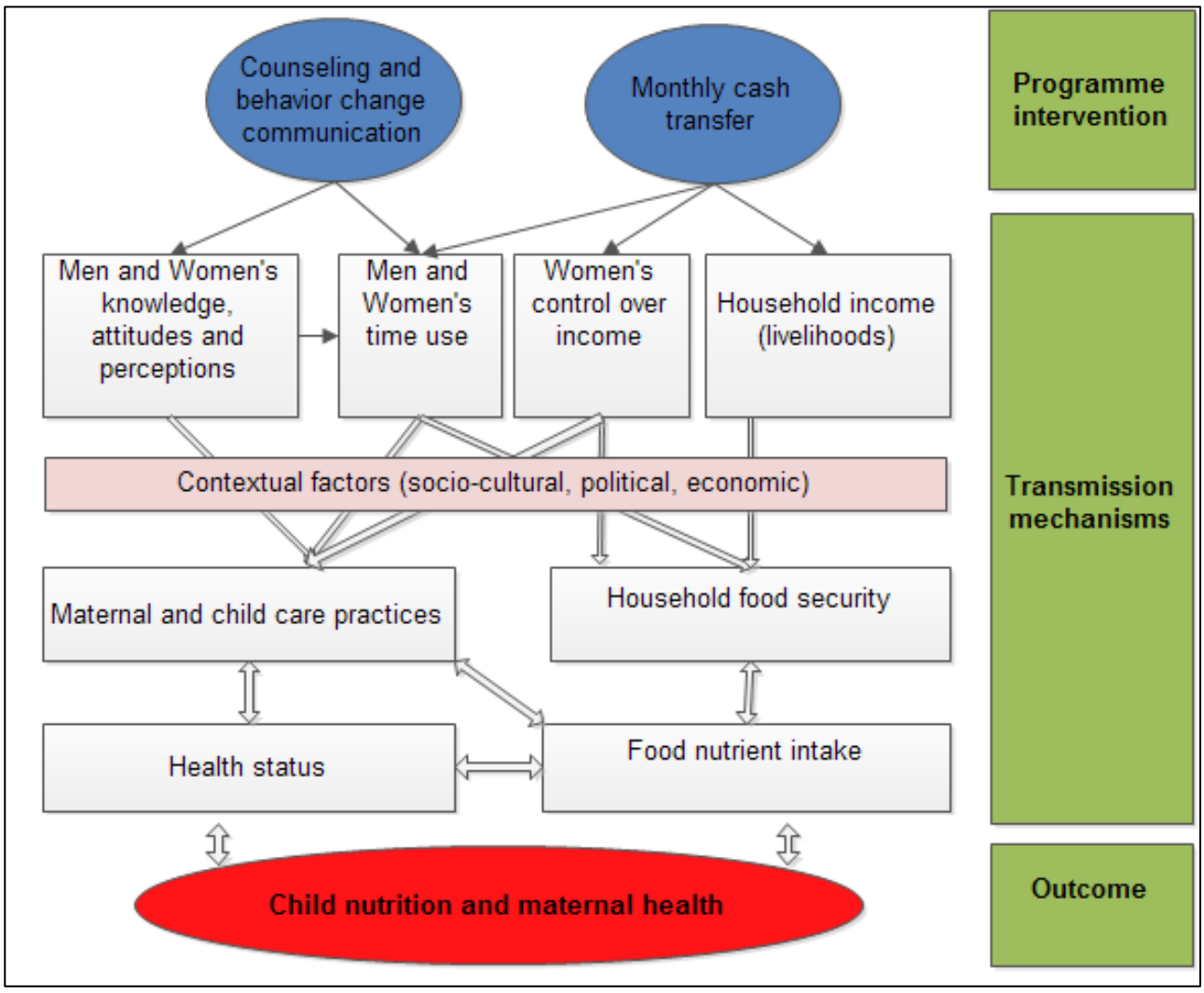
## 1.3 Programme Theory of Change

The Programme Theory of Change (ToC) developed for the evaluation is shown in Figure 2. It summarises *how* the programme interventions are expected to achieve the outcomes of improved

child nutrition and maternal health. Between the interventions (in blue) and the outcome (in red), there are a number of expected intermediate effects and connections ('transmission mechanisms'):

- The *monthly cash transfer* is expected to increase beneficiary households' income and women's control over the use of income (for example, for food purchase). Indirectly, it is also expected to have an impact on men's and women's time use, and on their responses to seasonal risks and stresses. These effects in turn are expected to result in increased food security, and an increase in the quantity and quality of food consumed.
- The *counselling and behaviour change communication* are expected to influence women's and men's knowledge, attitudes, perceptions and time use, resulting in improved maternal and child-care practices and ultimately improved health and nutrition of women and children.

**Figure 2 CDGP Evaluation ToC**



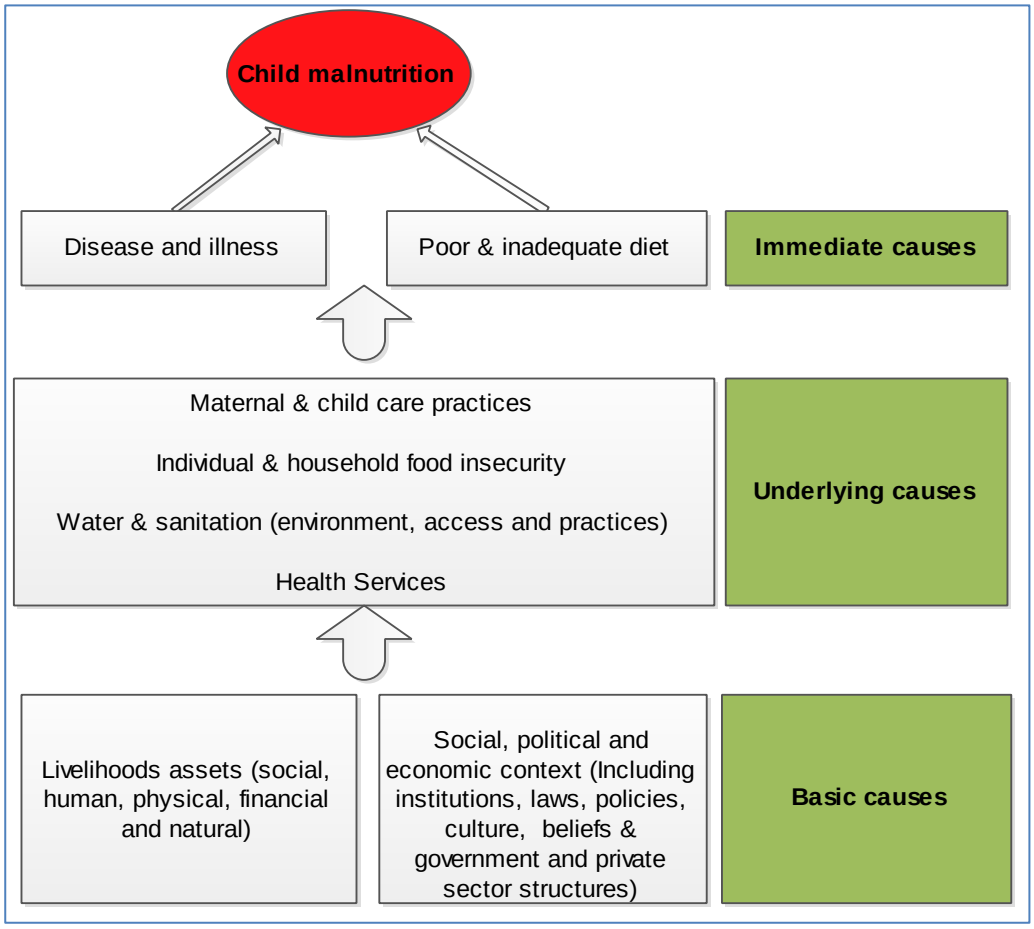

Source: *CDGP Evaluation Inception Report, ePact 2014:8*

A core purpose of the qualitative research is to explore how these transmission mechanisms actually work. All of the intended causal chains may be helped or hindered, or mediated in various ways, by the socio-cultural, political and economic context in which the programme is implemented. Also, the assumptions about how one element affects another may prove to be

wrong or incomplete, and other factors outside the programme's control might affect its success in changing behaviour and improving food security.[2]

Given that the programme's overall intended impact is to improve the nutritional status of children and mothers in the participating households, the qualitative strand of the evaluation will also pay attention to the factors categorised in Figure 3 (an adapted version of UNICEF's widely-used conceptual framework) as *immediate*, *underlying* and *basic* causes of malnutrition. The CDG's combination of a cash transfer and a behaviour change campaign aims to tackle only parts of this framework: the economic causes of inadequate diets, and maternal and child-care practices. However, as the figure shows, nutritional outcomes may also be impacted by other factors outside the CDG's remit, such as water and sanitation, the availability and quality of health services, or the underlying economic and social conditions.

**Figure 3 Causes of child malnutrition**




Source: *ePact 2014:7*. Adapted from UNICEF: www.unicef.org/nutrition/training/2.5/4.html

[2] The definition of household food security assumed here – 'physical and economic access … at all times to sufficient safe and nutritious food for an active and healthy life' – relates to both the quantity and quality of the diet people are able to consume. Maternal and childcare practices affect what they choose to consume or provide for their families, and how they prepare it, from the range of foods that they can access.

## 1.4 Purpose and scope of the qualitative baseline

This report presents a descriptive analysis of the findings of the first (baseline) round of qualitative fieldwork, carried out in late September and October 2014 in seven selected communities where the CDG programme will be implemented.[3] The qualitative module of the evaluation is designed as a cohort study, which will make it possible to follow research participants' experience, and any relevant changes or impacts in their lives, during the implementation of the CDG Programme. The same communities and case study households who have participated in the baseline fieldwork will therefore be visited in each subsequent round of qualitative fieldwork. Findings from all three rounds will be analysed cumulatively at the end of the evaluation, which will build up a database of case study information at community and household level. It is expected that some of the preliminary findings presented in this report will be triangulated or expanded on in the subsequent rounds.

The key objectives of this first round were: to establish the purposive sample of communities and case study women who will be followed through the period of the evaluation; to build a rapport with them and gain their informed consent to participate in the research over the next three years; and to understand as much as possible about their current situation, practices and viewpoints in relation to the key themes of the evaluation (as set out in Section 2.1), before the beginning of CDG implementation. In exploring these key themes, the report also incorporates findings from the 2013 situation analysis where this adds to our understanding of the issues, either through convergence or divergence of evidence. It should be kept in mind that different communities, within the same LGAs, were visited for the situation analysis (see Section 2.3. for details). Our findings so far suggest that all the communities have a great deal in common, but that local variation in factors such as water quality, access to markets and health care, previous BCC campaigns, overall levels of wealth and diversity of local food availability may be significant.

Early findings from the qualitative and quantitative baseline studies were shared between the two teams at a one-day workshop in January 2015, to compare and inform the data analysis process of both workstreams. Further triangulation and integration between the two streams, including identification of any quantitative findings which could usefully be explored through the next round of qualitative fieldwork, are planned for once the two baseline reports have been finalised.

## 1.5 Organisation of the report

After a description of the methodology in Section 2, the report profiles the seven communities selected as qualitative evaluation sites (Section 3), highlighting the variation in economic and ecological context as well as the potential impacts on health and nutrition of their relative remoteness or access to markets, services and infrastructure. Section 4 outlines the characteristics of the case study women and their households. The main findings and observations of the baseline are then presented thematically, in Section 5. Finally, Section 6 draws together some implications of the findings so far for the implementation of the CDG and for the evaluation.

[3] The purposive sampling process by which these communities were selected for the evaluation is explained in Section 2.3.

# 2 Methodology

## 2.1 Research themes

Drawing on the evaluation's ToC (Figure 2) and key hypotheses (Box 1 below), the data collection for the qualitative baseline focused on the following six thematic areas, which are briefly explained below:

1. Consumption patterns and dietary practices;
2. Household decision-making and resource management;
3. KAPs relating to health and nutrition;
4. Livelihoods;
5. Negative coping mechanisms and risk-coping behaviour; and
6. Wellbeing.[4]

Gender and seasonality are taken as cross-cutting issues to be considered within all six themes.

**Box 1 Key evaluation hypotheses**

**Evaluation Hypothesis I:** The CDGP intervention and, in particular, the provision of a regular transfer of NGN 3,500 (£13.60) on a monthly basis to women will result in consumption of larger quantities and more varied type of food, resulting in an increase in dietary intake and consequently a reduction in child malnutrition.

**Evaluation Hypothesis II:** The provision of a regular predictable cash transfer will result in a reduction in negative risk-coping behaviour and, in particular, a reduction in the distress sale of assets and debt accumulation among beneficiary households.

**Evaluation Hypothesis III:** Through nutritional advice and counselling the programme will improve the KAPs among the targeted men and women on nutrition and general maternal and child-care practices.

**Evaluation Hypothesis IV:** The cash transfer will result in improved material wellbeing and contribute to the relational wellbeing of households through enhanced trust and reciprocal social and economic collaborations.

**Evaluation Hypothesis V:** Provision of a regular cash transfer to women will enhance their ability to make economic choices and result in improved social capital.

Source: CDGP Evaluation Inception Report, ePact 2014, p. iv

### 2.1.1 Consumption patterns and dietary practices

This theme relates to **Evaluation Hypothesis I** (ePact 2014:18), which will test the effect of the CDG transfer on the quantity and variety of food consumed by beneficiaries (and consequently on malnutrition).

[4] 'Wellbeing' is a broader concept than wealth or poverty, encompassing three dimensions: the material; the relational; and the subjective ('3D wellbeing', as formulated by Gough and McGregor 2007). This framework captures what people believe they need to have, need to do, and need to be in order to live well in their community, how they feel about it, and the extent to which they feel they are achieving this. (Situation Analysis Methodology, Leavy 2013a:12).

The qualitative baseline aims to expand our understanding of current consumption patterns, including people's actual diets, what they consider a good diet, and their reasons for preferring or avoiding certain foods. It investigates the quantity and quality of food available in different seasons, and the access to various foodstuffs in different communities, or by different people within the communities (e.g. wealth or ethnic groups). Questions also explored who eats what, and why (i.e. any differences in the diets of men and women; girls and boys; different wealth or social groups; and diets at different times of life, including pregnancy and infancy).

### 2.1.2 Household decision-making and resource management

**Hypothesis V** proposes that the provision of CDG cash transfers directly to women will enhance their ability to make economic choices, while **Hypothesis I** requires that the cash will be spent (at least in part) on improving the quantity and quality of food consumed by children (ePact 2014:21, 18).

Building on the situation analysis, the qualitative baseline further explores how resources (particularly food and cash) are pooled, shared and distributed within households, before CDG implementation begins. Particular attention is paid to the agency and independence of women in this context, and to the gender and power dynamics within households that determine how these decisions are made.

### 2.1.3 KAPs

Evaluation **Hypothesis III** suggests that 'the programme will improve KAPs among the targeted men and women on nutrition and general maternal and child-care practices' (ePact 2014:19–20).

The qualitative baseline therefore seeks to expand our understanding of current KAP in these areas. The scope of questions included participants' KAP in relation to breastfeeding, IYCF, care of sick and malnourished children, mothers' own nutrition practices, health-seeking behaviour, and hygiene and sanitation. It also covered sources of information and the role and knowledge of key advice givers, such as older women, other household members, clinic staff, and TBAs.

### 2.1.4 Livelihoods

Livelihoods are an important part of the 'transmission mechanisms' in the evaluation ToC, in terms of women's and men's income and time use, the opportunities and constraints provided by the socio-cultural and economic context, and household food security.

The qualitative baseline aimed to investigate all these aspects of people's livelihoods, expanding our knowledge of the livelihood assets, activities, incomes and opportunities in different communities and among different groups (particularly women and men, and poorer versus better-off households). It also explored the seasonality of workloads, income sources and expenditure. The livelihoods theme links closely with theme 5 (risks and coping behaviour), and theme 6 (wellbeing).

### 2.1.5 Negative coping mechanisms and risk-coping behaviour

This theme addresses **Evaluation Hypothesis I** (with regard to household economic decisions) and **Evaluation Hypothesis II**, which suggests that the CDG cash transfer will enable beneficiaries to reduce negative risk-coping behaviour, particularly the distress sale of productive assets (ePact 2014:18-19).

The qualitative baseline provides contextual understanding of this issue by exploring what kinds of seasonal or occasional shocks and stresses affect people's livelihoods, wellbeing and food security in the study areas; what effects these shocks have; and how people respond to them. The scope of research includes consumption-based coping strategies (switching to cheaper or less nutritious foods; reducing the size or number of meals; relying on wild foods, etc.) and changes in behaviour or household composition (sending children to relatives; early marriage; withdrawing children from school; divorce, etc.), as well as economic risk-coping behaviour (sale of assets; the incurring of debt; unusual migration or other income-seeking strategies; etc.).

### 2.1.6 Wellbeing

**Hypothesis IV** proposes that the cash transfer will contribute to improving beneficiaries' material and relational wellbeing (ePact 2014:20).

As background to this issue, the qualitative baseline builds on the findings and methods of the situation analysis to explore people's current perceptions and experience of wellbeing within their local context. The scope of questions under this theme includes the meaning(s) of wellbeing to people in these communities; the characteristics of households at different levels of wealth or wellbeing; and what people aspire to for themselves and their children. Participants were also consulted about pathways to greater wellbeing and the potential role of cash in those pathways.

## 2.2 Data collection methods

The core of the qualitative data collection is a set of individual case studies of women and their households, supplemented by FGDs and KIIs. The same case study participants will be interviewed in each round of fieldwork, building up a narrative over time of their experience and perceptions, as well as any changes attributable to the programme or to other factors.

**Box 2 Summary of scope**

7 CDG recipient communities

In each community:

- 12 case studies (interviews with 1 focus woman and 2 other members of her household or family, total 36 interviews)
- 4 FGDs (2 with women, 2 with men)
- KIIs (no fixed number: possibly 3-5 depending on availability, knowledge and time)

The number of case studies, FGDs and KIIs in each community, summarised in Box 2, is based on a judgement of the best balance between breadth and depth (number of communities versus time spent in each place), the number of cases needed to capture the likely range and variety of people's experience, and the need for gender balance (particularly in the FGDs).

Participatory and visual tools (maps, transects, calendars and diagrams) were used in focus groups and KIIs. Semi-structured checklists were used as guides for all three methods, and researchers drew on a set of reference questions organised by theme, adapted from the situation analysis methodology. The methods and tools selected for the baseline build on the field researchers' feedback on what worked well during the situation analysis, as well as the skills and experience of team members.

The case studies focus on the individual women, but will also explore their household and family context. During the baseline, interviews were held with the case study woman plus (in most cases)

her husband or household head, and one other woman in the household (in most cases an older or higher-status woman who was expected to influence the mother's decision-making in relation to food, nutrition and health).

Further details of the data collection methods can be found in the Baseline Fieldwork Guide (Sharp and Leavy, 2014). In line with DFID's open data policy, the data set will be available at the end of the evaluation.[5]

## 2.3 Sampling strategy

### 2.3.1 Linking with the quantitative sample

At community and household (case study) levels, the qualitative evaluation sample is a purposively selected subset of the quantitative survey sample. Linking the samples in this way will enable us to link the data sets and analysis, maximising the synergies between the qualitative and quantitative workstreams and adding depth to our investigation of the research questions in specific local contexts. The qualitative baseline sampling draws on the community and household data collected by the quantitative listing teams, thus avoiding duplication of effort and unnecessary demands on respondents, as well as ensuring that the samples intersect. Over the whole evaluation period, linking the qualitative case studies to the survey data for the same households will enable us to produce more detailed multidimensional case studies that may be linked to specific findings from the quantitative analysis. Hypotheses generated through analysis of the case studies could potentially be tested in the survey, and survey findings could be investigated or explained through qualitative follow-up interviews with case study participants.

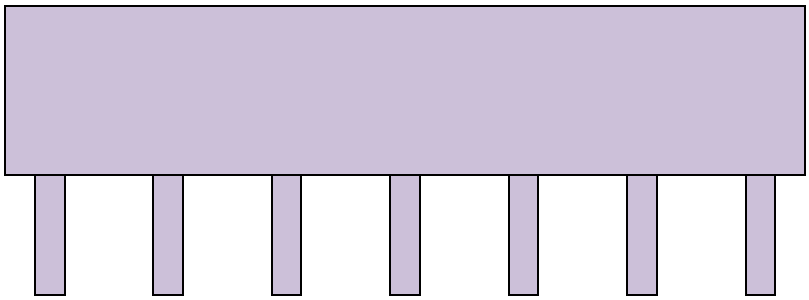
This sampling approach for mixed-method research has been described as a 'table-top' design (Wilson 2002:9), in which breadth and generalisability are provided by a large, statistically representative survey sample, while a smaller number of units within that sample are selected for qualitative investigation, enabling researchers to 'dig down' into issues and add depth and flexibility to the interpretation of findings.

[5] The data generated by the project will be the property of DFID. However, e-Pact has exclusive rights of usage over the data for purposes of academic publication and research for a period of up to one year from the date of completion of the project and the delivery of the endline report.

During this period DFID will not publish the full data set and will not share data with any third parties for the purposes of academic research and publication. DFID may release limited data for programmatic purposes. While releasing limited data DFID will consult with the evaluation team, to ensure that the evaluation team's exclusive rights to academic research are protected and the released data are used for purposes other than academic research and publication, ensuring that the academic research rights of the evaluation team are protected. At the end of the one-year period, or after an earlier period mutually agreed between DFID and the evaluation team, the evaluation team will make the anonymised data set publicly available. The evaluation team will duly acknowledge DFID's financial support in any publications that result from the use of the data.

The qualitative data set will contain transcripts and photographs.

**Figure 4 Linking qualitative and quantitative sampling ('table-top' design)**



**Quantitative survey**

- 210 villages (70 *'T1'*, 70 *'T2'*, 70 *control*)
- Statistically representative random sample

**Qualitative research**

- 7 villages (3 *'T1'*, 4 *'T2'*)
- Purposive sample

At both community and household levels, the qualitative sampling is purposive. The aim is to capture variation in factors which might be expected to affect the implementation and outcome of the CDG programme, so that the qualitative research can investigate and compare different contexts and experiences of the programme. The sample is not designed to be representative of the CDG area as a whole, and care should be exercised in drawing generalisations or wider inferences from the qualitative findings alone.

The size of the qualitative sample (seven communities, and an initial target of 12 case study households in each community) is based on a judgement of the maximum coverage possible, with an appropriate depth of work, given the time and resources budgeted for the evaluation. The sample size has no significance in terms of representativeness.

