

## Background notes for teachers

It is recommended you look over all of the background notes before embarking on these sessions, as there may be questions that come up where the information needed has been included in a later session's notes.

### Researching Women's Collective Action

The Researching Women's Collective Action (WCA) project was launched in 2009 by Oxfam, with funding from the Bill and Melinda Gates Foundation. The research gathered evidence on how collective action can improve women smallholders' incomes, strengthen their assets and increase their empowerment.

A smallholder is someone who runs a small farm. In countries like those studied in this project, the farm usually supports a single family with a mixture of cash crops and subsistence farming (growing what the family needs to survive).

The researches wanted to explore four key questions:

- How do women smallholders benefit from collective action?
- How does collective action help women overcome market barriers?
- Which women participate in collective action and who is excluded?
- Which strategies are most helpful to ensure benefits to women farmers?

### What is WCA?

Women's Collective Action (WCA) is a term used to describe voluntary, ongoing action by a group to achieve common interests. For example, farmer unions and co-operatives (where farmers pool their resources in certain activities such as sharing machinery and tools or marketing their produce); savings and credit associations (these tend to be a group of people who save and borrow together, a form of peer-to-peer banking and lending); farmer extension groups (where farmers learn from a more experienced farmer or those who have expertise in particular areas).

The groups studied were both formal and informal, single-sex and mixed. Formal groups are legally registered and usually have written bye-laws. Informal groups by definition are not legally registered. Groups selling into specific markets are often formal because of the need to engage in contracts and financial liabilities.

### Women's empowerment

The majority of people living in poverty are women. Women work two-thirds of the world's working hours and produce half of the world's food, yet they earn only 10% of the world's income and own less than 1% of the world's property, according to the United Nations Development Programme. They tend to have fewer resources, fewer rights, and fewer opportunities to make life-shaping decisions than men. There are many, often complex, reasons why women are not reaching their full potential. Domestic violence, discrimination, and lack of education are among the biggest barriers. Heavy and unequal household and care work, often considered the 'natural' responsibility of women, also holds back efforts to improve gender equality.



Women's skills, resilience, determination, and ingenuity are valuable - but greatly underused - resources to overcoming poverty. Women's empowerment is about enabling them to make the most of these skills so they can take part in decision-making and be economically active. The result of empowering women is to reduce poverty.

Empowerment benefits measured in the WCA project were those which allowed women to increase their control over critical parts of their lives in the household, community, and economy.

### Women's economic empowerment

Women's economic empowerment means women gaining economic and social power to move out of poverty. In practice, this means changing attitudes and beliefs to enable equal relations with men and in economic decision-making, ensuring women have access to economic resources, and improving their ability to market their products.

Women small-scale producers are central to meeting the growing global demand for food and are increasingly involved in agricultural markets in developing countries. But, compared to men, women often face poor access to the services and resources needed to compete in agricultural markets. As a result, their engagement in markets does not necessarily result in increased incomes and control over assets.

As part of the WCA research, women involved in collective action groups identified key constraints to their engagement in markets and assessed which of these were being addressed by collective action, including:

- **Low volumes or low quality of production:** addressed by training in improved production techniques, and increased access to equipment or finance.
- **Inadequate business skills, organisation and information about markets:** collective action groups provide training, access to information, possibilities for exchange, and increase contacts with a wide range of external actors.
- **Lack of secure markets:** this constraint is overcome through links to specialised co-operatives and unions and/or through an established relationship with a specific buyer.

Constraints identified that are not effectively addressed by existing collective action groups include:

- **Transporting goods to market:** co-operatives buying goods from villages only partially addresses the challenges that women face in getting goods to market.
- **Access to land for women to produce and market independently:** rarely addressed directly by collective action groups. A few instances were reported (mainly in Mali) in which collective action has been instrumental in enabling women to access land.
- **Social barriers, including to women's mobility:** restrictions placed by husbands on women's engagement in markets do not seem to be directly addressed by collective action interventions.
- **Women's lack of time due to family responsibilities:** this remains a barrier for those participating in collective action to improve engagement in markets. Women's groups accommodate this more, because they are more flexible and responsive to women's needs, but specific initiatives to address it were not identified.



