



Marja Koole / CARE

# Modelling Catalytic Impact at CARE

December 2022

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## Acronyms

<b>CI</b>	Catalytic Impact
<b>CIMMYT</b>	The International Maize and Wheat Improvement Center
<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>FFS</b>	FAO Farmers' Field School
<b>FFBS</b>	CARE Farmers' Field and Business School
<b>FID</b>	Farmer ID Cards
<b>GIF</b>	Global Innovation Fund
<b>MEL</b>	Monitoring, Evaluation and Learning
<b>NFGF</b>	National Farmers Group Federation
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>PPP</b>	Public Private Partnership
<b>WEI</b>	Women's Empowerment Index

# Introduction

## Background

CARE has set an aspirational catalytic impact target of 200 million people. Catalytic impact is a new impact category that comes from Vision 2030's focus on impact at scale. CARE defines catalytic impact as the “*sustainable impact through the independent adoption or funding of solutions by governments, donors, the private sector, or open replication that originated with CARE and/or its partners*”.

CARE's contribution to catalytic impact is indirect. It is the impact of our work after our direct programming efforts end or impact, as an *indirect* effect of our work. For example, CARE worked globally with partners to adopt the new [ILO 190](#) convention and recommendation and in Vietnam to get country-level ratification. That work has since contributed to the government of Namibia's ratification and the government of Vietnam's implementation of a monitoring and enforcement process for GBV in factories. Another example is the impact of CARE's work to link women to financial services through CARE's social enterprise [Microvest](#) after our divestment. Finally, we anticipate solutions that are sustainably scaling—such as VSLA—will generate significant catalytic impact as they are taken up by other actors independently of CARE's grant funded programming.

## Approach to measuring catalytic impact

Catalytic impact will usually not be measured directly using CARE's monitoring and evaluation systems, but rather will be estimated or modelled and then routinely validated using existing secondary data sources, such as those available through global, regional, or national reporting mechanisms. CARE also will not aggregate catalytic impact with CARE's direct implementation and systems-level impact since CARE's contribution to catalytic impact is indirect.

Over the next three years, CARE will develop, test, and refine our approach measuring catalytic impact. Our goal is to be able to report catalytic impact on an annual basis. However, we will report only impact that we can *credibly measure*<sup>1</sup> and to which CARE contributed.

In defining a model and approach to capture the catalytic impact of CARE and its partners work we see two critical factors as instrumental to valid and reliable modelling of impact—depth and breadth. Depth of impact contributes to greater sustainability. The greater the impact, the kind of impact, and the number of impacts generated by an individual's participation in a program or because of an advocacy or influencing effort the more likely that the change will persist through time. This concept is presented in the context of the CARE 2030 Vision<sup>2</sup> that focuses on lasting impact at scale delivered across six impact areas that drive progress towards ending poverty.

## Determining a model

As a first step, in 2022, CARE with the help of GY Associates developed a suitable method to capture CARE's contribution to CI. This method was to be clear, transparent, and robust. As such, the method will require CI estimates to have some level of external validation—if not measurement—to be credible. Similarly, an external reader will want to understand the ways in which CARE has contributed to CI, given that CARE's contribution to CI is indirect. The CI approach measures both breadth and depth dimensions of impact (defined below) and provides a methodology that should allow annual CI reporting as well as comparable replication in other contexts and cases.

The CI method presented in the report below was developed from a range of potential methods explored and is illustrated with two case studies that are summarised below with detailed analysis in the annexes to this document. The two case studies are (1) the FAO Farmers' Field School (FFS) uptake of the CARE Farmers' Field and Business School (FFBS) model and (2) scaling by 60 local governments of CARE Nepal's work to develop a farmer identification card process<sup>3</sup>.

# Summary of Interventions for the Case Studies

## CASE STUDY 1

### FAO's Integration of FFBS into FFS

CARE's proven, women-focused **Farmers' Field and Business School (FFBS)** approach helps small-scale farmers build the skills they need to increase production, improve resilience, adapt to climate change, diversify diets, and boost nutrition (Farmer Field Business School Innovation Brief, CARE 2021). CARE has tested FFBS in 28 projects across 17 countries. Since 2014, FFBS has directly improved the lives of more than 500,000 households or 2.5 million farmers and their families<sup>4</sup>. It also transforms the status and recognition of women by providing the support they require to be successful farmers, businesspeople, leaders, and agents of change.

Building on CARE's FFBS model, in 2022, the Food and Agriculture Organization (FAO) of the United Nations committed to ensuring that the 3,000 farmer field schools (FFS) they oversee across the world will promote gender transformative approaches by 2027 with the expectation that FAO will continue to expand on that work into the future. To achieve gender transformation, CARE partners with communities to challenge and transform inequitable gender norms that restrict women's and girls' ability to achieve their best possible health and lives. CARE will support FAO to ensure their FFS approaches are gender transformative.

Relatedly, with CARE's technical support, FAO also agreed to lead the [Making Food Systems Work for Women and Girls Coalition](#) that CARE launched during the UN Food Systems Summit (UNFSS) in Fall 2021. The goal of the coalition is to "ensure that women and men, boys and girls, and other groups have equitable roles, responsibilities, opportunities, and choices, and that countries, communities and households, individuals are equipped to participate in local, global and regional food systems activities in a meaningful, dignified, and equitable way." The coalition will do this through a focus on four critical levers of gender equality and the empowerment of women and girls:

1. Expanding women's agency
2. Increasing access and rights to resources, services, and opportunities with three priority actions
3. Eliminating systemic institutional and legislative biases against women
4. Shifting harmful and constraining gender and social norms.

This coalition matters because it is the mechanism through which key pieces of global agricultural guidance will get implemented at the national level.

**The FAO integration and scaling of CARE's FFBS work is considered as catalytic impact because FAO is using the CARE FFBS innovation in 3,000 farmer field schools that FAO has developed with national government and NGO partners.** Further, FAO is highly likely to continue to scale this work globally as foundational to its FFS initiatives. CARE is therefore indirectly contributing to the broader impact of FAO's implementation of FFS. In this case, CARE is also providing limited direct support to FAO FFS on gender from 2022 – 2027 and some support to government partners. Hence, some of the overall impact projected for this case study will be a direct contribution from CARE rather than simply CI. In practice, it is not possible to separate this out, and therefore, projected CI captures both direct and indirect CARE contributions.

## CASE STUDY 2

### Scaling of the Farmer Identification Card by the Government of Nepal

In Nepal since 1990, landless people have had the right to farm the land on which they reside, but this land has remained unregistered and cannot be used for any economic purposes. Policies on land, agriculture and food security in Nepal are not sufficiently supportive of the needs of landless people and marginalized farmers, and the government lacks the knowledge and capacity to work with these groups.

CARE Nepal and National Farmers Group Federation of Nepal (NFGF) partnered with the Government of Nepal to support the government's UNFSS commitments by hosting dialogues. One of the government's commitments (based on dialogue outcomes) is to over the next three years (up to 2025) "categorize farmers, producers, issuance of farmers ID and provision of categorized services and incentives." The farmer ID intervention relates to the introduction of new formal local agricultural policies by municipalities including farmer ID cards (targeting landless marginalized women and small holder farmers and agricultural labourers).

Farmer ID cards are issued following digital mapping and construction of a farmer database. The mapping process classifies farmers into four wealth categories (A to D) with subsidies concentrated on the poorest. The system it replaces failed to identify marginalized and landless farming laborers and subsidized richer land-owning farmers.

Results of a 2022 evaluation of the SAMARTHYA' Project experience with Belaka Municipality<sup>5</sup> suggest that scaling farmer ID cards by local governments will result in three primary impacts for marginalized farmers and the landless. First, scaling will result in improved access of the target community to public services, facilities, agricultural inputs and technology, resources, and opportunities to bring change to their standards of living. Based on category the ID card holders (farmers) are eligible to demand specific government services as mentioned in the ID cards. Belaka has started aligning its subsidy and social security provisions with the farmer database created as part of this model. The marginalised farmers (category D - red card) become eligible to receive 100% of agricultural subsidies, the small farmers (category C - white card) receive 75%, the medium farmers (category B - yellow card) receive 50% and the big farmers (category A - blue card) receive 25% of subsidies to be provided by the local governments to farmers. Second, scaling will improve rapport of farmers with government stakeholders and gradual recognition by the latter of the farmers' contributions results in enhanced self-respect and social status. Finally, as the ID initiative expands farmers participate in local level decision making forum and influence local government policies and programmes and budget allocation procedure targeted to land management and farmers' wellbeing.

# The Catalytic Impact Measurement Framework

## Overview

The CI measurement framework draws from the Global Innovation Fund (GIF) Practical Impact assessment method<sup>6</sup> and the adaptation of this model for CGIAR<sup>7</sup>. The framework has three components:

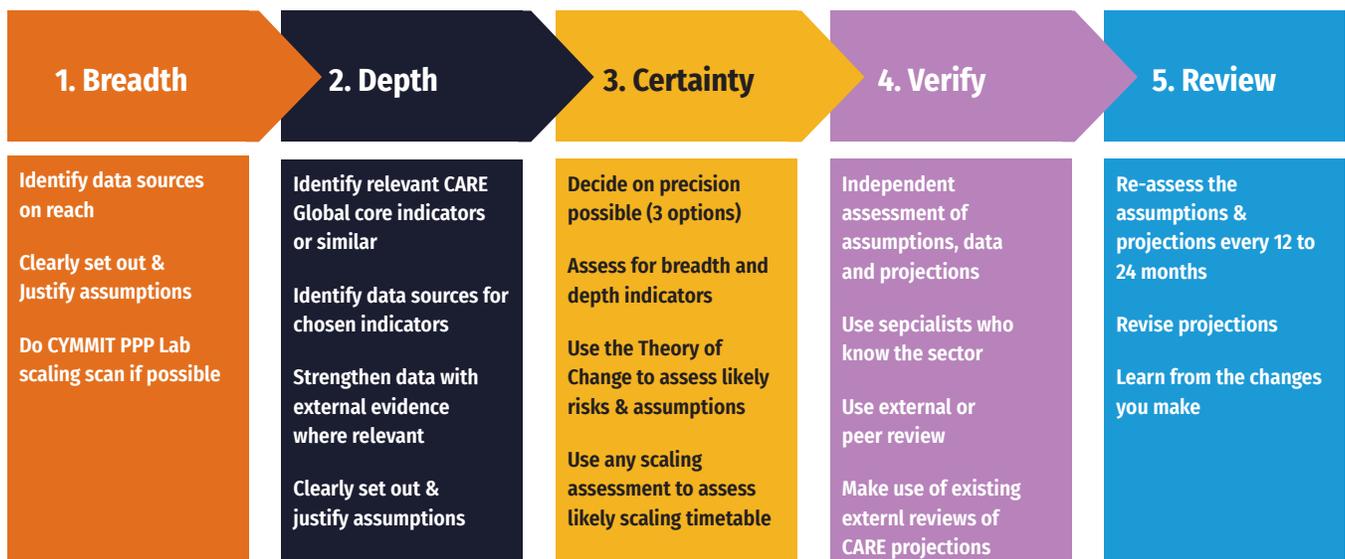


We define each of these components as follows.



The five key steps for estimating CI are summarized in Figure 1. Note that sources of data, assumptions, and methods of projecting values for each of these components play a critical role in estimating values of catalytic impact. These are discussed for each component in the following sub-sections.

**FIGURE 1 - THE FIVE STEPS TO MEASURING CI**



## Step 1: Project Breadth – The Number of Targeted Individuals Reached

CARE's Vision 2030 provides an overall target of 200 million people supported to overcome poverty and social injustice. This is underpinned by CARE's six impact areas with numeric targets for gender equality, crisis response, food and water, economic justice, health, and climate justice. For this reason, the assessment of CI is relevant to the adoption and/or scaling of CARE interventions related to these impact areas.

Projecting the breadth or reach of an adopted or scaled intervention requires two evidence sources and a process to check each is credible:

- 1. Evidence on individuals reached by the original CARE intervention** – this is provided by project and program reporting and evaluation. CARE MEL processes should ensure this data is a reliable starting point.
- 2. Evidence on how the intervention will be adopted and scaled by partners** and the implications for the number of individuals reached. In many cases, this assessment will have been done for donors funding the proposed scaling. The task is then to check this has been done with reference to past evidence (from point 1 above) *and* assessment of the factors that determine uptake in additional countries (or other contexts).

The CARE Nepal FID case study (see Box 1 below with full details in Annex 2) is an example of good practice in using a formal assessment of expected scaling. This “scaling scan” uses a standardized assessment of the ingredients generally required for scaling pro-poor innovations in a developing country context. The toolkit for doing this is freely available at <https://www.cimmyt.org/news/scaling-scan-a-simple-tool-for-big-impact/>

For the Nepal FID example, the FID project approach developed in 2018-19 has been adopted by a growing number of local governments over 2020-22, providing a good test of the scaling assumptions. **Where a scaling assessment is done for the purpose of projecting CI, we recommend getting a light touch external or peer review of the assumptions made.** This can be as simple as getting the CARE team doing the scaling scan to evidence and justify their assumptions to independent specialists who are familiar with the type of proposed intervention.

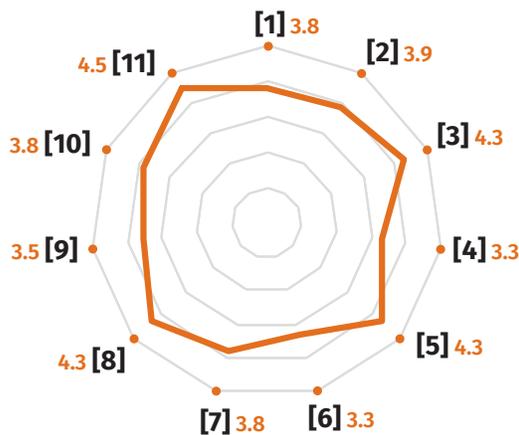
**In cases where no formal assessment of the independent adoption or scaling exists, claims should be evidenced with reference to the partner track record in this area and their theory of change.** In the FAO FFS case study (see Annex 1), FAO is introducing a gender transformative approach developed by CARE to FAO's long-established FFS program. The CARE innovation has been tested and evaluated in six countries with projected scaling to 17 countries in which FAO already operates FFS. Evaluation evidence on these CARE projects has been used by CARE to project future uptake. We have relied on these CARE projections for uptake by country by 2028 as they have been subject to external donor review. Given the substantial experience of FAO with FFS and CARE testing of FFBS in multiple countries, relying on external donor review of CARE estimates seems reasonable but it would be sensible to check on the assumptions used each year as FFS progresses.

For FFS, we have had to make assumptions on the trajectory of scaling (how we go from 2022 to 2028 levels) and what will happen to reach between 2028 and 2030. Following discussions with the CARE team involved and review of their scaling proposal, we assume a linear trajectory in uptake of FFS from 2022 - 2028 and no further increase in scale from 2028 – 2030.

## BOX 1 - THE CARE NEPAL FID SCALING ASSESSMENT IN SUMMARY

CARE Nepal has developed a scaling model for municipalities to adopt farmer id cards and has systematically considered scaling pathways, partners, and constraints. The National Farmers' Groups Federation (NFGF) has shared and discussed this model with boundary partners, and this has led to the formal scoring of scaling against the 11 scaling ingredients developed by the CIMMYT PPP Lab. This discussion resulted in the scoring on a 1 – 5 scale shown in the Figure below. The model scored 3.9 with a score greater than 3 being the recommended threshold for scalability.

### AVERAGE SCORING 3.9



- [1] Technology and practice
- [2] Awareness and demand
- [3] Business cases
- [4] Value chain
- [5] Finance
- [6] Knowledge and skill
- [7] Collaboration
- [8] Evidence and learning
- [9] Leadership and management
- [10] Public sector governance
- [11] GESI consideration

## Step 2: Project Depth – The Intensity of Change for Targeted Populations

The indicators we use to estimate the depth dimension of impact need to meet three conditions:

1. They need to capture **how much** changes – the intensity of change - for those reached (as distinct from just being reached by the program)
2. The type of change has to be **relevant to CARE** (drawn from or closely related to the CARE 30 global core indicators<sup>8</sup> that often provide ordinal measures of change).
3. **Evidence has to be available** to support the projection.

The FFS case study provides an example of program monitoring, learning and evaluation (MEL) generating highly suitable impact indicators on income, food security

and gender empowerment. However, the available data had some important limitations that we sought to address by **comparing and combining data from multiple sources** and **creating proxy control group data** from publicly available data – see Box 2.

The CARE Nepal FID case study presented different challenges for depth indicators. CARE Nepal produced the evidence on depth indicators from secondary evidence they had collected for other purposes as FID MEL evidence did not include data on any of the Vision 2030 Global Indicators. The specific context of FID in Nepal made international comparisons unrealistic. Fortunately, CARE Nepal was able to use data from mixed method evaluation to produce evidence on increased household income from FID – a relevant measure of depth of impact.

## BOX 2 - FFS CASE STUDY DEPTH INDICATORS

The Pathways evaluations on CARE FFBS in four countries in Africa and India was the first major source of evidence. The Pathways coverage of five countries that resemble the 17 FFS countries is helpful when using past experience to project future impact. The Pathways evaluations, however, did not include control groups and hence the documented increases in depth indicators could well be due to effects that have nothing to do with the intervention. They would therefore overstate the likely impact from FFS we could expect in future. To address this, proxy control groups have been created using publicly available datasets (from UN agencies and the World Bank) to capture changes that occurred in the areas relevant to each indicator. This reduces the net effect of the indicators we use for projecting depth and hence CI. **This is a recommended approach where relevant evaluation data that lacks control groups exists.**

The second source of depth indicator evidence was the Win-Win randomised control trial of three arms (control group, gender light and gender empowerment transformative interventions) of an FFBS project in six districts in Burundi. This is more likely to produce accurate data, but it is less likely to be relevant to 17 countries. The design of this evaluation (that tested a gender light approach that is similar to that used in many donor-funded projects against the CARE EKATA gender empowerment transformative approach) provided an opportunity to identify any *additional* gains that the gender transformative approach yielded for the depth indicators. We can consider this additional effect as a good approximation of the CARE contribution to the FAO FFS program if this was just in Burundi. As we are interested in scaling to 17 countries, we **combine** the evidence from Burundi with the evidence from the Pathways evaluation. **Comparing and combining multiple evidence sources is also a recommended approach.**

## BOX 3 - FID CASE STUDY DEPTH INDICATORS

Available FID MEL evidence (from the Samarthya program) was limited to “access to government services and subsidies”. This data is robust but closer to the intermediate outcome rather than outcome level that is ideal for CI. That is to say, we are very interested in further evidence on what happens when marginalized farming households access these services. For example, do households become more income or food secure as a result of access to services and subsidies? A potential answer to the lack of suitable impact data was to look for international evidence that could be transferred to the Nepal context. After all, Nepal is one of a number of countries implementing digital identification in agriculture and the experience of India (with [Aardhar](#)) may be thought relevant to Nepal. However, the differences in benefits offered, implementation and national context precluded transferring estimated benefits from India (or elsewhere) for this case study. Fortunately, CARE Nepal was subsequently able to identify the income gains made by households receiving improved access to services and subsidies – a very good CI depth indicator – although capturing just one dimension of program impact.

