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The use of Participatory Video in adaptation to environmental change

A case study in Wage Worgaja, Ethiopia

Masters dissertation

Master of Philosophy in Environmental Management

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July 2011

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My deepest gratitude to:

Gina Ziervogel and Pablo Suarez for making this project possible.

The Wage Worgaja community for opening their doors for me.

The Ethiopian Red Cross Society, especially to Azemeraw Bekele and Mulat Andargie, for the enormous support I received from them.

The Climate System Analysis Group (CSAG) at the University of Cape Town, especially to Gina Ziervogel and Nadine Methner, for helping me fund my fieldwork in Ethiopia.

My lecturers at the University of Cape Town, especially to Pippin Anderson for her guidance during the initial stages of this research.

Bettina Koelle for her comments on my draft.

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List of Acronyms

CBA	Community-based adaptation
CIA	Central Intelligence Agency
CSAG	Climate system group analysis
ERCS	Ethiopian Red Cross Society
GDP (PPP)	Gross domestic product at purchasing power parity
GIZ	Gesellschaft für Internationale Zusammenarbeit
HDI	Human development index
IMF	International Monetary Fund
IPCC	Intergovernmental panel on climate change
NFB	National Film Board
PM	Participatory mapping
PSD	Participatory development
PV	Participatory video
SES	Social-ecological system
UNDP	United Nations Development Program
UNEP	United Nations Environment Programme

Glossary

Kebele: the smallest administrative unit of Ethiopia. The closest word to it in English is “neighbourhood”. Approximately 500 families make up a kebele.

Woreda: an administrative unit of Ethiopia. A woreda is made up of a number of kebeles. “District” could be the closest word to it in English.

Injera: a yeast-risen flatbread. It is made out of teff flour. The teff flour is mixed with water and allowed to ferment for a few days. As a result of this, injera has a slightly sour taste. Injera is a national dish in Ethiopia and Eritrea.

Wat: a stew that is very distinctive of Ethiopian food. Wats can be made out of meat, chicken, chickpeas, and lentils among others. A wat is usually thick and spicy. It is eaten together with injera.

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List of figures

Figure	Title	Page
Figure 1	Steps of a typical participatory video process.....	7
Figure 2	(Left) Ethiopia's location in Africa (Right) Ethiopia's map.....	12
Figure 3	(***)Left) Injera (**Right) Traditional stove.....	13
Figure 4	Stages and sub-stages of the fuel-saving stoves participatory video project.....	15
Figure 5	**Participants and external facilitator during the initial training.....	16
Figure 6	**Participants creating the storyboard.....	17
Figure 7	**Participants recording the participatory video.....	18
Figure 8	***Left) Fuel-saving stove Right) Farmer being interviewed.....	20
Figure 9	***Left) Azanu, one of the stove producers Right) Azanu's house.....	20
Figure 10	Research methods applied to different stages of the participatory video project.....	22
Figure 11	*Participants during the focus group.....	23
Figure 12	*Attendees watching the participatory video during the workshop in Wage Worgaja.....	26
Figure 13	*Attendees answering the questionnaire in Wage Worgaja.....	28
Figure 14	*Attendees during the group discussion in Ayhaquha.....	29
Figure 15	Stages of the participatory video project and their associated advantages.....	31
Figure 16	Gender distribution of attendees.....	36
Figure 17	Age distribution of attendees.....	37
Figure 18	Attendees who were and were not using a fuel-saving stove before the workshop.....	38
Figure 19	Attendees' understanding of the benefits of fuel-saving stoves before and after watching the participatory video.....	39
Figure 20	Reasons for not using fuel-saving stoves.....	40
Figure 21	Increase in levels of understanding of the benefits of fuel-saving stoves after watching the participatory video.....	41
Figure 22	Attendees' interest in shifting from a traditional stove to a fuel-saving stove before and after watching the participatory video.....	41
Figure 23	Increase in levels of interest in shifting from a traditional stove to a fuel-saving stove after watching the participatory video.....	42
Figure 24	Benefits of fuel-saving stoves as perceived by attendees.....	43
Figure 25	Advantages of participatory video as perceived by attendees.....	46

* Photographs taken by the researcher

** Images taken from the video "Documenting a Participatory Video".

<http://www.climatecentre.org/site/films-by-farmers> accessed on July 13th 2011.