### 2.3.2 Community selection

The purposive selection of communities for the qualitative evaluation was carried out jointly by the qualitative team leader, research manager and senior field researchers, in consultation with the quantitative team, during the pre-fieldwork training workshop held at ABU in Zaria (23–27 September 2014). As mentioned above, the list of 'treatment' (CDG-recipient) communities produced by the quantitative team was used as the sampling frame from which the qualitative sites were selected.[6] The seven communities to be selected were distributed by LGA in line with the proportional distribution of the quantitative sample (which itself is based on population densities), as follows:

| State | Zamfara | | Jigawa | | |
|---|---|---|---|---|---|
| LGA | Tsafe | Anka | Gagarawa | Kirikasama | Buji |
| No. of communities | 2 | 2 | 1 | 1 | 1 |

Data from the community questionnaire administered by the quantitative listing teams were used to inform the purposive sampling of locations, and to avoid duplication in data collection. The objective was to select a varied range of communities, in order to investigate the functioning of the CDG in different contexts and to enable some contrast and comparison among them, using the following criteria:

- A balance of communities assigned to T1 (low-intensity BCC) and T2 (high-intensity BCC);

[6] In order to avoid delay to the CDGP implementation, the quantitative listing survey and randomisation of villages (i.e. assignment to treatment and control groups) were done in three tranches. The second of these tranches was taken as the sampling frame for the selection of the qualitative evaluation sites.

- Good and poor market access (indicator: distance to fruit and vegetable market, according to the community questionnaire);
- Good and poor access to health facilities (indicator: location/walking time to facility, according to the community questionnaire);
- Types of shocks reported in the past year, according to the community questionnaire. The questionnaire included natural shocks (drought, flood and crop damage) and man-made shocks (in-migration, curfews and violence); and
- Expected diversity of livelihoods (e.g. agricultural, pastoralist, trading), based on local researchers' knowledge of terrain and location.

As we could select only seven sites using these five criteria, we did not apply any quotas to the number of communities meeting each of them, beyond an iterative subjective process to ensure we had 'some of each' under each criterion. In the case of T1 and T2 (the two BCC models to be compared later in the evaluation), it would have been ideal to have half the communities in each. However, as 7 is an odd number we took four of one and three of the other.

Logistical and security factors were also taken into account, based on the local researchers' knowledge of the areas, prior scoping of potential research sites by the quantitative team, and consultation with key informants for up-to-date security advice. The TFDC teams had encountered some security problems during the situation analysis fieldwork, particularly in the areas of Jigawa bordering on Boko Haram territory to the east. Given the continuing volatility of the situation in this part of the country, there was a clear duty of care to ensure that the field teams were not sent into areas known to be dangerous. Some communities were eliminated from the selection due to their closeness to the Boko Haram borders, or other known security risks, including banditry. Communities that had listed 'violence' as a major recent shock were also eliminated. It is recognised that these decisions limit our investigation of the context in which the CDGP will be implemented, as people living in insecure areas are very likely to suffer significant disruptions to their food security, livelihoods, and access to markets and health services, in addition to the more direct risks they face to life, limb and property.

Table 1 sets out the selected communities in relation to the sampling criteria from the community questionnaire.

## Table 1 Selected communities by sampling criteria

| State | LGA | Village name (site number for quantitative survey) | BCC approach T1 = low intensity, T2 = high intensity | General Hospital in community? | Health Facility in community? | Primary School in community? | Market where you can buy fruits & vegetables in community? | Shocks in the previous 12 months |
|---|---|---|---|---|---|---|---|---|
| ZAMFARA | Anka | Matseri (119) | T1 | No | Yes | Yes | No | |
| | | | | > 2 hrs walk 1–2 hrs by motorcycle | | | 30–60 mins walk < 30 mins by motorcycle | None reported ** |
| | | Doka Gama (136) | T2 | No | No | No | No | |
| | | | | 1–2 hrs walk < 30 mins by motorcycle | 1–2 hrs walk 30–60 min by motorcycle | < 30 mins walk < 30 mins by motorcycle | 1–2 hrs walk 30–60 min by motorcycle | None reported ** |
| | Tsafe | Keita (231) | T2 | Yes | Yes | Yes | Yes | |
| | | | | | | | | D |
| | | Yankuzo (260) | T1 | No | Yes | Yes | No | |
| | | | | 1–2 hrs walk < 30 mins by motorcycle | | | 1–2 hrs walk < 30 mins by motorcycle | D, CD |
| JIGAWA | Buji | Kafin Madaki (324) | T1 | No | Yes | Yes | Yes | |
| | | | | > 2 hrs walk 1–2 hrs by motorcycle | | | | F, D, CD, IM |
| | Kirikasama | Kokura (401) | T2 | No | No | Yes | No | |
| | | | | > 2 hrs walk 30–60 min by motorcycle | > 2 hrs walk 30–60 min by motorcycle | | > 2 hrs walk 30–60 min by motorcycle | F, D, CD |
| | Gagarawa | Kanyu (533) | T2 | No | No | Yes | No | |
| | | | | > 2 hrs walk < 30 mins by motorcycle | 30–60 mins walk < 30 mins by motorcycle | | 1–2 hrs walk < 30 mins by motorcycle | F, D, CD |

** D = Drought, F = Flood, CD = Crop Damage; V = Violence, IM = In-Migration*

*** Although the listing survey reported no shocks in these communities in Anka, participants in the qualitative baseline fieldwork said that floods and cattle raids were recurrent seasonal risks.*

Data source: quantitative listing survey (community questionnaire)

The information on livelihoods available at the time of sampling proved to be quite limited, but will be expanded in the course of subsequent rounds of fieldwork. Kokura (in Kirikasama) was known to be a wetland (*fadama*) area. Kanyu (in Gagarawa) was thought to be partly pastoralist and to include a Fulani population. Kafin Madaki (in Buji) was known to be close to the state capital,

Dutse, and to have relatively good access to markets of various kinds. Keita (in Tsafe) also appeared well-connected in terms of markets and services, and Tsafe LGA as a whole is known to be agriculturally diverse.[7] In Anka LGA, Doka Gama lies in a flood plain, while Matseri is in rocky terrain. Reference was made to the livelihood zoning maps in the recently revised Household Economy Analysis (HEA) atlas of the Sahel,[8] but it was not yet possible to locate the selected villages exactly in relation to these zones. This will be followed up as the evaluation goes forward.

Ethnic diversity was originally intended as a community selection criterion: specifically, it was intended to include at least one Fulani pastoralist community. This was based on the finding of the literature review and situation analysis that, while the population of the CDGP area is ethnically mixed (an overall majority of Hausa, with minorities including Fulani, Gagarawa, and Kanuri people), only the Fulani are significantly different in terms of their livelihoods (primarily pastoral), social organisation (including household dynamics and roles of women), and possibly dietary practices and access to different foods. However, consultation with local experts during the community sampling process concluded that all the communities in our sampling frame are ethnically mixed. While there are Fulani populations in many of the villages, there was no separate 'Fulani village' on the list. Therefore, ethnicity was not used as a selection criterion at the community level. Instead, Fulani neighbourhoods (typically transhumant settlements around the periphery of villages) and households (for the case studies – see 2.3.3 and 2.3.4 below) were identified in the course of the baseline fieldwork. This report includes some examples and comments on themes where the experience of people in this Fulani subsample seems to be distinct from their neighbours'. The methodology and field protocols will be reviewed prior to the next round of fieldwork to ensure systematic attention is paid to capturing these differences.

Further information about the selected evaluation sites can be found in the community profiles (Section 3). Annex A provides the sampling frame from which they were selected – the list of all the recipient (treatment) villages allocated by the second tranche of the quantitative survey, together with the selected data from the community questionnaire which informed the purposive selection.

### 2.3.3 Communities in the situation analysis and baseline

In contrast to the baseline sampling described above, the five communities (one in each LGA) previously visited for the 2013 situation analysis were selected during the fieldwork, in consultation with state and local government officials and traditional leaders in the LGAs. The primary selection criterion was poverty, and then among the poor communities identified the aim was to capture diversity of livelihood systems and ethnicity. At the time of the situation analysis, it was not known which communities would be included in the CDGP: recipient ('treatment') status was therefore not a criterion.

On ethical grounds, the qualitative team would have preferred to include the communities visited during the situation analysis in the on-going evaluation. This was because the field researchers had noted a degree of 'research fatigue' in these communities: people said they were tired of being asked questions by researchers who never returned and brought them no benefits. There would

[7] 'Tsafe LGA is the grain belt of Zamfara, with arable land for farming of different kinds of grains. The varieties of crops produced in the LGA are: maize, sorghum, millet, soya beans, groundnuts, cotton, etc. We also have a sizeable number of farmers who engage in farming vegetables: tomatoes, onions, carrots, pepper and sweet potatoes during the dry season farming' (Alhaji Danladi A. Mohammed Chafe, Head, Local Government Agricultural Extension Unit, Tsafe LGA; Situation Analysis, Leavy et al. 2014:22)

[8] Food Economy Group 2014, www.hea-sahel.org/publications/profils-hea/region-sahel/RS-hea-sahel-atlas-september-20149019163.pdf

also have been an advantage in building on the local information already collected in these communities. However, the need to ensure a balanced sample of sites that would be receiving the CDG programme and were also included in the quantitative survey took precedence. A new sample of qualitative evaluation sites was therefore selected from the 'treatment sites' listed by the quantitative team, as explained above. By chance, only one of the situation analysis communities (Kafin Madaki in Buji LGA) was included in this sampling frame. Kafin Madaki was therefore the only community visited in both the situation analysis and the baseline.

**Table 2 Communities included in the situation analysis and qualitative baseline**

| State | LGA | Communities in situation analysis | Qualitative evaluation sites (for baseline and subsequent rounds) |
|---|---|---|---|
| ZAMFARA | Anka | Kawanan Maje | Matseri<br>Doka Gama |
| | Tsafe | Magazu | Keita<br>Yankuzo |
| JIGAWA | Buji | Kafin Madaki | Kafin Madaki |
| | Kirikasama | Garin Tarno | Kokura |
| | Gagarawa | Wutsada | Kanyu |

The general thematic findings and observations in this report are therefore drawn from a total of 11 communities across the five LGAs, as listed in Table 2. Where variations in the findings by location were observed, they are noted, and quotations from participants are attributed to the relevant community. Quotations or narratives not marked 'situation analysis' are from the baseline fieldwork. The community profiles in Section 3 cover the baseline communities only, and these are the sites that will be revisited in subsequent rounds of qualitative fieldwork for the evaluation.

### 2.3.4 Case study selection

In each of the seven selected communities, the baseline aimed to recruit 12 women as case study participants, making an initial target of 84 case studies. As noted above, this target number of case studies was based on the maximum coverage possible with the time and resources available. The sample size has no significance in terms of representativeness, and is not fixed. It is expected that some case study participants will drop out or be unavailable during the three rounds of fieldwork, so that the final number may be reduced. Also, the number and characteristics of the case studies will be reviewed, and if necessary adjusted, before the second round of fieldwork (provisionally planned for early 2016).

The case study sampling was done in advance of the fieldwork, using selected data from the 'household' and 'index woman' modules of the quantitative listing survey. The sampling frame compiled from these data (included as Annex B) is a list, within each of the selected communities, of individual women who:

a) were either pregnant at the time of the listing survey, or were likely to become pregnant during the period of the evaluation (and are therefore potential beneficiaries of the CDG during the evaluation period); and

b) belong to households randomly selected as either 'sample' or 'replacement' for the quantitative survey (that is, they would potentially be included in the quantitative RCT survey).

Because it was necessary to conduct the qualitative baseline work during the same period as the quantitative survey, so that both could be done before the implementation of the CDG was rolled out in the evaluation sites, the case study selection was done before the final survey sample was known. Therefore, some of the qualitative case study participants are included in the survey and some are not (see Section 4).

The objective of the purposive sampling was to include case studies with a range of individual and household characteristics that we expect to be relevant to the evaluation questions, i.e.:

- Women from the poorest, better-off, and middle range of wealth or income (based on the socio-economic indicators in the listing survey);
- Women in small and large households;
- Women who already have children, and first-time mothers;
- Women who are in polygamous or monogamous marriages;
- Junior and senior wives (in polygamous households); and
- Older and younger women.

As with the community sampling above, we did not apply quotas to the numbers of women in each of these various categories, but aimed instead to select examples reflecting the range of each criterion within each community, as far as the available data allowed.[9] In terms of the simplest binary criterion (polygamous or monogamous), we aimed for approximately equal numbers of each, in line with the distribution observed in the listing data.

As shown on the sampling tables in Annex B, in each community 12 women were marked on the list as 'selected' and six as 'reserve' (to be used as replacements if any of the initial 12 were unavailable or unwilling to participate). These lists were provided to the senior field researchers (team leaders), together with ID codes linking them to the survey sample and details of how to locate their households. Co-coding of the case study participants was essential to enable later linking of the qualitative and quantitative analysis.

Annex B contains the whole sampling frame, showing the data available at the time of the initial sampling, and highlighting the 18 women selected as potential qualitative case studies in each community. During the qualitative baseline fieldwork, the field teams succeeded in interviewing 82 of the selected women, and members of their households.[10] The characteristics of these case study participants are profiled in Section 4.

## 2.4 Fieldwork implementation

Implementation of the data collection started with a training workshop held at the ABU campus in Zaria, 23–27 September 2014, at which the draft fieldwork guide was extensively discussed and revised, incorporating researchers' local knowledge and feedback on the methodology of the situation analysis. The workshop involved all the field researchers and was led by the Nigeria-based Research Manager, with the participation of the UK-based Team Leader and Research Assistant for the first three days. The phrasing and translation into Hausa of the thematic questions and key terms was discussed and decided by the field teams during the workshop, and revised following the field-testing, led by the senior TFDC researchers. The purposive sampling of

[9] Some of the data from the listing survey was patchy (particularly the women's ages).

[10] In two communities, Doka Gama and Kokura, the field teams were only able to interview 11 of the planned 12 case studies.

communities was also done during this workshop, while the UK and Nigeria-based team members were together and before the fieldwork began.

Training and field-testing of the methods in local communities, involving all the field researchers, continued for a further two days after the UK-based team members left. Immediately after the training, the fieldwork procedures and data collection methods were applied in the first two communities. Feedback from these first sites was used to fine-tune the methodology and question guides for the remaining communities.

From the third day of the training workshop the researchers divided into two teams, one for each state, each led by a senior researcher. Care was taken to ensure an appropriate gender balance within the teams in order to enable interviews with women (the majority of the case study work) to be conducted by female researchers. However, the availability of qualified female researchers was a constraint. The final field teams were composed of seven researchers (four women and three men) in Zamfara, and six researchers (three women and three men) in Jigawa.

The fieldwork was conducted by the two teams working in parallel between 29 September and 20 October 2014. This was at the very end of the rainy (*damina*) season and the beginning of the harvest (*kaka*) season. Most crops were not yet being harvested, but as one focus group participant in Kanyu put it, 'We are in *kaka* of millet at this moment. This means that *damina* is not fully out and *kaka* has not fully set in.'

Approximately four days were spent in each community, including travel time: the dates are shown in Table 3.

**Table 3 Fieldwork dates by community**

| Zamfara | | Jigawa | |
|---|---|---|---|
| Keita (Tsafe) | 30 Sep–3 Oct | Kanyu (Gagarawa) | 29 Sep–3 Oct |
| break for Sallah (Id-al-Adha) and review of first sites | | | |
| Matseri (Anka) | 9–12 Oct | Kokura (Kirikasama) | 11–15 Oct |
| Yankuzo (Tsafe) | 29 Sep;[11] 12–15 Oct | Kafin Madaki (Buji) | 16–20 Oct |
| Doka Gama (Anka) | 17–20 Oct | | |

## 2.5 Data analysis

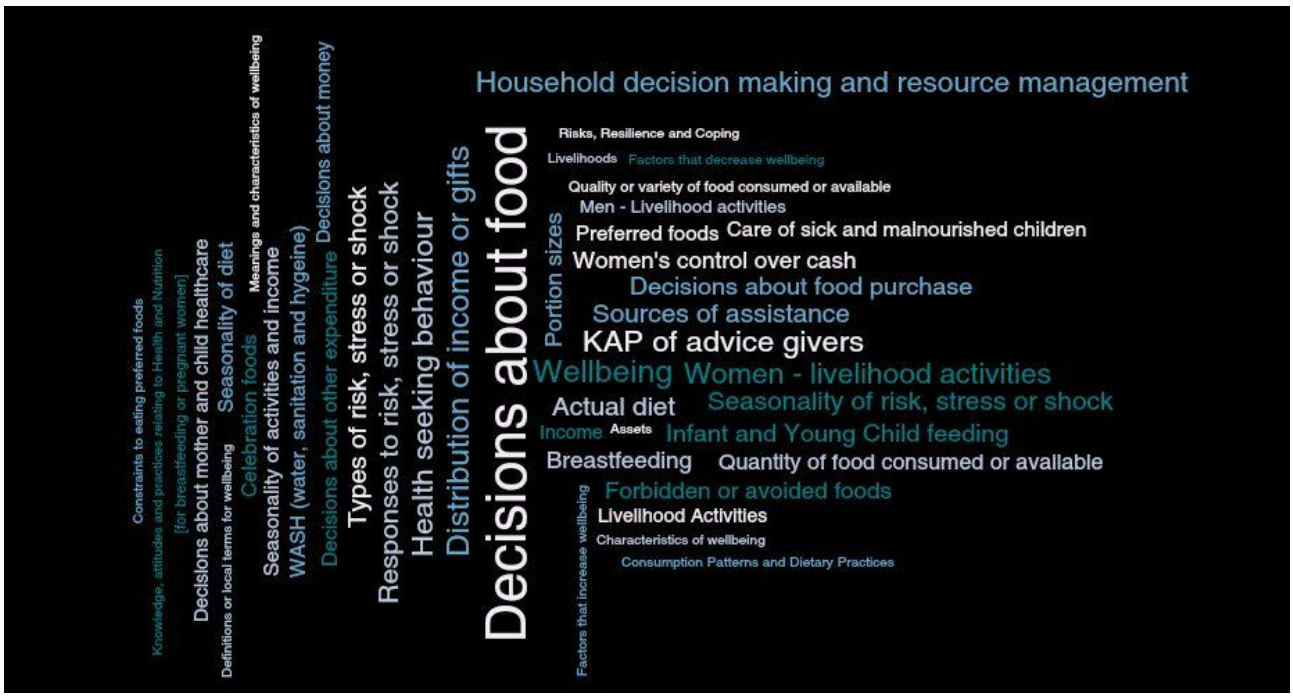
Data analysis broadly followed the same multi-tier approach as the situation analysis. A debriefing workshop for all the field researchers was held at ABU in Zaria shortly after the end of the fieldwork (31 October and 1 November) to standardise the process for transcription and to discuss fieldwork experiences, including reflections on the methodology and factors to note for future rounds of the evaluation. At this workshop, the field teams also discussed their preliminary findings and impressions in relation to the pre-defined research themes.

All the interviews and discussions conducted during the fieldwork were transcribed by the field researchers using their recordings and field notes. The transcripts were then uploaded into data analysis software Dedoose, and tagged by three research assistants according to the coding

[11] Yankuzo was intended to be the first site for Zamfara, and the team started work there on 29 September. However, heavy rains that night made the road impassable the next day. Therefore, Keita was substituted as the first site and the team returned to Yankuzo later when conditions had improved.

structure set out in Annex C. Inter-coder reliability was checked by the ITAD staff member (the research assistant) responsible for managing the coding process. Figure 5 is a screen capture of the code cloud generated by Dedoose from this process. The font size of each phrase is proportional to the number of text extracts linked to that code, which reflects the frequency of answers given by participants to each of the pre-set themes and subthemes. The extracts linked to each code were then reviewed and compared by the team leader (the report author) in order to draw out a thematic summary and to highlight key points or insights, with illustrative quotations, under each topic.

**Figure 5 Dedoose code cloud: CDG Qualitative Baseline Analysis**




This analytical approach has limitations: the coding structure is inflexible, and does not pick up unforeseen topics. Also, the separation of research functions among the TFDC team (who conducted the fieldwork and wrote the interview transcripts), the research assistants (who coded the transcripts), and the team leader (who analysed the coded transcripts and wrote the report) is far from ideal for qualitative enquiry of this kind. This separation is largely dictated by the security conditions in northern Nigeria, which make it impossible for the international team members to participate in the fieldwork.

In order to counteract these limitations as far as possible, the TFDC senior researchers were requested to provide team leaders' reports on the fieldwork in each state, and a community profile of each village, recording their own observations, interpretations and comments. All the field researchers were encouraged to make their own observations (clearly separated in the transcripts from the words and opinions of the respondents), to use the evaluation ToC (Figure 2) as a framework for flexible enquiry in the field (rather than rigidly following the checklists and thematic questions), and to discuss their findings and observations during the post-fieldwork debriefing workshop. The minutes of this workshop were provided to the team leader. The TFDC senior researchers reviewed the first draft of this report and made some corrections and comments.

## 2.6 Limitations and challenges

A number of methodological limitations have already been mentioned, and are summarised in this section. First, the sampling of communities and households is purposive. The sampling has been done as objectively as possible, using the data available, to minimise selection bias and to capture variation in contextual factors that are likely to affect the implementation and impact of the CDGP, but it is not intended to be representative either in a statistical or a qualitative sense. The qualitative research aims to complement the quantitative survey analysis by investigating how and why people in the selected communities act or believe as they do; how social, cultural and economic contexts affect their decisions and their use of cash transfers; and whether or how the expected transmission mechanisms of the CDG programme work in practice. The qualitative analysis will highlight areas where there appears to be unanimity or variation in these factors within or between the selected communities and groups (e.g. by age, gender, ethnicity, wealth or status), but it will not attempt to quantify these observations in a more general sense across the whole CDG area.

A second set of limitations relates to resource and security constraints. It has been noted above that the volatile security situation in much of northern Nigeria has limited the selection of evaluation sites to locations known to be relatively safe (and therefore, the evaluation will inevitably lack an understanding of some places where life is particularly difficult). In addition, security concerns in some areas limit the hours that the field teams can spend in the villages, because they need to leave in time to return safely to their lodgings before dark. The allocated time in each community (dictated by finite budgets) is already very short for the kind of exploratory qualitative enquiry that we are aiming for. Some of the qualitative evaluation sites are more accessible than others: this was intentional, as we were aiming for a balance of more and less remote communities with good or poor access to markets and services, but the necessary travel time on poor roads also reduces the time that the teams can spend on research activities in the villages.