### Step 3: Determine Certainty

The third pillar of CI is the certainty we have that the results of a CARE program will be replicated as it is scaled by partners. Multiplying the breadth and depth indicator values by the probability of success (certainty) produces an expected catalytic impact value. In principle, there is uncertainty associated with the projections of breadth (reach) and each of the depth indicators.

The FID and FFS case studies illustrate aspects of the process for estimating the certainty associated with breadth and depth. CARE Nepal has systematically considered how the FID intervention will be scaled by government municipalities. This analysis (described in Annex 2) draws on CARE Nepal's experience in piloting and initial scaling the FID intervention under the Samarthyia project. Consequently, there is a **high** degree of certainty that scaling will occur. There is less certainty around the depth of impact. We argue there is a **fairly high** degree of certainty that recent past experience in increasing the proportion of marginalized farmers who access services and subsidies and the consequent increase in household incomes (the depth indicators) will be met as FID continues to be scaled by local governments.

For the FFS case study, no formal scaling model has been produced, although estimates of scaling by program area and country have been produced and reviewed by donors. These have informed the certainty estimates below. In the absence of a formal assessment of scaling (as for FID), we would have systematically analysed the FAO FFS theory of change to **identify major assumptions and risks** to scaling.

Program staff could then broadly quantify how certain we should be in using past evidence as a guide to the future. We know from good practice in Theory of Change design that implementors and partners delivering the intervention are the key sources of information on assumptions and risks. Participatory work with this group **has not been possible in the time available for this case study, and consequently, the assumptions below will need to be reviewed and revised by CARE in discussion with FAO.** Given CARE's past experience and involvement in supporting FFS, we assume a **fairly high** degree of certainty for reach (breadth) estimates.

How this process is turned into certainty projections for CI depends on the detail and quality of the available evidence. We consider three increasing levels of detail to capturing (un)certainty below. The first approach is used for the case studies (as this is the simplest and most robust), but examples using the third (most detailed) approach have been provided to CARE to demonstrate how this might work.

The first approach relies on broad categories as shown Figure 2 below<sup>9</sup>. The advantage of this approach is that it is relatively easy to find evidence that justifies projections being in a particular category if there are relatively few categories. The disadvantage is that CI estimates can only be stated with the associated certainty. For example, enabling women in three million households to gain a 20% increase in intra-household food security by 2030 *with fairly high* certainty. In this example, fairly high certainty was applied to both the breadth and depth projections.

**FIGURE 2 - CERTAINTY AS BROAD CATEGORIES**

	Certainty level		Certainty level
<b>Breadth</b>	High > 75%	<b>Depth</b>	High > 75%
	> 50% Fairly high <=75%		> 50% Fairly high <=75%
	> 25% Fairly low <= 50%		> 25% Fairly low <= 50%
	Low <25%		Low <25%

An alternative (illustrated in Figure 3) is to use the mid-point values for the certainty categories chosen. For example, enabling women in 1.9 million households to gain a 12.5% increase in intra-household food security by 2030. Again, in this example, fairly high certainty was applied to both breadth and depth. The advantage of this approach is that point estimates can be given for CI as a whole. The disadvantage is that the mid-point of the category is just a crude average and there may be evidence to support more accurate point estimates. Or it may be more reasonable to simply say there is "fairly high certainty".

Finally, if there is sufficient evidence to support a detailed assessment of the probability of breadth and depth projections being reached, point estimates can be used to multiply the breadth and depth indicators. For example, an in-depth scaling assessment model may produce an estimated value of 70% for households reached and discussion with sector experts may give a 60% estimate of the depth indicator being reached by 2030. This is illustrated in Figure 4 below. Following the same example above, we have CI projected as enabling women in 2.1 million households to gain a 12% increase in intra-household food security by 2030. The advantage of this approach is the potential additional accuracy in projections, but the disadvantage is the additional time, cost, and difficulty of finding reliable evidence to justify the point estimates chosen.

### Step 4: Verify

Independent assessment of assumptions, data and projections is required to build the credibility of CI projections. This need not require a time-consuming and resource-intensive process if the evidence sources, assumptions and projections are clearly set out and justified.

It is helpful to use specialists who know the sector and, ideally, the context of the proposed intervention. Ideally, independent, external reviewers would be used – providing a "critical friend" review to challenge and suggest potential ways of strengthening projections. Where resource constraints make this unrealistic, peer review can provide a reasonable substitute. Existing reviews of breadth or depth data used in CARE projections (e.g., by donors reviewing funding proposals) should be used where possible to provide additional sources of external review.

### Step 5: Review

CI estimates should be updated annually or biannually as new information on the adopted/scaled intervention becomes available. This should be used to check and revise the assumptions used for the projection of CI. There is a good opportunity for strategic learning when assumptions on projects expected to drive lasting impact need to be revised.

**FIGURE 3 - CERTAINTY AS BROAD CATEGORIES WITH MID-POINT MEAN VALUES**

<b>Breadth</b>	<b>Certainty level</b>	<b>Depth</b>	<b>Certainty level</b>
	High = 87.5%		High = 87.5%
	Fairly high = 62.5%		Fairly high = 62.5%
	Fairly low = 37.5%		Fairly low = 37.5%
	Low = 12.5%		Low = 12.5%

**FIGURE 4 - CERTAINTY POINT VALUE ESTIMATES**

<b>Breadth</b>	<b>Certainty level</b>	<b>Depth</b>	<b>Certainty level</b>
	Point estimates: 0% – 100% (e.g., 70%)		Point estimates: 0% – 100% (e.g., 60%)

# Projected Catalytic Impact

## CASE STUDY 1

### FAO's Integration of FFBS into FFS

Based on the case study estimates using the method above, we can expect the **catalytic impact of FFS on food security is to increase women's intra-household food access by 11% (over 2022 levels) by 2030 in 4.5 million households with a high degree of certainty.** We therefore expect to see the influence of CARE on intra-household food access in 4.5 million FFS households across 17 countries by 2030.

**The catalytic impact of FFS on women's empowerment** is projected to reach women farmers who make up 54% of all FFS farmers. It seems reasonable to argue that it will be easier to move from gender sensitive to responsive practice than from gender responsive to gender transformative practice. If so, there should be greater certainty of the WEI increasing from 2022 levels in the next few years, than in reaching 0.8 (an indicator of full empowerment) in later years. For this reason, the certainty factor for improved WEI is shown as "high" for 2022-2025 and then "fairly high" from 2025 – 2030. Hence, we estimate that the CARE WEI indicator score that captures five domains of empowerment increases from 0.6 in 2022 to 0.87 by 2030 for **2.4 million women with a fairly high level of certainty.** Moreover, the proportion of women who achieve a WEI score of at least 0.8 – an indicator of empowerment - rises from 27% to 60% by 2025 and 100% by 2030 for these **2.4 million women with a fairly high level of certainty.**

We make the case that CARE can claim a proportion of FFS income gains as CI, and these gains are forecast to be significant. FFS and CARE direct support to governments is expected to **raise the income of 10 million people by 2025 and 22.5 million by 2030 with a fairly high degree of certainty. Monthly incomes are projected to rise substantially in constant USD terms (relative to 2022) by 105% by 2025 and by 158% by 2027 with a fairly high degree of certainty.**

## CASE STUDY 2

### Scaling of the Farmer Identification Card Intervention by the Government of Nepal

CARE's contribution to FID will have a significant positive effect on an increasing proportion of marginalized and landless households in Nepal with access to agricultural services and subsidies and training. We can expect the **catalytic impact of FID to reach 1.4 million people in 300,000 households in Nepal by 2025 with a high degree of certainty.** This reflects uptake by municipalities with a significant number of landless and marginalized farmers targeted for FID.

Based on experience to date, we can expect that **54% of farmers reached will be women.** Across all households reached, 15% (2022) falling to 13% by 2025 will access key services for the marginalized (incentives/subsidies, insurance, minimum support price and access to finance). This percentage falls with projected scaling as municipalities with the highest proportion of marginalized farmers are reached first. A smaller proportion, approximately 4.4% of FID households, gain access to technical advisory or training services in agriculture and non-agricultural services. This proportion is expected to drop in 2022 as new local governments introduce FID cards but then returns to 4.4% by 2025.

**For the targeted, marginalized households (15% of all those with FID cards in 2022), evidence to date suggests that average annual household incomes increase by approximately 19%.** Projecting this out to 2025 suggests a 19% increase in annual incomes for the 185,000 people affected (13% of 1.4 million) with a **fairly high level of certainty.** That is to say, the increase in income for households reached is 19% relative to before they received FID cards and the number of households reached increases year on year.

# Lessons, Conclusions, and Recommendations

The method used for projecting CI is conceptually straightforward, building on an approach used by the Global Innovation Fund and by the CGIAR to estimate ex-ante project impact. For the projection of CARE CI:

$$\text{CI} = \text{Breadth} \times \text{Depth} \times \text{Certainty}$$

The two case studies show how uptake of CARE programs by partner organizations and governments is expected to generate catalytic impact. The projected CI is significant and there is good evidence that CARE's contribution will reduce multidimensional poverty and gender inequality.

The biggest challenge to applying the CI model was the **availability of evidence** to estimate the breadth and depth dimensions. It has proved **relatively easy to find evidence on breadth** – the expected reach of FFS and FID as they scale. This is where projections of impact (often in bidding for donor funding) have traditionally gone.

The innovative aspect of CI mainly relates to the “depth” component of CI. The indicators we use to estimate the depth dimension of impact have had to meet three conditions:

1. They need to capture *how much* changes – the **intensity of change** – for those reached (as distinct from just being reached by the program). This is outside the comfort zone of many practitioners, used to thinking of impact solely in terms of numbers reached (breadth).
2. The type of change has to be **relevant to CARE**. To do this, indicators should be drawn where possible from the CARE 30 global core indicators – many of which provide the measures of change we need.
3. Evidence has to be **available to support the projection**. In both case studies we used program evaluation evidence as past implementation. This evidence is a good starting point for projecting future impacts in similar countries. The difficulty has been in finding evidence that is likely to be accurate (using rigorous methods), and thus, meets the evaluation objective of “**internal validity**” and relevancy to new countries and contexts as FFS scales (the evaluation objective of “**external validity**”).

In summary, key lessons and recommendations from the case studies are:

1. **Update initial CI projections.** CI projections indicate the expected magnitude of impact resulting from adoption or scaling of solutions developed by CARE. This can help CARE identify likely big wins in terms of lasting impact. They are not intended to be used as statements of the impact of interventions that have taken place. CI estimates will also need to be updated annually or perhaps every one to two years as new information on the adopted/scaled intervention becomes available. This should be used to check and revise the assumptions used for the projection of CI. There is a good opportunity for strategic learning when assumptions on projects expected to drive lasting impact need to be revised.
2. **Invest in more case studies of CI projections involving a broader range of CI scenarios to facilitate refinement and uptake of the CI model across CARE.** Both case studies are examples of partners *scaling* approaches developed by CARE. Although CI will often be associated with scaling, there will also be examples where partners or other organisations adopt and continue CARE projects and programs without scaling up.
3. **Ensure scaling plans for CARE and with partners are quantified and justified.** The systematic assessment of scaling the numbers of households reached by CARE Nepal – using the CIMMYT PPP Lab scaling tool or similar – helped to generate more credible evidence for the breadth indicator in CI and should be used more widely.
4. **Invest in program evaluation to ensure relevant impact data is available to drive CI estimates.** CI estimates will be easier to make if the relevant data are collected at the time of program evaluation. This is much more likely to happen if the program reports on and evaluates a program against CARE's Global 30 impact indicators to capture the extent of change resulting from the intervention. Applying CARE's impact indicators (that capture the extent of change for targeted individuals) across multiple countries implementing FFBS strengthened the program evaluation but also was very helpful for the projection of CI.

5. **Make the best of secondary evidence** that is relevant to the intervention and scaling context by:
  - a. Drawing on evaluation evidence and the literature on this intervention in similar contexts (if the latter exists).
  - b. Combining evidence on multiple countries where possible to make projections for scaling to additional countries more reliable.
  - c. Strengthening evaluation evidence without control groups using data from public databases (e.g., from the World Bank and UN agencies) to give a better picture of what would have happened without the intervention. This allows better identification of the net effect of the intervention.
6. **Develop case studies in a way that facilitates third-party review and validation.** Validation by third parties is critical for ensuring that CI projections are externally valid. CARE teams producing CI estimates should set out evidence sources and assumptions in a way that facilitates independent review. This is critical for meaningful external validation of projected CI using limited time and resources.
7. **Evidence from past experience (from project evaluation) is a good basis for projecting future impact if this captures the challenges of scaling to the proposed locations.** Where data on the relevant indicators is not available, it may be possible to use evidence from similar programs in similar contexts. Whether this is practicable depends on the extent of impact evidence available for the particular intervention *and* how context-specific the intervention is. For example, Nepal is one of several countries implementing digital identification in agriculture<sup>10</sup> and the experience of India (with Aardhar<sup>11</sup>) may be thought relevant to Nepal. However, the differences in benefits offered, implementation and national context precluded transferring estimated benefits from India (or elsewhere) for this case study.
8. **Allocate time and human resources for conducting CI estimates.** This applies to country offices, with MEL teams able to plan CI into work schedules. If CI is to be used across a number of CARE programs, it is not realistic to rely on the good will of country teams that are already fully committed to other tasks to find a couple of additional days to support CI work by digging out relevant secondary data and to answer multiple questions as the external CI analyst turns this into a detailed spreadsheet model over a couple of weeks. Working virtually is low cost and resource efficient but it is likely to be less effective than working directly with a country MEL team to produce CI estimates from their data – particularly if the country team is expected to take over the model in future.
9. **Invest in new or additional MEAL capacities for CARE, as estimating CI is not routine MEL and therefore requires.** The proposed CI method draws on skills that MEL teams require for evaluation, but a relatively small amount of training and capacity building is likely to be required, depending on the mix of skills in the MEL team. Economists, for example, are likely to be familiar with the techniques used for estimating CI.
10. **Incorporate participatory discussion with staff and partners involved in delivering the program when conducting CI estimates** to quantify the certainty associated with the breadth and depth projections. These are likely to be most effective if conducted face-to-face over the course of three to five days.
11. **Partner with organizations ‘taking over’ and scaling CARE interventions, to ensure that relevant data are captured, tracked, and analysed.** This would allow improved CI projections to be periodically produced with updated breadth, depth, and certainty estimates.

## Endnotes

- 1 Meaning measurement by a third party using a clear, transparent, and robust methodology.
- 2 [https://www.care-international.org/files/files/Vision\\_2030.pdf](https://www.care-international.org/files/files/Vision_2030.pdf)
- 3 We also engaged with Microvest as a potential case study, but the owners of the business did not have suitable impact data for CI.
- 4 Figures provided by CARE, October 2022
- 5 Evaluating System-level change and impact: Findings from the evaluation of the SAMARTHYA project in Nepal, CARE Nepal, October 2022, <https://careevaluations.org/evaluation/evaluating-system-level-change-and-impact-findings-from-the-evaluation-of-the-samarthya-project-in-nepal/>
- 6 <https://www.globalinnovation.fund/practical-impact-assessment/>
- 7 An application of this method to one group of projects can be found at: [https://www.researchgate.net/publication/354901590\\_Estimation\\_of\\_Projected\\_Benefits\\_for\\_GI\\_Initiatives\\_rationale\\_for\\_the\\_joint\\_approach\\_assumptions\\_and\\_data\\_sources](https://www.researchgate.net/publication/354901590_Estimation_of_Projected_Benefits_for_GI_Initiatives_rationale_for_the_joint_approach_assumptions_and_data_sources)
- 8 <https://www.careemergencytoolkit.org/wp-content/uploads/2022/08/CARE-2030-Global-Indicators-for-measuring-change.pdf>
- 9 Quartiles are shown to illustrate broad categories but fewer or more categories can be used.
- 10 A World Bank 2018 review on this topic reports on the experience in India, Nigeria, Estonia, Malaysia and Uruguay - <https://documents1.worldbank.org/curated/en/655951545382527665/pdf/The-Role-of-Digital-Identification-in-Agriculture-Emerging-Applications.pdf>
- 11 Shirin Madon, C.R. Ranjini & R.K. Anantha Krishnan (2022) Aadhaar and social assistance programming: local bureaucracies as critical intermediary, Information Technology for Development, 28:4, 705-720, DOI: [10.1080/02681102.2021.2021130](https://doi.org/10.1080/02681102.2021.2021130)



Laura Noel / CARE

## CASE STUDY ONE

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# FAO's Scaling of CARE's Farmer Field and Business School Approach Globally

# The Catalytic Impact of FAO's Integration of CARE's Farmer Field and Business School Approach into their Farmer Field Schools Globally

## A Case Study

### Introduction

CARE defines catalytic impact (CI) as the “sustainable impact through the independent adoption or ownership of solutions by governments, donors, the private sector, or civil society that originated with CARE and/or its partners”. This concept is presented in the context of the CARE 2030 Vision<sup>1</sup> that focuses on lasting impact at scale delivered across six impact areas that drive progress towards ending poverty. This report presents a case study applying the proposed method with the FAO Farmers' Field School (FFS) uptake of the CARE Farmers' Field and Business School (FFBS) model. It is the first of two case studies.