*** Images taken from the fuel-saving stoves participatory video

Table of Content

Chapter 1. Introduction	1
1.1. Background	1
1.2. Aim	2
1.3. Objectives	2
Chapter 2. Literature review	4
2.1. What has been the role of participatory approaches in adaptation? to environmental change?	4
2.2. What is participatory video?	4
2.3. What are the origins of participatory video?	5
2.4. What steps make up a participatory video project?	6
2.5. How has participatory video been used in other sectors?	8
2.6. What are the benefits of participatory video?	8
2.7. What are the main challenges in a participatory video project?	9
2.8. What has been the role of participatory video in adaptation to environmental change?	9
Chapter 3. Case Study.	12
3.1. Ethiopia, the Ebinat woreda, and Wage Worgaja	12
3.2. Fuel-saving stoves in the Ethiopian context	13
3.3. The fuel-saving stoves programme in Wage Worgaja	14
3.4. The fuel-saving stoves participatory video project	14

Chapter 4. Methodology	21
4.1. Research methods	21
4.2. Post-fieldwork data analysis	29
Chapter 5. Results	31
5.1. The first stage of the project: Making the participatory video	32
5.2. The second stage of the project: Screening the participatory video	35
5.3. The effectiveness of the tool affected by the context in which it is used	47
Chapter 6. Analysis and Discussion	50
6.1. The dual nature of participatory video	50
6.2. The power of video as a communication tool	52
6.3. Participatory video compared to other video-related approaches	52
6.4. Adaptation to environmental change vs. other livelihood concerns	53
6.5. Participatory video as a context-specific tool	54
Chapter 7. Conclusions	55
7.1. Summary of findings	55
7.2. Recommendations	56
7.3. Limitations of the study	57
7.4. Final conclusion	57
References	58
Annex 1. Before-After questionnaire	61
Annex 2. Workshops attendance profile	62

Abstract

Changes in the environment require a range of responses and adaptations at different levels. One of the levels where adaptation is needed is at the community level in developing countries. This research evaluated the effectiveness of participatory video when used to articulate and communicate messages of adaptation to environmental change. The researcher collaborated with the Ethiopian Red Cross Society in a participatory video project that focused on promoting the use of fuel-saving stoves among farmers. The project took place in Wage Worgaja, in northern Ethiopia, where a group of female farmers has been producing and selling fuel-saving stoves since August 2009, as part of a broader programme run by the Ethiopian Red Cross Society in their community. In September 2010, the stove producers made a video promoting the use of their product, following the guidelines of participatory video. In following these guidelines, farmers learned about basic video-making techniques and they themselves decided on the video content and recorded the video. The participatory video was then screened during a series of workshops that were aimed at promoting the use of fuel-saving stoves. It became evident from this study that participatory video created a space for critical discussion about the benefits of using fuel-saving stoves among farmers who were involved in the video-making process. The study also found that screening the participatory video in the workshops increased both attendees' understanding of the benefits of fuel-saving stoves and their willingness to shift from a traditional stove to a fuel-saving stove. The findings of this research add to the existent academic literature on participatory video and contribute to the formalisation of this tool when used in adaptation to environmental change.

Chapter 1

Introduction

1.1. Background

Participatory video is a process by which a group of members of a community produce a short video. A facilitator trains community members in the basic concepts and skills to make a video. The video is normally about an issue that is relevant to the community and it is usually the community itself who decides the topic of the video. The facilitator guides community members throughout the process of planning and making the participatory video. However, given that the video is to be made by the community members themselves, facilitators generally choose to intervene as little as possible. Once the video has been made, it can be used for different purposes such as to disseminate information among other communities for which the topic of the video is also relevant (Lunch and Lunch 2006).

The effectiveness of participatory video in areas such as the health sector and community development has been documented (Martin et al. 2005, Menter et al. 2006). However, there's little evidence in the academic literature evaluating its benefits as a method used in adaptation to environmental change. This research aims to contribute to the formalisation of participatory video as a method to articulate and communicate messages of adaptation to environmental change, as well as to provide useful guidelines and recommendations for future projects. This research presents a case study of a participatory video project in Ethiopia.