The challenges posed by the separation between the team members responsible for the field research and analysis are also due to a combination of security and budget constraints, and have been outlined above. Efforts will continue within the team to minimise the impact of this separation of functions.

Road access is, of course, especially poor during the rainy season. As seasonality is a key dimension of most of the research themes in this evaluation, the three rounds of qualitative fieldwork are planned to take place at three different points in the year to maximise our understanding of the different seasons.[12] The baseline fieldwork was conducted in September and October, just at the turn of the season between the end of the rains and the beginning of the harvest period. At this time, significant access problems were encountered by the teams due to flooding and damaged roads. The next (midline) round of fieldwork is provisionally planned for the dry season (around January 2016, at the end of the harvest period). The timing of the third and final round is yet to be decided but must take account of the feasibility of access. It will not be possible to conduct fieldwork during the main rainy season. This is unavoidable but it will limit our observations, as participants in all the qualitative sites confirm that the peak of the rains in August is the most difficult time of year for them.

Some challenges with the implementation of the fieldwork methods were also encountered during the baseline, and are noted here so that they can be improved on in the next round. The first of

[12] The quantitative survey, by contrast, will be implemented at the same time of year in each round, investigating seasonality through recall questions about the preceding twelve months.

these is the gender composition of the field teams: more female researchers are needed in each team, as mentioned above, so that women respondents are interviewed only by women. During the baseline there were some cases where women were interviewed by male researchers. It is not clear what effect this had on the information collected, but women need to be chaperoned when talking to a man, and it is assumed that they will speak less freely. This challenge will be addressed by recruiting more female researchers for the next round (the ideal ratio would be twice as many women as men, given the focus of the case studies on women).

In general, if both the interviewer and the respondent are of the same gender, one-to-one conversations were acceptable, although in some cases the field team encountered suspicion about this request for confidentiality and consequently one-to-one interviews were not always possible. It is hoped that the researchers will be able to build rapport with the participants as they will be re-visiting the same communities and households, thus easing suspicions and facilitating private conversations. By the time the teams return for the second round of fieldwork, the CDGP should have started implementation in all the qualitative evaluation sites. It is hoped that this will also reduce the general 'research fatigue' expressed by some participants.

Difficulties were encountered in accessing Fulani communities and households, particularly in Kokura (Kirikasama), which is the home of most of our Fulani case study women (see Section 4). It transpired that there were tensions there between the population of the main village (who are Kanuri and Hausa) and the Fulani community living on the outskirts. As the research team's entry into the village was through contacts and key informants in the main village, they were viewed with suspicion by the Fulanis, who were therefore reluctant to participate in the research. It will be important in the next round of fieldwork to build better relations with the Fulani community by identifying appropriate leaders and gatekeepers and approaching them separately. Equally important, more Fulfulde-speaking researchers are needed. Now that the communities and case study participants are known, Fulfulde-speaking researchers (both women and men) should be assigned to the relevant communities and households. The number needed will be reviewed within the team.

Finally, the pre-identification of case study women using the quantitative sampling lists was a new and unfamiliar approach for the field teams, and was not without challenges. On the whole it seems to have been successful, but in some cases the field teams noted attempts by community informants to manipulate the sample by misidentifying households and substituting others, presumably in expectation of benefits to follow. The team leaders report that they were able to explain that there was no connection between being interviewed and receiving future assistance, and succeeded in eventually contacting the households listed. Identifying the case study households should be much easier in the next round, now that the initial contact has been made. Some cross-checking of identities might nevertheless be needed.

# 3 Community profiles

This section gives a brief description of each of the seven communities selected for the qualitative evaluation (for the baseline and subsequent rounds), highlighting any features that seem locally specific or particularly relevant to the evaluation themes and the potential causes of child malnutrition (as identified in Figure 3). These communities were purposively selected (as explained in Section 2.3) to reflect the variation in the social and economic contexts in which the CDGP will be implemented. The profiles given here are provisional, and it is possible that some of the apparent differences between the communities are due to inconsistency in the questions asked by different researchers. The same seven sites will be visited in subsequent rounds of qualitative fieldwork, and the community profiles will be further developed during the course of the evaluation. More systematic investigation and analysis of thematic differences by community will also be developed in future rounds.

## 3.1 Matseri (Anka LGA, Zamfara)[13]

Matseri has a total population of around 10,000. The people are predominantly Hausas, with minority populations of Kanuris, Zazzagawa and Fulanis. There are apparently tensions and distrust between the Hausa and Fulani parts of the community, with some people accusing the latter of being involved in cattle raiding. The whole community practises Islam, and the imam is highly esteemed. The head of the community is called Matseri and under him are five *hakimi* who govern the community alongside him. The name 'Matseri' means 'runaway' in Hausa. According to the village head, this name was given to the settlement because its founder left Nasarawa (a town not far from Matseri, in another local government area) to start a new community here.

**Photo 1 Children in Matseri**

The community is largely agrarian with a few people rearing animals and some involved in petty trade and labour migration. Farmers in Matseri grow maize, millet, sorghum and vegetables (moringa and spinach), primarily for their own consumption. They also grow groundnuts, beans and soya beans, mainly as cash crops. Women are mainly engaged in home-based businesses processing or cooking food items for sale, or petty trade in domestic items.

[13] Quantitative survey site 119. Approximate location: Lat. 12.05, Long. 5.75.

The nearest market where fruits and vegetables can be bought is 10 minutes' walk away at Nasarawa, while the nearest major town is Gusau.

Matseri is not prone to community-wide natural disasters such as drought and flood, although crops are sometimes damaged by locusts and other pests. The main perceived risk to people's lives and livelihoods is insecurity, particularly cattle raiding.

Although the community has a health care facility, the building is in poor condition and is not used. For medical services, people either have to go to the nearby community of Nasarawa (a NGN 50 motorbike ride away, in another LGA), or rely on their herbal health specialist or the imam in the village.

> Any sickness in this community is a challenge. Our health clinic has collapsed and we do not get to see the health officer because he is not from this community. We go over to the next community for any medical condition. When you cannot afford [it], you go to the imam. (Older Men's FGD, Matseri)

The village has boreholes and solar taps but only one is functioning. FGD members explained that the borehole is not functioning and the overhead tank that used to provide clean water has 'gone bad': therefore, everyone is using unprotected water sources (wells and river).

## 3.2 Doka Gama (Anka LGA, Zamfara) [14]

Doka Gama is a small and tightly-knit community of fewer than a hundred households. It was said to be founded over 80 years ago by Mallam Gama, who was born at the end of the Nagwamatse war – hence the name 'Gama' meaning 'finish' or 'end of'. The village head (*hakimi*) is a descendant of the founder and administers the village with the help of four trusted aides (*wakilis*). The village is made up of Hausa and Fulfulde (Fulani) speaking people: all are Muslim. The field team observed that everyone knows everyone else and there is a high degree of mutual support within the community.

The major livelihood activity of the people is farming, with a few engaged in animal husbandry (cattle and goats) and petty trading. The main crops grown are millet, sorghum, maize and beans. The cattle rearers produce large amounts of yoghurt, and everyone was said to drink *fura da nono* (yoghurt with millet meal) every day – this was described as a 'tradition' handed down in this community. The research team observed that the children looked healthier than in the other three villages visited in Zamfara, and wondered if this could be attributed to the consumption of yoghurt.

Labour migration is common among the men, mainly during the *rani* (dry) season from January to March:

> [I]n this community, we migrate a lot. We travel as far as Niger republic, then within the country we go to Sokoto, Benin, Kaduna. Over there we are butchers and we do other menial jobs. All this we do so as to get money and send back home. (Older men's FGD, Doka Gama)

Women can earn income from petty trade, processing or cooking food items for sale, or home-based services such as pounding grain and hairdressing.

[14] Quantitative survey site 136. Approximate location: Lat. 12.04, Long. 6.13.

Doka Gama has the poorest access to services among our evaluation sites, in terms of the indicators in Table 1. There is no government school or health care facility in the community. The only school they have is the Islamic school. Both the nearest health facility and the nearest market where fruits and vegetables can be bought are more than an hour away by motorbike. The nearest health facilities are in Wuya.

**Photo 2 Doka Gama landscape**

Access to the village is difficult due to the poor road network. To get to the village the team had to cross two wide rivers with no bridges. During the rainy season, the village is sometimes completely inaccessible by motor vehicle. Mobile phone connectivity is poor: the researchers had to climb a tree to get a signal.

The village suffers from frequent armed attacks by unknown gunmen, the most recent five days before the team's visit when armed bandits invaded the village and stole eight cows. People are often killed during these raids. Community leaders report that there are no security forces present, and they live in perpetual fear. This security situation along with the known banditry along the Anka road constrained the time spent by the field researchers in the community.

Apart from insecurity, the main natural hazard affecting the community is seasonal flooding:

> [O]n your way here you will notice a river, that river is our greatest challenge in this community. During the raining season the riverbanks overflow and it causes flood in some areas [of the] community and erosion in [others].
> …We always experience flood in August …We wish you people have come to construct the road/bridge for us because bringing our farm product home from the farm is a problem.
> … Ah, we are seriously suffering here because it takes two hours to get to the town … a journey [that usually takes] 30 minutes takes someone an hour. (Young men's FGD, Doka Gama)

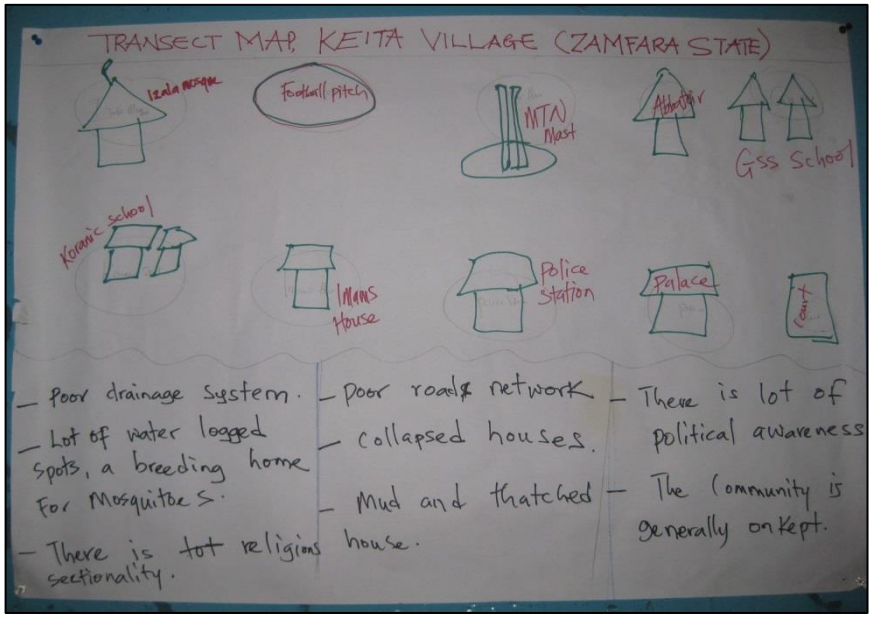
## 3.3 Keita (Tsafe LGA, Zamfara)[15]

In contrast to Doka Gama, Keita (or Sauri Keita – Mayana Keita is actually the title of the village head) is a large community of over 15,000 households and is well served with infrastructure and services, including an access road, a primary health care centre which has an ambulance, an MTN

[15] Quantitative survey site 231. Approximate location: Lat. 11.84, Long. 6.79.

(mobile phone) mast, primary and junior secondary schools, a law court, a police station and a large market selling a range of commodities including fruit and vegetables. Political parties have a presence in the community.

**Figure 6 Transect walk showing key buildings and amenities, Mayana Keita**




The people of Keita are descended from migrants who came from Sudan and from Niger over a century ago. The majority language is Hausa, though a few speak Fulfulde, and a very few speak English, although not fluently. Ethnic groups are Hausa, Fulani, Gahiwatawa, and Yanmatawa. All are Muslim.

The community is largely agrarian with a few who rear animals and also a few (both men and women) involved in trade. The major crops grown are maize, millet, sorghum, potatoes and vegetables. They also grow groundnut, beans and soya beans, which are considered cash crops but are also an important part of local diets.

Not surprisingly in such a large and semi-urban context, there are more opportunities for income diversification: the occupations of the 10 participants in the young men's FGD included motorcycle rider, store-keeper, blacksmith, builder and painter, livestock trader, traditional herbal doctor, and electrician/electrical repairman. Most of them combined these businesses with farming.

As in the other communities, women can earn income from home-based food-processing businesses, petty trade in domestic items (such as rice, soup ingredients, seasonings, soap and washing powder), or making clothes (e.g. knitting caps) for sale. FGDs give the impression that the market for all these activities may be more active and possibly more profitable than elsewhere.

Erosion, drought, and flood (leading to waterlogging of crops) were cited as the main natural hazards affecting Keita, with Fulani cattle raids a frequent man-made shock, as in Doka Gama. A shortage of government employment within the area is seen as a problem pushing men to migrate to urban centres for 'menial jobs'.

Some male focus group participants highlighted the impact of health facilities on childbirth practices as the most important generational change relating to the topics under discussion:

> Most women do not stay home for delivery, they go to the hospitals now for delivery, but before now it was not so. (Older men's FGD, Keita).

Women respondents added that husbands do not always give permission for women to attend the clinic for ante-natal care (ANC), but that the main constraint is cost. FGDs on this issue suggest that when a woman is able to pay for ANC herself, her husband is more likely to agree (Older women's FGD, Keita). Younger women said that they all attended the local health centre for ANC, and also described a change in breastfeeding practices:

> Our older ones say there [is] some dirt in the breast that can affect your baby's body so they use the two days[16] to wash the breast with traditional herbs before you begin to breastfeed the baby. But now, with the new trend that has come to us, as soon as you deliver your baby, you will breastfeed (Younger women's FGD, Keita).

This change could perhaps be attributable to the advice received at the health centre or from SC (Health Worker KII, Keita).

**Photo 3 Young women's focus group, Keita**

Water is sourced mainly from wells and boreholes within or near people's compounds, and all but one of the households in our case study sampling frame had access to a pit latrine. However, the research team observed that the drainage around the community was poor, with standing water providing breeding grounds for malarial mosquitoes, and that the environment appeared quite dirty.

## 3.4 Yankuzo (Tsafe LGA, Zamfara)[17]

Yankuzo is about a hundred years old and was founded by the current *hakimi's* grandfather, who came from Katsina State and brought his friends and relatives from there to join the new settlement: hence the name, Yankuzo, meaning 'we all came'. It has over 10,000 residents and could be considered semi-urban. It has boreholes and an overhead water tank, divisional police headquarters, a primary school and a junior secondary school. It also has a law court, a political party secretariat (All Progressives Conference) and a government department office. There is a health centre in the community, built by UNICEF, and the nearest general hospital is in Tsafe (a journey costing NGN 200 by motor cycle).

[16] The 'two days' refers to the local practice of not breastfeeding immediately after birth.

[17] Quantitative survey site 260. Approximate location: Lat. 11.94, Long. 7.07.

The founding families are of Fulani origin, but the population is now a mixture of Fulani, Hausa and Beri-beri. All are Muslim. Aside from these residents, people from the east and other parts of the country (Igbos, Yorubas, etc.) often come for business.

> Yankuzo … is a place for business. We do irrigation farming here which is part of business because some sell pepper, tomato and vegetables, some have shops in the market selling different food stuff and clothes (District Head/hakimi KII, Yankuzo).

The village head, himself a teacher, estimates that about 2,000 men and a very few women (perhaps ten) have government jobs as teachers, LGA staff and health unit workers, earning salaries ranging from NGN 5,500 to NGN 50,000. Yankuzo has good soil, and farmers here grow rice as well as maize, legumes and beans.

Drought and crop damage were reported during the listing survey as the major shocks in the past year. Like Doka Gama in Anka LGA, Yankuzo suffers from poor quality access roads that can become impassable during the rainy season:

> [O]nce it rains we are cut off from the rest of the world … you cannot take the sick to the hospital … Ideally one is supposed to get to the LGA General Hospital in Tsafe in less than an hour but now you will spend over three hours to get [there] ... Any efforts at building a bridge have washed away with the rains [due to poor construction] (village head KII, Yankuzo).

Water is drawn mainly from private wells in people's compounds, or from a public borehole near the old market (without charge – the water is free).

**Photo 4 Yankuzo Health Centre**

## 3.5 Kafin Madaki (Buji LGA, Jigawa) [18]

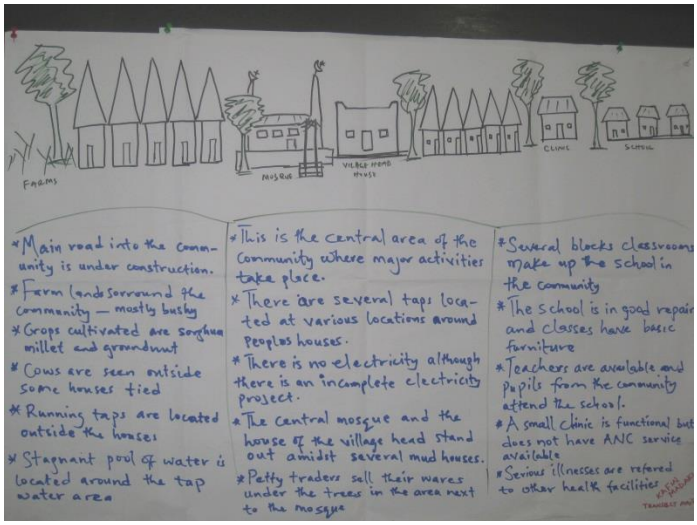
Kafin Madaki, in Buji LGA, is close to the Jigawa State capital, Dutse, giving it relatively easy access to a large urban market for commodities, employment and services. It is located on the

[18] Quantitative survey site 324. Approximate location: Lat. 11.54, Long. 9.82.

upper Hadejia-Jamaare flood plains, west of Hadejia tributary, and is characterised by dark loamy soils and rich biodiversity. The population is estimated to be between 2,000 and 3,000. The majority are Hausa, with minorities of Fulani and Kanuri. All are Muslim. Most of the Hausa and Kanuri residents were said to have migrated from the east, from places like Maiduguri.

Kafin Madaki has an ancient history as one of the towns round which mud walls were built in the era of the old Hausa city states. Relics of the collapsed old city wall are still visible. About a third of the houses now are constructed of brick and aluminium roofs, while the majority are made of mud and thatch. A solidly built palace and mosque welcome visitors from the western entrance to the village, and the streets were observed to be planned. The traditional ruler of Kafin Hausa historically had a higher rank than a village head, and today the community has its own district head (*hakimi*), who reports to Hakimin Yayarin Tukur, who in turn reports to the Emir of Birnin Kudu under the Dutse paramount ruler.

**Figure 7 Transect walk, Kafin Madaki**




Agriculture is the major occupation. The main crops are millet, maize, sorghum, beans, sesame and groundnuts, while cucumber, pumpkin and watermelon are also widely grown in this area. Animals (cattle, goats, sheep, rabbits and poultry) are kept for consumption and also as a means to raise money for food, health care or other necessities. Trading too is an important livelihood activity, and men engage in seasonal labour migration to urban areas during the dry season when farm work is over (from December to January until the rainy season, the *damina*, is established around June). Some household heads also work at fishing and weaving. Women earn income from petty trading and other home-based activities such as mat-making and groundnut oil extraction.

> Our women may not be into big business … but most of them buy like a carton of (*Taliya*) pasta, some can buy like 10 measures of rice, some five measures, some two or one measure and sell them to help themselves (religious leader KII, Kafin Madaki).

The Fulani people tend their cattle on the outskirts of the town, where they live in long-established settlements (*ruga*). The major asset for most households is land, while the Fulani participants equated wellbeing with the possession of large herds, grazing land and water.

Damage to crops and houses caused by floods or excessive rainfall was cited as the major natural hazard (older men's FGD). This had happened recently, in September.

### Photo 5 Household compound, Kafin Madaki

### Photo 6 Mothers and children, Kafin Madaki

The community has access to pipe-borne water supplied to them by the state water board at a subsidised monthly rate of NGN 50 per household. However, the quantitative listing survey found that nearly half of the sampled households are using unprotected or untreated water sources (see Annex B). Stagnant water around the communal taps was observed to be a mosquito-breeding hazard. Within the compounds, the team observed that rooms are located in close proximity to animal sheds (goats, sheep, cows) while chickens, ducks and guinea fowls roam the compounds and litter them with their droppings. There is an incomplete electricity project.

**Photo 7 Kafin Madaki clinic**

Although Kafin Madaki has a health facility within the community, it is poorly resourced and staffed and does not provide ANC. There is a dispensary where drugs can be obtained for minor ailments, but for anything more serious people go to the clinics at Yayari or Sagu, four and six kilometres away respectively.

Both the TBA and women's focus groups raised the problem of transport to the hospital: even women in labour have to go by motorcycle. They have heard that other communities have cars provided by Jigawa State's Safe Motherhood Initiative.

## 3.6 Kokura (Kirikasama LGA, Jigawa) [19]

Kokura is a small community of about 45 households. It was founded less than 60 years ago by the father of the current *bulama* (village head), who originally brought four families across the wetland from Baturiya in order to get more space of their own for farming and fishing. Previously Kokura was known as a good game-hunting ground for Baturiya. Fulani were also early in moving over, and others have joined the new community but still have relatives in the main town, Baturiya. The ethnic composition of Kokura is a combination of Kanuri and Fulani, with a minority of Hausa. The Kanuri and Hausa live in the central village while the Fulani live in surrounding *rugas* from which they often migrate with their cattle to pastures all across Nigeria and neighbouring countries, always returning to Kokura. The whole population is Muslim.

Kokura and its surrounding hamlets are located in a low-lying plain of the Hadejia-Baturiya Wetlands, characterised by *fadama* and dark-coloured loamy soils. The ecology is rich in biodiversity, with water bodies (supporting aquatic life such as fish) as well as farmland and open bush for grazing. Access to Kokura by vehicle was difficult at the time of the baseline fieldwork (October, at the end of the rains). The tracks were water-logged, narrow and slippery, bordered by fields of corn, rice, beans, groundnut, sesame and millet. Road access is presumably difficult throughout the rainy season, but there was a regular flow of motorcycle traffic through the wetlands between Baturiya and Kokura, ferried part of the way by canoe-men.