## FAO's Integration of FFBS into FFS

CARE's proven, women-focused **Farmers' Field and Business School (FFBS)** approach helps small-scale farmers build the skills they need to increase production, improve resilience, adapt to climate change, diversify diets, and boost nutrition (Farmer Field Business School Innovation Brief, CARE 2021). CARE has implemented FFBS in 28 projects across 17 countries. Since 2014, FFBS has directly improved the lives of more than 500,000 households or 2.5 million farmers and their families<sup>2</sup>. It also transforms the status and recognition of women by providing the support they require to be successful farmers, businesspeople, leaders, and agents of change.

Building on CARE's FFBS model, in 2022, the Food and Agriculture Organization (FAO) of the United Nations committed to ensuring that the 3,000 farmer field schools (FFS) they oversee across the world will promote gender transformative approaches. To achieve gender transformation, CARE partners with communities to challenge and transform inequitable gender norms that restrict women's and girls' ability to achieve their best possible health and lives. CARE will support FAO to ensure their FFS approaches are gender transformative.

Relatedly, with CARE's technical support, FAO also agreed to lead the [Making Food Systems Work for Women and Girls Coalition](#) that CARE launched during the UN Food Systems Summit (UNFSS) in Fall 2021. The goal of the coalition is to "ensure that women and men, boys and girls, and other groups have equitable roles, responsibilities, opportunities, and choices, and that countries, communities

and households, individuals are equipped to participate in local, global and regional food systems activities in a meaningful, dignified, and equitable way." The coalition will do this through a focus on 4 critical levers of gender equality and the empowerment of women and girls:

- 1) Expanding women's agency
- 2) Increasing access and rights to resources, services and opportunities with three priority actions
- 3) Eliminating systemic institutional and legislative biases against women
- 4) Shifting harmful and constraining gender and social norms.

This coalition matters because it is the mechanism through which key pieces of global agricultural guidance will get implemented at the national level.

**The FAO FFS scaling of CARE's FFBS work is considered as catalytic impact because FAO is using the CARE FFBS innovation in 3,000 farmer field schools that FAO has developed with national government and NGO partners.** CARE is therefore indirectly contributing to the broader impact of FAO's implementation of FFS. In this case, CARE is also providing limited direct support to FAO FFS on gender from 2022 – 2027 and some support to government partners. Hence some of the overall impact projected for this case study will be a direct contribution from CARE rather than simply CI. In practice, it is not possible to separate this out, and therefore, projected CI captures both direct and indirect CARE contributions.

# FFS and projected catalytic impact

## A summary of projected catalytic impact

Based on the estimates presented above, we can expect that the **catalytic impact of FFS on food security is to increase women's intra-household food access by 11% (over 2022 levels) by 2030 in 4.5 million households with a high degree of certainty**. We therefore expect to see the influence of CARE on intra-household food access in 4.5 million FFS households across 17 countries by 2030.

**The catalytic impact of FFS on women's empowerment** is projected to reach women farmers who make up 54% of all FFS farmers. This is estimated to increase the CARE WEI indicator score that captures five domains of empowerment from 0.6 in 2022 to 0.87 by 2030 for **2.4 million women with a fairly high level of certainty**. Moreover, the proportion of women who achieve a WEI score of at least 0.8 – an indicator of empowerment – rises from 27% to 60% by 2025 and 100% by 2030 for these **2.4 million women with a fairly high level of certainty**.

We make the case that CARE can claim a proportion of FFS income gains as CI, and these gains are forecast to be significant. FFS and CARE direct support to governments is expected to **raise the income of 10 million people by 2025 and 22.5 million by 2030 with a high degree of certainty**. **Monthly incomes are projected to rise substantially in constant USD terms (relative to 2022) by 105% by 2025 and by 158% by 2027 with a high degree of certainty**.

### Overview of methods used

The starting point for any CI projection is to set out the impact pathways that make the link between what CARE did and the impacts we want to measure, including providing clear definitions of those impacts and their alignment to CARE's organizational measurement framework/impact indicators. Where possible, an existing theory of change should be used as this sets out the steps needed to get to projected impact and associated assumptions. This is particularly helpful in assessing the probability of achieving impact projections (discussed further below).

In this case study, we look forwards using the FAO FFS projections for who will be reached. We also look back to the actual experience of CARE with FFBS to understand what kind of difference we can expect to the lives of individuals as a result of the intervention. The key measures of this difference to individuals (the *depth* of impact discussed below) are taken from CARE's impact indicators used in the evaluation of FFBS. These relate to per capita household income, food security (women's intra-household food access) and women's empowerment (the CARE WEI index).

Turning now to how this evidence is used to project CI, the model of projected CI used here has three key components<sup>3</sup>:



We define each of these components as follows.

### Breadth

numbers of targeted individuals reached

### Depth

the difference made to each targeted individual using relevant CARE indicators

### Certainty

the estimated probability of achieving projections on breadth and depth

The sources of data, assumptions and methods of projecting values for each of these components play a critical role in estimating values of catalytic impact. For this reason, these are set out transparently below and an annotated spreadsheet model that can be used by CARE going forward has also been produced.

There are two options in this model for comparing income, food security and gender dimensions of impact. The first, and the one used in this case study, is to treat each impact with **equal importance**. There is no attempt to compare the *relative* importance of improved gender indicators with improved income or food security. This means that CARE's CI will be presented as the impact on income, the impact on food security and the impact on gender outcomes – using CARE indicators. This approach can capture synergies between transformational improvements in gender equality and household incomes, for example, as the indicator values for gender equality and incomes will both be higher.

The second option is to compare the **relative importance** of income, food security and gender impacts by setting boundaries for levels of impact (transformational, significant, perceptible etc.). Again, synergies between indicators should be captured. This relative approach is used by the Global Innovation Fund (GIF) to estimate practical impact across income, health, and education<sup>4</sup>. Each impact is stated in terms of economic value (USD), allowing direct comparison

across each of these dimensions of impact. GIF find this useful when attempting to compare different proposed investments with different strengths and weaknesses in terms of income, health, and education.

This is **not** the approach taken for estimating the CI of FFS on incomes, food security and gender empowerment for two reasons. Firstly, because there is no agreed way of expressing all these dimensions of impact in comparable monetary values (as used by GIF). Consequently, CARE would need to decide what levels of change constitute transformational change for food security relative to transformational change for multidimensional gender empowerment. Yet, as improving gender equality is central to CARE's work and a driver of sustainable development, gender empowerment is a critical objective by itself. Hence it would not be realistic for CARE to identify a program as having transformative impact if it delivered large improvements for income and food security but very little empowerment. Making these kinds of decisions would certainly be a subjective choice. Secondly, other case studies may (and do) have different dimensions of impact and so there is no guarantee that different interventions can be compared using the same scale. However, if CARE did decide to use the second option (relative importance) in future and provides the boundary thresholds for each indicator, it would be relatively straightforward to re-state the CI projections using these thresholds.

## Projected Breadth – Individuals Reached

CARE's existing experience with FFBS from 28 projects has reached approximately 500,000 farmers as of 2022 (in 17 countries). Based on evidence from these 28 projects, FAO and CARE estimate that FAO and CARE scaling with national governments across 18 countries will reach 3,000,000 farmers and 15,000,000 individuals in six years, with CARE support to FAO from 2022 - 2027. This expansion in reach is based on Table 1.

There are several factors that will determine progress towards the 15,000,000 people (3,000,000 farmers) reach

target. Some scaling initiatives (such as integration into national government policies are expected to take some years) whereas country programs that adopt first may be the most enthusiastic and scale faster than later adopters. For these reasons, and after consulting with an FFBS specialist, we **assume** growth in reach is linear, on average globally. As government adoption is a key objective for FFS, we also **assume** that **the same rate of growth is maintained by FAO from 2028 – 2030**. This is shown in Figure 1 and Table 2.

**TABLE 1 - CARE ESTIMATES FOR FFBS EXPANSION UNDER FFS**

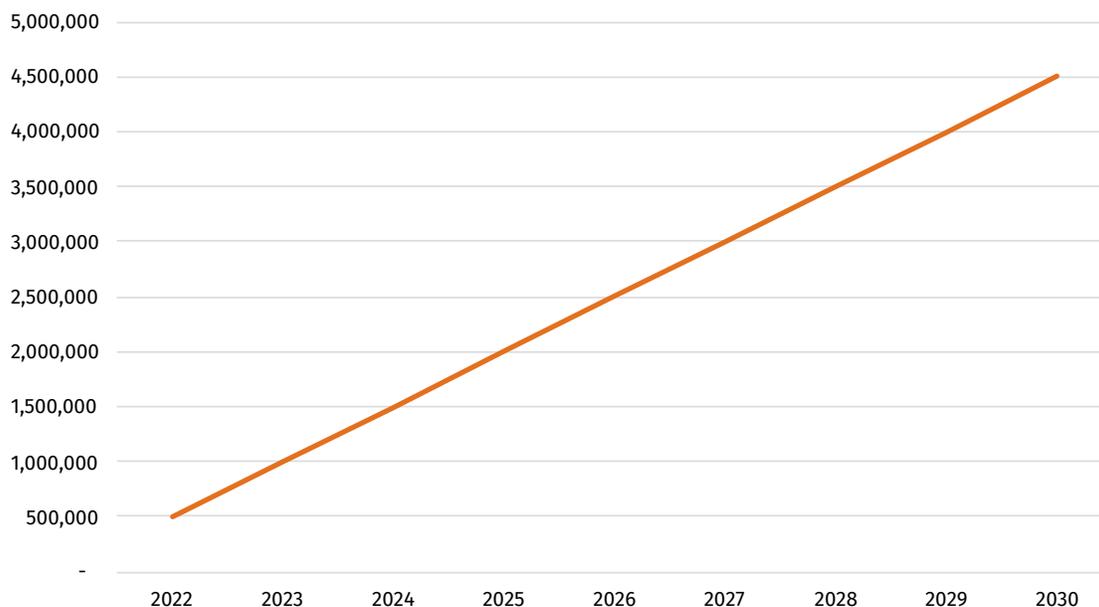
Country	Expanding FFBS programing to new countries	Deepening FFBS Programing	Engaging FFBS farmers with global markets	Promoting the adoption by nat'l governments	Totals
Ethiopia		800,000		2,000,000	2,800,000
Kenya		100,000	50,000		150,000
Uganda		200,000		600,000	500,000
Somalia	500,000				500,000
Zambia	50,000				50,000
Burundi		200,000		1,000,000	1,200,000
Tanzania		200,000		300,000	500,000
Madagascar	200,000				200,000
Nigeria	450,000				450,000
Ghana		300,000			300,000
India		1,400,000		4,500,000	5,900,000
Nepal	450,000				450,000
Jordan	100,000				100,000
Turkey	50,000				50,000
Palestine	50,000				50,000
Haiti	250,000				250,000
Guatemala					650,000
Honduras		500,000	150,000		600,000
<b>Totals</b>	<b>2,100,000</b>	<b>500,000</b>	<b>100,000</b>	<b>8,400,000</b>	<b>15,000,000</b>

Source: Annex 1, CARE proposal to Sall Family Foundation, 2022

Other key assumptions in Table 2 below relate to the average family size – assumed to remain at 5 in CARE projections for FFS - and the % of farmers who are women. Evidence from the CARE FFBS work across 17 countries is that 54% of farmers reached were women. There is no guarantee this

will be maintained as the intervention is scaled by FFS and FAO have not committed to reaching a specific proportion of women. As the 54% figure is based on actual implementation across six countries, we take this as the base case and consider alternatives using sensitivity tests.

**FIGURE 1 - FFS PROJECTED REACH (FARMERS AND HOUSEHOLDS)**



**TABLE 2 - FFS PROJECTED REACH AND KEY ASSUMPTIONS**

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Projected reach (farmers and Households)	500,000	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000	3,500,000	4,000,000	4,500,000
Projected reach (people in HH)	2,500,000	5,000,000	7,500,000	10,000,000	12,500,000	15,000,000	17,500,000	20,000,000	22,500,000
% of farmers who are women	54%								
Number of female farmers	270,000	540,000	810,000	1,080,000	1,350,000	1,620,000	1,890,000	2,160,000	2,430,000
<b>Certainty</b>	<b>Very High</b>	<b>Fairly High</b>	<b>Fairly High</b>	<b>Fairly High</b>					

<b>Key assumptions/data sources</b>	
Average family size (current)	5
Existing FFBS reach	500,000
<b>Annual growth rate (linear)</b>	<b>2,500,000</b>

# Projected Depth –

## Income, Food Security & Women’s Economic Empowerment

The indicators we use to estimate the depth dimension of impact need to meet three conditions:

1. They need to capture **how much** changes – the intensity of change - for those reached (as distinct from just being reached by the program)
2. The type of change must be **relevant to CARE** (drawn from or closely related to the CARE 30 global core indicators that often provide ordinal measures of change).
3. **Evidence must be available** to support the projection.

In this case study, we **use data on income, food security and gender empowerment indicators** that is **drawn from the CARE Pathways final evaluation of FFBS in districts of five implementing countries** (Ghana, India, Malawi, Mali and Tanzania). Evidence is drawn from the global evaluation<sup>5</sup> and country-specific evaluations noted below. This five-year program (and the associated 2016 final evaluation) funded by the Bill and Melinda Gates Foundation has generated primary survey data that is potentially a very useful input for the depth calculation. It covers a range of countries in sub-Saharan Africa and India that makes it more reasonable for projecting likely future impact for 17 FFS countries than evidence taken from one country alone. Nonetheless, the absence of a control group makes it very difficult to identify impacts from the project separately from external factors. Further, this data is six years old. This is a major limitation for projecting CI in this case, as the objective is to identify impacts that CARE can **credibly claim** to have contributed to in a meaningful way and into the future.

To illustrate the issue, consider using the evaluation reported project effects on per capita household income. There have been many macroeconomic and climatic changes over the CARE project implementation period in Ghana and Malawi (the two countries with the most complete income data) and these external factors may explain the observed changes in income.

For CI projections based past program or project data to be credible it is essential to identify program impacts that

are distinct from changes that would happen anyway. This presents a challenge when the program evaluation **did not use an experimental or quasi-experimental design**. However, we can interrogate this data to see whether there are credible arguments to **support using the data “as is”** and whether **other data sources can be used to triangulate** or improve the reliability of the evaluation data for projecting CI. Organizations such as the World Bank, FAO and other UN agencies have country level data that can be used to help understand what changes have occurred to agriculture and incomes in the country, independent of the project. This data must be applied thoughtfully as FAO scaling efforts may be focused in specific, subnational agro-ecological zones, whereas available data may only be at the national level.

A **second source of evidence** that we draw on for projected impact of FFS on income, food security and gender empowerment indicators **is an experimental evaluation** (randomised control trial) of FFBS “Win-Win” in six districts in Burundi, 2016-2019<sup>6</sup>. This gives us a much more accurate estimate of the change in income, food security and gender empowerment that results from participation in FFBS. However, data come from a specific country context and therefore it is more difficult to extrapolate to the proposed 17 FFS countries. To help strengthen the case for the assumptions we use for the chosen breadth indicators, we **compare the estimates from the Burundi RCT with those from the Pathways estimates** adapted to control for external changes where possible.

### DEPTH INDICATOR 1: HOUSEHOLD INCOME

Per capita household income was chosen as the income indicator as it is possible to generate an ex-post pseudo control group for this indicator. In doing this, note that the FFBS program focussed on rural incomes, of which agricultural incomes were particularly important. The UN Department of Economic and Social Affairs (UN DESA) 2021 report on reconsidering rural development also wrestled with the question of how to identify rural per capita household incomes and opted to use per capita agriculture value added (for the agricultural sector) as a proxy for per capita rural income<sup>7</sup>. **The accuracy of this proxy will**

**depend to the extent to which project communities rely on agriculture as an income source.** It seems very likely that FFS communities will rely heavily on agriculture, making this a good proxy.

The CARE Ghana (2016) and CARE Malawi (2019) end of project evaluation reports provide the data for the chosen indicator of per capita household income. The indicator values in USD 2015 prices together with proxy indicator values from the World Bank<sup>8 9</sup> are shown in Table 3 below. Net effects are estimated for both countries, with the increase for Ghana being 152% over three years and for Malawi being 158% over six years. *We therefore start with an estimate of 158% achieved by linear growth over six years with no further increase from 2028-2030.* Call this step 1.

The key assumption here is that the CARE FFBS model for increasing farmer incomes is a direct contributor to the FFS model. That is to say that FFS without the CARE gender focus would not increase household incomes as much. The Burundi Win-Win evaluation provides some evidence to support this. This evaluation found that the gender transformative approach (that will be mainstreamed in FFS) generated significantly greater economic well-being than a “gender-light” intervention and relative to the control group. As livestock incomes were affected by a widespread plague, agricultural incomes fell in all groups. However, incomes from rice sales appear more comparable to the

Pathways results. These show an increase of 58.6 percent compared to 28.9 percent in Gender Light and only 8 percent in Control groups. *Given this evidence, we estimate the ratio of gender transformative to gender light income increase above (28.9/58.6 = 49.3%).* This is step 2.

We make the argument that some of the increase in per capita income increase projected for FFS would be obtained by FAO using a gender light approach. The increase that is due to the gender transformative approach is the increase in projected household income (step 1) multiplied by the ratio of increased household income in gender transformative relative to gender light households found in the Win-Win evaluation (step 2). *The lower adjusted value that results from step 1 x step 2 we call step 3.*

The projection of FFS impact on per capita income (see Table 3 below) provides the data for step 1. The results of step 1 are shown in Table 4. The shaded cells in Table 5 (and in the accompanying spreadsheet) indicate that the author assumption of no further increase in income after the life of the program in year 7 – 10. It has not been possible to get external expert opinion on this in the time available and hence the most conservative assumption has been chosen. This is subject to modification if data or expert views support this. The results of step 2 and step 3 are shown in Table 5. This shows an increase of 158% in per capita income in constant prices by 2028 (year 6).