## The research

Oxfam selected an agricultural sector in each of the three African countries: Ethiopia, Tanzania and Mali. The study looked at women's production and access to markets of honey in Ethiopia, shea butter in Mali and vegetables in Tanzania. The resource gives learners the opportunity to study both qualitative and quantitative data from Ethiopia and Mali.

## Methodology

Both qualitative (data collected on opinions and descriptions) and quantitative (data collected which can be measured and deals with numbers) analysis was undertaken. The qualitative research analysed fourteen case studies of WCA in-depth across the three countries. The quantitative analysis was based on surveys of at least 300 WCA members and 600 non-members per country, comparing economic and empowerment benefits between women participating in groups and those not in groups trading in the same sectors.

# Session 1: Collecting data in Ethiopia

## Ethiopia

Over the past decade, Ethiopia has become one of the fastest growing economies in Africa, and it is the agricultural sector which is leading this economic growth. Beekeeping is an important economic activity, employing up to two million people, and the honey sector is now benefiting from government investment. However, while Ethiopia is the largest producer of honey in Africa, current production is limited to only 43,000 tonnes of honey and 3,000 tonnes of beeswax, approximately 10% of potential output ('Ethiopian Central Statistical Authority Report', 2009). Meanwhile, globally, there is large and growing demand for honey, as well as for beeswax and other bee products.

In Ethiopia, women play an active role in family-based agriculture, and female-headed households make up 21% of all households (World Bank, 'Well-Being and Poverty in Ethiopia: the role of agriculture and agency', Report No. 29468-ET, 2005). However, until recently they have had limited public recognition as farmers. Structural barriers, such as the heavy burden of domestic drudgery, reinforced by local cultural perceptions, have limited women's participation in official agricultural extension (training) activities. In addition, women's lack of access to land, finance, technology and decision-making power have critically impeded their ability to take part in profitable market activities.

The WCA research was carried out in Dangila and Mecha woredas (a third-level administrative division) in Amhara, a region in the north-west highlands of Ethiopia, which accounts for nearly 25% of the country's total honey production ('Ethiopian Central Agricultural Census Commission (CAAC) Report', 2003). Traditional beehives remain the dominant technology (96%), despite producing lower yields and lower quality honey than newer hives. Due to limited market access, producers tend to sell their honey locally for a low price.

The main form of recognized collective action in Amhara is the 'multipurpose farmers' primary cooperative'. These cooperatives provide access to inputs and services, as well as marketing support. There are 42 honey cooperatives in Amhara, with an average of 10% women members (S. Baden 'Women's collective action in African Agricultural Markets: The missing link for empowerment?' 2013). Meanwhile, in the two cooperatives studied in-depth, Agunta cooperative in Dangila woreda,



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and Meserethiwot co-operative in Mecha woreda, women members constitute almost half (49% and 45% respectively).

### Characteristics of honey

Three types: white, yellow and red (colour depends on flowers and the way the hives are handled). Other potential products, like beeswax and hive products, are not currently exploited.

Produced from both modern and traditional beehives (95% approx). Quality of honey is a major factor in determining price and market access.

Harvested three times a year, mainly during the rainy season.

87% of produce consumed as drinks (for example, tej – which is a honey wine). Small but expanding international market.

## Session 2: Collective action groups, scatter plots and sample size

### Collective Action Groups

The groups described in learner worksheet 2A: *Collective Action Groups* are simplified versions of the types of groups researchers found in the three study countries. In fact there were 15 different types of group that the women belonged to.

The definition of collective action used by Oxfam's research team is: *ongoing, voluntary action by a group to achieve common interests*.

In this study, Oxfam focused on groups with a shared purpose in relation to a market rather than primarily religious, social or political groups. The collective action groups had either a function in a market chain e.g. production or processing, or provided services to enable market access e.g. credit, transport and training.

### The Impact of WCA Groups

There were important positive effects for women who were part of collective action groups. This was the main, statistically meaningful conclusion of the study.