Most houses in the central village are made of mud with grass roofing, while a few have corrugated metal roofs. Fulani dwellings are constructed with palm grass, leaves and twigs, convenient for all seasons. The *rugas* are located in the open savannah.

[19] Quantitative survey site 401. Approximate location: Lat. 12.52, Long. 10.29.

### Photo 8 Fulani *ruga*, Kokura

### Photo 9 Kokura mosque

The range of livelihood options is very similar to Kafin Madaki's. Crop and livestock farming predominate, but do not provide enough food or income for the whole year. Fishing is also an important occupation in Kokura. The men supplement their farming income with dry-season labour migration and other activities such as trading, gathering firewood, brick making, and cutting *kaba* palm for baskets, while the women earn income from home-based petty trade, food-processing, and crafts.

The research team observed that people in Kokura eat more fish, milk, and rice than those in Kanyu (for example), because of their proximity to the Baturiya wetlands. Fulani children eat more vegetables, fruits and berries because of their proximity to them in the bush. Their meals have more milk and they were observed to look healthier than children of the main Kokura settlement. The women do less cooking and less house chores in general than the Hausa and Kanuri members of the community, but are engaged more in milking cows and preparing the milk for sale in neighbouring communities. Fulani women are less restricted and travel distances to sell milk.

Out of the seven qualitative evaluation sites, Kokura is the most remote from health services. There is no clinic in the community, and the nearest health facility is reportedly more than two hours' walk away. The nearest market is in Baturiya, but people from Kokura also go to Hadejia market to sell farm produce and to Gamawa (Bauchi State) to sell livestock.

Water is drawn from two manual tube wells, which provide water all year round. There is no electricity.

### Photo 10 Water source, Kokura

### Photo 11 Fishing baskets, Kokura

## 3.7 Kanyu (Gagarawa LGA, Jigawa)[20]

Kanyu is similar in many ways to Kokura, but further from the wetlands. It lies in a peneplain of the Hadejia River ravine, characterised by hydromorphic, sandy and dark loamy soils. It was founded more than 100 years ago by two brothers who migrated from Gumel town, and then grew as others came to join them. According to the elders, it was in Kanyu that one of the earliest wells in the area was dug. People from surrounding villages come here to fetch water from the ground when they are not using the streams. Water is from boreholes and solar pumps.

The ethnic composition of the main Kanyu village is a mix of Hausa and Kanuri, while the surrounding hamlets (*rugas*) are populated by Fulbes (Fulanis): these groups have co-existed peacefully for decades. There are over 500 people resident in Kanyu village, all Muslim. Most houses are made of mud with grass roofing, fenced with mud and corn stalks, while a small minority have houses built of concrete with metal roofs. The streets are laid out in a grid, but drainage is poor. As in Kokura, the Fulani houses on the outskirts of the village are made in the traditional style, from palm grass, leaves and twigs.

Farming of crops (millet, maize, sorghum, beans, sesame, groundnut, zobo, cucumber, pumpkin and water melon) and livestock (cattle, goats, sheep, rabbits and poultry) are the main occupations in Kanyu. The Fulani migrate seasonally with their cattle but maintain a permanent base in Kanyu, while some Kanuri and Hausa men move to urban areas (including Kano, Kaduna, Abuja, Minna and Lagos) for employment in the dry season. Local non-farm livelihood activities for the men include selling firewood, hay making, brick-making and digging soil for house construction. Women engage in home-based petty trade and food processing, and help to rear animals in the house. They also participate in cutting and threshing grain crops during the harvest (*kaka*) season.

There is no marketplace in Kanyu. To buy or sell food, the men travel to Gujungu, Maigatari or Laraba. The nearest is Gujungu, an estimated 20–26 km away.

There is also no clinic. For health care, including ANC, people must go to Medu clinic, four kilometres away along the main road to Gumel. Within the community (and in all the evaluation sites), a TBA (traditional birth attendant) assists mothers with home deliveries, while many go to the imam for prayers and *rubutu* (prayer water) in cases of sickness or childbirth.

[20] Quantitative survey site 533. Approximate location: Lat. 12.46, Long. 9.43.

### Photo 12 Water pump, Kanyu

### Photo 13 Woman pounding grain, Kanyu

# 4 Case study characteristics

As explained previously, the core of the qualitative evaluation methodology will be a set of case studies focusing on individual women who are in the target group of the CDG. Other household members will also be interviewed and intra-household dynamics will be investigated. As explained in Section 2.3, the case study women were a) purposively selected from those who had been identified by the quantitative listing survey as eligible for the CDG (i.e. either currently pregnant or likely to become pregnant during the evaluation period), and b) randomly selected for the quantitative survey, either as 'sample' or 'replacement'. This strategy should enable us to link the analysis at later stages of the evaluation, potentially developing a subset of 'super case studies' or 'Q-squared case studies' which can draw on both qualitative and quantitative data.

The intention is to follow the same cohort of case study households through the three rounds of fieldwork, in order to build up in-depth information about them and to observe and discuss with them any changes (including the potential impacts of programme participation) during the three-year period. Key objectives of the baseline fieldwork were therefore to identify and establish contact with the case study participants, and to ensure that the qualitative case study cohort intersects with the quantitative survey sample.

The baseline fieldwork has successfully established a cohort of 82 mothers and potential mothers across the seven communities, who are likely to be direct beneficiaries of the CDG. This is slightly below the target number of 84 (12 case studies in each of seven communities), as the teams were only able to interview 11 of the pre-selected households in two of the villages. Of the 82 women, 48 (approximately 58%) are in currently monogamous marriages and 34 (42%) are in polygamous marriages.[21] All are married,[22] and all are Muslim.[23] Fifty-three of the case study women were pregnant at the beginning of the evaluation; of those, 20 were first-time mothers while the others already had children. Of those (a minority) whose ages were recorded, the range is from 15 to 44 years: around half are in their twenties, and a third are in their teens. Thirty-three of the case study women (around 40%) belong to households of between five and nine people; 27 (about 33%) are in large households of 10 or more; and the remaining 22 (about 27%) are in small households with two to four members.

Data from the quantitative baseline, available after the qualitative fieldwork was complete, confirmed that 51 of our case study households have also been included in the quantitative survey, so that data from the survey can be linked to the qualitative investigations. Of these 51 cases, six are Fulani and one is Gobirawa, while the remaining majority are Hausa. Ethnicity and language were not systematically recorded in the qualitative baseline and are therefore not currently known for the 31 case studies who are not also survey respondents. This gap can be filled in the next round of fieldwork. However, the sample of six Fulani cases (12% of the 51 Q-squared cases and 7% of the total 82) is in proportion to the overall population: early findings from the quantitative survey show that 7% of households in the total survey sample identify themselves as Fulani and 5.5% speak Fulfulde (the Fulani language) as their main language, while 88% describe themselves

[21] Although the sampling aimed at roughly equal numbers of polygamous and monogamous cases, early findings from the quantitative survey show that about 54% of women in the whole sample are in monogamous marriages. It is not surprising therefore that we have a small majority of monogamous women among the case studies.

[22] Only married women were listed for the quantitative sample.

[23] The quantitative baseline survey found that 99.9% of the total sample were Muslim. Religion was not a selection criterion in the qualitative research, but no non-Muslims were encountered during the fieldwork.

as Hausa and 90% are Hausa-speaking. The number of Fulani case studies, combined with planned focus groups within the Fulani community, is therefore expected to be adequate to investigate the differences in diet, social organisation, livelihoods, gender roles, child-care practices and other relevant factors.

Table 4 summarises the characteristics of the case study women and their households by community. Drawing on the quantitative baseline data, for the subsample of 51 cases the table also includes their distribution by quartile of the Progress out of Poverty Index (PPI) used as the main measure of household wealth in the quantitative analysis. This shows that, as intended, we have roughly equal numbers of case studies at each level of wealth. Subjective and broader understandings of household wealth and wellbeing were also investigated during the qualitative baseline work, and may be compared with the quantitative index in future rounds.

**Table 4 Case study numbers and characteristics by community**

| | Matseri | Doka Gama | Keita | Yankuzo | Kafin Madaki | Kokura | Kanyu | Total | |
|---|---|---|---|---|---|---|---|---|---|
| Total case studies | 12 | 11 | 12 | 12 | 12 | 11 | 12 | 82 | (100%) |
| Polygamous | 2 | 5 | 5 | 6 | 5 | 5 | 6 | 34 | (41.5%) |
| Monogamous | 10 | 6 | 7 | 6 | 7 | 6 | 6 | 48 | (58.5%) |
| Currently pregnant | 11 | 8 | 8 | 10 | 7 | 6 | 3 | 53 | (65%) |
| Household size: | | | | | | | | | |
| large (≥ 10) | 3 | 1 | 5 | 5 | 6 | 4 | 3 | 27 | (33%) |
| medium (5 to 9) | 6 | 8 | 4 | 3 | 3 | 2 | 7 | 33 | (40%) |
| small (2 to 4) | 3 | 2 | 3 | 4 | 3 | 5 | 2 | 22 | (27%) |
| | | | | | | | | | |
| Included in quantitative survey | 7 | 9 | 7 | 7 | 7 | 8 | 6 | 51 | (100%) |
| Household wealth index: | | | | | | | | | |
| PPI Quartile 1 (poorest) | 3 | 3 | 4 | 0 | 0 | 1 | 0 | 11 | (22%) |
| PPI Quartile 2 | 2 | 4 | 1 | 1 | 2 | 1 | 2 | 13 | (25%) |
| PPI Quartile 3 | 1 | 2 | 0 | 2 | 4 | 3 | 2 | 14 | (27%) |
| PPI Quartile 4 (richest) | 1 | 0 | 2 | 4 | 1 | 3 | 2 | 13 | (25%) |
| Ethnicity/main language: | | | | | | | | | |
| Hausa | 7 | 9 | 6 | 7 | 7 | 3 | 5 | 44 | (86%) |
| Fulani | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 6 | (12%) |
| Gobirawa | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | (2%) |

For the baseline, case study participants were interviewed about their experience and perceptions relating to the six thematic areas. The individual interviews enabled private conversations about some of the more sensitive or personal topics, such as women's knowledge and opinions around breastfeeding and health care practices, or decision-making within the household. The transcripts of these interviews have been drawn on for the thematic summaries in the next section of this report: they have not yet been analysed for patterns or differences by location, age, ethnic group or

other characteristics. Future rounds of fieldwork will build on the basic information collected in the baseline interviews, and the information collected from the case study households will be cumulative. Other dimensions of the case studies (such as the household hierarchy, gender dynamics, livelihoods, and differences by wealth or ethnic group) will also be developed in the next rounds of fieldwork.

The number and characteristics of the women in our case-study cohort will be reviewed in preparation for the next round of fieldwork, and the sample may be adjusted if necessary. As the case-study component of the qualitative work is intended as a longitudinal study, following the same women and their households through the three rounds of fieldwork, there is a strong argument for maintaining the same sample of 82 women already interviewed. However, because the baseline fieldwork was conducted in parallel to the quantitative survey and before the CDGP implementation started, it was impossible to know how many of the case study women would actually be included in the final survey sample, or how many would be enrolled as CDGP beneficiaries. While it is not essential for all the women in the qualitative case studies to be included in the quantitative survey, it is important that we have a sufficient number of beneficiaries among the case studies. Therefore, the programme listing and local CDGP staff will be consulted to determine which of the case study women are beneficiaries before a final decision is made about the cohort.

# 5 Thematic findings

## 5.1 Consumption patterns and dietary practices

The main staple foods across the seven communities are locally produced millet and sorghum, most often cooked as a paste or pap (*tuwo*), and sometimes maize, rice and wheat products. 'Supplementary' foods to accompany these staples include sauces or soups made of baobab, moringa, and other wild or cultivated leaves; pulses and tubers such as cowpeas, groundnuts and tiger nuts; cultivated vegetables such as pumpkin, yam, and sweet potatoes; milk, yoghurt and butter; meat, poultry and fish. The glossary of local foods compiled during the situation analysis and baseline (see page v of this report) gives an impression of the variety of dishes, most using locally produced or gathered ingredients, which constitute the diet and food culture in this part of Nigeria. Table 5 below summarises the main foods available by type (categorised as for a dietary diversity score).

**Table 5 Locally available foods by type**

| Food type | Locally available foods |
|---|---|
| Cereals | Millet, sorghum, rice, maize |
| Roots and tubers | Casava, sweet potato, yam, tiger nuts |
| Pulses, legumes, nuts, seeds | Cowpeas, groundnuts, bambara nuts, sesame, locust bean, soya beans |
| Vegetables | Pumpkin, hibiscus (kenaf), moringa, baobab leaves, okra, tomatoes, peppers |
| Fruits | Wild berries, dates, doum palm berries, tamarind, orange, banana |
| Meat/poultry, offal | Cows, goats, chickens, guinea fowl |
| Eggs | Chicken and guinea fowl eggs |
| Fish, seafood | Freshwater fish |
| Milk and milk products | Cow and goat milk, yoghurt, butter |
| Oil/fat | Groundnut oil, butter |
| Sugar/honey | Sugar cane, dates, honey |

Of course, this does not mean that all these foods are eaten by everyone, or eaten frequently. Availability varies by season and location. For example, rice and fish are more readily available in the wetland community of Kokura, while dry-season vegetables are grown wherever there is irrigable land (e.g. Yankuzo). Households with access to irrigable land stand to gain most from these local resources, both through consuming their own production and generating income from sales: however, local production also means that these items are more likely to be available for sale, and might therefore be purchased with transfers from the CDGP. Local exchange and retail purchase of foods is common (e.g. farming households buying milk from Fulani pastoralists), even in the absence of a formal marketplace. Communities with physical access to larger markets are able to purchase a wider range of foods at lower cost than the more remote villages.

Access to most foods, even the 'subsistence' grain crops, is highly dependent on household production and purchasing power. It is well established by previous HEA studies[24] and other analysis across this part of the Sahel that very few farmers are able to produce enough food to

[24] See Bush 2012, Bush and Noura 2012, FEG 2014, Save the Children 2014a and 2014b.

sustain their household throughout the year, and that the poorer the household the higher the proportion of food purchased is likely to be. This same observation was made in several of the baseline focus groups:

> *How long do your food stores last?*
> … not usually long enough, only a few have food to go through the hunger season … (Older men's FGD, Yankuzo).

> Food stores normally last till March or April. After that, hunger sets in with the attendant poverty (Mr R., group household interview, household case study, Kafin Madaki – Situation Analysis, p. 32).

When asked what foods they would like to eat more of, or what they would like to give their children if they could, most people said they would prefer more variety and would like to buy more vegetables, fruit, meat, eggs and seasonings as well as processed or more expensive staples such as pasta and rice. In almost all cases, lack of money (rather than non-availability) was given as the main obstacle to eating the preferred diet.

> [E]verybody has knowledge of [what] is good but lack of money, work or business stops people from eating the right meal … We all know that beans is a good meal but if you don't have [money] you can't buy it (Case study interview, husband, Kanyu).

Like people everywhere, our evaluation participants look forward to eating special or expensive foods on festive occasions such as Sallah (Id-al-Adha) or weddings. These 'celebration foods' include tasty dishes (seasoned with Maggi bouillon cubes or spices) and treats like Maltina (a soft drink) and sweet cakes, as well as more meat, fish and eggs than usual. Purchased staples such as pasta (*taliya*), noodles (*indomie*), and rice are a welcome change from *tuwo* and were often mentioned as celebration foods.

> *What foods are saved for celebrations? Why?*
> Ah! That will be *shinkafa* (rice), wake (beans), *nama* (meat), *talia* (spaghetti), *waina*/*masa* (maize cakes). The[se] food items cost money and are much loved by everyone. It is not something you can afford all the time (Older men's FGD, Yankuzo).

> In this village there are people that would spend an entire year without meat in their soup except for Sallah celebration (Case study interview, husband, Kokura).

The baseline research confirmed the finding of the situation analysis that, in these communities, there are no taboo foods that are widely forbidden to children or women, during pregnancy or other times (apart from the normal religious dietary rules which apply to everyone, and foods touched by bats or monkeys which people have recently been told could transmit Ebola).

In a few cases, people mentioned foods that had previously been regarded as bad for pregnant women, implying that these beliefs are no longer held. For example, in Kafin Madaki, older women remembered that in their grandmothers' time they were forbidden to eat *zogale* (moringa) when pregnant or breastfeeding:

> - Before, pregnant women and nursing mothers were not allowed to [eat] *zogale*.
> - You see when I went to Kano state that was when I started eating *zogale*.
> - My grandmother then [would] not let me eat *zogale* but I saw [another woman] eating it so … I [would] go to her place and eat (Older women's FGD, Kafin Madaki).

One husband said that 'before, we were told that guinea fowl eggs were not good for pregnant women' (Case study interview, Kanyu). One mother in Kokura said she had been told by a doctor to stop drinking yoghurt during pregnancy (perhaps because it is unpasteurised). A few women in Matseri and Keita thought that *kunu tsamiya* (millet and tamarind) and *kuka* (baobab) were not

allowed for pregnant women because they could harm the health of the mother or baby. However, the overwhelming majority of respondents to this question said that there are no restrictions on a woman's diet during pregnancy or breastfeeding: 'so long as she has the money, she can eat anything she wants' (Case study interview, senior wife, Kokura). No special foods or larger portions of the shared family meals are provided for pregnant or breastfeeding women, although some women (in both the baseline and the situation analysis) mentioned buying additional snacks to satisfy cravings if they could afford them.

> Whatever the husbands bring, everyone eats. We are sure no family can afford the luxury of preparing separate food for women just because of pregnancy (Men's FGD on gender norms; Anka LGA – Situation Analysis, p. 42).

Unanimously, people also said that boys and girls are given the same food, with no difference of type or quantity. Portions of cooked food are not allocated: women who were asked this question consistently said that if the food is there, each child will eat from the shared pot until they have had enough. However, they also said that some children eat more than others, and boys and older children tend to eat more because they are bigger and doing more work, but not because they are prioritised. Children may be given snacks at various times of the day, and if they are with their mother in the kitchen they may also be given food from the cooking pot before the meal is served.

The situation analysis found that, at meal times, mothers try to ensure that children are fed first. Food is then offered to grandparents, then the husband, and the mother last. When food is short, adults will go without to ensure children and grandparents are fed. This is true even if the mother is pregnant or nursing, so in the lean season pregnant women may go without (Leavy et al. 2014:41).

Seasonality is an important factor in both the quantity and quality of consumption (see also Section 5.6). As one mother explained:

> [We] enjoy abundance during the harvest period (*kaka*); we have vegetables, bambara nut, beans, maize, guinea corn, millet. During the rainy season (*damina*), we have to scout for what to eat, we have … vegetables like *zogale* (moringa), *tapasa*, *rama* (kenaf) which we can add to our meals.
> During the Harmattan[25] (*rani* – a period of temporary male migration in search of jobs or food), we change our food. We eat lots of *hoche* (made from guinea corn) and lettuce and *tuwo*. The land preparation (*bazara*) period is worst, when we eat whatever we can get. At this period, we have to support our husband because we will need to be buying some food items to supplement what we have in our barn.
>
> *What effect does this have on the children?*
> They glow during the harvest period and this doesn't continue in the other periods of the year (Case study interview, Doka Gama).
>
> In *kaka*, we have vegetables and variety of grains; soya beans, guinea corn, maize, rice. During the rainy season, we have *tuwo* made from guinea corn, soya-bean cake, *taliya*, [and] vegetables: *rama* (kenaf), *zogale* (moringa), *kawuri*, *tapasa*. During the land preparation time (*bazara*) we eat a lot of *gauda* (made from guinea corn, packed in leaf and cooked) and all derivatives of guinea corn. And during the harmattan (*rani*) we have to buy rice, *taliya*, beans cake (Case study woman, Yankuzo).

[25] The harmattan is a cold, dry and dusty trade wind, blowing over the West African subregion.

Wild foods, particularly fruits and vegetables, are a valued part of the diet especially in the rainy season when they are abundant. Gathering these foods was not described by anyone in these communities as a sign of stress or food shortage. Wild green leaves including baobab and moringa are gathered during the *bazara* or *damina* season. As well as being eaten fresh, they are dried for use later in the year.

> To a great extent at least the fresh leaves are available around us [in the rainy season] – all we do is to give bags to our children to fetch the leaves around us (Case study interview, Senior wife, Kanyu).

**Photo 14 Locust beans, Doka Gama**

## 5.2 Knowledge, attitudes and practices

### 5.2.1 Breastfeeding

Customary practices in the communities visited are not to breastfeed immediately after birth, and to expel the colostrum before beginning to breastfeed. As one of our case study mothers explained,

> After delivery, we do not breastfeed our babies. We give them cow milk for two to three days. After the two to three days, we commence breastfeeding …Within this period, they have to massage the breast and give us some herbs to drink and some to bathe with. These herbs are treatment for bad breast milk, the coloured milk [colostrum] is expelled out and until the breast milk is whitish, we do not commence breastfeeding … All of us practise this. If you see a child breastfed on the first day of life, it means he wasn't born in this bush, he was born in the hospital. And you know there the nurses insist that women breastfeed immediately (Case study interview, Doka Gama).

Babies may be given cow or goat milk, or powdered (Peak) milk, before or alongside the mother's milk. Another of our case study women expanded on the belief that colostrum is harmful, and also explained that the customary delay before initiating breastfeeding is longer for first babies:

> After my first delivery, I did not breastfeed immediately, I breastfed my baby after one week when my breast milk became clear. This is the practice for first deliveries, but after your first

> delivery, you can breastfeed your child after two days. During the one-week period, my baby was fed goat milk. They said that my breast milk was not good … They said that if the child drinks the bad breast, it can bring '*Iskoki*' (superstitious belief about some spirits that torment) and even make the child grow thin. Within the seven days, I kept drinking the local medicine until the white milk comes (Case study interview, Matseri).

The qualitative fieldwork found that these traditional practices in relation to early initiation of breastfeeding are changing in some places. In one of our seven communities, Keita (see Section 3.3), all the younger women interviewed said they now breastfeed their babies as soon as they are born, and have abandoned the previous custom of expelling the colostrum before putting a baby to the breast:

> Our older ones say there [is] some dirt in the breast that can affect your baby's body so they use the two days[26] to wash the breast with traditional herbs before you begin to breastfeed the baby. But now, with the new trend that has come to us, as soon as you deliver your baby, you will breastfeed (Younger women's FGD, Keita).