**TABLE 3 - PER CAPITA HOUSEHOLD INCOME DATA (THE BASIS FOR CALCULATING STEP 1)**

Ghana (2015 USD constant prices)					
	2012	2015		2012-15	2012-18
				% change	% change
Household mean per capita monthly income	3.41	9.9		190%	
<b>Agriculture, forestry, and fishing, value added per worker</b>	1862.9	2571.95		38%	
Net (intervention - “control”) change in mean per capita monthly HH income				152%	NA
Malawi (2015 USD constant prices)					
	2012	2015	2018	% change	% change
Household mean per capita monthly income (male HHH)	11.47	20.8	29.1		154%
Household mean per capita monthly income (All HHH)		15.67	29.09	86%	
<b>Agriculture, forestry, and fishing, value added per worker</b>	334.28	338.7	319.39	-6%	-4%
Net (intervention - “control”) change in mean per capita monthly HH income				91%	158%

**TABLE 4 - PROJECTIONS FOR PER CAPITA INCOME INCREASE - STEP 1**

<b>Step 1</b>	<b>YEAR</b>								
<b>Projection</b> (set at Malawi rate over 6 years as similar to Ghana over 3 years)	1	2	3	4	5	6	7	8	9
	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Household (HH) mean per capita monthly income (% increase)</b>	0%	53%	79%	105%	132%	158%	158%	158%	158%

**TABLE 5 - PROJECTED INCREASE IN ADJUSTED PER CAPITA MONTHLY INCOME – STEPS 2 & 3**

<b>Step 2</b>	
Adjustment for gender transformative impact on income (from Burundi WinWin evaluation):	
a) % increase in revenue from household rice sales - gender transformative intervention	58.6
b) % increase in revenue from household rice sales - gender light intervention	28.9
Implied adjustment factor b)/a)	49.3%

<b>Step 3 = Step 1 x Step 2</b>	<b>YEAR</b>								
<b>Projection</b>	1	2	3	4	5	6	7	8	9
	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>Household (HH) mean per capita monthly income (% increase) -Step 1</b>	0%	53%	79%	105%	132%	158%	158%	158%	158%
<b>Household (HH) mean per capita monthly income (% increase) - Step 3 = Step 1 x Step 2</b>	0%	26%	39%	52%	65%	78%	78%	78%	78%

## DEPTH INDICATOR 2: FOOD SECURITY (WOMEN'S INTRA-HOUSEHOLD FOOD ACCESS)

Food security indicators reported by the Pathways final evaluation are also likely to be affected by the broader macroeconomic, weather and climate environment. However, one project indicator appears more likely to reflect project specific impacts and this is the measure of **women's intra-household food access**<sup>10</sup>. The literature on the determinants of intra-household food allocation recognises the role of changes in economic circumstances and food availability as well as the significance of social norms and customs as determinants<sup>11</sup>. To the extent that the latter influences intra-household access, it seems reasonable to assume few if any changes would be seen in a notional control group. That is because social and cultural norms typically change slowly<sup>12</sup>. Clearly, evidence from an actual control group would be far better, but this food security indicator appears less subject to bias than the others reported by the evaluation. The data for all five Pathways countries is shown in Table 6 below<sup>13</sup>.

The mean of the effect across Ghana (-5%), Malawi (46%), India (36%), Mali (-5%) and Tanzania (-21%) is taken as the basis for the projection shown in Table 5. *This gives an increase of 4.8% over three years.* There is clearly a great deal of variation between countries. If the aim was to project FFS for one country, this variation would make it risky to assume this average applied to the specific country. However, we are looking at FFS adoption in 17 countries that are similar to the countries we have past evidence for. *Hence, it is assumed the trend growth (of 4.8% over three years) is maintained 2026 – 2030* – an assumption that can, of course, be modified if additional data or expert opinion suggests an alternative.

**TABLE 6 - WOMEN'S INTRA-HOUSEHOLD FOOD ACCESS**

	2012	2015	2012-2015 % Change
<b>Ghana</b>			
Mean women's intra-household food access (All HH)	4.2	4.4	-5%
<b>Malawi</b>			
Mean women's intra-household food access (All HH)	5.2	5.7	10%
<b>India</b>			
Mean women's intra-household food access (All HH)	3.9	5.3	36%
<b>Mali</b>			
Mean women's intra-household food access (All HH)	6.1	5.8	-5%
<b>Tanzania</b>			
Mean women's intra-household food access (All HH)	7	5.5	-21%

### DEPTH INDICATOR 3: WOMEN'S EMPOWERMENT

The CARE WEI indicator is based on the women's empowerment in agriculture index (WEAI)<sup>14</sup> with the addition of some dimensions of empowerment and some changes to the weighting of sub-indicators<sup>15</sup>. For this index, a score of 0.80 or more indicates empowerment<sup>16</sup>.

As with women's intra-household food access, many of the WEI components depend on social and cultural norms that would not change rapidly without active community-level intervention or policy change. However, there is considerable NGO work on gender equality in Ghana and Malawi and there have also been policy changes likely to impact WEI. For this reason, it seems important to try and identify an ex-post pseudo control group estimate for this indicator. To do this, we have used one minus the UN Gender Inequality Index (GII) - a composite index with health, empowerment and labour market dimensions<sup>17</sup>. This, of course, is a far from perfect match with the WEI but it does generally follow the same trend, with much more progress in Ghana 2012-2015 than in Malawi, for example<sup>18</sup>.

The (1-GII) measure is used to create two "net" WEI indicators:

1. Net WEI% change = WEI% - (1-GII)%
2. Net 0.80WEI% change = (WEI0.80% x (WEI% - (1-GII)%)/ WEI

The Burundi Win-Win evaluation uses a slightly different measure of WEI, they refer to as Pro-WEAI, that reflects the original women's empowerment in agriculture index (WEAI). The threshold for empowerment is 0.75 in this evaluation. It seems reasonable to argue that the FAO FFS without CARE influence on gender empowerment would include standard gender sensitive interventions. This would be similar to the "gender light" intervention considered by the Burundi Win-Win evaluation. The role of CARE is to help FFS incorporate the gender transformative approach developed by FFBS. Hence, the projected additional impact on WEAI is the difference found by the evaluation on groups receiving the gender transformative and gender light interventions. These are shown in Table 8.

The effect of adding the pseudo-control group is to reduce the estimated increase in the Ghana by nearly 30% (4/13) and to have little or no effect in Malawi, Mali and Tanzania. In India, the GII improved more than the WEI 2012-15 – producing a negative net project impact. *Overall, there is a strong upward trend for both gender indicators over the period.* In Burundi, there is a significant additional gain in WEAI scores and % of women reaching the empowerment threshold as a result of the gender transformative approach. This slightly increases the average increase in the indicators when Burundi is added to the other five countries.

**TABLE 7 - PROJECTED INCREASE IN WOMEN'S' INTRA HOUSEHOLD FOOD ACCESS**

Projection - set at mean across countries*	2022	2023	2024	2025	2026	2027	2028	2029	2030
Mean women's intra-household food access (All HH)	0.0%	2.4%	3.6%	4.8%	6%	7%	8%	10%	11%

\* All countries over 3 years except Malawi (6 years)

**TABLE 8 - GENDER EMPOWERMENT INDICES**

	2012	2015	2012-15 % change	2015-21 % Change	2021	2022
<b>Ghana</b>						
Women's 5 domains of empowerment - mean score for all women in sample	0.52	0.59	13%		<b>0.62</b>	
% of women achieving empowerment (.80 or greater)	8%	16%	113%		<b>0.17</b>	
1- Gender inequality index	0.429	0.446	4%	6%	0.471	
"Net" Women's 5 domains of empowerment - mean score for all women	0.52	0.57	9%		<b>0.60</b>	<b>0.61</b>
"Net" % of women achieving empowerment (.80 or greater)	8%	14%	80%		<b>0.15</b>	<b>0.15</b>
<b>Malawi</b>						
Women's 5 domains of empowerment - mean score for all women in sample	0.6	0.66	10%		<b>0.71</b>	
% of women achieving empowerment (.80 or greater)	21%	29%	38%		<b>0.31</b>	
1- Gender inequality index	0.415	0.415	0%	7%	0.446	
"Net" Women's 5 domains of empowerment - mean score for all women	0.6	0.66	10%		<b>0.71</b>	<b>0.72</b>
"Net" % of women achieving empowerment (.80 or greater)	21%	29%	38%		<b>0.31</b>	<b>0.32</b>
<b>India</b>						
Women's 5 domains of empowerment - mean score for all women in sample	0.48	0.52	8%		<b>0.56</b>	
% of women achieving empowerment (.80 or greater)	4%	11%	175%		<b>0.12</b>	
1- Gender inequality index	0.43%	0.48%	11%	7%	0.51	
"Net" Women's 5 domains of empowerment - mean score for all women	0.48	0.47	-2%		<b>0.5</b>	<b>0.51</b>
"Net" % of women achieving empowerment (.80 or greater)	4%	6%	50%		<b>0.06</b>	<b>0.07</b>
<b>Mali</b>						
Women's 5 domains of empowerment - mean score for all women in sample	0.31	0.45	45%		<b>0.51</b>	
% of women achieving empowerment (.80 or greater)	3%	6%	140%		<b>0.07</b>	
1- Gender inequality index	0.331	0.341	3%	13%	0.387	
"Net" Women's 5 domains of empowerment - mean score for all women	0.31	0.45	42%		<b>0.51</b>	<b>0.52</b>
"Net" % of women achieving empowerment (.80 or greater)	3%	6%	131%		<b>0.07</b>	<b>0.07</b>
<b>Tanzania</b>						
Women's 5 domains of empowerment - mean score for all women in sample	0.59	0.71	20%		<b>0.72</b>	
% of women achieving empowerment (.80 or greater)	20%	43%	113%		<b>0.43</b>	
1- Gender inequality index	0.43	0.43	0%	2%	0.44	
"Net" Women's 5 domains of empowerment - mean score for all women	0.59	0.71	20%		<b>0.72</b>	<b>0.73</b>
"Net" % of women achieving empowerment (.80 or greater)	20%	43%	113%		<b>0.43</b>	<b>0.44</b>
<b>Burundi (Win-Win evaluation)</b>						
	2016	2019	% change	2019-21		
Pro-WEIA score - control	0.41	0.44	7%			
Pro-WEIA score - gender light intervention	0.39	0.52	33%			
Pro-WEIA score - gender empowerment transformative intervention	0.34	0.65	91%			
% women achieving empowerment - control (>=0.75)	27%	34%	26%			
% women achieving empowerment - gender light (>=0.75)	34%	53%	56%			
% women achieving empowerment - gender transformative (>=0.75)	22%	68%	209%			
Pro-WEIA score (GT - GL)			58%			
Pro-WEIA score (GT - GL)	0.34	0.54			<b>0.54</b>	<b>0.54</b>
% women achieving empowerment (GT - GL) (>=0.75)	22%	56%	153%		<b>0.56</b>	<b>0.56</b>
1- Gender inequality index		0.493		0.4	0.4995	

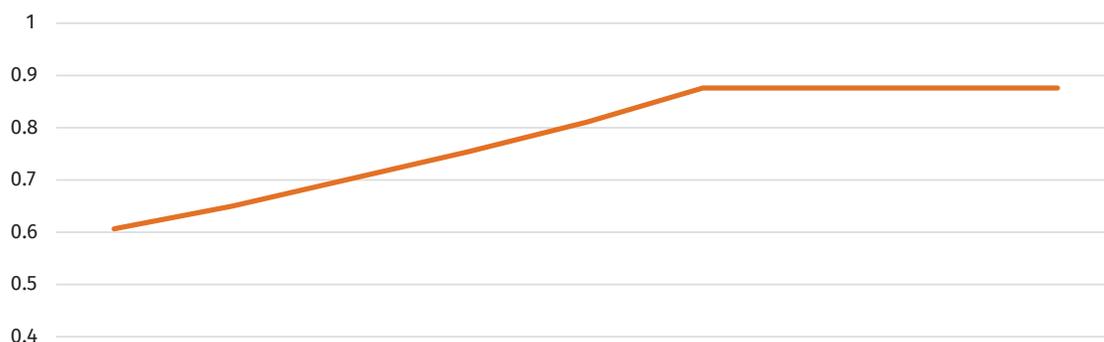
Unlike the per capita household income and women’s intra-household food access indicators, the gender indicators are expressed as point values each year rather than a percentage increase. This requires us to identify a 2022 starting value for each indicator, as the CARE Pathways evaluations only provide values for 2015 (and the Win-Win evaluation for 2019). This has been done based on two alternative assumptions in the spreadsheet with the second assumption below used to produce the results in Table 9:

1. No improvement post Pathways or Win-Win projects (2015 starting point and projected improvements in line with the average of Table 8); and

2. Post Pathways project, the average WEI increased in line with the GII 2015-22 (for Pathways countries) and 2019-22 for Burundi and then projected improvements in line with the average of Table 8. **This leads to WEI projected to reach 0.87 in 2027 (and hence 100% of women reaching the 0.80 threshold).** This is far higher than the 0.60 average starting point in 2022. We therefore assume no further increase 2028-2030. *This is the base case assumption.*

The projections for the base case assumption are illustrated in Figure 2 below.

**FIGURE 2 - PROJECTED EMPOWERMENT INDICATORS FOR THE BASE CASE ASSUMPTION**



**TABLE 9 - GENDER INDICATOR PROJECTIONS**

Projection (Average across 6 countries)									
	2022	2023	2024	2025	2026	2027	2028	2029	2030
“Net” Women’s 5 domains of empowerment - mean WEI score [2015 starting point + 2019 for Burundi]	0.57	0.61	0.66	0.71	0.76	0.82	0.82	0.82	0.82
“Net” % of women achieving empowerment (WEI >=0.80) [2015 starting point + 2019 for Burundi]	26%	34%	44%	58%	76%	100%	100%	100%	100%
“Net” Women’s 5 domains of empowerment - mean WEI score [(1-GII) trend] - base case	0.60	0.65	0.70	0.75	0.81	0.87	0.87	0.87	0.87
“Net” % of women achieving empowerment (WEI >=0.80 or 0.75 for Burundi) [(1-(GII) trend] - base case	27%	35%	46%	60%	79%	100%	100%	100%	100%

# Certainty

The third pillar of CI is the certainty we have that the results of a CARE program will be replicated and replicated with sufficient fidelity as it is scaled by partners. For the FFS case study, no formal scaling model has been produced, although estimates of scaling by program area and country have been produced and reviewed by donors. These have informed the certainty estimates below. In the absence of a formal assessment of scaling (as for FID), we would have systematically analysed the FAO FFS theory of change to **identify major assumptions and risks** to scaling. Program staff could then broadly quantify how certain we should be in using past evidence as a guide to the future. We know from good practice in Theory of Change design that implementors and partners delivering the intervention are the key sources of information on assumptions and risks. Participatory work with this group **has not been possible in the time available for this case study, and consequently, the assumptions below will need to be reviewed and revised by CARE in discussion with FAO.**

The FAO FFS program is scheduled to run to 2027 and, given CARE’s past experience and involvement in supporting FFS, a **fairly high** degree of certainty is assumed for reach (breadth) estimates until then. Post 2027, government partners are expected to continue with FFS but there is arguably less certainty over who will be reached. Despite this, the extensive FAO and CARE experience in working with government partners suggests we retain a **fairly high** certainty for 2028 – 2030.

How this process is turned into certainty projections for CI depends on the detail and quality of the available evidence. As CARE has not undertaken a detailed scaling assessment for FFS and we have not undertaken an assessment with FAO of their theory of change, we rely on broad categories of certainty as shown in Figure 3 below.

**FIGURE 3 - CERTAINTY AS BROAD CATEGORIES**

Certainty level		Certainty level	
<b>Breadth</b>	High > 75%	<b>Depth</b>	High > 75%
	> 50% Fairly high <=75%		> 50% Fairly high <=75%
	> 25% Fairly low <= 50%		> 25% Fairly low <= 50%
	Low <25%		Low <25%

**TABLE 10 – BREADTH AND DEPTH INDICATORS AND CERTAINTY ASSUMPTIONS**

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Projected reach (farmers and Households)	500,000	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000	3,500,000	4,000,000	4,500,000
Projected reach (people in HH)	2,500,000	5,000,000	7,500,000	10,000,000	12,500,000	15,000,000	17,500,000	20,000,000	22,500,000
% of farmers who are women	54%								
Number of female farmers	270,000	540,000	810,000	1,080,000	1,350,000	1,620,000	1,890,000	2,160,000	2,430,000
<b>Certainty</b>	<b>Fairly High</b>								

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Household (HH) mean per capita monthly income (% increase)	0%	26%	39%	52%	66%	78%	78%	78%	78%
<b>Certainty</b>	<b>Fairly High</b>								

	2022	2023	2024	2025	2026	2027	2028	2029	2030
Mean women's intra-household food access (All HH)	0.0%	2.4%	3.6%	4.8%	6%	7%	8%	10%	11%
<b>Certainty</b>	<b>Fairly High</b>								

	2022	2023	2024	2025	2026	2027	2028	2029	2030
"Net" Women's 5 domains of empowerment - mean WEI score [(1-GII) trend] - base case	0.60	0.65	0.70	0.75	0.81	0.87	0.87	0.87	0.87
	27%	35%	46%	60%	79%	100%	100%	100%	100%
<b>Certainty</b>	<b>High</b>	<b>High</b>	<b>High</b>	<b>High</b>	<b>Fairly High</b>				

In principle, there is uncertainty associated with the projections of breadth (reach) *and* each of the depth indicators. For example, climate shocks may limit the ability of FFS to deliver improved farmer incomes even though the target number of farmers are reached<sup>19</sup>. This is illustrated by separate certainty projections for breadth and depth in the highlighted cells in Table 10.

As catalytic impact is the product of breadth, depth and certainty, the projected CI value for each dimension of impact in this case study (income, food security and gender) must be stated with its associated certainty. For example, we estimate for 2024, FFS will reach 7.5 million people with a fairly high degree of certainty. The income of these people is estimated to increase by 79% by 2024, again, with a fairly high degree of certainty.