No one group type benefits women most; women experience empowerment in different areas, from different kinds of groups, and empowerment impacts are often greater from the combined effect of membership of more than one group.

Links between formal and informal groups play a significant role in women's engagement in collective action groups. Informal groups often help women develop leadership skills and build savings, while formal group members often have greater access to inputs (such as finances or equipment) and services, and engage more effectively in markets.

While economic benefits are often higher in mixed groups due to greater resources, networks and access to transport, women-only groups allow women to develop skills and confidence, and participate effectively in mixed groups. Women-only or women-led groups can avoid appropriation of benefits by men (not uncommon in mixed groups where men dominate leadership roles).



Appropriation of benefits means men reaping all or most of the advantages and benefits of being in the group such as paying themselves the extra profits or taking training opportunities.

### Data

Please note that the data for this session has been converted to whole numbers, to make it easier for learners to work with.

## Session 3: Using collective action groups to understand measures of central tendency

The graph shown on slide 10 in slideshow 3 has been adapted to provide a clearer and simpler graph for 11-14 years to interpret. The category of women who produced no honey has been removed because otherwise the impression is that not many farmers produced anything at all. The outliers have also been removed, so that the scale of the grouped bar graph is clearer for learners in this age group. Those women who produced much higher quantities of honey were working for commercial farms rather than small-scale family farming. There weren't many women in this category and they were working in a different situation, so to keep the data simpler for learners we have removed them.

## Session 4: Comparing the wealth of women in collective action groups

### Wealth Index

The wealth index is a composite measure of a household's cumulative living standard. The wealth index is calculated using data on a household's possessions, livestock and housing characteristics, such as whether they have a grass or tin roof.

The data in this study only shows relative wealth. In other words the wealthy women in the study are only wealthy compared to the others surveyed, and they are still much poorer than most women in the UK.

Cumulative living standard means adding together all of the earnings and possessions of everyone in a household.

### Pie Charts

Pie charts should be used for categorical variables not continuous data. The recommended number of maximum sectors or categories is six. So when learners are categorising the data, they should use no more than six categories. It might be worth discussing with learners whether pie charts are the best way of displaying either the years or education or wealth index data.



## Session 5: The age and years of experience of women in collective action groups

### Histograms or bar charts?

Histograms are used to represent continuous data. Continuous data can be measured on a scale, and it can be any number along that scale. Age and wealth are both examples of continuous data.

Bar charts are used to represent discrete data. Discrete data can only take certain values. Number of children and amount of honey produced are both examples of discrete data.

Age is continuous data, and would generally be shown on a histogram. *However*, sometimes continuous data is grouped into categories. For data grouped into categories, bar charts are appropriate.

Creating a bar chart using the age data in this lesson is a 'special' case and this needs to be explained to learners.

The ideal representation of the age data being used in this lesson would be a back-to-back histogram. However, as this may be tricky for many 11-14 year olds a comparison bar chart could be an acceptable alternative.

## Session 6: Were women better off as a result of collective action groups?

Overall, the study found that belonging to a collective action group was positive for the women surveyed. The study also wanted to find out if there was an impact on women's empowerment and so used the Women's Empowerment Index described below.

To understand the relationship between collective action group membership and women's empowerment, the quantitative analysis used measures for the eight empowerment indicators obtained according to a procedure adapted from the Women's Empowerment in Agriculture Index methodology, developed by the International Food Policy Research Institute, the Oxford Poverty and Human Development Institute and USAID.