Other respondents in Keita attributed this "new trend" to the accessibility of ante-natal care at the local health centre (attended by all the young women in our focus group), together with a previous information campaign supported by Save the Children. A shift towards early breastfeeding due to the influence of health services was also described in Yankuzo:

> More women breastfeed on the first day and we give our babies that yellow milk [colostrum]. We learned in the hospital that it is very good to give the child (Case study interview, senior wife, Yankuzo).

A number of respondents also commented that mothers were much more likely to adopt the 'new' breastfeeding practices if they gave birth in health facilities rather than at home. These examples give encouraging support to the expectation that an effective BCC campaign by the CDGP could significantly improve knowledge and practices in relation to early initiation of breastfeeding.

By contrast, the qualitative discussions found that women were more resistant to adopting exclusive breastfeeding, and particularly to the idea of not giving babies water, although it was widely known that doctors and hospitals recommend this. Nearly all the respondents who were asked about this believed that babies need water as well as breast milk:

> In this community we give breast milk and water only to infants, unlike other places where they give them milk from other animals … As soon as the child is born, he is given water – boiled water (Case study interview, Kanyu).
>
> We do not believe in giving only breast milk without water. It makes the child thirsty (Case study interview, mother-in-law, Kanyu).
>
> Even when we tell them to practice exclusive breastfeeding they say we want them to kill their children. They insist on giving them water (TBA KII, Yankuzo).
>
> We feel that if we do not give a child water, we have cheated that child, we feel he wants the water and we are preventing him. But now, they have explained to us that the breast milk is mostly water, the main food comes after the watery milk … Now we have heard that we should breastfeed exclusively but people do not comply with this. Very few women have begun to adopt the exclusive breastfeeding (Case study interview, Yankuzo).

[26] The 'two days' refers to the customary period before breastfeeding – see above.

> We feed the baby with water and breast milk though we were told in the hospital not to give water (Case study interview, Kafin Madaki).
>
> Most times is not me that refuses to practise that but people around influence me not to do that, and at the end of the day [other] people give the child water in your absence (Case study interview, Keita).

As outlined in Section 1 of this report, the qualitative strand of the evaluation seeks to understand people's perceptions and their reasons for behaving or thinking as they do, in relation to selected issues relevant to the success of the CDGP. Neither the data collection tools nor the sampling are designed to quantify the frequency of such perceptions or behaviours. The qualitative findings provide a different type of information which aims to help interpret, triangulate or interrogate the quantitative analysis. In relation to breastfeeding practices, the quantitative and qualitative findings shed light from different angles but are broadly consistent with each other. The quantitative baseline (Table 49) finds that 61% of children in the sample were breastfed within 24 hours of birth (early initiation), while only 10% were exclusively breastfed for the first six months of life.[27] It also finds (Table 51) that the proportion of mothers practising both early initiation and exclusive breastfeeding is significantly higher when there is a health facility present in the community.

### 5.2.2 Accessing health services

The clear impression from the baseline discussions and interviews is that physical and financial access to health services are by far the most important constraints on their use, including attendance at ANC or PNC and the seeking of treatment for sick children.

Women do need their husbands' permission to visit the clinic (or in most cases to go anywhere outside the home compound, due to the practice of female seclusion). However, a number of focus groups and interviewees commented that if permission was refused, it was usually because of the cost rather than any objection to the treatment.

> Husbands permit their wives to go except when they don't have the money to pay for her transport and drugs. Some men will tell their wives to borrow money to attend ANC (Young women's FGD, Kokura).
>
> *Who is responsible for deciding whether you or your child should go to a health clinic?*
> - My husband.
> *What factors influence this decision?*
> - Money, if he has enough to pay the hospital bills (Case study interview, Kanyu).

If the husband is away, his father, brother or mother can give permission for a wife to go to the clinic. This varies: it is not clear from the information collected so far whether it varies individually from household to household, or by community, social or ethnic group, but some women seem to have more independence than others in making such decisions.

> *Can the mother take the child to the hospital if the father is not around?*
> - Yes she can. We don't stop our women. If I am not around and she doesn't have money, she can borrow money to take the child to the hospital. She will do that and when the man is back he will pay her back (Case study interview, husband, Kokura).

[27] Possible causal linkages between non-exclusive breastfeeding and the incidence of diarrhoea and mortality in infants should be further investigated. Analysis of the quantitative survey may be able to shed some light on this.

A number of women in all communities said that if they have money, they will sometimes pay for health care for themselves or their children, often expressing this as a loan to or support for their husband: the head of the household is seen as primarily responsible for meeting health care costs, as well as for providing food (see Section 5.3).

Distance, poor roads, and lack of appropriate transport to health facilities are also important constraints on attending ANC, seeking medical assistance for childbirth, and taking sick children for examination and treatment, in communities that do not have a functioning local health centre. The difficulty and delays of road transport in the rainy season were particularly highlighted. Of course, transport costs add significantly to the access barriers for poorer households.

### 5.2.3 Sources of knowledge and advice

Many of the women who were asked who they go to, and who they trust most, for advice about pregnancy and child-care, gave more than one response. Advice is often sought from older, more experienced women (especially mothers-in-law, who live in the same household and are therefore more accessible than a wife's own mother). TBAs were mentioned but less often: KIIs suggest that their knowledge and the services they offer are very variable (see also the situation analysis report on the advice given by TBAs – Leavy et al. 2014:43–44). Health centres and ANC sessions are also mentioned as sources of information and advice, but by a minority of respondents.

> I go to my mother-in-law for advice and when my husband gives me permission I go to my mother. I go to Wuya [the health centre] for ANC (Case study interview, Doka Gama).

Husbands are very frequently cited as the person whose advice is most trusted on issues relating to pregnancy, child-care and health. For example:

> *Where do you get information about feeding, diet and health from?*
> - From home, what I saw my mother doing, what I see around and what the doctor says.
> *Whose advice do you accept most?*
> - My husband's (Case study interview, Kanyu).

No doubt the reasons for giving this answer are complex, and need to be understood in the context of gender roles and dynamics within the household. The answers do not imply that women necessarily believe their husbands have more knowledge of nutrition or medical matters than the doctor or a woman with experience of pregnancy and child-care, but that the husband is the decision-maker. This underlines the importance of including men, in their roles as husbands and fathers, in the CDGP nutrition education and behavioural change component. If they are convinced of the benefits of the changes recommended, they will in turn advise their wives to adopt them.

Religious leaders are also frequently mentioned as sources of advice in relation to pregnancy and child-care, and can be very influential. An example was encountered during the baseline fieldwork of the recent health communication campaign about Ebola, in which the imam had given information on how to avoid infection to the men of the community at Friday prayers (women do not attend the mosque). The men had then transmitted the message to the women of their households.

## 5.3 Household decision-making and resource management

Polygamy is the norm (or at least the aspiration of the great majority of men) in all the communities visited, and confers social status:

> The community respects the man with more wives, he is more responsible, he has more experience (Case study interview, mother-in-law, Matseri).

FGDs of wellbeing also identified polygamy as a sign of relative wealth, which is consistent with HEA analysis of wealth group characteristics in Zamfara and Jigawa (Bush 2012, Bush and Noura 2012). Larger households, which partly means those with more wives, are likely to be better-off. Younger and poorer men who are currently monogamous aspire to gather enough wealth to marry more wives. Therefore, although a high proportion of households are currently monogamous, this does not necessarily indicate any difference in attitudes or culture, but rather a difference in life stage or wealth. Of the case study households, roughly half are currently monogamous and half polygamous.

According to key informants, a small number of female household heads do live in these communities, but they are mainly elderly widows. Women of child-bearing age will always be part of a male-headed household. In cases of divorce they will normally return to their parents' house, while the children remain with their father (unless they are very small, in which case they may go with their mother until they are old enough to return to the father's household).

Whether polygamous or monogamous, gender roles within the household are very clearly defined (at least for the settled agriculturalist, Hausa-speaking majority of families in these communities; the gender dynamics of Fulani households will be explored in subsequent rounds of research). The male head has authority over his wife or wives and children, and is responsible for providing for them. The production and purchase of food, particularly staple grains and other major food items, are the man's responsibility. Women often supplement the household diet with spices, sauce ingredients, and other purchased or gathered items such as vegetables. When needed, and if they have money, they may also 'support' their husbands by buying staples to fill gaps in the household food supply.

**Photo 15 Grain store (*rumbu*), Doka Gama**

Control and distribution of the household grain store is held by the husband, or sometimes delegated to his senior wife or mother. In polygamous households, the responsibility for cooking rotates among the wives: the wife whose turn it is to cook will be given food to cook for that day's meals. Cooked food is distributed among the household members by the woman who cooked it.

The baseline confirms the finding of the situation analysis that women have a high degree of autonomy in the spending of their own earned income, which they are likely to use to buy snacks and supplementary food for the children, or other household needs, including food and medical care, when the husband is unable to cover those costs.

> The profit I make is for the family but I own it and I decide what to spend it on (Case study interview, Matseri).
>
> *What did you use your profit [from making and selling soyabean cakes] for?*
> - I buy both bathing and washing soaps for the family just to relieve my husband who is trying to provide us with food (Case study interview, senior wife, Kanyu).

There is a perception that unearned income (from gifts or 'windfall gains') may be treated differently from earned income, and is more likely to be shared with other household members or controlled by the husband. For example, government officials interviewed as key informants during the situation analysis were asked what they thought would happen to a cash transfer paid to a woman, given that women generally retain control over their own incomes but do not spend their income on the main foodstuffs for the family. These officials felt that the grant would *not* be retained by and spent by the woman, and if it was it may not be spent on food, for the following reasons:

> i) a cash transfer may not be seen as women's 'earned' income – other gifts of this kind are generally redistributed or spent by husbands;
>
> ii) men are responsible for providing food – it is not seen as a woman's responsibility to provide food for the family; and
>
> iii) even if the money were spent on food, it would be shared among the whole household and might not necessarily benefit pregnant women (who eat last) and children (who eat the same as everyone else) (Leavy et al. 2014:51–2).

The situation analysis concluded that it was unclear how a cash donation (such as the CDG transfer) would be treated within the household, and hypothesised that households in which money is most scarce might be more likely to redistribute the transfer among family members or to allocate it for other uses, resulting in little or no impact on maternal and child nutrition.

The quantitative baseline findings (Section 10, Figures 34 to 36) do not support the concern that the cash transfer is more likely than other income to be confiscated by husbands: they find that, across the whole survey sample, it makes no significant difference to decision-making whether a woman's income is earned or unearned. About 50% of both husbands and wives agree that the wife should have full control over the use of her money, regardless of the source. Forty percent suggest that some joint decision-making is more appropriate, while about 10% consider that the husband should have sole control of these resources. At the same time, the quantitative findings (Table 30) confirm that men are considered the primary providers and purchasers of food for the household.

Actual decision-making within households is complex, and may differ from people's statements of what 'should' happen. In future rounds of fieldwork the qualitative case studies will investigate how the CDGP money is actually spent in different households, and who by. For the CDGP's primary objective of improving maternal and child nutrition, the question of what the money is spent on is of more direct significance than who spends it, although the potential effects of the transfer on women's empowerment and autonomy are clearly of wider importance and will also be investigated.

Some participants in the qualitative baseline discussions felt that if it was known that money was intended for the benefit of children and babies, it would not be diverted to other uses.

> [I]f [the] donation is meant for breastfeeding mothers and children it will be unkind of any man to collect it from them. The custom here is that every woman is in full control of her cash, except [where] she decides to lend it to her husband. If not, it will be unfair for the husband to collect it by force (Case study interview, husband, Yankuzo).

This implies that effective communication by CDG about the purpose and intended uses of the cash transfer might have a significant effect on how the money is treated. Although the transfer is unconditional, the messages accompanying it should support the BCC content and thus strengthen the position of the individual woman recipient in deciding how it is spent. As men are the primary purchasers of food and have much greater access to markets, it is important that husbands are included in communications about the programme so that they are well-informed about the recommended uses of the money.

## 5.4 Livelihoods, risks and coping

Throughout the study area, crop and livestock production are the mainstay of the local and household economy, but they are highly seasonal and do not provide enough food or income for the whole year for most people. Opportunities to smooth and diversify incomes through other livelihoods activities vary by location (see community profiles in Section 3), but for men they generally include local agricultural labour in the planting, growing and harvest seasons; urban labour migration in the dry season; trading (mostly in food commodities and livestock); and the usual range of crafts and services for which there is local demand (blacksmithing, house construction and repair, firewood collection, crafts such as basketry, and so on). Women in all seven communities can earn their own income through home-based petty trade, food-processing and sales, producing craft items, and services such as hairdressing and pounding grain for others.

The main stresses on people's incomes and food security are due to the inherent seasonal pattern of agricultural livelihoods, food supply, and supplementary income opportunities. Additional stress is caused by recurrent natural hazards, which are also seasonal. Flooding, which causes significant damage to houses and disrupts road access in the rainy season, was the threat most frequently identified by focus groups and interviewees. This may have been uppermost in people's minds because the fieldwork was conducted at the end of the rainy season, but it is also consistent with HEA analysis of northern Nigeria (see FEG 2014: 67). The HEA atlas (ibid: 67) also identifies theft as the major hazard affecting livestock production in this area, which is also consistent with the baseline data collected: livestock raids were described as a recurrent seasonal risk by communities in Zamfara (Matseri and Doka Gama in Tsafe, and Keita in Anka). In addition, droughts, irregular rain, and crop pests and diseases periodically affect crop production.

The information collected on coping behaviour in response to these stresses mainly concerns seasonal diversification of income sources, the reduction in quantity and variety of food consumption, and drawing on social support. Borrowing of food or money, both within and outside the family, is common. Interest rates can be very high when borrowing is from money-lenders.

> We manage from harvest to the next harvest, though we have periods in which the portions eaten are well reduced; before harvest and at the start of the rainy season …
> … [When food is short] we borrow from our wives, we borrow from friends and some migrate (*cirani*) to urban centres for menial jobs in order to send something home for family sustenance (Older men's FGD, Mayana Keita).
>
> *How do you cope when the food has run out?*
> We borrow money, we migrate (*chirani*) to urban society to carry out menial labour for money … to send home, we sell our animals, we work for the rich among us in exchange for food: [we] work in their farms (Older men's FGD, Yankuzo).

The situation analysis (Leavy et al. 2014:59-60) explored safety nets within the villages, and found that communities were close-knit and mutual support networks were strong. These include:

- *Gaiya,* a system of community cooperation. For example, the community will come together to work on the farm of someone in need. *Aikin gaiya* (communal labour) works in two ways. It may be a reciprocal system of working on one another's farms to help reduce the burden of hiring labour, especially if financial resources are thin. It also allows farmers to complete the cultivation of their farms in time, as the rains are short. The community may, in addition, collectively help community members to cultivate their piece of land for free if they do not have the means to do so or are physically challenged.
- *Zakat,* an Islamic system of social support for the needy. In Anka, this was organised through the local government, which distributed substantial cash gifts from the state governor. Within communities, *zakat* groups collect from the wealthy and distribute to those in need.
- *Adashe*, an informal savings scheme. This allows individuals to leverage larger amounts of money than they would be able to save individually, which are often used for predicted expenditure. Individuals join informal *adashe* groups and save an agreed amount on a regular basis, often weekly. *Adashe* group members take it in turns to draw on resources held in the savings pot. Membership of *adashe* groups is low among women and girls, especially women, due to their limited mobility and visibility resulting from purdah.

Seasonal sales of livestock, by those who are fortunate enough to have them, are part of the normal annual pattern. Livestock holdings also function much like a living savings account which can be drawn on to meet unexpected cash needs (again, for those who are well enough off to have them). Therefore, it is not always obvious from survey data on livestock sales what constitutes an acceptable or normal sale of assets from which a household can expect to recover within the annual cycle, and what is a damaging or irreversible sale of productive capital. Careful contextual analysis of this will be needed in order to draw any meaningful conclusions about the impact of the CDG transfer on asset sales. The quantitative baseline (Table 26) finds that only 7% of households who had experienced food shortage in the previous 12 months had sold livestock to cope with it.

No unusual or exceptionally large shocks were reported in these communities in recent years. When directly asked about this, participants were very much aware of the risks of a 'ratchet' effect if they were forced to sell important productive assets ('property, land or livestock') in response to a major shock.

> In recent times, there haven't been any shocks such as flooding or conflict but rise in food prices, yes. We cope by either going to cultivate someone's land and that person pays, or you sell a piece of your land or sell some of your livestock … the damaging effect caused is to a large extent because … when we sell most of our assets, we are left with nothing or just but little and at times the sale of such assets does not always cover the cost of what it is we want and need to do. Children are forced to leave school most of the time too (Case study interview, husband, Kanyu).

However, none of the people interviewed actually reported having withdrawn children from school or sold major assets to cope with food shortage in recent years. Overwhelmingly, the experience and perceptions shared with us during the baseline and situation analysis suggest that lives in these communities are characterised by chronic food insecurity and a pronounced recurrent seasonal pattern of variation in incomes, health, food access and risks, rather than extreme shocks or acute food crises.

**Photo 16 Basket made from kaba palm leaves, Kokura**

## 5.5 Wellbeing: perceptions and pathways

Perceptions of what it means to live well, and what people aspire to for their children and families, are multi-faceted, as the situation analysis also found. Poverty and wealth are not only about money, but money is of course a key means of accessing the things that make a good life – not only things that can be directly purchased but also social standing and resilience (in terms of assets and claims to fall back on). The quantity, quality and reliability of food supplies in the household is a key element of wellbeing, as reflected in the description of wealth groups given by one focus group in Matseri (Box 3). However, social standing and family life are also important, alongside ownership of key assets (houses, land and livestock). Having 'no one to help' is described here as a feature of the 'worst form of poverty'.

**Box 3 Five levels of wealth and poverty in Matseri**

***MawadaciMai wadata* – Wealthy:** This is a person who is rich in a community and can afford almost everything good with his money. He doesn't struggle to live a good life with his family. His household eats a good diet and his children look healthy, they attend good schools, wear good clothes and he has many wives … He owns houses, farm land and livestock.

***Mai Rufin Asiri* – Middle class:** This is someone who is averagely okay in the community. He is not too rich and he is not poor, he stands in the middle of those who are poor and those who are wealthy. However, he may be contented with what he has but still needs more to make life better for his household.

***Talaka* – Poor:** This is someone who has nothing in the community. Even though his family manage to eat, they do not have a balanced diet … they sometimes go to bed without food. The children hardly go to school and hospital because he cannot afford all the expenses of life.

***FaqiriMai ruwawar Tsuntsu* [Very poor]:** He must go out to search to survive. This is someone who survives on daily hustling like a bird because he does not have enough to eat for that day, not to mention preserving it for tomorrow's consumption … [He has] no farmland and most times he plants without tilling the farm … He lives in a family house with his parents and siblings, he cannot pay his bills.

Figure A.1 ***Matsiyaci* [Destitute]:** He has nothing, no house, no farmland, no friends, no clothes and he has no one to help him. This is the worst form of poverty. *Allah ya kiyaye* (may God forbid

> such a life).
>
> Young Men's Wellbeing FGD, Matseri

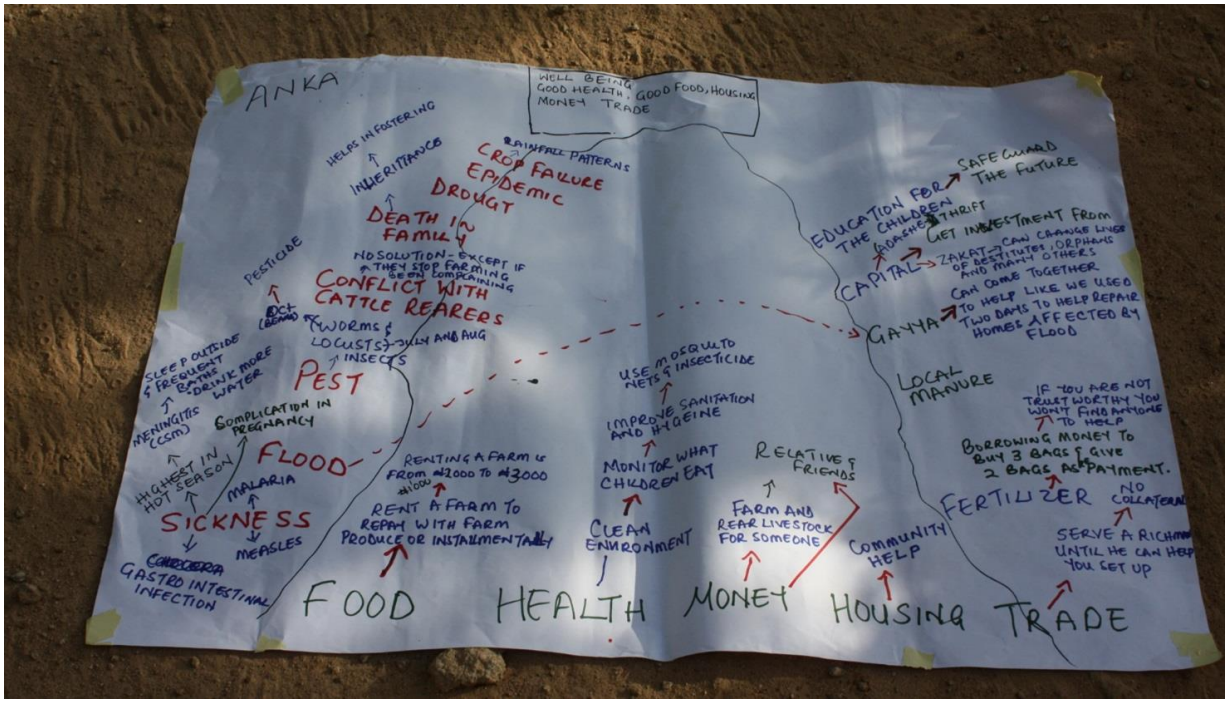
A participatory 'pathways to wellbeing' exercise was used with focus groups in both the situation analysis and the baseline fieldwork to map out people's perceptions of their pathways out of poverty, vulnerability and malnutrition. The discussion took a wellbeing framing (Gough and McGregor, 2007) and the objective of the exercise was to capture people's own perceptions of what it means to be doing well, and what it is they think they need in order to achieve this – what people thought they could do to improve their own lives, what resources they need to do so, what risks or negative pressures might prevent them, and what outsiders could do to help.

Respondents were asked the characteristics of vulnerability for recipients and communities and how they themselves conceive of changing their poverty and vulnerability. Prompts were used to help focus the discussion on child wellbeing and health, food security, reduced poverty and malnutrition. Key questions included:

- What does it mean to be living well here?
- What do you need to have, do and be in order to live well?
- To what extent do you feel you are achieving this?
- What are the pathways to achieving this?