The projected increase in gender empowerment is based on past, successful FFBS experience. Nonetheless, it seems reasonable to argue that it will be easier to move from

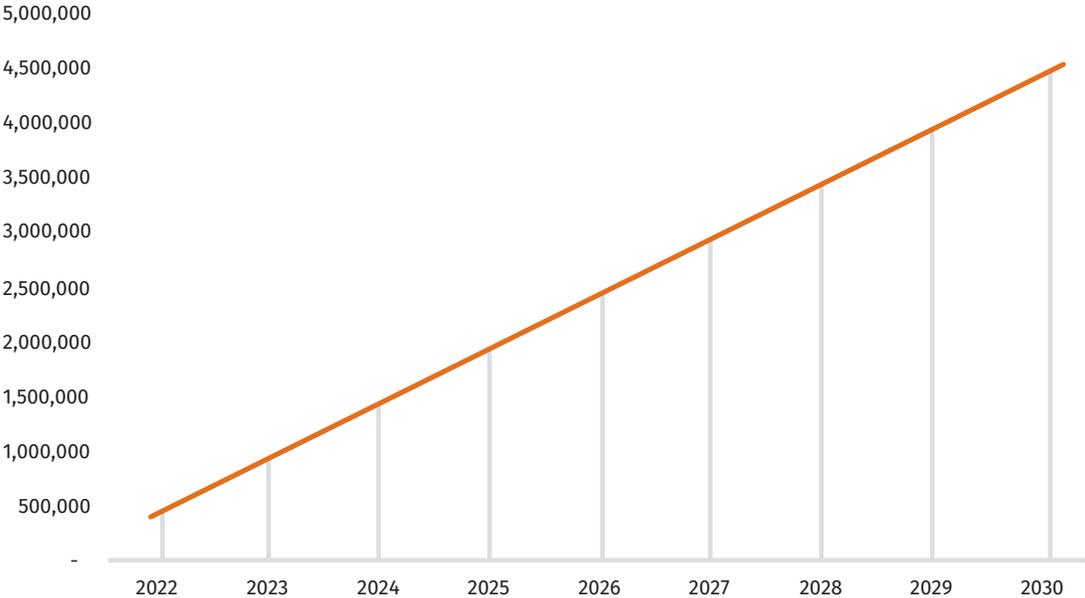
gender sensitive to responsive practice than from gender responsive to gender transformative practice. If so, there should be greater certainty of the WEI increasing from 2022 levels in the next few years, than in reaching 0.8 (an indicator of full empowerment) in later years. For this reason, the certainty factor for improved WEI is shown as “high” for 2022-2025 and then “fairly high” from 2025 – 2030.

**Overall projected catalytic impact of FFS**

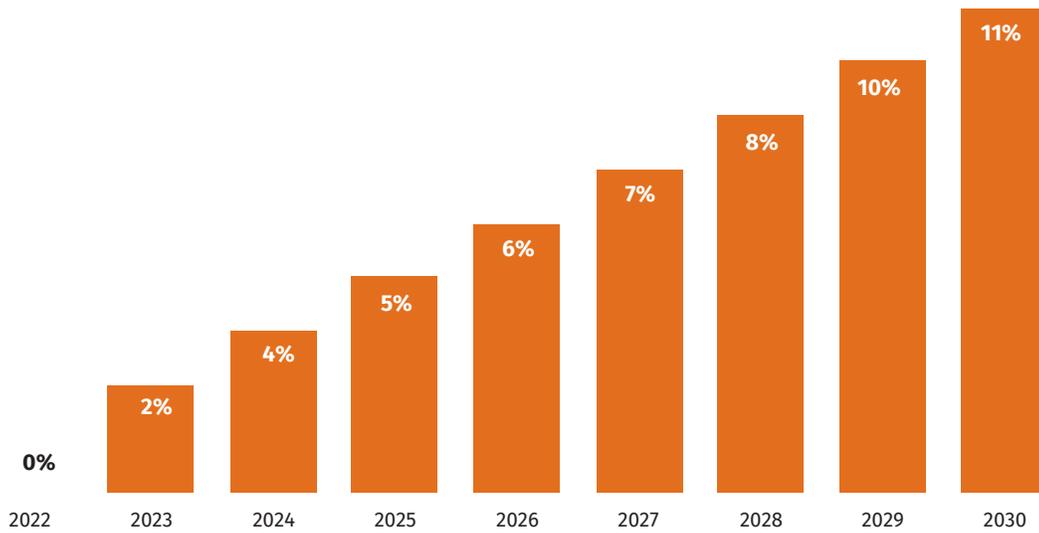
CARE’s contribution to projected FFS will reduce multidimensional poverty and gender inequality.

Based on the estimates presented above, we can expect the **catalytic impact of FFS on food security is to increase women’s intra-household food access by 11% (over 2022 levels) by 2030 in 4.5 million households with a fairly high degree of certainty**. This is illustrated in Figure 4 and Figure 5 below. We therefore expect to see the influence of CARE on intra-household food access in 4.5 million FFS households across 17 countries by 2030.

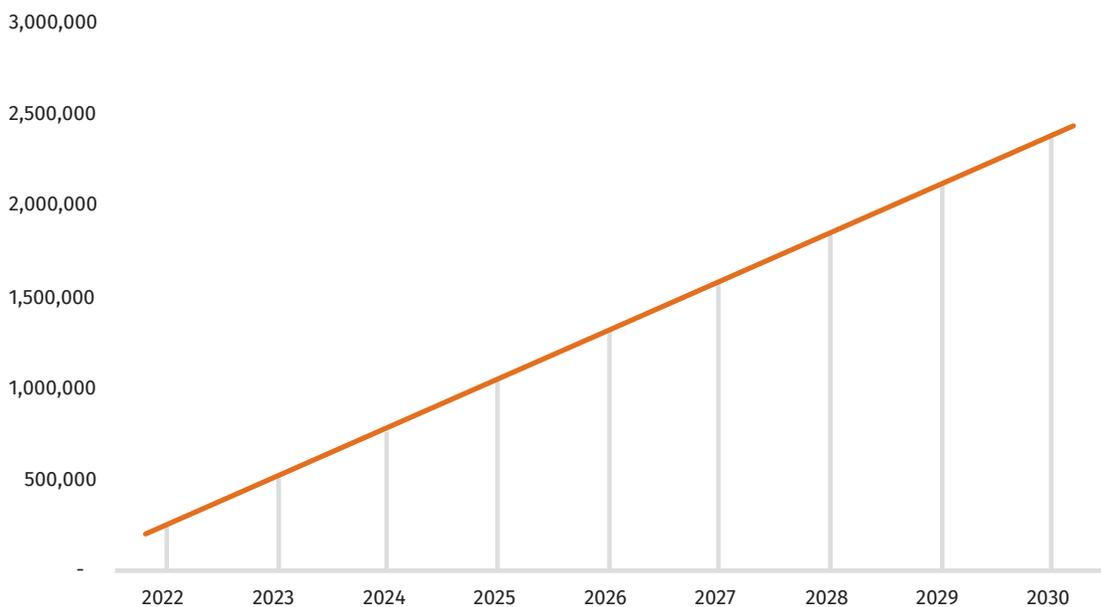
**FIGURE 4 - FOOD SECURITY REACH (NUMBER OF HH BENEFITING)**



**FIGURE 5 - WOMEN'S IMPROVED INTRA-HOUSEHOLD FOOD ACCESS (ALL HH)**



**FIGURE 6 - BREADTH OF EMPOWERMENT (NUMBER OF WOMEN BENEFITING)**



The catalytic impact of FFS on women's empowerment is projected to reach women farmers who make up 54% of all FFS farmers. This is estimated to increase the CARE WEI indicator score that captures five domains of empowerment from 0.6 in 2022 to 0.87 by 2030 for **2.4 million women** with a fairly high level of certainty. Moreover, the proportion of women who achieve a WEI score of at least 0.8 – an indicator of empowerment - rises from 27% to 60% by 2025

and 100% by 2030 for these **2.4 million women with a fairly high level of certainty**. This is illustrated in Figure 6, Figure 7 and Figure 8. Given the very significant projected increase in the proportion of women empowered by the end of the FFS direct intervention in 2027, we assume that there are no additional gains during the scaling by government phase from 2027 – 2030.

FIGURE 7 - PROJECTED WEI INDICATOR SCORES

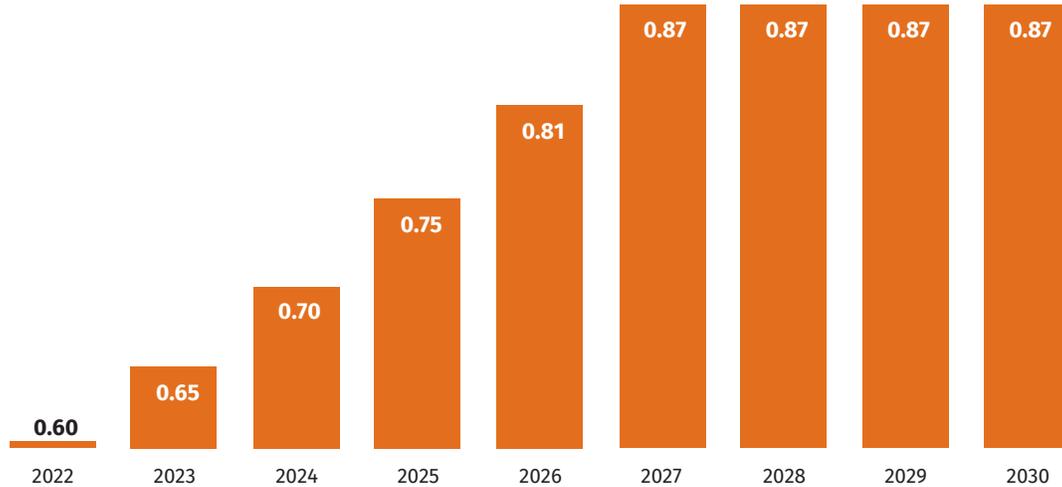
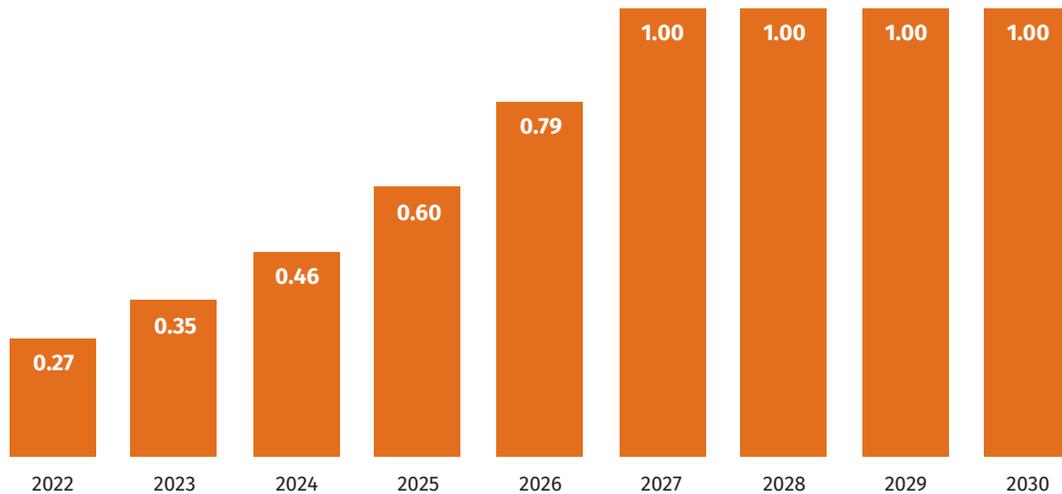


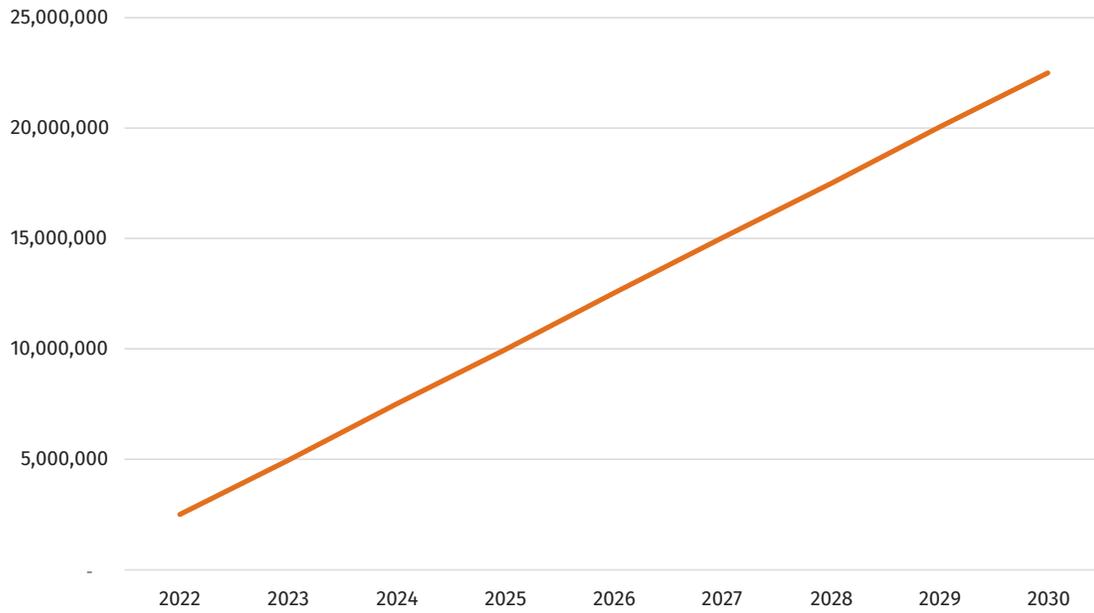
FIGURE 8 - PROJECTED % OF WOMEN WITH WEI AT LEAST  $\geq 0.8$



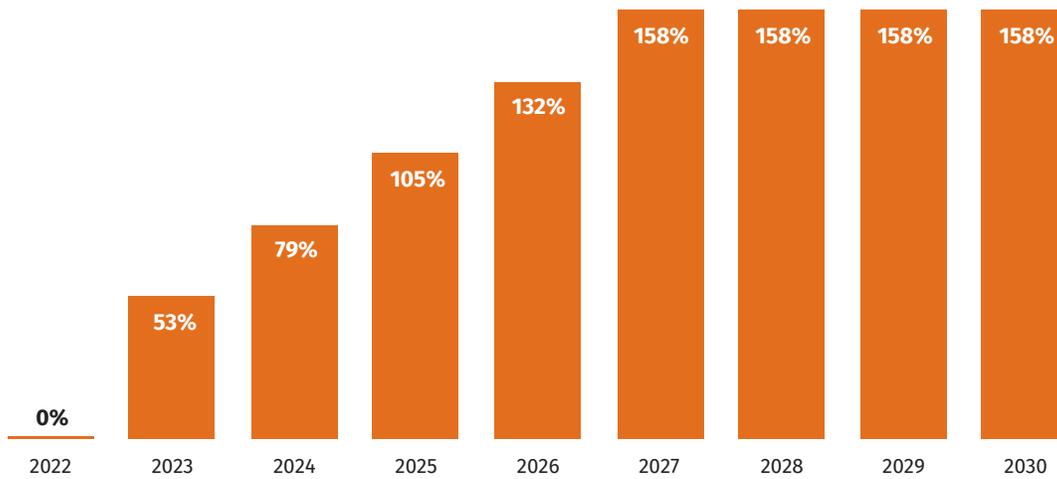
**We have made the case that CARE can claim a proportion of FFS income gains as CI, and these gains are forecast to be significant.** FFS and CARE direct support to governments is expected to raise the income of 10 million people by 2025 and 22.5 million by 2030 with a **fairly high** degree of certainty. Monthly incomes are projected to rise substantially in

constant USD terms by 105% by 2025 and by 158% by 2027 again, with a **fairly high** degree of certainty. This is shown in the Figures below. As noted in the section on incomes above, the intervention is expected to raise incomes in line with past experience for the six years it operates and maintain these gains after that.

**FIGURE 9 - PEOPLE BENEFITING FROM INCREASED INCOMES**



**FIGURE 10 - PROJECTED MONTHLY INCREASE IN INCOME IN CONSTANT USD (%)**



# Lessons, conclusions, and recommendations

This case study has shown how uptake of CARE's gender transformative FFBS by FAO and partner governments in their FFS program is expected to generate catalytic impact. The projected CI is significant and there is good evidence that CARE's contribution to projected FFS will reduce multidimensional poverty and gender inequality.

The method used for projecting CI is conceptually straightforward, building on an approach used by the Global Innovation Fund and by the CGIAR to estimate ex-ante project impact. In our approach:

$$\text{CI} = \text{Breadth} \times \text{Depth} \times \text{Certainty}$$

The challenge lies in finding robust evidence for each of the components of CI. It has proved relatively easy to find evidence on breadth – the expected reach of FFS as it scales. This is where projections of impact (often in bidding for donor funding) have traditionally gone.

The innovative aspect of CI mainly relates to the “depth” component of CI. The indicators we use to estimate the depth dimension of impact have had to meet three conditions:

1. They need to capture **how much** changes – the intensity of change - for those reached (as distinct from just being reached by the program). This is outside the comfort zone of many practitioners, used to thinking of impact solely in terms of numbers reached (breadth).
2. The type of change has to be **relevant to CARE**. To do this, indicators have been drawn from the CARE 30 global core indicators – many of which provide the measures of change we need.
3. **Evidence has to be available** to support the projection. In this case we have used evaluation evidence on FFBS from six countries. Evidence from changes arising from past implementation is a good starting point for projecting future impacts in similar countries. The difficulty has been in finding evidence that is likely to be accurate (using rigorous methods) -meeting the evaluation objective of “internal validity” and relevant to new countries and context as FFS scales (the evaluation objective of “external validity”).

The best approach to using available data depends on **what data is actually available**. In this case study, a combination of approaches has been used to improve the accuracy and relevance of the data on depth of impact. **Firstly, discussions with CARE staff that had experience of the FFBS work and how this had influenced the FAO FFS work was essential to provide context and identify potential sources of evidence.** However, identifying the relevant staff and securing their engagement to support CI with multiple meetings when they are already fully committed to project work is a non-trivial exercise. These discussions and support from the CARE MEL team identified the Pathways and Win-Win evaluations as useful source material.