Ethiopia's total forest coverage was reduced from 40% at the beginning of the 19th century to approximately 2.5% in the present days. One of the main drivers of deforestation in the country is the clearing of forests for firewood collection. The vast majority of the population uses firewood as a cooking fuel. This firewood burns in an open fire where only 10% of the heat is used to cook the food and the rest is wasted. As a result of this, fuel use efficiency at a household level has been identified by different entities in Ethiopia as a critical issue of concern (GIZ 2005).

In August 2009, the Ethiopian Red Cross Society (ERCS) initiated a fuel-saving stoves programme in Wage Worgaja, a kebele in the Ebinat woreda in northern Ethiopia. A group of 21 women were trained to make fuel-saving stoves. Since then, the group of female farmers has been producing and selling fuel-saving stoves in Wage Worgaja and

its surrounding kebeles. In September 2010, the ERCS started the fuel-saving stoves participatory video project in Wage Worgaja. The ERCS's main goal was to promote the use of fuel-saving stoves among farmers in Wage Worgaja and neighbouring kebeles by using participatory video. The initial stage of the project took place over a three-day workshop in September 2010, during which the participatory video was made. The second stage of the project happened over a period of three weeks in January and February 2011. This stage involved the video screening in other kebeles in the Ebinat woreda.

Some programmes run by the Red Cross have used participatory video and other audiovisual tools in community-based adaptation (CBA) and disaster risk reduction. Suarez et al. (2008) report on the main findings of some of these projects. Due to the growing use in practice of participatory video and the Red Cross' willingness to continue using this tool in different projects, they were eager to support an evaluation of the Wage Worgaja project.

This research intends to evaluate the effectiveness of participatory video when used to articulate and communicate messages of adaptation to environmental change. The focus of the case study is on assessing the effectiveness of participatory video in improving Ebinat farmers' understanding of the benefits of fuel-saving stoves and promoting a shift from traditional stoves to fuel-saving stoves. In particular the shift to fuel-saving stoves enables farmers to reduce their dependence on fuel wood, thereby reducing the need for cutting down of trees, which supports mitigation of climate change and adaptation to the changing availability of firewood as a resource.

1.2. Aim

To determine the effectiveness of participatory video, in improving community members' understanding of changes they can adopt to adapt to their changing environment.

1.3. Objectives

In the first stage of the project, the participatory video was made by a group of farmers in Wage Worgaja. To evaluate the effectiveness of the first stage of the project, the study intended

- To survey the perceptions of the farmers who made the participatory video about the use of this tool.
- To find out if the farmers' understanding of the benefits of using fuel-saving stoves was reinforced by making the participatory video.

For the second stage of the project, five workshops aimed at promoting the use of fuel-saving stoves were organised in five different kebeles in the Ebinat woreda. As part of these workshops the participatory video was screened. To evaluate the effectiveness of the second stage of the project, the study intended

- To determine if the attendees' understanding of the benefits of fuel-saving stoves was influenced by watching the participatory video and the reason why.
- To determine if the attendees' interest in shifting from a traditional stove to a fuel-saving stove was influenced by watching the participatory video and the reason why.
- To survey attendees' perceptions about the advantages and shortcomings of using participatory video in the workshop to disseminate information about adaptation to environmental change.

Chapter 2

Literature Review

2.1. What has been the role of participatory approaches in adaptation to environmental change?

It is argued that environmental change is only one of the many natural, social, and economic problems found within marginalised communities (Reid et al. 2009, Ziervogel and Taylor 2008). Therefore, interventions oriented only towards environmental issues are very unlikely to address the real priorities of the community. It is very important that a project allows communities to express their needs and perceptions, and does not simply assume them. It is also very important that projects focus not only on reduction of vulnerability to climate change and disasters, but also on other livelihood benefits (Reid et al. 2009). Participatory tools allow for a bottom-up approach in which communities can express their needs and perceptions.