Wellbeing was understood by participants in the FGDs to be about more than money. In all communities, people saw it to include resources (financial, assets), food, houses, self-sufficiency, good clothing and living well. Wellbeing included the ability to rise above problems. In defining the pathway out of the many problems, both men and women likened it to climbing to the top of a mountain, where the top is the desired point where all is well. Examples are given below from the situation analysis (Figure 8) and the baseline (Figure 9).

**Figure 8 Pathways to wellbeing, Anka**

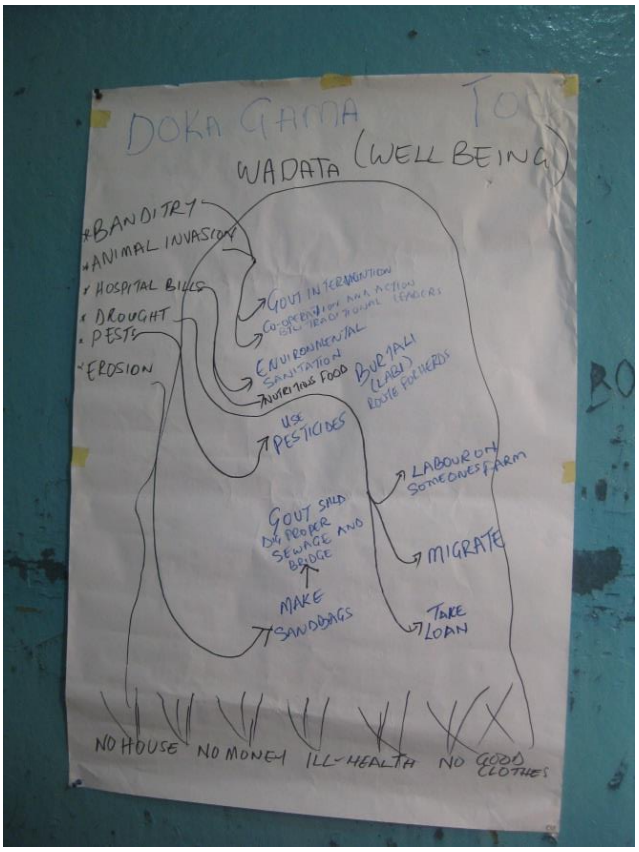



(Leavy et al. 2014:63)

Similar or overlapping sets of obstacles and solutions were identified in all the communities. Pathways considered to lead people out of poverty, disease and hunger include:

- Economic activities for income-generation;
- Getting jobs (often framed as government jobs; the local government officers in their areas are better-off – they are the elites of the communities);
- Education for children to lead them to better life;
- Family/community support system;
- Cash at hand;
- Farm inputs to increase farm size;
- Market access;
- Access to health care services; and
- Monogamy (reported by women, while men say that one of the signs of status in the community is having more than one wife).

**Figure 9 Pathways to wellbeing, Doka Gama**




## 5.6 Seasonality

Seasonality is an important dimension of livelihoods, food security, dietary diversity, health and risks in the study area, as indicated in the thematic findings above. FGDs around a participatory

seasonal calendar in each community, as well as case study interviews, show that the definition and description of the different seasons is quite complex. Different individuals in the same village, and within focus groups, give varying opinions about the months and the characteristics of each season. The timing of the rains is variable from year to year, and the harvest season (*kaka*) varies by crop. The seasons may overlap – conditions do not change from one season to the next on a given day or week, as illustrated by the following FGD extracts:

- Every season can extend into another season….
- We expect *damina* (the rainy season) from the seventh month but it is purely a matter of luck …
- Rainfall can begin any time. There is no predicting it.
(Older Men's FGD, seasonal calendar discussion, Kafin Madaki)

- This moment is *damina* -
- [No we are in] *kaka* -
- *Damina* is not out!
- We are in *kaka* of millet.
- We are in *kaka* of millet at this moment. This means that *damina* is not fully out and *kaka* has not fully set in.
(Older Men's FGD, seasonal calendar discussion 30 September, Kanyu)

With this complexity in mind, Figure 10 is a provisional summary of what was said in each community about the approximate timing of the different seasons, and the timing of selected key factors: food shortages (shown by an empty bowl symbol ◡), illness (i) and temporary labour migration (m). There seems to be quite a variation in the beginning of the early and main rains, and in the season for temporary labour migration: the latter may be due to the different employment destinations accessible from different places. It is not clear whether the apparent difference in the seasonality of food shortages in Figure 10 is due to objective differences among the communities, or to the varying views of individuals: a wide range of answers was given to questions about periods of food shortage, as discussed below. The calendars for each community will be cross-checked and developed further in future rounds of fieldwork.

## Figure 10 Seasons by community

| | LGA | Village | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Zamfara | Anka | Matseri | | | m | m | m | ◡ | i | ◡i | ◡ | | | |
| | | Doka Gama | m | m | m | i ◡ | i ◡ | i ◡ | ◡ | ◡ | ◡ | | | |
| | Tsafe | Keita | | | m | m | m | ◡ | ◡ | ◡ | ◡ | | | |
| | | Yankuzo | | | m | m | | | i | ◡i | ◡ | | | |
| Jigawa | Buji | Kafin Madaki | m | m | m | m | m | | | ◡i | ◡i | i | | |
| | Kirikasama | Kokura | m | | | | | m | ◡ | ◡ | | i | | |
| | Gagarawa | Kanyu [28] | m ◡ | ◡ | ◡ | ◡ | ◡ | ◡ | ◡ | ◡i | i | | | m |

*Key*

| | |
|---|---|
| RANI - dry season (harmattan) | ◡ food shortage |
| BAZARA - early rains / land preparation / | m labour migration |
| DAMINA – rainy season | i illness |
| KAKA – harvest | |

Source: compiled from seasonal calendars and FGD discussions

[28] In Kanyu, the season from January to March was called *Sanyi*, and April to June was called *Rani*.

The lean season or period of food shortage varies to some extent from place to place, but peaks everywhere towards the end of the rainy season, when both household food stores and alternative income sources are scarce and prices are high. In all seven communities, August is the month of heaviest rain and was widely described as the most difficult time of the year. Food stocks from people's own production were exhausted and the new harvest had not yet come in. At the same time, the rains themselves make it difficult to travel to find alternative sources of food or income.

> In August every crop we produce here is on the farm and none … is ready to come home. Millet has not come home, groundnut has not come, and sorghum has not come, [or] beans … August … is that month of hardship … That is when you go to your farm and admire the crops but there is no food at home (Older men's FGD, Kafin Madaki).

The concept and translation of the 'lean season' or period of food shortage[29] needs some unpacking. Responses from different participants in the baseline suggest that there are at least three different dimensions to what this means. One relates to the duration of self-provisioning in cereals by farmers, the time of food shortage being the months when the grain stores at home are empty and the household has to rely on purchased staples. The number of months of consumption covered by household grain production varies, of course, according to wealth and resources, but in general stocks are at their lowest by August and September, when (as would be expected) the pre-harvest market price of grains is also highest.

Another perspective focuses on income availability (and therefore purchasing power to provide food):

> - Between *bazara* and *damina*, *damina* is more tolerable than *bazara*, because they [men] can get work to bring money …
> - There is no work during *bazara*, but once it is rainy season, they get work to do.
> *So in turn, there is food to eat?*
> - Yes (in chorus).
> (Young women's focus group, Yankuzo)

> When it is land preparation period we have to buy food because our barns are empty. We eat whatever my husband is able to bring home: *taliya*, rice, *indomie*, [or] *tuwo* made from *dawa* (Case study interview, mother-in-law, Doka Gama).

A third understanding of food shortage has more to do with dietary diversity than with the quantity of basic staples. Women were more likely than men to give this response, and interestingly they frequently identify the rainy season (*damina*) as a good time for food availability because of the diversity of vegetables and fruit.

> - We have more food in *kaka* (harvest period) than in *damina* (rainy season) or *rani* (harmattan period – a period of temporary migration) and the worst is *bazara* (period of land preparation).
> - In *kaka*, our barns are full, we can even sell or exchange some of our grains to get [a] variety of food: we eat yam, rice, *taliya* (pasta), macaroni, *indomie* (noodles), bread [and] tea.
> - And in the rainy season, we have vegetables and fruits, so even when our barns have gone down, there is something to support our *fura* (millet or sorghum drink) and *nono* (milk).
> - In *bazara* and *rani*, we eat from hand to mouth – it is whatever the man can bring to the house that we eat.

[29] Participants in the baseline rejected the terminology of the 'hungry season', finding it insulting and saying there is a food shortage but no hunger.

- And sometimes you have to just bear without food and make do with whatever snack you can lay your hand on.
- Or you collect *fura* from your neighbour.
(Young Women's FGD, Kokura)

During dry seasons, we do not get fresh leafy vegetables like moringa leaves, tabasa (green leaves) so we manage our stored millet, guinea corn and use dried leaves for soup.
(Case study interview, senior wife, Kanyu)

… fresh okro soup, kenaf soup and spinach soup are more readily available during the rainy season.
(Case study interview, Matseri)

Relatively little information was collected about the seasonality of the livestock economy (except that forage is most abundant during the harvest period), either for the mixed-farming majority or for the pastoralist minority. A separate calendar discussion should be held with at least one Fulani focus group in the next round of fieldwork to address this gap.

# 6 Conclusion: implications of the findings

The findings outlined in this report have a number of potential implications for the implementation of the CDG programme, and for the evaluation.

As highlighted by the situation analysis, the importance of 'informal' channels as the first port of call for nutrition information, combined with the key role men (and to a lesser extent older women) play in growing and selecting food consumed by the household, suggests that to effect positive change in nutrition and child-care practices **advice on nutrition and IYCF needs to reach the whole household – including males, older female relatives and, in polygamous households, more senior wives, as well as influential community members** such as TBAs. The baseline further finds that for many women their husbands are the key decision-makers and advisers on the care and feeding of children in the household, regardless of what other sources of information the mother has access to. If husbands are convinced of the benefits of the changes recommended, they will in turn advise their wives to adopt them. Religious leaders are also frequently mentioned as respected sources of advice and information: an example was given by participants of the recent Ebola information campaign, which was communicated by the Ministry of Health through the imams to the men of the community, who in turn instructed the women about how to avoid infection. These findings underline the importance of the BCC messages being addressed not only to the direct target group of mothers of infants, but also to the people who can influence and support them to put the recommended changes into practice.

Women of child-bearing age are restricted in their movements by the social norm of seclusion, and generally need permission from their husbands to go outside the home compound to visit family, attend social gatherings, or to access health services, including ante-natal and PNC. The situation analysis found that the unavailability of female health care professionals was one reason for men to refuse permission for their wives to attend clinics. However, a number of focus groups and interviewees in the baseline commented that if permission was refused, it was often because of the cost rather than any objection to the treatment. Several women said that if they were able to cover the cost from their own money, their husbands would not refuse permission for them to go. This suggests that **the CDG cash transfer could reduce the financial barrier and enable more women to access health care for themselves and their children.**

Affordability is the reason most frequently given by the research participants (both women and men) for not eating more of the foods they prefer, or foods they know to be healthy for themselves and their children. Not surprisingly, better-off households are able to buy more and better quality food, as well as to produce and store more from their own fields. This tends to support the assumption of the CDG programme that **people are likely to spend additional money on food**, and that poorer households may be more likely to do so. It is unclear, however, what kinds of food they are likely to buy, and whether they will choose the most nutritious options: the nutrition education component of the BCC will be important. For the evaluation, further background research is needed on the nutritional value of locally available foods, including wild foods. This information is likely to be available from the Nigerian Government's Nutrition Department, and may already have been collected by SC and ACF in connection with the messages to be conveyed through the BCC about what foods mothers are advised to eat more of, and what they should buy with the cash transfer. **It will be important for the final conclusions of the evaluation to understand not only whether the cash transfer is spent on food, but also *which* foods are purchased**, in relation to their usual diet, the BCC recommendations, and the potential nutritional impact of the programme.

Marked **seasonal variations in the quantity, price and diversity of food available (whether purchased, home-grown or gathered) are likely to have a significant impact on the value of**

**the cash transfer in nutritional terms**, and the feasibility of following nutrition advice about dietary composition, at different times of year. These seasonal variations should be taken account of in the BCC messages.

**Malnutrition, specifically wasting or acute (short-term) malnutrition, is also highly seasonal** according to the baseline participants. Children were said to be thinnest at the peak of the rainy season, around August, before the early harvest starts to come in.

Information collected so far about livelihoods, risks and coping suggests that people's lives in these communities are characterised by chronic food insecurity and a pronounced seasonal variation in incomes, health, food access and risks, rather than extreme shocks or acute food crises. Consequently, **the main coping strategies described are eating cheaper or less preferred foods, relying on informal social support, borrowing money or food, and engaging in different kinds of work to earn income.** Exceptional or distress strategies such as sales of major productive assets or withdrawing children from school are known but rarely used.

Growing or purchasing food for the household, especially staple commodities, is the responsibility of the husband. Women retain money they have earned, and often spend this on snacks for the children as well as on supplementary foods to complete the household meals: but on the whole their earnings are not seen as household maintenance money unless the husband is unable to meet the family's needs, in which case his wife may 'support' or 'lend to' him by covering essential expenditure from her own money. Concerns raised by key informants that a cash grant paid to a woman may be considered as an unearned gift or windfall and therefore may be appropriated by the husband for other purposes are not supported by the quantitative baseline survey, which finds that about half of respondents think a woman should have sole control over her money whether it is earned or not. Nevertheless, this suggests that men are likely to have some influence over how the money is spent in at least half of households. Men's role as the main market-goers, as well as comments by some participants in the baseline that men would not divert the money for other purposes if they know it is intended for mothers and babies, suggest that **effective communication by CDG about the purpose and intended uses of the cash transfer might have a significant effect on how the money is spent**.

As it is men who mainly purchase food for the household, it is **not necessarily negative for men to spend the CDG cash transfer,** as long as: a) the nutrition messages reach the man and he makes informed decisions about what to buy; and/or b) women have a say in how it is spent; and/or c) it does not lead to conflict at the household level and an erosion of overall wellbeing. The intra-household effects in terms of the impact of the grant on household relationships need to be considered, and will be investigated through the qualitative case studies.

Finally, the information collected by the qualitative research so far (both for the situation analysis and the baseline) suggests that there is **considerable variation among communities within the CDG area in key contextual factors which are likely to affect the impact of the programme**. These include overall levels of wealth, livelihood opportunities and income sources (particularly in semi-urban versus remote rural communities), access to food markets, diversity of locally available foods, safe water supplies, and physical access to functioning health facilities. Preliminary findings also suggest that, in addition to these factors, the minority Fulani pastoralist communities differ in their household organisation and gender norms in ways which may also affect the transmission mechanisms and therefore the impacts of the CDG. All of these factors will be further investigated in future rounds of qualitative fieldwork.

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# Annex B Community sampling tables

These tables show the seven communities selected for the qualitative evaluation, in relation to the whole sampling frame of all communities listed in the second tranche of the quantitative survey and allocated as 'treatment' villages.

The selected communities are highlighted and marked with a ✓.

The rationale and process for the sampling is described in Section 2.3. Further information about the selected communities is in Section 3.

*Data source for the tables: quantitative listing survey, 2014.*

| | State | LGA | village_id | village | emirate | district | treatment | distance to health facility (walking) | distance to fruit market (walking) | shocks in last 12 months |
|---|---|---|---|---|---|---|---|---|---|---|
| | Jigawa | Buji | 301 | Buji Gabas | Dutse | Buji | T1 | 30-60 mins | 30-60 mins | Flood, crop damage, in-migration |
| | Jigawa | Buji | 302 | Buji Yamma | Dutse | Buji | T1 | 1-2 hrs | > 2 hrs | Crop damage |
| | Jigawa | Buji | 303 | Chakwama | Dutse | Buji | T1 | 1-2 hrs | 30-60 mins | Flood, crop damage, in-migration |
| | Jigawa | Buji | 310 | Unguwar Maina | Dutse | Buji | T2 | in community | > 2 hrs | Flood, drought, crop damage |
| ✓ | Jigawa | Buji | 324 | Kafin Madaki | Dutse | Yayari | T1 | in community | in community | Flood, drought, crop damage, in-migration |
| | Jigawa | Buji | 327 | Sagu | Dutse | Yayari | T2 | in community | in community | Crop damage |
| | Jigawa | Buji | 328 | Yalwa | Dutse | Yayari | T1 | in community | > 2 hrs | F,D,CD |
| ✓ | Jigawa | Kiri Kasama | 401 | Baturiya | Hadejia | Baturiya | T2 | > 2 hrs | > 2 hrs | F,D,CD |
| | Jigawa | Kiri Kasama | 406 | Matarar Galadima | Hadejia | Baturiya | T1 | 1-2 hrs | 1-2 hrs | F,CD |
| | Jigawa | Kiri Kasama | 410 | Buluncheri | Hadejia | Kiri Kasama | T2 | 30-60 mins | 30-60 mins | F,D CD, IM |
| | Jigawa | Kiri Kasama | 413 | Jarmari | Hadejia | Kiri Kasama | T1 | 30-60 mins | 30-60 mins | F, CD |
| | Jigawa | Kiri Kasama | 418 | Mailakauri | Hadejia | Kiri Kasama | T2 | 30-60 mins | 30-60 mins | F, CD |
| | Jigawa | Kiri Kasama | 422 | Garin Ando | Hadejia | Tarabu | T1 | 1-2 hrs | > 2 hrs | F,D CD, IM |
| | Jigawa | Kiri Kasama | 428 | Matarar Ganji | Hadejia | Tarabu | T2 | 1-2 hrs | > 2 hrs | F,CD, violence |
| | Jigawa | Gagarawa | 501 | Dogon Dawa | Gumel | Gagarawa | T2 | 1-2 hrs | > 2 hrs | F, D, CD |
| | Jigawa | Gagarawa | 506 | Jaftar | Gumel | Gagarawa | T1 | 1-2 hrs | > 2 hrs | D |
| | Jigawa | Gagarawa | 510 | Baraye | Gumel | Madaka | T1 | < 30 mins | > 2 hrs | F, CD |
| | Jigawa | Gagarawa | 513 | Garin Mado | Gumel | Madaka | T2 | in community | in community | F, D, CD |
| | Jigawa | Gagarawa | 522 | Zingaran | Gumel | Madaka | T2 | in community | > 2 hrs | F,D CD, IM |
| | Jigawa | Gagarawa | 523 | Akwai Allah | Gumel | Medu | T1 | 30-60 mins | > 2 hrs | F, CD |
| | Jigawa | Gagarawa | 528 | Zaro | Gumel | Medu | T2 | 1-2 hrs | 1-2 hrs | CD |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Jigawa | Gagarawa | 531 | Furya | Gumel | Yalawa | T1 | 30-60 mins | > 2 hrs | CD |
| ✓ | Jigawa | Gagarawa | 533 | Kanyu | Gumel | Yalawa | T2 | 30-60 mins | 1-2 hrs | F, D, CD |

| | State | LGA | village_id | village | emirate | district | treatment | distance to health facility (walking) | distance to fruit market (walking) | shocks in last 12 months |
|---|---|---|---|---|---|---|---|---|---|---|
| | Zamfara | Anka | 109 | Sarkin Gulbi | Anka | Gima | T2 | in community | > 2 hrs | None reported |
| ✓ | Zamfara | Anka | 119 | Matseri | Anka | Matseri | T1 | in community | 30-60 mins | None reported |
| | Zamfara | Anka | 120 | Hakimin Wanu | Anka | Moda | T2 | > 2 hrs | > 2 hrs | None reported |
| | Zamfara | Anka | 128 | Mai Arewa | Anka | Sarkin Gabas | T2 | in community | > 2 hrs | None reported |
| | Zamfara | Anka | 129 | Tsingaru | Anka | Sarkin Gabas | T2 | < 30 mins | < 30 mins | None reported |
| ✓ | Zamfara | Anka | 136 | Sardauna | Anka | Wuya | T2 | 1-2 hrs | 1-2 hrs | None reported |
| | Zamfara | Anka | 139 | Tudun Yar Sabaya | Anka | Wuya | T2 | 1-2 hrs | 1-2 hrs | None reported |
| | Zamfara | Anka | 182 | Bunu | Anka | Gima | T1 | in community | 1-2 hrs | None reported |
| | Zamfara | Anka | 183 | Bayarar Zaki | Anka | Yarimawa | T1 | < 30 mins | < 30 mins | None reported |
| | Zamfara | Tsafe | 202 | Marafan Dumuyo | Tsafe | Bawa Ganga | T2 | > 2 hrs | > 2 hrs | D, CD |
| | Zamfara | Tsafe | 218 | Wazirin Danjibga West | Tsafe | Danjibga | T2 | in community | > 2 hrs | F,D CD, IM |
| | Zamfara | Tsafe | 228 | Dan Galadima Nasarawa | Tsafe | Keta | T1 | 30-60 mins | < 30 mins | F,D CD, IM |
| | Zamfara | Tsafe | 230 | Magajin Garin | Tsafe | Keta | T2 | in community | 1-2 hrs | D, CD, IM |
| ✓ | Zamfara | Tsafe | 231 | Mayana Keta | Tsafe | Keta | T2 | in community | in community | D |
| | Zamfara | Tsafe | 232 | Ajiyan Karan Zomo | Tsafe | Kunchin Kalgo | T1 | 1-2 hrs | > 2 hrs | D,CD,V, IM |
| | Zamfara | Tsafe | 233 | Garkuwa Munhaye | Tsafe | Kunchin Kalgo | T1 | 1-2 hrs | > 2 hrs | F, D,CD,V, IM |
| | Zamfara | Tsafe | 234 | Madawakin Biya | Tsafe | Kunchin Kalgo | T1 | < 30 mins | 30-60 mins | F, D, IM |
| | Zamfara | Tsafe | 239 | Marafan Gwanja | Tsafe | Kwaren Ganuwa | T1 | 1-2 hrs | 1-2 hrs | F, D,CD,V, IM |
| | Zamfara | Tsafe | 252 | Sabon Garin Gidan Dauda | Tsafe | Yandoton-Daji | T1 | in community | < 30 mins | D, CD |
| | Zamfara | Tsafe | 253 | Sarkin Arewa | Tsafe | Yandoton-Daji | T1 | < 30 mins | > 2 hrs | D, CD |
| | Zamfara | Tsafe | 256 | Tudun Gobirawa | Tsafe | Yandoton-Daji | T2 | 30-60 mins | > 2 hrs | D, CD, Curfews, IM |
| | Zamfara | Tsafe | 258 | Ajiyan Malamawa | Tsafe | Yankuzo | T2 | < 30 mins | 30-60 mins | D, CD, V |
| ✓ | Zamfara | Tsafe | 260 | Marafan Yankuzo | Tsafe | Yankuzo | T1 | in community | 1-2 hrs | D, CD |

# Annex C Case study sampling tables

The following tables contain the sampling frame, for each community, from which the case study women were selected. The sampling rationale and process are described in Section 2.3. A descriptive profile of the selected women can be found in Section 4.