The Pathways evaluations on FFBS in four countries in Africa and India was the first major source of evidence. The Pathways coverage of five countries that resemble the 17 FFS countries is helpful. The Pathways evaluations, however, did not include control groups and hence the documented increases in depth indicators could well be due to effects that have nothing to do with the intervention. They would therefore overstate the likely impact from FFS we could expect in future. To address this, proxy control groups have been created using publicly available datasets (from UN agencies and the World Bank) to capture changes that occurred in the areas relevant to each indicator. This reduces the net effect of the indicators we use for projecting depth and hence CI. **This is a recommended approach where relevant evaluation data that lacks control groups exists.**

The second source of depth indicator evidence was the Win-Win randomised control trial of three arms (control group, gender light and gender empowerment transformative interventions) of an FFBS project in six districts in Burundi. This is more likely to produce accurate data, but it is less likely to be relevant to 17 countries. The design of this evaluation (that tested a gender light approach that is similar to that used in many donor-funded projects against the CARE EKATA gender empowerment transformative approach) provided an opportunity to identify any *additional* gains that the gender empowerment transformative approach yielded for the depth indicators. We can consider this additional effect as a good approximation of the CARE contribution to the FAO FFS program if this was just in Burundi.

As we are interested in scaling to 17 countries, we **combine** the evidence from Burundi with the evidence from the Pathways evaluation. **Comparing and combining multiple evidence sources is also a recommended approach.**

Both Pathways and Win-Win evidence sources capture how CARE projects dealt with challenges to FFBS implementation. The scaling of FFBS by FAO and government partners is likely to present new challenges that will ideally be captured in their program theory of change (ToC) and potentially in country-specific ToCs. The risks and assumptions that should be embedded in these ToCs will determine the certainty component of CI. It has not been possible to explore these in the time available for this case study and there is no guarantee that FAO staff would find the time to do this. **However, participatory discussion with those involved in delivering the program driving CI is recommended to quantify the certainty associated with the breadth and depth projections.** For the purposes of illustrating the method, uncertainty has been expressed as specific percentage values in this case study. Going forward, certainty may well be expressed in broad ranges such as very likely through to unlikely. Discussion with implementors should allow these ranges to be associated with percentages e.g. very likely as 75% plus. In this case, projected CI values can either be expressed as ranges or using the mid-point of these ranges.

This case study presents a snapshot of CI using the evidence currently available. As FFBS gets underway, new evidence will be generated. FAO FFBS program reporting should allow an annual check of breadth (reach) projections against what has been achieved and an associated restatement of breadth projections. This should be a low cost and straightforward exercise provided CARE has access to this data. Review of the assumptions and risks in the FFBS ToC should be done by FAO as part of their monitoring, evaluation and learning cycle – at least at mid-term in the six year program. This provides a relatively low cost opportunity to review the certainty projections (again, assuming CARE has access to this reporting and potentially to discuss implications with FAO). Periodic review of the depth indicator projections will depend on the evaluation evidence produced by FFBS. **If CARE aims to influence FAO (and others) to adopt transformative gender empowerment interventions, CARE has an interest in seeing rigorous evaluation that includes gender indicators that matter to CARE. It may be possible to secure this by**

**influencing planned FFBS evaluation at the same time as influencing program design or it may require CARE to co-fund components of evaluations to produce this evidence.**

In summary, the key recommendations from this case study are:

- 1. CI estimates will be easier to make if the relevant data are collected at the time of program evaluation.** This is much more likely to happen if the program reports on and evaluates CARE Global 30 impact indicators that capture the extent of change resulting from the intervention. Having consistent CARE impact indicators (that capture the extent of change for targeted individuals) across multiple countries implementing FFBS strengthened the program evaluation but also was very helpful for the projection of CI.
- 2. Make the best of existing secondary evidence** that is relevant to the intervention and scaling context by:
  - a. Drawing on evaluation evidence and the literature on this intervention in similar contexts (if the latter exists).
  - b. Combining evidence on multiple countries where possible to make projections for scaling to additional countries more reliable.
  - c. Strengthening evaluation evidence without control groups using data from public databases (e.g., from the World Bank and UN agencies) to give a better picture of what would have happened without the intervention. This allows better identification of the net effect of the intervention.
- 3. CARE needs to allocate time and human resources for conducting CI estimates.** This applies to country offices, with MEL teams able to plan CI into work schedules. If CI is to be used across a number of CARE programs, it is not realistic to rely on the good will of country teams that are already fully committed to other tasks to find a couple of additional days to support CI work by digging out relevant secondary data and to answer multiple questions as the external CI analyst turns this into a detailed spreadsheet model over a couple of weeks. Working virtually is low cost and resource efficient but it is likely to be less effective than working with a country MEL team to produce CI estimates from their data – particularly if the country team is expected to take over the model in future.

**4. Participatory discussion with those involved in delivering the program driving CI** is recommended to quantify the certainty associated with the breadth and depth projections.

**5. CARE should partner with organizations ‘taking over’ and scaling CARE interventions, to ensure that relevant data are captured, tracked and analysed.** This would allow improved CI projections to be periodically produced with updated breadth, depth and certainty estimates.



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## Endnotes

- 1 [https://www.care-international.org/files/files/Vision\\_2030.pdf](https://www.care-international.org/files/files/Vision_2030.pdf)
- 2 Figures provided by CARE, October 2022
- 3 This section follows the model of CI set out in the June 2022 report to CARE
- 4 <https://www.globalinnovation.fund/practical-impact-assessment/>
- 5 [https://www.careevaluations.org/wp-content/uploads/evaluations/pathways\\_endline\\_global\\_report.pdf](https://www.careevaluations.org/wp-content/uploads/evaluations/pathways_endline_global_report.pdf)
- 6 <https://www.careevaluations.org/evaluation/a-win-win-for-gender-and-nutrition-testing-a-gender-transformative-approach-from-asia-in-africa/>
- 7 <https://www.un.org/en/desa/world-social-report-2021>
- 8 World Bank data - see [Agriculture, forestry, and fishing, value added per worker](#)
- 9 World Bank data - see [Agriculture, forestry, and fishing, value added per worker](#)
- 10 The Pathways Ghana (2016) evaluation defines this as “The main food preparer (typically the sampled CARE member) is asked to report on 12 different food groups consumed by any household member over a 24-hour period (the day and night prior to the interview). The responses produce a HDDS between 0 and 12, with the higher score demonstrating access to diverse food groups. After determining whether any household member consumed each of the 12 food groups, the main food preparer is asked if all, some, or no female household members over the age of 15 ate the food item. The responses for “all women” or “some women” produce an intra-household access (IHA) score between 0 and 12, with the higher score indicating greater access to diverse food groups.”p16
- 11 Harris-Fry, H., Shrestha, N., Costello, A. *et al.* Determinants of intra-household food allocation between adults in South Asia – a systematic review. *Int J Equity Health* **16**, 107 (2017). <https://doi.org/10.1186/s12939-017-0603-1>
- 12 Inglehart, R. (2018). Cultural Change, Slow and Fast: The Distinctive Trajectory of Norms Governing Gender Equality and Sexual Orientation\*. In *Cultural Evolution: People’s Motivations are Changing, and Reshaping the World* (pp. 77-101). Cambridge: Cambridge University Press. doi:10.1017/9781108613880.006
- 13 This indicator is not reported by the WinWin evaluation.
- 14 Alkire, S., Meinzen-Dick, R., Peterman, A., Quisumbing, A., Seymour, G., Vaz, A. (2013). The women’s Empowerment in Agriculture index. *World Development*, (52), 71–91.
- 15 These differences are described in Annex 5, CARE Global Pathways Evaluation Report (2016).
- 16 As described in the Global Pathways Evaluation Report (2016), the WEI includes the “Five Domains of Empowerment (5DE) index and Gender Parity. The 5DE reflects the percentage of women who are considered empowered, based on their empowerment score. This score is calculated from 13 weighted indicators within five domains: production, resources, income, leadership, and autonomy... CARE’s WEI includes 9 of the 10 indicators that comprise the WEAI, as well as indicators for political participation, mobility, self-confidence, and attitudes on gender, for a total of 13 indicators distributed among the five domains. A woman who achieves an empowerment score of 0.80 or greater is considered to be empowered. To allow for country-specific improvement, baseline values were adjusted to country-specific thresholds.” p25
- 17 <https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index#/indicies/GII>
- 18 As CARE works with the poor, this will underestimate the impact of the CARE intervention to the extent that GII falls with income in each of the five countries considered.
- 19 The OECD-FAO Agricultural Outlook 2022 - 2031 does suggest that per capita agricultural and fish income will decline for sub-Saharan Africa over this period - see [https://www.oecd-ilibrary.org/sites/f1b0b29c-en/1/3/2/index.html?itemId=/content/publication/f1b0b29c-en&\\_csp\\_=866270b5f683db9d176e7208bc48c151&itemIGO=oecd&itemContentType=book#section-d1e11302](https://www.oecd-ilibrary.org/sites/f1b0b29c-en/1/3/2/index.html?itemId=/content/publication/f1b0b29c-en&_csp_=866270b5f683db9d176e7208bc48c151&itemIGO=oecd&itemContentType=book#section-d1e11302)



CARE Nepal

## CASE STUDY TWO

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### Scaling of the Farmer ID by the Government of Nepal

# The Catalytic Impact of Scaling of CARE's Farmer ID in Nepal

## A Case Study

### Introduction

CARE defines catalytic impact (CI) as the “sustainable impact through the independent adoption or ownership of solutions by governments, donors, the private sector, or civil society that originated with CARE and/or its partners”. This concept is presented in the context of the CARE 2030 Vision<sup>1</sup> that focuses on lasting impact at scale delivered across six impact areas that drive progress towards ending poverty.

This report presents a case study applying a proposed method to the farmer id card approach developed by CARE Nepal with the National Farmers Group Federation (NFGF) as part of the SAMARTHYA project. CARE Nepal and NFGF partnered with the Government of Nepal to support the government’s UNFSS commitments by hosting dialogues. One of the government’s commitments (based on dialogue outcomes) is to over the next three years (up to 2025) “categorize farmers, producers, issuance of farmers ID and provision of categorized services and incentives.” The government did not set a municipal government target associated with this outcome and the 60 municipalities target by 2025 was set by CARE and NFGF.

This is the second of two case studies. This case study considers the farmer identification card (FID) component that was successfully piloted in Belaka Municipality in south-eastern Nepal. The FID was adopted and scaled up by seven local governments in 2021<sup>2</sup> and is projected to be adopted by 60 municipalities (local governments) by 2025<sup>3</sup>.

# The Farmer ID Card

In Nepal since 1990, landless people have had the right to farm the land on which they reside, but this land has remained unregistered and cannot be used for any economic purposes. Policies on land, agriculture and food security in Nepal are not sufficiently supportive of the needs of landless people and marginalized farmers, and the government lacks the knowledge and capacity to work with these groups. The farmer ID intervention relates to the introduction of new formal local agricultural policies by municipalities including farmer ID cards (targeting landless marginalized women and small holder farmers and agricultural labourers).

Farmer ID cards are issued following digital mapping and construction of a farmer database. The mapping process classifies farmers into four categories (A to D) with subsidies concentrated on the poorest. The system it replaces failed to identify marginalized and landless farming laborers and subsidized richer land-owning farmers.

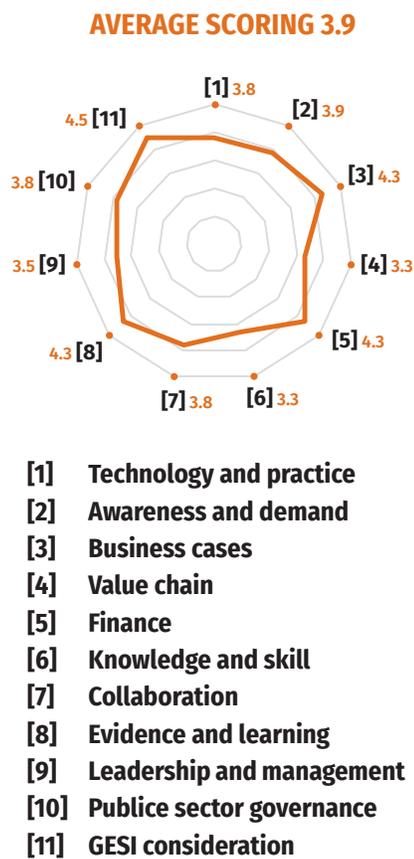
Results from a 2022 evaluation of the SAMARTHYA' Project experience with Belaka Municipality<sup>4</sup> suggest that scaling farmer ID cards by local governments will lead to:

- **Improved access of the target community to public services, facilities, agricultural inputs and technology, resources, and opportunities to bring change to their standards of living.** Based on their categories the ID card holders (farmers) are now eligible to demand specific government services as mentioned in the ID cards. Belaka has started aligning its subsidy and social security provisions with the farmer database created as part of this model. The marginalised farmers (category D - red card) become eligible to receive 100% of agricultural subsidies, the small farmers (category C - white card) receive 75%, the medium farmers (category B - yellow card) receive 50% and the big farmers (category A - blue card) receive 25% of subsidies to be provided by the local governments to farmers.
- **Improved rapport of farmers with government stakeholders and gradual recognition by the latter of the farmers' contributions results in enhanced self-respect and social status.**

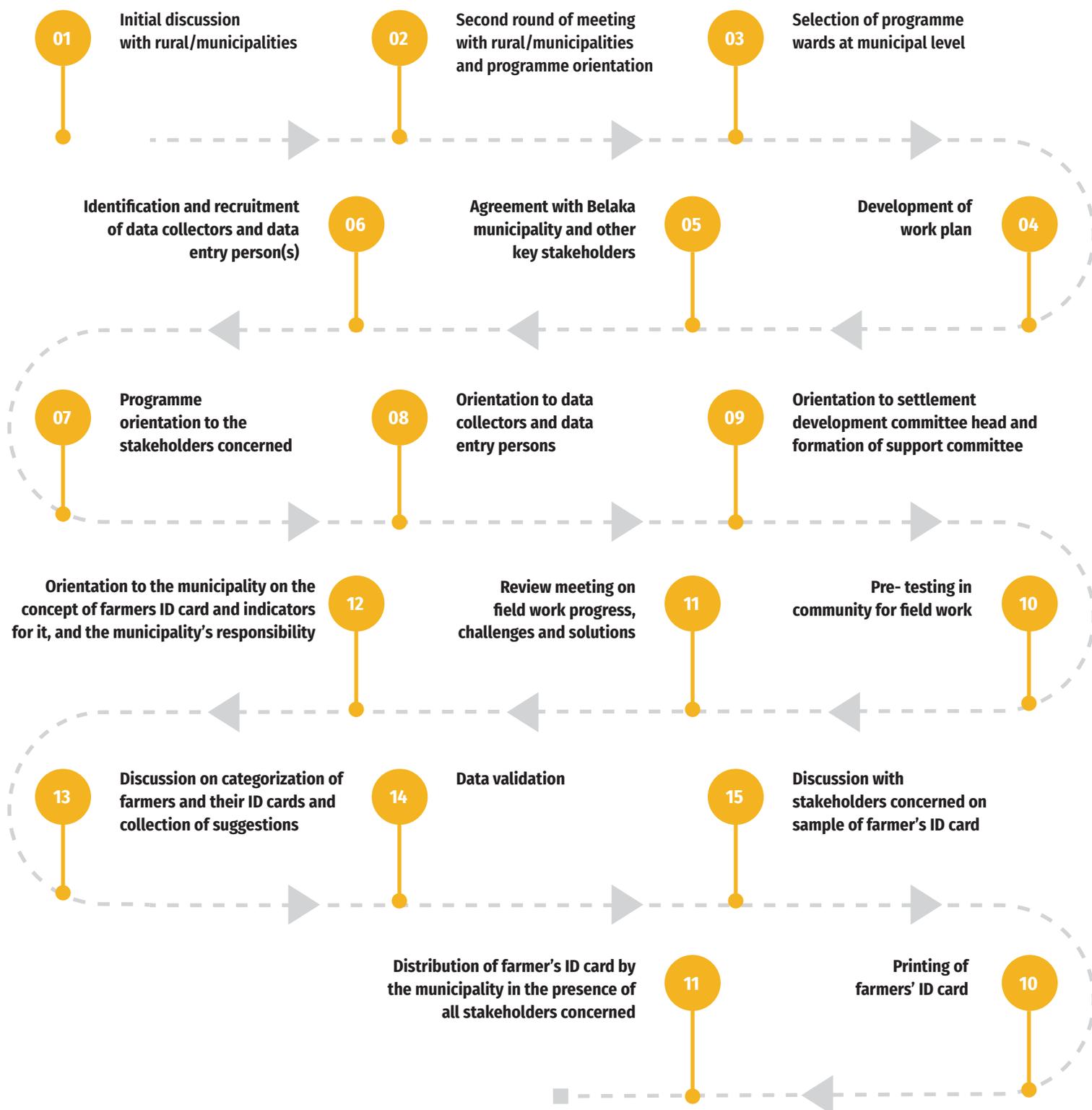
- **Farmers participate in local level decision making forum and influence local government policies and programmes and budget allocation procedure targeted to land management and farmers' wellbeing.**

CARE Nepal has developed a scaling model for municipalities to adopt farmer ID cards – see Figure 2 below – and has systematically considered scaling pathways, partners and constraints. The National Farmers' Groups Federation (NFGF) has shared and discussed this model with boundary partners<sup>5</sup>, and this has led to the formal scoring of scaling against the 11 scaling ingredients developed by the CIMMYT PPP Lab<sup>6</sup>. This discussion resulted in the scoring on a 1 – 5 scale shown in Figure 1 below. The model scored 3.9 with a score greater than 3 being the recommended threshold for scalability.

**FIGURE 1 - FARMER ID CARD SCALING ASSESSMENT**



**FIGURE 2 - CARE NEPAL FARMER ID CARD SCALING MODEL**



Farmer ID card scaling is considered as catalytic impact because local governments in Nepal are taking the approach piloted by the CARE SAMARTHYA project and introducing new policies to implement farmer ID cards in new, non-project municipalities.