*Eight dimensions of empowerment:*

Dimension / indicator	Definition of 'adequacy' in this dimension
Decision-making in agriculture related activities	The respondent is adequate if she has 'significant' input in decisions or feels 'highly able' to make decisions in AT LEAST TWO domains related to agriculture activities.
Decision-making on income from agriculture related activities	The respondent is adequate if she has 'significant' input in income decisions or feels 'highly able' to make decisions related to agriculture income, other than decisions on minor household expenditures.
Ownership of assets	The respondent is adequate if she owns, individually or jointly, AT LEAST two large assets (agricultural land, livestock, mechanised agricultural equipment, housing, large durable consumer goods, etc.) or more than three assets (if one of those is a small asset, such as poultry, non-mechanised farming equipment, and small consumer durables), out of a total of 15 categories of household assets.
Decision rights over agricultural assets	The respondent is adequate if she, individually or jointly, has AT LEAST ONE right in AT LEAST TWO agricultural assets owned by the household.
Decision-making on access to credit	The respondent is adequate if she jointly makes AT LEAST ONE decision regarding AT LEAST ONE source of credit.
Decision-making on household expenditures	The respondent is adequate if she has 'significant' input in income decisions or feels she is able to make decisions on how to use income from at least one source, AND involving more than just minor household expenditure choices.
Freedom of movement beyond the household	The respondent is adequate if she has freedom to independently visit at least two places (out of five different options) inside or outside the village, not including the house of friends and relatives.
Freedom to attend group meetings	The respondent is adequate if she has the freedom to go to at least one place to attend group meetings (formal and informal groups).



**Women's Empowerment Chart (can be found on slide 6 in slideshow 6)**

This compares women members and non-members for each adequacy indicator, where adequacy is defined as achieving a minimum threshold level in the realms of decision-making, control, and freedom.

Overall, there seem to be uneven relationships between WCA membership and empowerment domains, as well as variation across countries. It is not very clear in Ethiopia that women who belong to collective action groups are more empowered than those who don't belong to the groups. Results from the other countries in this study were less ambiguous, for example, in Mali there was a stronger relationship between women who belonged to groups and empowerment. Further, some relationships are puzzling such as the negative relationships between group membership and the freedom to attend group meetings in Ethiopia.

Qualitative case study research, by contrast, showed that participation in women's collective action leads to varying degrees of improved status at household and community levels across virtually all studied groups.

*Learner worksheet 6A: The Impact of Collective Action Groups on Women's Empowerment in Ethiopia*

Point 2 - Women who are members of collective action groups have a higher quality product and make more of their product. This conclusion was drawn from three study countries (Ethiopia, Tanzania and Mali).

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## Project Partners



### Think Global

Think Global is an education charity helping people to understand global issues. We stand for a more just and sustainable world. We believe that the more people understand global issues, such as poverty and human rights, the more likely they are to take better decisions in their personal and professional lives.

Teachers can join the Think Global Schools Network - [www.globaldimension.org.uk](http://www.globaldimension.org.uk) and receive half-termly updates on resources and events for teaching about global issues along with activity kits and ideas you can use in the classroom.

[www.think-global.org.uk](http://www.think-global.org.uk)



## OXFAM

### Oxfam UK

Oxfam is a global movement of millions of people who share the belief that, in a world rich in resources, poverty isn't inevitable. In just 15 years, extreme poverty has been halved. 15 more years and we can end it for good.

To spread that change and make it last, political solutions are also needed to tackle the root causes of poverty and create societies where empowered individuals can thrive. We will always act, we will speak out, and we won't live with poverty.

[www.oxfam.org.uk](http://www.oxfam.org.uk)



### Mathematical Association

The MA is run by members for members from its headquarters in Leicester and is managed by a Council of around 19 MA members. But the heart of the MA is to be found in its publications, its committees and subcommittees, and its other activities, which provide an invaluable opportunity for interested teachers to work together on topics of common interest - work which often results in publications, resources or discussion documents for the wider community.

Website: [www.m-a.org.uk/history](http://www.m-a.org.uk/history)



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### Mathematics in Education and Industry

Mathematics in Education and Industry (MEI) is a charity and a membership organisation. It is an independent curriculum development body for mathematics.

MEI offer teachers of all GCSE, Core Maths and A level specifications a range of continuing professional development courses, provide specialist tuition for students and work with industry to enhance mathematical skills in the workplace. MEI also pioneer the development of innovative teaching and learning resources, including extensive online materials to support all major examination syllabuses. Website: [www.mei.org.uk](http://www.mei.org.uk)

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