



**Food Security and Livelihoods Support among
Fishers and Fish Processors
in Kasenyi and Tchomia
*Project Effectiveness Review – Summary
Report***



**Oxfam GB
Livelihoods Support Global Outcome Indicator**

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Executive Summary

Under Oxfam Great Britain's (OGB) Global Performance Framework (GPF), mature projects are being selected at random each year to undergo a rigorous assessment of their effectiveness. In the 2011/12 financial year, the food security and livelihoods project (DRCB12) was selected for evaluation against OGB's global indicator for livelihoods support:

- **Proportion of supported producers demonstrating greater income, as measured by per capita daily expenditure.**

During the effectiveness review's data collection phase, the area where the project is currently being implemented was inaccessible for security reasons. Consequently, the effectiveness review was only carried out in the area of Kasenyi and Tchomia, where this project was implemented from December 2008 to November 2009. During these 12 months, the project supported producers in three value chains, with interventions including capacity building, distributions of inputs and equipment, and the construction of productive infrastructure. The effectiveness review focused specifically on the fishing value chain, and it sought to assess whether any sustained impact was derived from these activities. The project's participants were divided into two distinct groups: the fishers themselves (who are all male) and women who were engaged in the processing and marketing of fish.

In March and April 2012, a team of enumerators administered a household survey to 164 male fishers and 230 female fish processors in the area of Kasenyi and Tchomia. The respondents included a random sample of the project participants, as well as comparable non-participants selected from communities where the project was not implemented. The survey was designed to capture data relating to Oxfam's global indicator for livelihoods – *the percentage of supported households demonstrating greater income, as measured by consumption expenditure per capita* – as well as on household food security status, asset wealth, and current fishing and fish processing activities. At the analysis stage, the statistical tools of propensity-score matching and multivariable regression were used to control for measured differences between the intervention and comparison respondents. It is important to note that only around 40 per cent of the fish processors supported in 2008/09 could be identified and located in the communities at the time of the survey; most of the rest were reported to have since left the area. The findings of this effectiveness review apply only to the fish processors who have remained in the area since that time.

The results provide no indication of any sustained effect on the quantity or quality (as measured by price) of the fish being sold by either the fishers or the processors. Among the fish processors, there is also no indication of any positive effect on household income as a whole or on any other measures of household wellbeing such as food security or asset wealth. However, for the fishers, the data do provide some evidence of sustained higher income and increased asset wealth among those who were supported by the project. These results are corroborated by several self-reported measures of household income which were collected during the survey. It appears from these results, therefore, that the project activities of 2008/09 have enabled fishing households to realise some sustained improvements in wellbeing. Unfortunately, however, the same does not apply to the households of fish processors.

Considerations to enable the programme team to learn from this effectiveness review include:

- Ensure that project activities are implemented with sufficient intensity, as well as on a long-enough time-frame, to achieve lasting impact.
- Further investigate the dynamics of change observed among the fishers, to understand how the lack of impact on the level of fishing activities is consistent with the observed increase in household expenditure and asset wealth.

Introduction and Purpose

Oxfam GB has put in place a Global Performance Framework (GPF) as part of its effort to better understand and communicate its effectiveness, as well as enhance learning across the organisation. As part of this framework, modest samples of sufficiently mature projects are being randomly selected each year and rigorously evaluated. One key focus is on the extent they have promoted change in relation to relevant OGB global outcome indicators. For projects focused on livelihoods support, the global outcome indicator is taken to be the proportion of households that have income greater than that of a typical comparable household.

In the 2011/12 financial year, the food security and livelihoods project (DRCB12) was one of those selected for an effectiveness review. The areas where the project has been implemented since late 2009 were not accessible at the time of data collection for security reasons. It was therefore decided instead to carry out the effectiveness review in the area of Kasenyi and Tchomia, where this project was implemented from December 2008 to November 2009. During those 12 months, the project supported nearly 2000 producers in three value chains: livestock rearing, fishing, and vegetable farming. For practical and budgetary reasons, the effectiveness review focused purely on the activities in the fishing value chain. The producers in this value chain consisted of 150 fishers, who were exclusively male, as well as 1063 female fish processors. The key purpose of the project effectiveness review was to assess the extent to which members of these supported groups are better off now than had they not received support in 2008/09.

Evaluation Approach

The project under evaluation was aiming to improve the livelihoods and food security of producer households at the grassroots level. The best way to evaluate such an intervention would have been to restrict its implementation to randomly selected geographical areas, leaving others sites for comparative purposes. If all went well, this would ensure that the producers in the intervention and control groups were comparable in every way, save for their exposure to the project. Consequently, the impact of the project could be assessed by directly comparing the two groups on relevant outcome measures.