# Farmer ID card scaling and projected catalytic impact

## A summary of projected catalytic impact

CARE's contribution to FID will have a significant positive effect on an increasing proportion of marginalized and landless households in Nepal with access to agricultural services and subsidies and training. We can expect the **catalytic impact of FID to reach 1.4 million people in 300,000 households in Nepal by 2025 with a high degree of certainty**. This reflects uptake by municipalities with a significant number of landless and marginalized farmers targeted for FID.

Based on experience to date, we can expect that **54% of farmers reached will be women**. Across all households reached, **15% in 2022**, falling to **13% in 2025**, will **access key services for the marginalized** (incentives/subsidies, insurance, minimum support price and access to finance). This depth of impact has a **fairly high certainty**. This percentage falls with projected scaling as municipalities with the highest proportion of marginalized farmers are reached first. A smaller proportion, approximately **4.4% of FID households**, will benefit from technical advisory or training services in agriculture and non-agricultural services. This proportion is expected to drop in 2022 as new local governments introduce FID cards but then returns to 4.4% by 2025.

For the targeted, marginalized households (15% of all those with FID cards in 2022), evidence to date suggests that **average annual household incomes increase by approximately 19%**. Projecting this out to 2025 suggests a 19% increase in annual

incomes for the 185,000 people affected (13% of 1.4 million). Again, this depth of impact has a **fairly high certainty**. That is to say, the increase in income for households reached is 19% relative to before they received FID cards and the number of households reached increases year on year.

### Overview of methods used

The starting point for any CI projection is to set out the impact pathways that make the link between what CARE did and the impacts we want to measure, including providing clear definitions of those impacts and their alignment to our organizational measurement framework/impact indicators. Where possible, an existing theory of change should be used as this sets out the steps needed to get to projected impact and associated assumptions. This is particularly helpful in assessing the probability of achieving impact projections (discussed further below).

In this case study, we draw on the formal scaling work done by CARE Nepal and have worked with CARE Nepal staff supported by CARE USA researchers to pull together evidence from the initial piloting of farmer ID cards in Belaka 2018/19 and subsequent scaling in seven municipalities in 2021/22 to inform their projected scaling in 60 municipalities by 2025.

Turning now to how this evidence is used to project CI, the model of projected CI used here has three key components<sup>7</sup>:



In this case study these terms are defined as follows.

**Breadth**  
numbers of targeted farmers and households reached

**Depth**  
the difference made to each targeted individual using relevant CARE indicators for **access to services**

**Certainty**  
the estimated probability of achieving projections on breadth and depth

The sources of data, assumptions, and methods of projecting values for each of these components play a critical role in estimating values of catalytic impact. For this reason, these are set out transparently below.

## Projected Breadth – Individuals Reached

CARE Nepal’s evaluation of the farmer ID card uptake and scaling projection (described above) was undertaken in 2021 and extends to 2025 as shown in Table 1 and Figure 3 below. Column 1 of Table 1 shows increases of approximately 70,000 households in years 1 and 280,000 in year 3 and 60,000 in

year 4. **Experience of implementation since 2018 and the detailed work with the National Farmers’ Groups Federation and scaling partners on which municipalities are likely to adopt farmer ID cards as well as context-specific uptake rates provides a rigorous basis for this projection.**

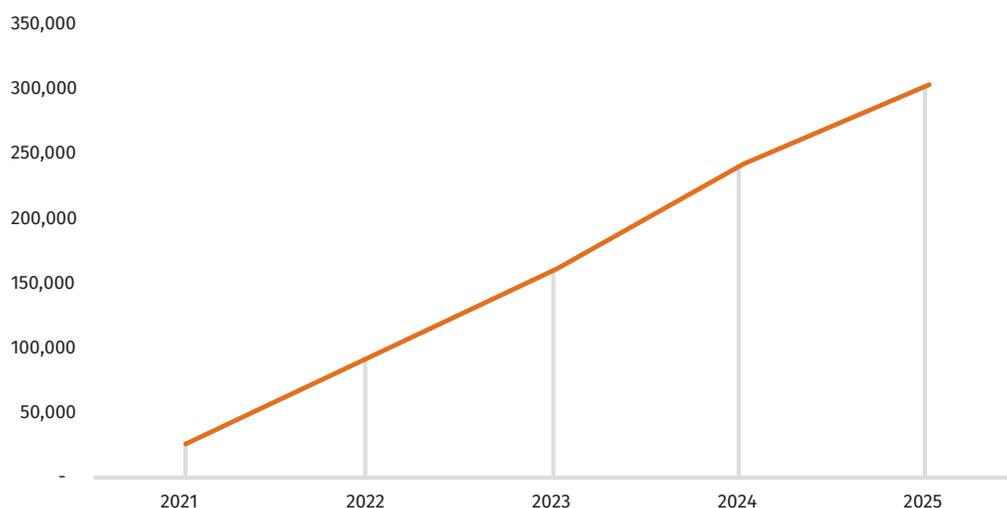
**TABLE 1 - FARMER ID CARD PROJECTED UPTAKE**

Year	#ID farming households <sup>1</sup>	#Individuals in farming HH <sup>2</sup>	% of male farmers <sup>3</sup>	% women farmers	Number of Municipalities <sup>4</sup>
2021	25,000	117,500	46%	54%	4
2022	92,000	432,400	46%	54%	11
2023	160,000	752,000	46%	54%	25
2024	241,000	1,132,700	46%	54%	42
2025	302,000	1,419,400	46%	54%	60

Sources:

- 1 5-year growth projection from implementation of the Samarthya Project, Nepal, assumed constant thereafter
- 2 .7 = Rural household size from most recent available data - [https://nepalindata.com/media/resources/items/20/bAnnual-Household-Survey-2016\\_17.pdf](https://nepalindata.com/media/resources/items/20/bAnnual-Household-Survey-2016_17.pdf)
- 3 Actual data, Samarthya project
- 4 5-year growth projection from implementation of the Samarthya Project, Nepal, assumed constant thereafter - uptake capped at 13% of 460 GaunPalik (Rural Municipalities)

**FIGURE 3 - PROJECTED # OF FARMER ID HOUSEHOLDS**



### Projected depth – access to services indicators

The indicators we use to estimate the depth dimension of impact need to meet three conditions:

1. Indicators should capture **how much changes**, or the intensity of change, for those reached (as distinct from just being reached by the program)
2. The type of change must be **relevant to CARE** (drawn from or closely related to the CARE 30 global core indicators that often provide ordinal measures of change).
3. **Evidence must be available** to support the projection.

In this case study, available evidence on the depth of change resulting from farmer ID cards is limited to two indicators below – with the % being a measure of the extent of change for the targeted group.

1. Number (#) and % of farming households with **access to distributive support and services in agriculture sector** (incentives/subsidies, insurance, minimum support price, access to finance)
2. # and % of farming households **benefitting from technical advisory or training services in agriculture and non-agricultural services**

Projections for these indicators have been provided by CARE Nepal based on past experience and evaluation evidence from the Samarthya project. The number of farming households (and hence individuals targeted) are shown in Table 1 and the depth indicators are the % change for this group shown in Table 2 below. As for the reach indicator, experience of implementation since 2018 and the detailed work with the NFGF and scaling partners on which municipalities are likely to adopt farmer ID cards as well as context-specific uptake rates provides a rigorous basis for this projection. This percentage of farming households with access to the full package of subsidies falls with projected scaling, as municipalities with the highest proportion of marginalized farmers are reached first.

The relatively low proportion of farming households that gain access to the full package of support reflects the proportion of marginalized and landless farmers in the total number of farmers reached. However, the introduction of farmer ID cards for this group is transformative. For this group an FID case study shown in Box 1 - gives a sense that additional types of change secured.

TABLE 2 – INITIAL DEPTH INDICATORS

Year	% of farming households with <b>access to distributive support and services for agriculture (incentives/ subsidies, insurance, minimum support price, access to finance)</b>	% of farming <b>households benefitting from technical advisory or training services in agricultural and non-agricultural services</b>
2021	20%	4.4%
2022	15%	1.6%
2023	15%	3.4%
2024	15%	4.4%
2025	13%	4.5%

Source: CARE Nepal

### BOX 1 - A DESCRIPTION OF FARMER ID BENEFITS

The poorest category of farmers among the FID holders have received 100% subsidy from the government on production inputs. Holding FID means a lot to landless and small holder. *“We are feeling secured livelihoods for long run as we are given FID which provide us evident to claim our right we are entitled to. This is the happiest moment in my life”* our interviewee thankfully shared her happiness. In addition to categorization of HHs based on asset holding, return from assets use and proximity to hazards, it creates validated vital information in the local government system that is instrumental to policy and plan formulation processes.

*“The benefit of FID doesn’t limit to accessing livelihood source by poor families further it has inclusive, meaning women involving in farming get identity of farmer once having FID. About 80% women in agriculture in Nepal but they are not recognized as farmer because they formally do not hold land ownership certificate.”*

Source: Instituting categorization-based Farmer ID card: an effective tool for establishing economic, gender and climate justice, CARE Nepal, 2022 p1

In this context, readers of this case study are very likely to ask *“what happens to the well-being of farmers and their households that benefit from improved access to distributive support and agricultural services?”*

Unfortunately, **the Samarthya evaluation was not designed for this purpose and** cannot provide this information. It is worth unpacking this constraint as **future CI work will require CARE to modestly adapt project evaluation**. The question we consider is what would the Samarthya evaluation have looked like if it was to produce well-being evidence for CI? This has two components: i) The focus of the evaluation (e.g., evaluation questions) and ii) methods used.

Considering the first issue, the Samarthya evaluation did not consider the farmer ID card (FID) intervention separate from other interventions such as climate resilient leasehold farming, agro-met advisory services and community-based land management. There is certainly value in considering the system-wide, combined impact of all CARE-supported interventions and adding the assessment of specific key scalable components (including FID) would facilitate CI at very low additional cost. This would involve asking the

same interviewees to consider the effects of each major component of the intervention or to consider joint impacts and then asking about the relative contribution of each component. Both these approaches imply longer interviews or focus group discussions, but these costs are small relative to overall fieldwork costs.

The methods used for the Samarthya evaluation involved key informant interviews, focus group discussions and a survey of 105 households (206 farmers). This generated the evidence on the impact on people’s lives as shown in Box 2.

The results presented in Box 2 do not allow us to estimate quantitative impacts. However, **this reflects how the methods were used, rather than a fundamental gap in the methods themselves**. This is discussed further in Section 4 below. Fortunately, the CARE Nepal team have also very recently used these methods to estimate the annual increase in income as shown in Table 3 below. **The weighted average increase in FID household income is calculated as 84% across the 312 FID households** using the results from six examples in Table 3.

## BOX 2 - SAMARTHYA EVALUATION FINDINGS ON IMPACT

### (iii) Impact on people's lives (due to systems change)

The SAMARTHYA project systems-change had a significant impact on people's lives, including the following:

- **Empowerment and leadership skills:** Increased life skills and leadership skills among landless and smallholder farmers to claim their rights. Increased participation in the municipal decisions which affect their lives. Dignity through land certificates and the FID.
- **Technical skills:** Greater understanding and skills on climate agricultural models and farming practices among target group, increasing their production and reducing crop loss
- **Access to resources:** Greater access to direct resources from local government to support climate smart farming production, including subsidies (benefiting 1069 households)
- **Gender equality and women's empowerment:** Women now play a greater role in decision-making structures, and benefit from more inclusive social movements. Women show leadership in model development and scaling. Significant changes at household level in gender relations, with women having greater mobility, financial decision-making, improved reproductive autonomy, and reductions in violence against women.
- **Livelihoods and economic development:** Target group generates income through selling their extra production in local markets. They are transitioning from subsistence farming to semi-commercial activities. Women recognized as farmers and entrepreneurs due to their new land entitlement and FID, with greater access to trade opportunities and local markets, reinforcing the changes in their empowerment.
- **Food and nutrition security:** Landless people, marginalized farmers and women increase their food intake. Strengthened climate resilience among these groups supports responses to climatic shocks and stresses.
- **Health outcomes:** Significant improvement in health of women and children due to consumption of diversified food and reduced incidents of low birth weight of a newborn children.

**82% of farmers interviewed during the OH said that the individual and community level impacts they experienced due to changes in systems were highly satisfactory and 18% said these were satisfactory. No one interviewed said SAMARTHYA did not have an impact on individual lives (n=206)**

Source: Evaluating System-level change and impact: Findings from the evaluation of the [SAMARTHYA](#) project in Nepal p8

**TABLE 3 - ESTIMATED IMPACT ON FID HOUSEHOLD INCOME**

Name of Municipalities / Rural Municipalities	FID Distributed HHS Receiving Support from Local Government	Type of Support Provided to the Farmers Having Categorization Based FID	% increase in annual income	Year of Receiving Support
Belaka Municipality Udhayapur District	17	Rent of Leased Land	26%	2019, 2020, 2021
Belaka Municipality Udhayapur District	36	Nutrition Garden Support	18%	2021
Katari Municipality Udhayapur District	23	Nutrition Garden Support	26%	2022
Sakhuwanankarkatti Rural Municipality Siraha District	41	Rent of Leased Land	18%	2020 and 2021
Krishnapur Municipality Kanchanpur District and Godavari Municipality Kailali District	70	Seed support	18%	2022
Siddhicharan Municipality Okhaldhunga District	125	Seed support	18%	2022
<b>Total</b>	<b>312</b>		<b>19%</b>	

Source: CARE Nepal

The 19% weighted average increase is based on findings from roll out of local government FID. **For this reason, we take the annual average 19% increase as an additional depth indicator value as the program scales 2022 - 2025.** This is shown in Table 4 below<sup>8</sup>.

**TABLE 4 - % INCREASE IN HOUSEHOLD INCOME PROJECTED FOR FID HOUSEHOLDS**

Year	% estimated increase in household income
2021	-
2022	19%
2023	19%
2024	19%
2025	19%

Source: CARE Nepal, weighted average from 312 observations

# Certainty

The third pillar of CI is the certainty we have that the results of a CARE program will be replicated as it is scaled by partners.

How this process is turned into certainty projections for CI depends on the detail and quality of the available evidence. CARE has undertaken a detailed scaling assessment for FID but this is not the case for projected income. Hence, we use broad categories of certainty as shown in Figure 2 below.

**FIGURE 4 - CERTAINTY AS BROAD CATEGORIES**

	Certainty level		Certainty level
<b>Breadth</b>	High > 75%	<b>Depth</b>	High > 75%
	> 50% Fairly high <=75%		> 50% Fairly high <=75%
	> 25% Fairly low <= 50%		> 25% Fairly low <= 50%
	Low <25%		Low <25%

CARE Nepal has systematically considered how the FID intervention will be scaled by government municipalities. The analysis summarized in Figure 1 and Figure 2 in section 2.2 draws on CARE Nepal’s experience in piloting and initial scaling the FID intervention under the Samarthya project. Consequently, there is a high degree of certainty that scaling will occur. There are a number of risks that could lead to slower progress in scaling – the scaling assessment captured in Figure 1 identifies local government capacity (knowledge and skill) as a relatively weak area for example. However, discussions with CARE Nepal suggest that these risks have been considered when making the projections of breadth (reach) and these form part of the detailed scaling assessment summarized in Figure 1

As risks have been internalised in the breadth projections, these are estimated with a high degree of certainty.

In principle, there is uncertainty associated with the projections of breadth (reach) and each of the depth indicators. For example, climate shocks are likely to limit the ability of landless farmers to take up subsidized farming inputs on leased land. Richer farmers are generally less vulnerable to climate shocks, and this may lead to a relative decline in landless households relying on farming leased

land. If this occurred, the relevant depth indicator – “the % of targeted farming households with access to support services” – would fall. For this reason, the depth indicators in Table 2 are projected as having a fairly high certainty (rather than a high certainty).

The certainty factor is also relevant for the estimated impact on FID household income. The two main sources of uncertainty are 1) whether local government capacity and systems will be sufficient to deliver the increased access to subsidies and services that drive new income sources for marginalized farmers and 2) whether unexpected input price or climate shocks will reduce agricultural incomes.

As data for Table 3 was made available as this report was being drafted, it has not been possible to discuss the appropriate certainty factor with CARE Nepal. However, it seems reasonable to argue that the 2021 data is based on what has already happened and so has high certainty whereas the projections for 2022-2025 are based on plans made by the NFGF and municipalities. These plans are likely to be implemented but given macroeconomic uncertainty, we attribute a “fairly high” certainty to projected income (see Table 5 below).