Examples of different participatory tools that have been used to communicate messages of adaptation to environmental change include participatory video (PV) in Malawi (Baumhardt et al. 2009), participatory mapping (PM) in Kenya (Kimani and Obura 2004), participatory scenario development (PSD) in Hungary (Bizikova et al. 2009), seasonal forecast in South Africa (Koelle and Oettle 2009), and mental models in Ghana (Tschakert and Sagoe 2009).

2.2. What is participatory video?

Participatory video consists of a number of techniques that involve a community in producing their own video. (Lunch and Lunch, 2006). As stated by White (2003, p.64) “Participatory Video as a process is a tool for individual, group, and community development. It can serve as a powerful force for people to see themselves in relation to the community and become conscientized about personal and community needs. It brings about critical awareness that forms the foundation for creativity and communication”.

Participatory video has been used in areas such as geographic research (Kindon 2003), adaptation to climate change (Baumhardt 2009), community-based agriculture

extension (Ghandi et al. 2007), and youth leadership development (Menter et al. 2006) among others.

To better understand the concept of participatory video and its uses, it is important to understand its origins.

2.3. What are the origins of participatory video?

The origins of participatory video come from a process known as the *Fogo process*. In 1967, film maker Colin Low was sent to Newfoundland¹ to make a video documentary on rural poverty as part of the Challenge for Change programme of the National Film Board (NFB) of Canada. Low teamed up with Don Snowden, who at the time was the director of the Extension Service of Memorial University of Newfoundland. Snowden wanted to show that poverty in the country could not be seen from an urban central Canadian point of view, but that real poverty in areas like Newfoundland was the poverty of information, isolation from decision making, and lack of organisation. Snowden and Low used video to explore a number of issues on Fogo Island. Some 28 unscripted modules (i.e. short 16mm films made without following a script) were made in which Fogo islanders talked about a range of concerns and interests such as the fishery, local government, the merchants, and the location of a high-school, among others. The modules also showed aspects of the islanders' daily life such as a wedding and a house party. The result was a holistic view of life on Fogo Island *as perceived by the people themselves*. The process allowed community members to be the subjects and not the objects shown from a scriptwriter's point of view (Williamson 1989). After the films were screened for government officials and university academics, a government's response film was made and screened on the island. The Fogo process opened communication channels among island communities and between the island and the government. Furthermore, one of the most relevant outcomes was that the process of making the films was more important than the actual films. It was the cooperation and sense of community developed what made the Fogo process unique (Crocker 2003). A number of similar film-related projects took place in different communities in the Newfoundland province after the Fogo Island project.

Don Snowden spent the rest of his life applying the Fogo process all over the world until his death in 1984. Since then, there has not been a uniform development to

¹ Newfoundland is the main island in the province of Newfoundland and Labrador, in Canada. Fogo is the largest offshore island of Newfoundland.

http://en.wikipedia.org/wiki/Fogo_Island,_Newfoundland_and_Labrador, accessed on July 5th 2011.

formalise the practise of participatory video. Different individuals and organisations have worked with participatory video by adjusting it to their own needs (Lunch and Lunch 2006).

2.4. What steps make up a participatory video process?

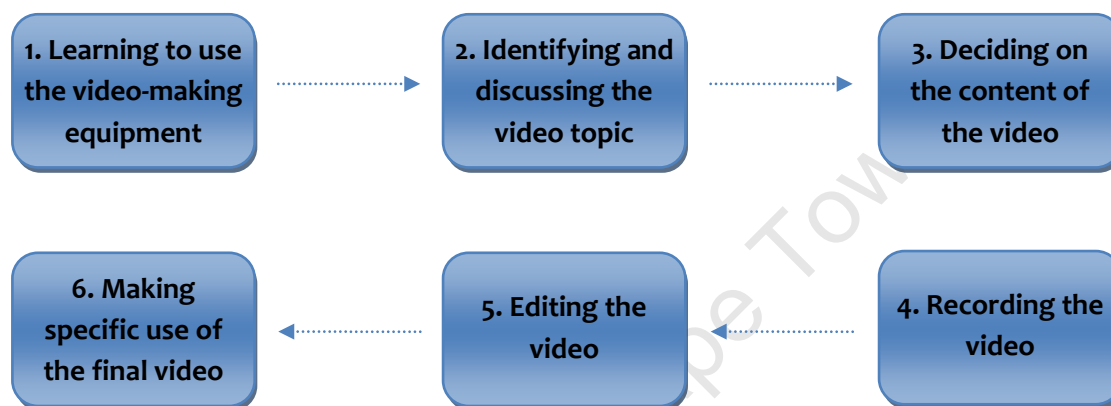


Figure 1. Steps of a typical participatory video process. Based on Lunch and Lunch (2006)