However, there was no random element involved in the selection and/or participation of the participants; the areas where the project was implemented were purposively chosen and the participants self-selected themselves into the groups it set up. Consequently, an alternative impact assessment design was pursued. This design is referred to as a quasi-experiment because it attempts to “mimic” what a randomised control trial does by statistically controlling for measured differences between the intervention and comparison groups.

To implement the design, the evaluation team worked with local staff to identify comparison communities where the project had not been implemented but where suitable numbers of fishers and fish processors could be found to form a comparison group. A questionnaire was designed and administered to the households of 164 fishers and 230 fish processors, of whom 45 per cent were supported by the project in 2008/09, while the others came from the comparison areas. At the analysis stage, propensity-score matching (PSM) and multi-variable regression (MVR) were used to control for observable differences between the women and men that were interviewed.

One important observation from the survey is that only around 40 per cent of the fish processors who were supported by the project in 2008/09 could be identified and located in the communities at the time of the survey. Most of the others have moved away from the area since that time or only make occasional visits to the area to purchase fish. This was expected, given that the area experienced large population movements during the conflicts of the 1990s and 2000s and the participants in the 2008/09 project may not have been permanent residents in the area. However, it does mean that the assessments made in this

review apply only to those processors who have remained in the area. Clearly, no judgements can be made about the effects of the project on those who have since moved away.

Outcomes Evaluated

The intended outcomes of the Food Security and Livelihoods project that were assessed as part of the effectiveness review included:

Outcome 1: Sustained increase in the quality and/or quantity of production

Outcome 2: Sustained increase in household income

Outcome 3: Accumulation of asset wealth

Impact Assessment Summary Table

The following summary table provides a snapshot of the key findings of the effectiveness review. A short narrative description related to each outcome then provides further information on each key finding. A separate technical report is also available, which provides a more detailed description of the evaluation design, process, and results. The table below summarises the extent there is evidence that the project realised its targeted outcomes in the form of a simple five-point 'traffic light' system. The key to the right shows what the traffic lights represent.

	Evidence supporting large impact
	Evidence supporting more modest impact
	Evidence of large impact, but constrained to specific sub-groups
	Evidence of modest impact, but constrained to specific sub-groups
	No evidence of impact

Outcome/Impact	Rating	Short Commentary
Outcome 1 – Sustained improvement in the quality and/or quantity of production		No evidence of a sustained effect on the quantity or unit price of fish being sold by supported households.
Outcome 2 – Sustained increase in household income		Some indications that household income is significantly higher among supported fishers, but not among the fish processors.
Outcome 3 – Accumulation of asset wealth		Some evidence of an increase in asset wealth among the households of supported fishers, but not among supported processors.