**TABLE 5 – BREADTH AND DEPTH INDICATORS AND CERTAINTY ASSUMPTIONS**

Breadth	# farming households	# people in farming households	Certainty adjustment
Year			
2021	25,000	117,500	High
2022	92,000	432,400	High
2023	160,000	752,000	High
2024	241,000	1,132,700	High
2025	302,000	1,419,400	High

Depth	% of farming households with access to distributive support and services in agriculture sector	% of farming households benefitting from technical advisory or training services	Access to services - certainty adjustment	% increase in household income	% increase in income - certainty adjustment
2021	20%	4.4%	High		
2022	15%	1.6%	Fairly High	19%	Fairly High
2023	15%	3.4%	Fairly High	19%	Fairly High
2024	15%	4.4%	Fairly High	19%	Fairly High
2025	13%	4.5%	Fairly High	19%	Fairly High

### Overall projected catalytic impact of FID

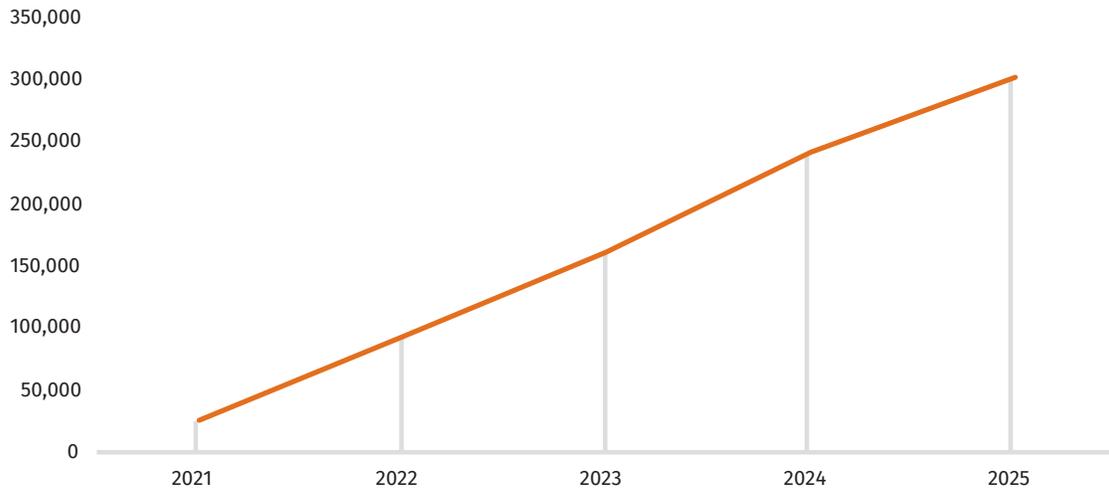
CARE’s contribution to FID will have a significant positive effect on increasing the proportion of marginalized and landless households in Nepal with access to agricultural services and subsidies and training—which in turn will increase household incomes. Based on the estimates presented above, we can expect the **catalytic impact of FID** to reach more than **1.4 million people** in more than **300,000 households** in Nepal **by 2025** with a high level of certainty (Figure 8 and Figure 6 below).

Approximately **15%** of of FID households reached in 2022 will **access key services** for the marginalized (Figure 7). These services include incentives/subsidies, insurance, minimum support price and access to finance). This proportion falls to **13% by 2025**. These depth impacts have a **fairly high** level of certainty. This percentage falls with projected scaling as municipalities with the highest proportion of

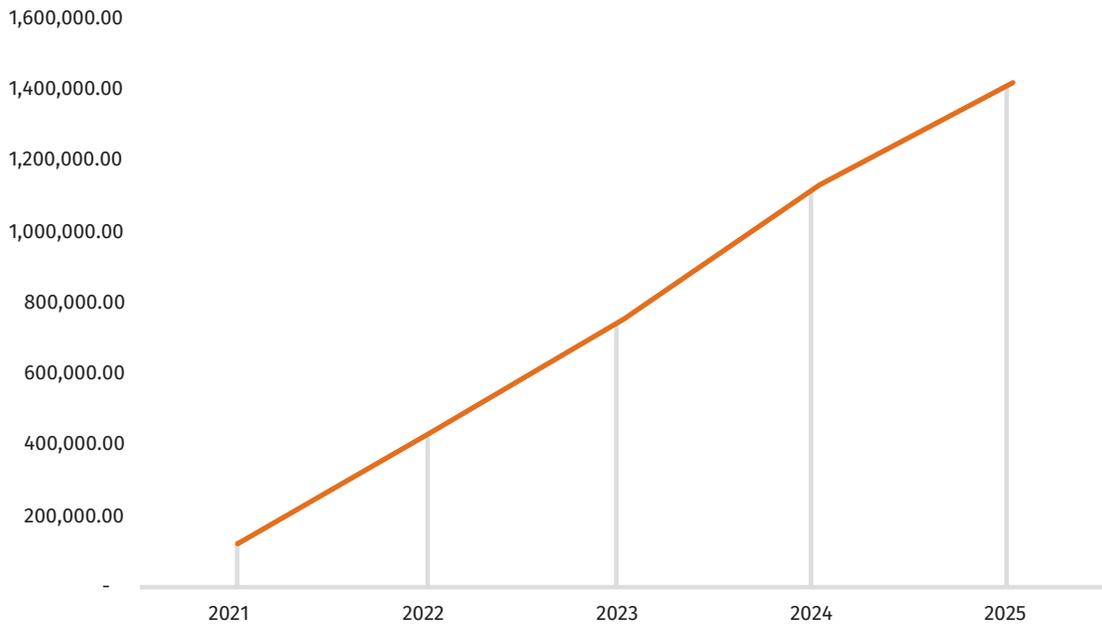
marginalized farmers are reached first. A smaller proportion, approximately **4.4%** of FID households, will **access to technical advisory** or **training services** in agriculture and non-agricultural services. This proportion is expected to drop in 2022 as new local governments introduce FID cards but then returns to 4.4% by 2025. These increases are projected to have a **high certainty**.

Among the targeted, marginalized households (15% of all those with FID cards) evidence to date suggests that **average household incomes increase by approximately 19%** year over year. Projecting this out to 2025 suggests a 19% impact on incomes (relative to pre-intervention) for the 185,000 people affected (**13% of 1.4 million**) - see Figure 8. Again, this depth impact has a **fairly high** level of certainty. The increase in income for each household reached stays at 19%, but the number of households reached increases year on year.

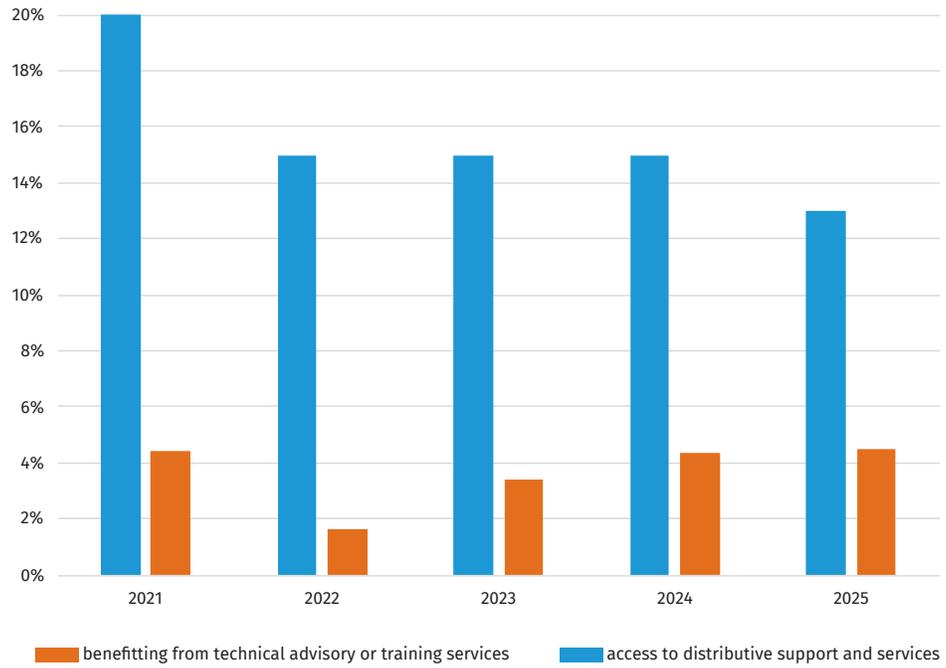
**FIGURE 5 – FARMER ID CARD REACH – FARMING HOUSEHOLDS**



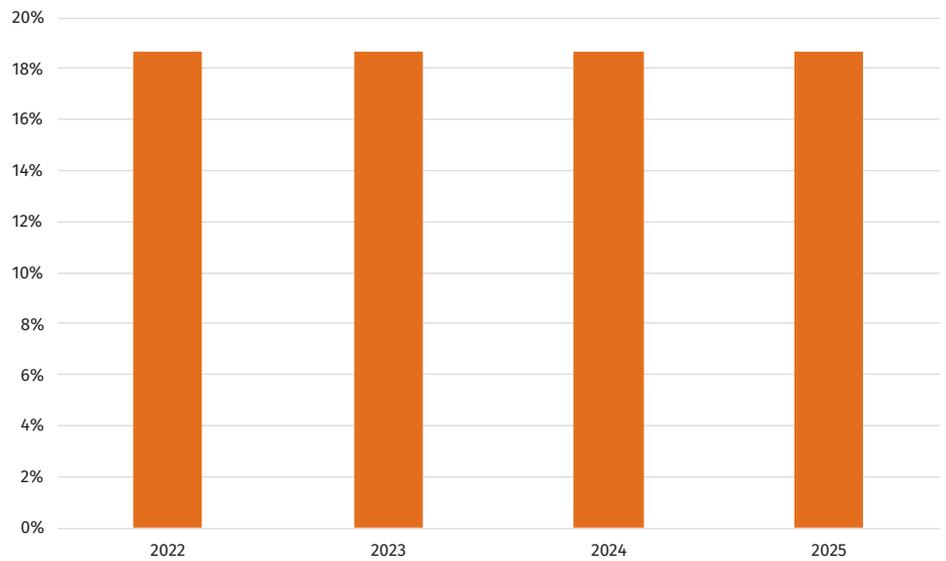
**FIGURE 6 – FARMER ID CARD REACH – INDIVIDUALS IN FARMING HOUSEHOLDS**



**FIGURE 7 – PROPORTION OF FARMER HOUSEHOLDS SUPPORTED**



**FIGURE 8 – % INCREASE IN HOUSEHOLD INCOME FOR FID HOUSEHOLDS ADJUSTED FOR CERTAINTY**



# Lessons, conclusions, and recommendations

This case study has shown how uptake of CARE Nepal’s FID process by 60 local governments is expected to generate catalytic impact. The projected CI is significant and there is good evidence that CARE’s contribution will improve access to services for the most marginalized households. This is associated with a substantial increase in household income for this group. There is also likely to be an improvement in food security and resilience, but evaluation data has not been collected in these areas.

The method used for projecting CI is conceptually straightforward, building on an approach used by the Global Innovation Fund and by the CGIAR to estimate ex-ante project impact.

$$\text{CI} = \text{Breadth} \times \text{Depth} \times \text{Certainty}$$

The biggest challenge to applying this model relates to the availability of evidence to estimate the breadth and depth dimensions. The best approach is to leverage existing data—as that makes estimates reliable and robust. In this way, the CI approach depends on using evidence that has already been collected (secondary data).

For this case study, data were available to estimate the breadth dimension. Specifically, **CARE Nepal developed a detailed reach scaling model based on 11 required “ingredients” for scaling identified by the CIMMYT PPP Lab.** This scaling model considers the major factors that have generally been found to constrain scaling (ranging from finance to knowledge to collaboration). This was discussed with partners who are involved in the scaling and **is as an example of good practice for determining the breadth component of CI.**

However, the innovative aspect of CI mainly relates to the “depth” domain – adding a measure of the extent of change for those reached, not simply the number of people reached. Unfortunately, data on depth was limited for this case study. Specifically, the indicators used to estimate the depth dimension of impact must meet three conditions:

1. They need to capture **how much changes** – the intensity of change - for those reached (as distinct from just being reached by the program). Practitioners often limit definition and thus measurement of impact to numbers reached (breadth), and thus, data to represent the extent of change for a population reached are not generated.
2. The type of change must be **relevant to CARE**. To do this, indicators have been drawn from the CARE 30 global core indicators – many of which provide the measures of change we need. In this case, the project did not collect data on any relevant core indicators. Encouraging and incentivizing CARE projects to report on these indicators will directly support the ability of CARE to project CI in future.
3. **Evidence must be available** to support the projection. This has been a major constraint in this case study. Evidence from changes arising from past implementation is a good starting point for projecting future impacts. The difficulty has been in finding evidence that is likely to be accurate (using rigorous methods) - meeting the evaluation objective of “internal validity” *and* relevant as FID scales (the evaluation objective of “external validity”). CARE can improve the availability of data that supports CI by specifying evaluation questions and methods that generate suitable data.

In this case study we followed the following steps to identify and access data:

1. **Discussions with CARE staff who had experience of the FID work – both with the CARE USA MEL team and staff at CARE Nepal to provide context and identify potential sources of evidence.** Identifying the relevant CARE Nepal staff and **securing engagement to support CI with multiple meetings, provide data and answer follow-up questions when they are already fully committed to field and project work is a non-trivial and time-consuming exercise for all concerned.** These discussions identified the Samarthyra evaluation as useful source material.

**2. Review of the Samarthya evaluation** suggested that this evaluation had been done for a specific purpose and would not meet the exact needs of CI. Specifically, it used methods that could have produced indicative estimates for CI (focus groups, KIIs and small-scale household surveys) but did not consider FID separately from the broader package of Samarthya project interventions and did not produce quantitative data on outcomes. A key finding is that **evidence generation for CI needs to be built into project and program evaluation. The marginal cost of building capacity and producing CI-relevant evidence is low. However, this work must be planned in advance.**

**3. CARE Nepal produced the evidence on depth indicators from secondary evidence they had collected for other purposes.** The evidence on access to services is robust but closer to the intermediate outcome rather than outcome level that is ideal for CI. For this reason, it will be important to track the development of evidence on what happens when marginalized households access these services as the government of Nepal continues to scale the Farmer ID. For example, do households become more income or food secure as a result of increased access to agricultural and non-agricultural services? In contrast, CARE Nepal was able to quantify the income gains made by targeted households – an ideal CI indicator.

This income data was generated using a small-scale household survey (312 households) and focus group discussions and key informant interviews. Large, quasi-experimental or experimental sample surveys would generate more accurate quantitative estimates to support CI depth indicators. Yet, the cost of these approaches is significantly greater than the mixed methods used for the Samarthya evaluation. Given that CARE will generally have to rely on lower-cost small-scale evaluations, the combination of focus groups, key informant interviews and small-scale household surveys is likely to be the source of CI data. We also know that this approach can be used to generate a range of quantitative evidence on community-based project outcomes<sup>9</sup>. **CARE can improve the CI depth indicator data available by integrating these types of measures into project monitoring and evaluations. In turn, CARE can improve CI projects by ensuring that researcher teams include staff trained to produce reliable quantitative data using mixed methods.**

In summary, the recommendations from this case study are:

- 1. The systematic assessment of scaling** the numbers of households reached by CARE Nepal – using the CIMMYT PPP Lab scaling tool – **helps to generate more credible evidence** for the breadth indicator in CI and should be used more widely.
- 2. CI estimates will be easier to make if the relevant data are collected at the time of program evaluation.** This is much more likely to happen if the program reports on and evaluates CARE Global 30 impact indicators that capture the extent of change resulting from the intervention.
- 3. Evidence from project evaluations is a good basis for projecting future impact** if results capture the challenges of scaling to the proposed locations. Where data on the relevant indicators is not available, it may be possible to use evidence from similar programs in similar contexts. Whether this is practicable depends on the extent of impact evidence available for the particular intervention *and* how context-specific the intervention is. For example, Nepal is one of a few countries implementing digital identification in agriculture<sup>10</sup> and the experience of India (with Aardhar<sup>11</sup>) may be thought relevant to Nepal. However, the differences in benefits offered, implementation and national context precluded transferring estimated benefits from India (or elsewhere) for this case study.
- 4. CARE needs to allocate time and human resources for conducting CI estimates.** This applies to country offices, with MEL teams able to plan CI into work schedules. If CI is to be used across several CARE programs, it is not realistic to rely on the good will of country teams that are already fully committed to other tasks to find a couple of additional days to support CI work by digging out relevant secondary data and to answer multiple questions as the external CI analyst turns this into a detailed spreadsheet model over a couple of weeks. Working virtually is low cost and resource efficient but it is likely to be less effective than working with a country MEL team to produce CI estimates from their data – particularly if the country team is expected to take over the model in future.

**5. This case study presents a snapshot of CI using the evidence currently available.** As FID scales up, new evidence will be generated – by existing and some new partners. There does not appear to be a systematic approach to tracking outcomes resulting from this scaling, although local governments should be able to provide annual evidence on uptake

(breadth). This can be used to periodically update the CI estimates. Ideally, however, CARE would partner with organizations ‘taking over’ and scaling CARE interventions, to ensure that relevant data are captured, tracked, and analysed. This would allow improved CI projections to be periodically produced with updated breadth, depth, and certainty estimates.



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## Endnotes

- 1 [https://www.care-international.org/files/files/Vision\\_2030.pdf](https://www.care-international.org/files/files/Vision_2030.pdf)
- 2 Katari, Siddicharan, Siranchowk, Kanakai, Siranchowk, Sakhuwanankarkatti and Bhagwanpur - according to “Instituting categorization based Farmer ID card: an effective tool for establishing economic, gender and climate justice”, CARE Nepal, 2021
- 3 The following is based on CARE Nepal, 2019. Climate Resilient Scalable Models and Guidelines on Land and Agriculture: Documentation of practices from ‘SAMARTHYA’ Project. SAMARTHYA: Promoting Inclusive Governance and Resilience for the Right to Food.
- 4 Evaluating System-level change and impact: Findings from the evaluation of the SAMARTHYA project in Nepal, CARE Nepal, October 2022, <https://careevaluations.org/evaluation/evaluating-system-level-change-and-impact-findings-from-the-evaluation-of-the-samarthya-project-in-nepal/>
- 5 The individuals, groups and organizations with whom the program interacts directly and expects to influence – see <https://www.idrc.ca/sites/default/files/openbooks/959-3/index.html#page-41>
- 6 <https://www.cimmyt.org/news/scaling-scan-a-simple-tool-for-big-impact/>
- 7 This section follows the model of CI set out in the June 2022 report to CARE
- 8 As data on increased income is for 2019, 2020, 2021 and 2022, we take 2022 as the first year in which the average increase applies.
- 9 Yaron G and Wilson D, “Estimating the Economic Returns to Community-Level Interventions that Build Resilience to Flooding”, *Journal of Flood Risk Management*, 2020 <https://onlinelibrary.wiley.com/doi/10.1111/jfr3.12662>
- 10 A World Bank 2018 review on this topic reports on the experience in India, Nigeria, Estonia, Malaysia and Uruguay - <https://documents1.worldbank.org/curated/en/655951545382527665/pdf/The-Role-of-Digital-Identification-in-Agriculture-Emerging-Applications.pdf>
- 11 Shirin Madon, C.R. Ranjini & R.K. Anantha Krishnan (2022) Aadhaar and social assistance programming: local bureaucracies as critical intermediary, *Information Technology for Development*, 28:4, 705-720, DOI: [10.1080/02681102.2021.2021130](https://doi.org/10.1080/02681102.2021.2021130)