For confidentiality, all identifying variables (such as names and location of houses) have been removed from these tables.

Key to colour-coding, notation and abbreviations used in the tables

Green = 12 selected women; Amber = 6 reserve women per community.

**Bold** and ✓ in left-hand column = agreed to participate in the study, and interviewed during the baseline.

DK = Don't know

N/A = Not Applicable (no household members of school age, 6–18)

***Water sources***

Treated = Treated pipe-borne water, borehole/hand-pump

Unprotected = Unprotected well/rain water, or untreated pipe-borne

***Toilet facilities***

Pit latrine = Covered or uncovered pit latrine

Bush = No facilities/bush

*Data source for the tables: quantitative listing survey 2014* (*'index woman' and household data*)

## Purposive sampling of case study women: Matseri (Site 119, Zamfara State, Anka LGA)

| QUAL. CASE STUDY | Woman ID code | INDIVIDUAL CHARACTERISTICS | | | | | HOUSEHOLD CHARACTERISTICS | | | Housing | | WASH | | Assets | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. of children monogamous / polygamous | No. children <5 | Pregnant? | Her age | Age of youngest child (months) | Hhs in structure | HH size | HH members in school? | Floor | Roof | Water source | Toilet | TV | stove | bed | radio |
| | 1190060102 | P | 3 | 2 No | 24 | 14 | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| ✓ | **1190090101** | **M** | **9** | **2 Yes** | | | **2** | **9** | **No** | **Cement / Concrete** | **Wood/bamboo** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 1190240201 | P | 2 | 0 Yes | | | 5 | 7 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| | 1190240301 | P | 5 | 1 Yes | | | 5 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | No | No |
| | 1190250101 | M | 0 | Yes | | | 1 | 5 | N/A | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1190310101 | M | 6 | 1 Yes | | | 1 | 7 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1190330103 | M | 1 | 1 No | 21 | 29 | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1190350202 | P | 4 | 2 Yes | | | 4 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1190350301 | M | 3 | 2 Yes | | | 4 | 5 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **1190360104** | **M** | **0** | **Yes** | | | **1** | **≥ 10** | **Yes** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 1190400201 | M | 2 | 1 Yes | | | 2 | 4 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1190410101 | M | 2 | 1 Yes | | | 1 | 4 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1190500103 | M | 1 | 1 No | 18 | 18 | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1190510102 | M | 0 | Yes | | | 2 | 9 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | Yes | No | Yes | Yes |
| ✓ | **1190510201** | **M** | **2** | **1 Yes** | | | **2** | **4** | **No** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **Yes** | **Yes** | **Yes** |
| ✓ | **1190530101** | **M** | **0** | **Yes** | | | **1** | **≥ 10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| ✓ | **1190600101** | **M** | **6** | **1 Yes** | | | **1** | **8** | **No** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Treated** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 1190620101 | M | 1 | 1 Yes | | | 1 | 9 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1190760101 | M | 0 | Yes | | | 2 | 2 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **1190780301** | **M** | **6** | **1 Yes** | | | **6** | **7** | **No** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 1190780401 | M | 6 | 1 Yes | | | 6 | 8 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| | 1190850102 | M | 1 | 1 Yes | | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **1190880101** | **M** | **3** | **1 Yes** | | | **1** | **5** | **Yes** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 1190930103 | M | 0 | Yes | | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **1190960101** | **P** | **11** | **1 Yes** | | | **1** | **≥ 10** | **No** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 1191040101 | M | 6 | 1 Yes | | | 1 | 9 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1191050103 | M | 0 | Yes | | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| ✓ | **1191080301** | **M** | **3** | **2 No** | **22** | **18** | **3** | **5** | **N/A** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **No** |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1191120201 | M | 1 | 1 | Yes | | | 2 | 3 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1191140101 | M | 3 | 1 | Yes | | | 1 | 5 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1191150301 | M | 0 | | Yes | | | 4 | 2 | N/A | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| ✓ | **1191170201** | **M** | **0** | | **Yes** | | | **3** | **3** | **N/A** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| | 1191180101 | P | 1 | 1 | Yes | | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1191200101 | M | 2 | 1 | Yes | | | 2 | 4 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1191220101 | M | 3 | 1 | Yes | | | 3 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1191220201 | M | 2 | 1 | Yes | | | 3 | 5 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| | 1191240102 | M | 3 | 2 | No | 23 | 16 | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | No |
| ✓ | **1191250101** | **P** | **1** | **1** | **Yes** | | | **2** | **3** | **N/A** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| ✓ | **1191290101** | **M** | **3** | **2** | **Yes** | | | **1** | **8** | **Yes** | **Cement / Concrete** | **Wood/bamboo** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| 12 | | | | | | | | | | | | | | | | | | |

## Purposive sampling of case study women: Doka Gama / Sardauna (Site 136, Zamfara State, Anka LGA)

| QUAL. CASE STUDY | Woman ID code | INDIVIDUAL CHARACTERISTICS | | | | | HOUSEHOLD CHARACTERISTICS | | | Housing | | WASH | | Assets | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Monogamous / polygamous | No. of children | No. children <5 | Pregnant? | Her age | Age of youngest child (months) | Hhs in structure | HH size | HH members in school? | Floor | Roof | Water source | Toilet | TV | stove | bed | radio |
| ✓ | **1360030101** | **M** | **2** | **2** | **No** | **22** | **14** | **1** | **5** | **No** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Bush** | **No** | **No** | **Yes** | **Yes** |
| | 1360060101 | P | 3 | 1 | Yes | | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1360080101 | M | 4 | 3 | No | 25 | 14 | 2 | 6 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Protected well | Pit latrine | No | No | No | No |
| ✓ | **1360080201** | **P** | **10** | **2** | **Yes** | | | **2** | **≥ 10** | **Yes** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Protected well** | **Pit latrine** | **No** | **Yes** | **No** | **No** |
| | 1360110101 | P | 6 | 0 | Yes | | | 1 | ≥ 10 | No | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | Yes | Yes | Yes |
| | 1360140101 | P | 6 | 2 | Yes | | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | Yes | No |
| ✓ | **1360200101** | **M** | **4** | **0** | **Yes** | | | **1** | **6** | **No** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| ✓ | **1360210202** | **P** | **0** | | **Yes** | | | **3** | **6** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 1360220101 | M | 1 | 1 | Yes | | | 1 | 3 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1360240101 | M | 0 | | Yes | | | 1 | 3 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1360250101 | M | 0 | | Yes | | | 1 | 2 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | No |
| | 1360260101 | P | 4 | 2 | No | 20 | 24 | 1 | 7 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | No |
| ✓ | **1360270102** | **P** | **0** | | **Yes** | | | **1** | **6** | **No** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Unprotected** | **Bush** | **No** | **No** | **No** | **No** |
| | 1360280101 | P | 2 | 1 | Yes | | | 1 | 8 | No | Cement / Concrete | Corrugated iron sheets | Unprotected | Bush | No | No | Yes | Yes |
| ✓ | **1360310101** | **P** | **4** | **1** | **Yes** | | | **4** | **9** | **No** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **River, lake or pond** | **Bush** | **No** | **No** | **Yes** | **Yes** |
| | 1360310401 | P | 0 | | Yes | | | 4 | ≥ 10 | No | Earth/mud or dirt/straw | Mud/ mud bricks | River, lake or pond | Pit latrine | No | No | Yes | Yes |
| | 1360320302 | P | 0 | | Yes | | | 4 | 9 | No | Earth/mud or dirt/straw | Corrugated iron sheets | River, lake or pond | Pit latrine | No | No | Yes | Yes |
| ✓ | **1360340202** | **M** | **0** | | **Yes** | | | **2** | **5** | **No** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Bush** | **No** | **No** | **No** | **Yes** |
| | 1360350101 | P | 3 | 1 | Yes | | | 2 | 7 | No | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Bush | No | No | No | No |
| ✓ | **1360350201** | **M** | **4** | **3** | **No** | **17** | **19** | **2** | **6** | **No** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Unprotected** | **Bush** | **No** | **No** | **No** | **No** |
| | 1360410102 | P | 3 | 2 | Yes | 25 | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Bush | No | No | Yes | Yes |
| | 1360440101 | M | 3 | 2 | Yes | | | 2 | 5 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Protected well | Bush | No | No | Yes | No |
| ✓ | **1360440201** | **M** | **1** | **1** | **No** | **15** | **48** | **2** | **4** | **No** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Protected well** | **Bush** | **No** | **No** | **No** | **No** |
| | 1360460102 | P | 5 | 0 | Yes | | | 3 | ≥ 10 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1360460202 | P | 0 | | Yes | | | 3 | 4 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 1360470102 | M | 2 | 2 | No | 25 | 13 | 1 | 9 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | Yes | No |
| | 1360510102 | P | 1 | 1 | Yes | | | 1 | 7 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Bush | No | No | Yes | Yes |
| | 1360540102 | P | 4 | 2 | No | 22 | 15 | 3 | ≥ 10 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Bush | No | No | No | Yes |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1360540301 | M | 3 | 1 | Yes | | | 3 | 5 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Bush | No | No | No | Yes |
| | 1360550102 | P | 3 | 0 | Yes | | | 1 | 9 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | River, lake or pond | Bush | No | No | Yes | No |
| | 1360570101 | P | 2 | 2 | Yes | | | 1 | 5 | No | Earth/mud or dirt/straw | Mud/ mud bricks | River, lake or pond | Pit latrine | No | No | Yes | No |
| ✓ | **1360580102** | **P** | **0** | | **Yes** | | | **3** | **7** | **No** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **River, lake or pond** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| | 1360580201 | P | 1 | 1 | Yes | | | 3 | 5 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| | 1360580301 | M | 2 | 0 | Yes | | | 3 | 4 | No | Earth/mud or dirt/straw | Mud/ mud bricks | River, lake or pond | Bush | No | No | Yes | Yes |
| | 1360590401 | M | 1 | 1 | Yes | | | 5 | 3 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | River, lake or pond | Pit latrine | No | No | Yes | Yes |
| | 1360600101 | P | 4 | 1 | Yes | | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Mud/ mud bricks | River, lake or pond | Pit latrine | No | No | Yes | Yes |
| ✓ | **1360620201** | **M** | **0** | | **Yes** | | | **3** | **2** | **No** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 1360630101 | M | 1 | 1 | No | 17 | 19 | 1 | 9 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | Yes | No | No | No |
| | 1360640201 | M | 0 | | Yes | | | 3 | 2 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | River, lake or pond | Pit latrine | No | No | Yes | Yes |

11

## Purposive sampling of case study women: Mayana Keita (Site 231, Zamfara State, Tsafe LGA)

| QUAL. CASE STUDY | Woman ID code | INDIVIDUAL CHARACTERISTICS | | | | | HOUSEHOLD CHARACTERISTICS | | | Housing | | WASH | | Assets | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No. of children monogamous / polygamous | No. children <5 | Pregnant? | Her age | Age of youngest child (months) | Hhs in structure | HH size | HH members in school? | Floor | Roof | Water source | Toilet | TV | stove | bed | radio |
| ✓ | **2310020101** | **M** | **8** | **1** | **Yes** | | | **6** | **7** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| ✓ | **2310020301** | **M** | **7** | **1** | **Yes** | | | **6** | **8** | **No** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **Yes** |
| | 2310020502 | P | 4 | 2 | No | 25 | 20 | 6 | 9 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | No | No |
| | 2310030201 | M | 4 | 2 | No | 20 | 14 | 4 | 6 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | No | No |
| | 2310030401 | M | 2 | 1 | No | 20 | 19 | 4 | 4 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | No | No |
| | 2310040101 | M | 1 | 1 | No | 20 | 24 | 1 | 6 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | Yes | No |
| | 2310050101 | P | 5 | 2 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | Yes | No | Yes | No |
| | 2310080101 | M | 2 | 2 | Yes | | | 2 | 4 | No | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| | 2310080201 | M | 2 | 2 | Yes | | | 2 | 4 | No | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **2310150101** | **M** | **1** | **1** | **No** | **18** | **18** | **1** | **4** | **N/A** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **Yes** | **No** | **Yes** | **Yes** |
| ✓ | **2310160101** | **M** | **1** | **1** | **No** | **17** | **24** | **1** | **3** | **No** | **Cement / Concrete** | **Corrugated iron sheets** | **Protected well** | **Pit latrine** | **Yes** | **Yes** | **Yes** | **Yes** |
| | 2310170401 | M | 0 | | Yes | | | 4 | 2 | No | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | No |
| ✓ | **2310200101** | **P** | **4** | **1** | **No** | **28** | **24** | **1** | **≥ 10** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 2310200102 | P | 1 | 1 | No | 17 | 17 | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | No | No |
| | 2310240101 | M | 2 | 2 | Yes | | | 1 | 4 | N/A | Cement / Concrete | Corrugated iron sheets | Protected well | Pit latrine | No | Yes | Yes | Yes |
| | 2310270101 | M | 1 | 1 | No | 20 | 24 | 1 | 4 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | Yes | Yes | Yes |
| | 2310300101 | M | 3 | 1 | Yes | | | 1 | 6 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | Yes |
| | 2310310101 | M | 1 | 1 | No | 20 | 20 | 1 | 3 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | Protected well | Pit latrine | No | No | Yes | No |
| | 2310320101 | M | 5 | 1 | Yes | | | 1 | 5 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **2310370101** | **M** | **2** | **2** | **Yes** | | | **1** | **4** | **No** | **Cement / Concrete** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 2310400103 | M | 3 | 3 | No | 25 | 25 | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | No | Yes | Yes |
| | 2310420201 | P | 1 | 1 | No | 17 | 32 | 2 | 3 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| ✓ | **2310440103** | **P** | **7** | **2** | **Yes** | | | **1** | **≥ 10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Protected well** | **Pit latrine** | **Yes** | **Yes** | **Yes** | **Yes** |
| ✓ | **2310450202** | **P** | **2** | **2** | **No** | **15** | **12** | **3** | **8** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 2310450301 | M | 1 | 1 | Yes | | | 3 | 3 | No | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | No |
| | 2310470201 | P | 4 | 2 | No | 27 | 30 | 2 | 6 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | No | No |
| ✓ | **2310480102** | **M** | **1** | **1** | **Yes** | | | **1** | **≥ 10** | **No** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 2310500103 | P | 1 | 1 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Protected well | Pit latrine | No | No | Yes | Yes |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2310540104 | P | 3 | 1 | No | 20 | 36 | 1 | 6 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | Yes | No | Yes | Yes |
| | 2310550101 | P | 1 | 1 | No | 20 | 24 | 1 | 6 | No | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | Yes |
| ✓ | **2310580105** | **M** | **0** | | **Yes** | | | **1** | **≥ 10** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 2310610101 | P | 3 | 2 | No | 25 | 18 | 1 | 5 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | No |
| ✓ | **2310620104** | **P** | **0** | | **Yes** | | | **1** | **≥ 10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Protected well** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 2310640101 | P | 2 | 2 | No | 22 | 13 | 1 | 5 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | Yes |
| | 2310680101 | M | 2 | 2 | Yes | | | 1 | ≥ 10 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | Yes | Yes | Yes | No |
| | 2310720101 | M | 0 | | Yes | | | 1 | 3 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Bush | No | Yes | Yes | Yes |
| | 2310780101 | P | 2 | 2 | Yes | | | 1 | 5 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 2310790101 | M | 0 | | Yes | | | 1 | 4 | No | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **2310810201** | **P** | **0** | | **Yes** | | | **2** | **7** | **No** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 2310840102 | P | 5 | 1 | Yes | | | 1 | 8 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Unprotected | Pit latrine | No | No | No | No |
| **12** | | | | | | | | | | | | | | | | | | |

## Purposive sampling of case study women: Marafan Yankuzo (Site 260, Zamfara State, Tsafe LGA)

| QUAL. CASE STUDY | Woman ID code | INDIVIDUAL CHARACTERISTICS | | | | | HOUSEHOLD CHARACTERISTICS | | | Housing | | WASH | | Assets | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Monogamous / polygamous | No. of children | No. children <5 | Pregnant? | Her age | Age of youngest child (months) | Hhs in structure | HH size | HH members in school? | Floor | Roof | Water source | Toilet | TV | stove | bed | radio |
| ✓ | **2600010101** | **M** | **4** | **1** | **Yes** | | | **1** | **7** | **Yes** | **Cement / Concrete** | **Wood/bamboo** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 2600040102 | P | 5 | 2 | Yes | | | 1 | ≥ 10 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | Yes | No | Yes | Yes |
| | 2600080201 | M | 0 | | Yes | | | 2 | 2 | No | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | No | Yes | Yes | Yes |
| ✓ | **2600090102** | **P** | **1** | **1** | **No** | **18** | **13** | **1** | **≥ 10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| | 2600100101 | M | 0 | | Yes | | | 2 | 3 | Yes | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | No | Yes | Yes | Yes |
| | 2600110101 | M | 5 | 2 | Yes | | | 1 | 8 | Yes | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | Yes | No | No | No |
| ✓ | **2600120103** | **P** | **2** | **2** | **No** | **20** | **17** | **1** | **≥ 10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 2600140102 | P | 4 | 3 | No | 25 | 20 | 2 | ≥ 10 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | No |
| | 2600150101 | M | 4 | 3 | DK | 25 | 24 | 1 | 6 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | Yes |
| ✓ | **2600160102** | **P** | **2** | **1** | **Yes** | | | **1** | **≥ 10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Unprotected** | **Ventilated improved pit latrine** | **Yes** | **No** | **Yes** | **No** |
| | 2600210102 | P | 0 | | Yes | | | 1 | 8 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| ✓ | **2600250104** | **P** | **1** | **1** | **Yes** | | | **1** | **≥ 10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 2600290101 | P | 1 | 1 | No | 20 | 24 | 1 | 9 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | No |
| | 2600300101 | P | 6 | 2 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | No |
| ✓ | **2600390102** | **P** | **10** | **1** | **Yes** | | | **1** | **≥ 10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **Yes** | **No** | **Yes** | **Yes** |
| | 2600400101 | P | 2 | 0 | Yes | | | 1 | 8 | Yes | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| ✓ | **2600410102** | **P** | **1** | **1** | **Yes** | | | **1** | **6** | **Yes** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 2600450102 | P | 0 | | Yes | | | 2 | 7 | Yes | Cement / Concrete | Corrugated iron sheets | Protected well | Pit latrine | No | No | No | No |
| | 2600460101 | P | 5 | 0 | Yes | | | 1 | 4 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 2600670102 | P | 5 | 1 | Yes | | | 1 | ≥ 10 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **2600710101** | **M** | **0** | | **Yes** | | | **1** | **2** | **No** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 2600770101 | P | 9 | 1 | Yes | | | 1 | ≥ 10 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 2600850101 | M | 0 | | Yes | | | 1 | 2 | N/A | Cement / Concrete | Corrugated iron sheets | Protected well | Pit latrine | No | Yes | Yes | Yes |
| | 2600940201 | M | 1 | 1 | Yes | | | 2 | 3 | N/A | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 2600960102 | P | 0 | | Yes | | | 1 | 3 | N/A | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **2600980101** | **M** | **1** | **1** | **Yes** | | | **1** | **3** | **N/A** | **Cement / Concrete** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **Yes** | **Yes** | **Yes** | **Yes** |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2601000101 | M | 4 | 1 | Yes | | | 1 | 6 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 2601020101 | M | 2 | 2 | No | 20 | 26 | 1 | 4 | No | Cement / Concrete | Corrugated iron sheets | Protected well | Pit latrine | No | No | No | No |
| | 2601030101 | M | 5 | 2 | Yes | | | 1 | 7 | Yes | Cement / Concrete | Corrugated iron sheets | Protected well | Pit latrine | No | No | No | No |
| | 2601100101 | M | 1 | 0 | Yes | | | 1 | 3 | Yes | Earth/mud or dirt/straw | Wood/bamboo | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **2601130101** | **M** | **1** | **1** | **Yes** | | | **1** | **5** | **N/A** | **Cement / Concrete** | **Cement/concrete** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| | 2601140101 | M | 3 | 1 | Yes | | | 1 | 5 | Yes | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | Yes | No | Yes | Yes |
| | 2601150101 | P | 6 | 1 | Yes | | | 1 | 9 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | Yes | No | Yes | Yes |
| ✓ | **2601190101** | **M** | **0** | | **Yes** | | | **2** | **3** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Protected well** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 2601190201 | M | 0 | | Yes | | | 2 | 2 | No | Cement / Concrete | Corrugated iron sheets | Protected well | Pit latrine | No | No | No | No |
| | 2601200201 | M | 0 | | Yes | | | 2 | 2 | No | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | No | No |
| | 2601270102 | P | 0 | | Yes | | | 1 | 8 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| | 2601340102 | P | 1 | 1 | Yes | | | 1 | 9 | Yes | Cement / Concrete | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **2601360101** | **M** | **0** | | **Yes** | | | **1** | **2** | **N/A** | **Cement / Concrete** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **Yes** | **Yes** | **Yes** | **Yes** |