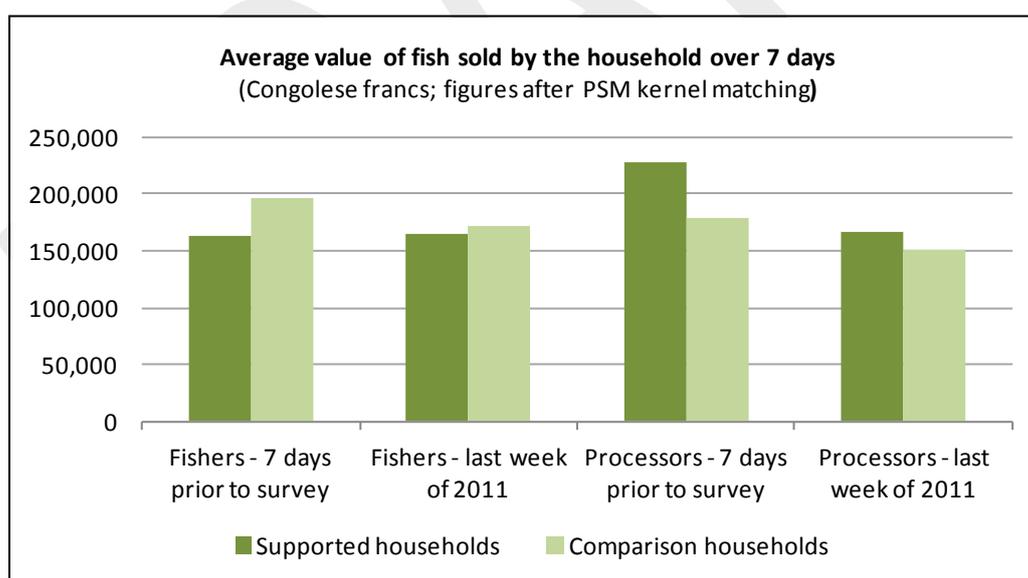
Impact Assessment Findings

Outcome 1 – Sustained improvement in the quality and/or quantity of production

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All survey respondents, both fishers and fish processors, were asked to provide details of the sales of fish they had made during the seven days leading up to the survey. The data collected included the number of days they had made sales, as well as the quantity and value of each type of fish sold. At the time of the survey, the Congolese government had imposed restrictions on fishing in Lake Albert, which was expected to have led to a reduction in the level of fishing activity. For this reason, the survey also asked for the details of sales made during the week following Christmas 2011 before the restrictions were imposed. It was thought that the details of transactions at this peak time of the year could be recalled with reasonable accuracy, even though the survey was conducted three months later.

Analysis of the resulting data showed no significant differences between the sales made by the supported producers and those made by the comparison producers. Whether it was the number of times they made sales that was considered, the quantity of fish sold, or the per-unit price (which is assumed to be a measure of quality), no systematic differences between the supported and comparison households were identified. The chart below shows the total value of the sales made over each of the seven day periods considered in the survey. Although there are some visible differences between the average sales of the supported and comparison producers, none of these differences are statistically significant, and they are not believed to represent an effect of the project activities.



Fish processors were also asked for the details of fish *purchased* during the same seven-day periods, which allowed an approximation of their net income to be calculated. Again, there were no systematic differences between the supported and comparison processors in this regard.

Outcome 2 – Sustained increase in household income



It would not be possible to evaluate overall household income directly in a short survey. However, household *expenditure* is simpler to measure and is closely linked to current income. Respondents were therefore asked to provide details of their recent expenditure, including:

- The value of all food which had been consumed in the household in the previous seven days.
- The amount spent on most common types of regular expenditure (including transport, communications and cooking fuel) in the month prior to the survey.
- The amount spent on less common expenditure types, such as health costs, school costs and clothing, in the 12 months prior to the survey.

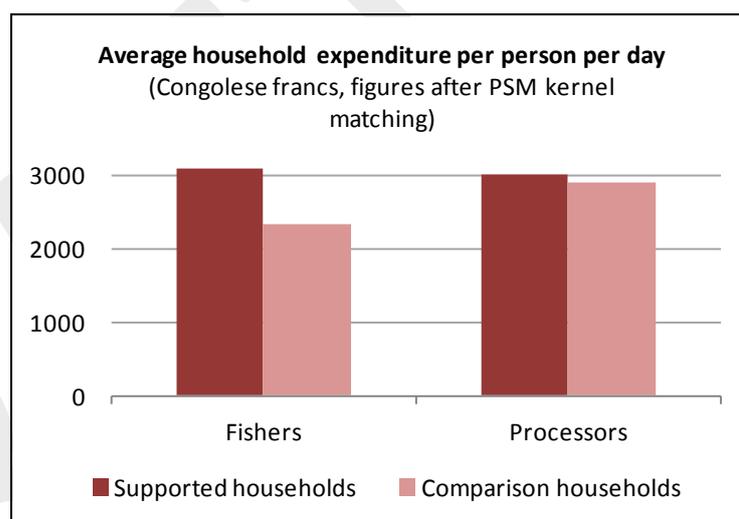
This information was aggregated and divided by the number of household members (with adjustments made for children and some allowance for economies of scale) in order to calculate per-person, per-day expenditure for the household. The household expenditure figures were then compared between the supported and comparison households.

Household expenditure was found to be significantly higher among the households of supported fishers than among the corresponding comparison households. Estimates of the difference in food consumption between supported and comparison households range between 19 per cent and 38 per cent. The statistical evidence is perhaps not strong enough for this result to be considered

conclusive in isolation, but it is corroborated by other information collected in the survey. In particular, supported fishers were marginally more likely to report that their household income had increased since 2008, and more of them also said their household can meet its basic needs from income, without relying on external support.

On the other hand, there was no significant difference in household expenditure between the households of supported fish processors and those of the comparison processors.

A section of the survey also asked about whether the household had experienced any food security difficulties in the four weeks prior to the survey. While the results are again not statistically significant, the general pattern is consistent with that found from the expenditure data: food security appears to be lower in the households of supported fishers, but not among supported processors.

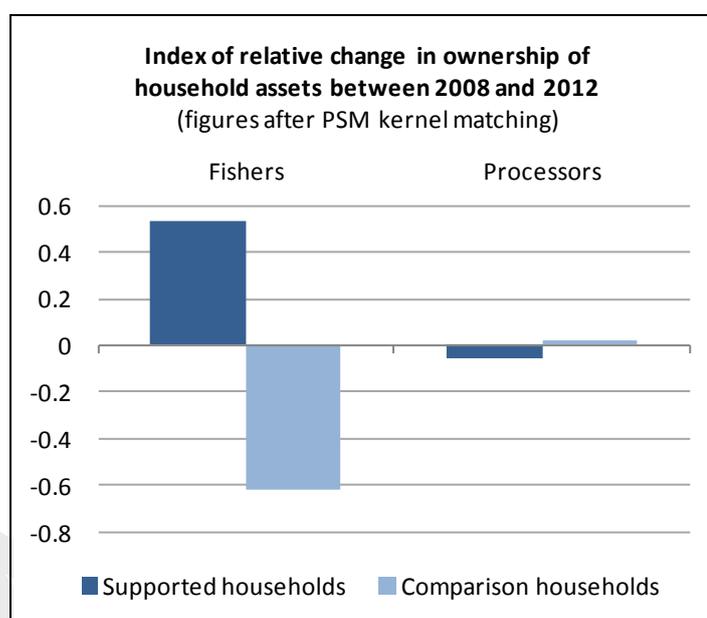


Outcome 3 – Accumulation of asset wealth



Household expenditure is generally believed to provide a good indication of current or recent household income. However, a potentially better measure of whether such income has been sustained over time is household asset ownership. To this end, survey respondents were also asked about the durable assets which they possess, including their farming and fishing equipment, furniture, household goods, livestock (if any), and the materials used in the construction of their homes, both at the time of the survey and in 2008 (the baseline period). A statistical technique called principal component analysis was used to generate an indexed score for the change in asset wealth of each household, relative to the others, since 2008.

In the chart to the right, the zero line represents the change in asset wealth of the *average* household between 2008 and 2012. The supported fishers can be seen to have experienced an above-average change in their asset wealth. In contrast, the change experienced by the supported processors is indistinguishable from that of the comparison group. It should be noted that the positive effect among the fishers is not due simply to the supported households having received distributions of some fishing nets and other productive equipment as part of this project: The results are almost unchanged even when the items distributed are excluded from the analysis.



There is therefore some evidence that the support provided by the project in 2008/09 elevated the wealth position of the supported fishers. Unfortunately no such gains are observable among the fish processors. It is also important to note that the difference between the supported and comparison fishers was not found to be consistently significant across all the statistical procedures used during the analysis of the data.

Programme Learning Considerations

- **Ensure that project activities are implemented with sufficient intensity and on a long enough time-frame to achieve lasting impact.**

The main finding from this effectiveness review is essentially a positive one: Even a limited duration livelihoods project like this can result in a sustained improvement in the living conditions of beneficiaries. However, the positive effects were found only among the fishers, not among the fish processors. It seems likely that this difference between the two groups, at least partly, reflects the intensity with which the activities were implemented. The number of fishers who were supported by this project was limited to 150, while the number of processors supported was 1,063. The inputs were provided to all of these participants, but the smaller number of fishers meant that they probably had a more intense capacity building experience than did the processors. Project design should ensure that potential impacts can be substantively realised by all project participants.

The findings of the effectiveness review may also be seen as a confirmation of the project team's belief that the project activities should ideally have been sustained for a longer period. The decision to end the project activities in Kasenyi/Tchomia in December 2009 and to shift the area of operations to the Geti area was driven by the availability of funding. These results – which show that achieving sustained impact on household wellbeing is possible but that it is not guaranteed from a short-term project – could perhaps assist in encouraging donors to make longer-term commitments to supporting particular populations.

- **Further investigate the dynamics of change observed among the fishers, to understand how the lack of impact on the level of fishing activities is consistent with the observed increase in household expenditure and asset wealth.**

It is interesting to consider why the supported fishers, on average, have higher household expenditure than the comparison fishers, even though there are no differences between these two groups in the quantity or value of fish they appear to be selling. A possible explanation for this is that the project helped fishers to generate higher income in the short term and that they subsequently diversified away from fishing into other activities, which are now generating higher returns. Detailed data on time use or other income sources were not collected in the survey, so this question cannot be tested. A more detailed survey or a rigorous qualitative study would be required to investigate this. While further research on this project may not fit within Oxfam's current priorities in the region, it would be valuable to look into what can be learned from this experience when planning future interventions of this kind.

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