12

## Purposive sampling of case study women: Kafin Madaki (Site 324, Jigawa State, Buji LGA)

| | | INDIVIDUAL CHARACTERISTICS | | | | | | HOUSEHOLD CHARACTERISTICS | | | Housing | | WASH | | Assets | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QUAL. CASE STUDY | Woman ID code | Monogamous / polygamous | No. of children | No. children <5 | Pregnant? | Her age | Age of youngest child (months) | Hhs in structure | HH size | HH members in school? | Floor | Roof | Water source | Toilet | TV | stove | bed | radio |
| | 3240020102 | P | 4 | 2 | Yes | | | 1 | 9 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Pit latrine | No | No | Yes | Yes |
| ✓ | **3240030201** | **M** | **0** | | **Yes** | | | **2** | **2** | **N/A** | **Earth/mud or dirt/straw** | **Thatch (grass or straw)** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 3240040101 | M | 1 | 0 | Yes | | | 1 | 4 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | No | Yes |
| ✓ | **3240050101** | **M** | **4** | **1** | **Yes** | | | **6** | **6** | **Yes** | **Earth/mud or dirt/straw** | **Thatch (grass or straw)** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 3240050402 | P | 1 | 1 | No | 20 | 24 | 6 | 6 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **3240080101** | **M** | **1** | **1** | **No** | **19** | **18** | **2** | **3** | **N/A** | **Earth/mud or dirt/straw** | **Thatch (grass or straw)** | **Treated** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 3240110102 | P | 1 | 1 | No | 20 | 24 | 1 | ≥10 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **3240140101** | **P** | **4** | **1** | **Yes** | | | **1** | **≥10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 3240160101 | M | 4 | 2 | Yes | | | 1 | 6 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | No | Yes |
| | 3240180301 | M | 8 | 0 | Yes | | | 6 | ≥10 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| | 3240180401 | P | 4 | 2 | Yes | | | 6 | 7 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| | 3240210502 | P | 4 | 1 | Yes | | | 10 | ≥10 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 3240210701 | M | 2 | 2 | Yes | | | 10 | 4 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 3240290201 | P | 0 | | Yes | | | 3 | 7 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 3240310201 | M | 0 | | Yes | | | 2 | 2 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 3240350101 | M | 1 | 1 | Yes | | | 1 | 3 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| ✓ | **3240420301** | **M** | **2** | **2** | **No** | **21** | **13** | **3** | **5** | **N/A** | **Earth/mud or dirt/straw** | **Thatch (grass or straw)** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 3240520201 | P | 3 | 0 | Yes | | | 3 | 9 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | No | No |
| | 3240530201 | M | 6 | 2 | Yes | | | 4 | 8 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 3240600202 | P | 2 | 1 | Yes | | | 2 | ≥10 | Yes | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| | 3240650101 | P | 6 | 2 | Yes | | | 3 | ≥10 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| ✓ | **3240650202** | **P** | **1** | **1** | **No** | **20** | **13** | **3** | **≥10** | **Yes** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 3240650301 | M | 3 | 2 | Yes | | | 3 | 5 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | Yes |
| | 3240680301 | M | 0 | | Yes | | | 8 | 2 | N/A | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | No |
| | 3240680401 | P | 3 | 1 | Yes | | | 8 | 6 | Yes | Cement / Concrete | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| | 3240680601 | P | 1 | 0 | Yes | | | 8 | 9 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | No |
| ✓ | **3240680702** | **P** | **6** | **1** | **Yes** | | | **8** | **≥10** | **Yes** | **Cement / Concrete** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 3240680801 | P | 3 | 1 | Yes | | | 8 | 7 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | **3240690102** | **P** | **12** | **1** | **Yes** | | | **1** | **≥10** | **Yes** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| ✓ | **3240720101** | **M** | **0** | | **Yes** | | | **2** | **≥10** | **Yes** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 3240720201 | M | 1 | 0 | Yes | | | 2 | 5 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| ✓ | **3240730202** | **P** | **4** | **1** | **Yes** | | | **3** | **≥10** | **Yes** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 3240820101 | M | 4 | 1 | Yes | | | 1 | 6 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| ✓ | **3240980701** | **M** | **1** | **1** | **No** | **15** | **13** | **9** | **3** | **N/A** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 3240990201 | M | 4 | 1 | Yes | | | 3 | 6 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Bush | No | No | No | No |
| | 3241090101 | M | 3 | 1 | Yes | | | 1 | 5 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Unprotected | Pit latrine | No | No | Yes | No |
| | 3241100101 | M | 2 | 1 | Yes | | | 1 | 5 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| | 3241120301 | M | 0 | | Yes | | | 6 | 2 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | No |
| ✓ | **3241120501** | **M** | **3** | **2** | **No** | **20** | **14** | **6** | **5** | **No** | **Earth/mud or dirt/straw** | **Corrugated iron sheets** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| 12 | | | | | | | | | | | | | | | | | | |

## Purposive sampling of case study women: Kokura Baturiya (Site 401, Jigawa State, Kirikasama LGA)

| QUAL. CASE STUDY | Woman ID code | INDIVIDUAL CHARACTERISTICS | | | | | | HOUSEHOLD CHARACTERISTICS | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Housing | | WASH | | Assets | | | |
| | | Monogamous / polygamous | No. of children | No. children <5 | Pregnant? | Her age | Age of youngest child (months) | Hhs in structure | HH size | HH members in school? | Floor | Roof | Water source | Toilet | TV | stove | bed | radio |
| | 4010010201 | M | 1 | 1 | No | 20 | 24 | 2 | 3 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | No | Yes | No |
| ✓ | **4010030102** | **P** | **5** | **2** | **Yes** | | | **1** | **≥10** | **Yes** | **Earth/mud or dirt/straw** | **Wood/bamboo** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 4010110101 | M | 3 | 1 | Yes | | | 2 | 5 | No | Earth/mud or dirt/straw | Wood/bamboo | Treated | Pit latrine | No | No | Yes | No |
| ✓ | 4010180201 | M | 3 | 2 | No | 25 | 17 | 2 | 5 | Yes | Earth/mud or dirt/straw | Wood/bamboo | Treated | Pit latrine | No | No | Yes | Yes |
| | 4010190301 | M | 2 | 1 | No | 23 | 24 | 3 | 4 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | No | Yes | No |
| | 4010220101 | M | 3 | 3 | No | 21 | 2 | 1 | 5 | N/A | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | No |
| ✓ | 4010230201 | P | 8 | 1 | Yes | | | 3 | ≥10 | Yes | Earth/mud or dirt/straw | Wood/bamboo | Treated | Pit latrine | No | No | Yes | Yes |
| | 4010270101 | P | 9 | 1 | Yes | | | 3 | ≥10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | No | Yes | No |
| ? | 4010270201 | P | 3 | 1 | Yes | | | 3 | 9 | Yes | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | No |
| | 4010270301 | M | 2 | 1 | Yes | | | 3 | 4 | No | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | No | Yes | Yes |
| ✓ | 4010300101 | M | 1 | 1 | Yes | | | 1 | 3 | N/A | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | No | No |
| | 4010330101 | P | 2 | 2 | Yes | | | 3 | 5 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010360101 | P | 4 | 3 | No | 22 | 0 | 2 | 8 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010380101 | P | 2 | 2 | No | 29 | 14 | 1 | 7 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | No | No |
| ✓ | 4010400201 | M | 0 | | Yes | | | 2 | 2 | N/A | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| ✓ | 4010420102 | P | 5 | 2 | Yes | | | 2 | ≥10 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Pit latrine | No | No | Yes | No |
| | 4010440201 | M | 0 | | Yes | | | 2 | 2 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010450101 | M | 8 | 2 | Yes | | | 1 | ≥10 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| | 4010460201 | M | 1 | 1 | No | 23 | 36 | 2 | 3 | N/A | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010490101 | M | 2 | 2 | No | 24 | 13 | 2 | 5 | No | Wood | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| ✓ | 4010510201 | M | 2 | 1 | No | 23 | 48 | 3 | 4 | No | Earth/mud or dirt/straw | Corrugated iron sheets | Treated | Pit latrine | No | No | Yes | Yes |
| | 4010520101 | M | 3 | 3 | No | 20 | 3 | 4 | 5 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010520301 | M | 1 | 1 | No | 20 | 15 | 4 | 3 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| ? | 4010520401 | M | 2 | 2 | No | 21 | 25 | 4 | 4 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010530201 | P | 4 | 1 | Yes | | | 2 | 7 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| ✓ | 4010550202 | P | 3 | 2 | No | 25 | 18 | 2 | 5 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| | 4010560201 | M | 3 | 1 | Yes | | | 4 | 5 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| ✓ | 4010570201 | M | 1 | 1 | No | 25 | 46 | 3 | 3 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4010610201 | M | 2 | 2 | No | 21 | 24 | 2 | 4 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| ✓ | 4010650201 | M | 0 | | Yes | | | 2 | 2 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| | 4010670101 | P | 1 | 1 | No | 22 | 24 | 1 | ≥10 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| | 4010680202 | P | 2 | 1 | No | 20 | 36 | 4 | 8 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010680301 | M | 2 | 1 | Yes | | | 4 | 4 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010690201 | M | 2 | 2 | No | 20 | 23 | 4 | 4 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| | 4010690301 | M | 2 | 2 | No | 26 | 23 | 4 | 4 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| | 4010690401 | M | 2 | 2 | No | 23 | 24 | 4 | 4 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |
| | 4010700101 | M | 8 | 1 | Yes | | | 2 | ≥10 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| | 4010700202 | P | 4 | 2 | DK | 25 | 24 | 2 | ≥10 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | No |
| ✓ | 4010730102 | P | 2 | 2 | No | 20 | 10 | 1 | ≥10 | No | Earth/mud or dirt/straw | Thatch (grass or straw) | Treated | Bush | No | No | Yes | Yes |

11

## Purposive sampling of case study women: Kanyu (Site 533, Jigawa State, Gagarawa LGA)

| QUAL. CASE STUDY | Woman ID code | INDIVIDUAL CHARACTERISTICS | | | | | | HOUSEHOLD CHARACTERISTICS | | | | | | WASH | | Assets | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Monogamous / polygamous | No. of children | No. children <5 | Pregnant? | Her age | Age of youngest child (months) | Hhs in structure | HH size | HH members in school? | Housing: Floor | Roof | | Water source | Toilet | TV | stove | bed | radio |
| ✓ | **5330020101** | **M** | **5** | **1** | **No** | **44** | **DK** | **4** | **5** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 5330020201 | P | 5 | 2 | No | 25 | 3 | 3 | 7 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | Yes |
| | 5330020301 | P | 8 | 2 | Yes | | | 4 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | No |
| | 5330050101 | M | 2 | 1 | No | 28 | 14 | 1 | 4 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Bush | No | No | Yes | No |
| ✓ | **5330070101** | **M** | **1** | **1** | **No** | **19** | **0** | **1** | **3** | **N/A** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | | **Treated** | **Bush** | **No** | **No** | **Yes** | **No** |
| | 5330080101 | M | 0 | | No | 18 | | 2 | 2 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | No |
| | 5330080201 | M | 1 | 1 | No | 22 | 36 | 2 | 3 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | No |
| | 5330100102 | P | 1 | 1 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | Yes |
| ✓ | **5330100202** | **P** | **0** | | **Yes** | | | **3** | **9** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | | **Unprotected** | **Pit latrine** | **No** | **No** | **Yes** | **Yes** |
| | 5330100302 | P | 1 | 1 | No | 27 | 14 | 3 | 8 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | Yes | No | Yes | Yes |
| | 5330110101 | P | 4 | 1 | No | 29 | 13 | 1 | 8 | Yes | Earth/mud or dirt/straw | Corrugated iron | | Treated | Pit latrine | No | No | Yes | Yes |
| | 5330140102 | P | 5 | 2 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | No |
| ✓ | **5330150101** | **M** | **4** | **1** | **No** | **33** | **23** | **1** | **≥ 10** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | | **Treated** | **Bush** | **No** | **Yes** | **Yes** | **Yes** |
| ✓ | **5330160201** | **P** | **1** | **1** | **No** | **16** | **18** | **3** | **≥ 10** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| | 5330160301 | M | 3 | 2 | No | 24 | 8 | 3 | 5 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | No |
| | 5330170101 | M | 1 | 1 | No | 18 | 4 | 1 | 3 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | Yes |
| | 5330180102 | P | 4 | 2 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | Yes |
| | 5330220101 | M | 3 | 1 | No | 18 | 10 | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | No |
| ✓ | **5330230102** | **P** | **0** | | **Yes** | | | **1** | **≥ 10** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | | **Treated** | **Bush** | **No** | **No** | **Yes** | **Yes** |
| | 5330240103 | P | 3 | 3 | No | 20 | 9 | 2 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | Yes |
| ✓ | **5330240201** | **P** | **2** | **1** | **Yes** | | | **2** | **6** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | | **Treated** | **Pit latrine** | **Yes** | **No** | **Yes** | **Yes** |
| | 5330270104 | P | 7 | 1 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Corrugated iron | | Treated | Bush | No | Yes | Yes | Yes |
| | 5330280101 | M | 5 | 1 | No | 30 | 36 | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | Yes |
| | 5330310102 | P | 6 | 1 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Corrugated iron | | Treated | Bush | No | No | Yes | Yes |
| | 5330320101 | P | 5 | 1 | No | 28 | 36 | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | No |
| | 5330340101 | M | 7 | 2 | No | 30 | 24 | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Pit latrine | No | No | Yes | No |
| | 5330350103 | P | 1 | 1 | Yes | | | 1 | ≥ 10 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | | Treated | Bush | No | No | Yes | Yes |
| ✓ | **5330380101** | **M** | **9** | **2** | **No** | **30** | **7** | **1** | **8** | **No** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **No** |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5330400101 | M | 2 | 2 | No | 20 | DK | 1 | 4 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | No | Yes | No |
| | 5330430101 | M | 2 | 1 | DK | 25 | 35 | 1 | 3 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Bush | No | No | Yes | No |
| ✓ | **5330460101** | **M** | **3** | **1** | **No** | **25** | **2** | **1** | **5** | **N/A** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Treated** | **Pit latrine** | **No** | **No** | **Yes** | **No** |
| | 5330470102 | P | 1 | 1 | Yes | | | 2 | 6 | Yes | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Bush | No | No | Yes | No |
| | 5330480101 | M | 3 | 2 | No | 23 | 13 | 2 | 5 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | No | Yes | No |
| | 5330480201 | M | 2 | 2 | No | 24 | 24 | 2 | 4 | N/A | Earth/mud or dirt/straw | Mud/ mud bricks | Treated | Pit latrine | No | No | Yes | No |
| ✓ | **5330490101** | **M** | **1** | **1** | **No** | **20** | **12** | **1** | **4** | **N/A** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Treated** | **Bush** | **No** | **No** | **Yes** | **No** |
| ✓ | **5330500102** | **P** | **8** | **1** | **No** | **30** | **24** | **1** | **9** | **Yes** | **Earth/mud or dirt/straw** | **Mud/ mud bricks** | **Treated** | **Pit latrine** | **No** | **No** | **No** | **No** |
| | 5330510103 | P | 5 | 1 | DK | 30 | 47 | 1 | 6 | N/A | Earth/mud or dirt/straw | Corrugated iron | Treated | Bush | No | No | Yes | Yes |
| | 5330520101 | P | 2 | 1 | No | 18 | 8 | 1 | 8 | N/A | Plant | Thatch (grass / straw) | Treated | Bush | No | No | No | No |
| ✓ | **5330530101** | **P** | **2** | **1** | **No** | **26** | **41** | **1** | **5** | **No** | **Earth/mud or dirt/straw** | **Thatch (grass / straw)** | **Treated** | **Bush** | **No** | **No** | **Yes** | **Yes** |
| | 5330540201 | M | 6 | 2 | DK | 30 | 10 | 2 | 7 | N/A | Earth/mud or dirt/straw | Thatch (grass / straw) | Treated | Bush | No | No | No | No |
| | 5330550101 | P | 1 | 1 | No | 24 | 20 | 1 | 6 | N/A | Earth/mud or dirt/straw | Thatch (grass / straw) | Treated | Bush | No | No | Yes | No |

12

# Annex D Data analysis codes

Following are the codes (with explanatory text) which were provided to the research assistants who coded the transcripts in Dedoose. The colour-coding follows the hierarchy of code trees in Dedoose (green is level 1, blue level 2, pink level 3). If in doubt the research assistants were instructed to code extracts at the higher (more general) level. The analytical structure of the codes follows the six key baseline research themes set out in this report and in the fieldwork guide.

## 1. Consumption Patterns and Dietary Practices

### Quantity of food consumed or available

### Quality or variety of food consumed or available

### Actual diet

#### Men – actual diet

#### Women – actual diet

#### Pregnant or breastfeeding women – actual diet

#### Infants and children – actual diet

(*if text specifies gender, i.e. boys or girls, include this in the excerpt*)

### Preferred foods

#### Men – preferred foods

#### Women – preferred foods

#### Pregnant or breastfeeding women – preferred foods

#### Infants and children – preferred foods

(*if text specifies gender, i.e. boys or girls, include this in the excerpt*)

### Celebration foods

*What foods are eaten on special occasions? Include any information on the type of celebration* (*religious holiday? wedding? funeral? etc.*), *any comments or descriptions of the food eaten, anything about seasonality of these events* (*do they happen at specific times of year?*)

### Constraints on eating preferred foods

*If the preferred diet is different from the actual diet – why? What prevents the respondents eating the food they prefer?*

### Forbidden or avoided foods

#### Pregnant or breastfeeding women – forbidden or avoided foods

*Include any information on things women either actually avoid, or believe should be avoided, during pregnancy or breastfeeding. Include any comments on why these foods should be avoided, any previous beliefs that are no longer practised.*
*For any other groups* (*i.e. foods avoided by everyone or by people other than pregnant or breastfeeding women*), *code at level 2* (*forbidden or avoided foods*).

### Seasonality of diet

*Include any information on seasonal changes in composition, quantity, quality, variety, or frequency of diet/consumption.*

### Portion sizes

*Include here any text giving information on portion sizes consumed by different groups or household members* (*e.g. men, women, boys, girls, pregnant women – who eats more or less, and why*). *Include also any information on the order or priority of consumption* (*who eats first or last, and why*).

## 2. Risks, Resilience and Coping

### Types of risk, stress or shock

*Include any information about the types of event or hazard that can threaten people's access to food, income or wellbeing* (*e.g. drought, flood, price rises, health risks*). *Include here any information about the effects of such events.*

### Seasonality of risk, stress or shock

*What time of year do these things happen? When is the period of food shortage or hungry season? Include here any information describing these periods (months/season name, what happens at that time, etc.)*

### Responses to risk, stress or shock

*What do people do when faced with food shortages? Include all coping responses here, e.g. sell productive assets, borrow money, withdraw children from school, migrate, reduce consumption, changes in behaviour or household structure.*

### Sources of assistance

*When people are under stress, or short of food or money, who do they turn to and what sort of assistance do they receive?*

## 3. Household Decision-Making and Resource Management

*If you come across any text about household resources other than food or money, i.e. anything that doesn't fit into the categories below, please code it under this general (green/level 1) heading.*

### Decisions about food

*Who decides or controls the distribution of food in the household (e.g. decisions about who eats what, portion size, timing and frequency of meals, distribution of household stocks to wives or other household members)? Who controls any stocks of food within the family or household? Include any information on why or how these decisions are made.*

### Decisions about money

#### Decisions about food purchase

*Include here any information on: Who decides what food is bought? Are women allowed to go and buy food, or to directly commission what is bought through someone else (perhaps an older child, or their husband)?*

#### Decisions about other expenditure

*Who decides about non-food expenditure? Include any information about types of expense (what is money spent on, why, when, how much etc.).*

#### Distribution of income or gifts

*Include any information about who receives or controls money coming into the household. E.g. if a mother receives a cash transfer, does she keep it or share it? Who decides? Include any text explaining attitudes or practices about this.*

#### Women's control over cash

*Include any information about women's ability/opportunities to earn, save, invest or spend money. Is earned income seen as different to unearned income (e.g. gifts or welfare payments)? Include any information on other people (e.g. husbands or senior women) influencing or deciding how women's money is used. Include any comments or perceptions on how these things should be managed.*

### Decisions about mother and child health care

*If a woman or child needs medical care, who decides whether/where/when they can go? Include any information about women's autonomy here, i.e. can a mother decide about health care for herself and her children or does she need permission to go to a clinic or healer? If so who from? Why? Include any text expressing attitudes to this issue.*

## 4. KAPs Relating to Health & Nutrition

### Breastfeeding

### IYCF

### Care of sick and malnourished children

### Nutritional needs of pregnant and breastfeeding women

*Include here any information about people's attitudes, beliefs or knowledge about the types or quantity of food that women should eat (or not eat) whilst pregnant and/or breastfeeding. Include any text on why they think this and who/where they learned it.*

### Health-seeking behaviour

*When babies, children, women or other household members are ill, what do they do/where do they go, and why? Include any information on constraints to using medical facilities, e.g. distance or cost, and any comments or attitudes about the treatment received from different providers.*

#### WASH (water, sanitation and hygiene)

##### Water sources

##### Sanitation

##### Hygiene

#### KAP of advice givers

*Include: who do women go to for advice about health, nutrition, pregnancy or breastfeeding (e.g. TBAs, clinic staff, ante-natal classes, their mothers or mothers-in-law, elders)? Whose advice do they trust or rely on? What advice have they received from these sources?*

## 5. Livelihoods

#### Livelihood activities

*This refers to everything that people do to make a living, i.e. to generate income (in the form of cash, food, or other in-kind payments). Include here any information on how people in this community make a living (e.g. farming, fishing, trading, labour migration, casual labour, weaving or other home industry – whatever they mention). Include any text explaining which activities are preferred and why, which provide better or more reliable income, which are less risky, which require capital or connections to pursue. Include any information on who does what (e.g. some types of work may be done mainly by poorer people, or by a particular ethnic or social group, etc.).*

##### Men – livelihood activities

*Code here any text specifying how men or boys make a living (same set of questions as above). If gender's not specified, code at level 2 (Livelihood Activities)*

##### Women – livelihood activities

*Code here any text specifying how women or girls make a living (same set of questions as above). If gender's not specified, code at level 2 (Livelihood Activities)*

#### Income

*Include here any information about how much income is earned from specific activities, or from an individual's or household's work in general. If the text specifies gender (women's income or men's income), please include that text in the excerpt.*

#### Assets

*Include any information on things that people own, which are either needed for their livelihood activities (e.g. land for farming, capital for trading), or are invested in as household wealth or savings (e.g. livestock, buildings, furniture, jewellery).*

#### Seasonality of activities and income

*Include here any information about how people's work or income changes according to months or seasons.*

## 6. Wellbeing

*In this section, if the text distinguishes between attitudes of men vs women, older vs younger people etc., please include that text in the excerpt. Otherwise, we can analyse this dimension using descriptors as most of this information will come from men's or women's focus groups.*

#### Meanings and characteristics of wellbeing

##### Definitions or local terms for wellbeing

*Include any information on people's perceptions or definitions of wellbeing or ill-being, poverty or wealth. Include local terms or explanations.*

##### Characteristics of wellbeing

*How do people describe a healthy, happy child, a prosperous, successful household, or a thriving community? What are the characteristics? What do people aspire to for their children? Include here any information on what it means to be poor or better-off in this community – what are the differences? How are they perceived?*

#### Factors that increase wellbeing

#### Factors that decrease wellbeing