The steps of a participatory video process are always specific to the context in which it is used (as is the case of most participatory approaches). However, certain guidelines have been broadly adopted by most participatory video facilitators. Lunch and Lunch (2006) describe a series of steps (Figure 1) as followed by Insight Share². These steps are explained in sections 2.4.1 to 2.4.6.

2.4.1. Learning to use the video-making equipment

Through a series of games and exercises, participants learn how to use the video-making equipment (i.e. normally a camera, a tripod, and a microphone). The games and exercises used in this step of the project allow all participants to familiarise themselves

² Insight Share is a leader organisation in the use of participatory video. <http://www.insightshare.org/>, accessed on July 5th 2011.

with the equipment by recording short footage, such as a short interview. Instant playback of the footage recorded allows the external facilitator to give feedback to the participants.

2.4.2. Identifying and discussing the topic of the video

Depending on the context of the project, the topic of the video may be decided by project managers or participants. When decided by the participants, a process of reflection must be led by the facilitator in order to promote discussion among participants to decide on the topic of the video.

2.4.3. Deciding on the content of the video

Participants decide on the content of the video. One of the most commonly used techniques here is the storyboard. Participants draw the sequence of the story that they want to tell. The facilitator normally tries to make participants think of who are they shooting and how they want to do it.

2.4.4. Recording the video

Participants direct and record their own video. In this step, facilitators normally choose to intervene only when participants have questions or when it is necessary to remind them about basic concepts and techniques learned in the initial training. Facilitators would try to show participants their footage at the end of the shooting day.

2.4.5. Editing the video

Depending on the project, it may or may not be necessary to edit the footage. When necessary, either a local can be trained in editing techniques or the video can be edited by an external facilitator. It is important that participants are the ones who decide on the final takes to be included in the video.

2.4.6. Making specific use of the final video

Depending on the project, the final version of the video can be used to strengthen horizontal communication (e.g. among communities) or vertical communication (e.g. between communities and decision-makers).

Participatory video as a tool is normally used as a component of a broader project. As mentioned at the beginning of this section, the steps in a participatory video process are context-specific and depend entirely on the type of project that they are part of. The steps described by Lunch and Lunch (2006) allow the reader to have a general idea of what a typical participatory video process is like. Refer to the Case Study chapter (p.12) for the steps in the case study relevant to this research.

2.5. How has participatory video been used in other sectors?

A participatory approach was used to produce an educational video for tuberculosis awareness in The Gambia (Martin et al. 2005). A steering group was formed by key members of organisations working in tuberculosis research, health education, the health service, and the media. This group developed a script and commissioned the production of the video. Even though this project did not follow the steps of a participatory video project described in sections 2.4.1 – 2.4.6, some of their findings are relevant to this study case. Communication between different sectors working on tuberculosis awareness was strengthened by collectively developing the content of the video. A clear sense of ownership was developed among different stakeholders. The pilot version of the video was well received among viewers and it was considered informative, entertaining, and professional.

Participatory video has also been used in geographical research with members of a Maaori tribe in New Zealand. Kindon (2003) concluded that participatory video can create space for transformation by looking alongside rather than at research objects.

2.6. What are the benefits of participatory video?

Baumhardt et al. (2009) say people can learn new skills that help them cope with the challenges imposed by climate change when they have access to relevant information and more importantly, when such information is presented to them in a way that is

easy to understand and engage with. After a participatory video in Malawi, it was concluded that participatory video is a suitable tool to disseminate information about adaptation to climate change among vulnerable communities (Baumhardt et al, 2009).

Most benefits associated to the use of audiovisual tools are also applicable to participatory video. Suarez et al. (2008) argue that audiovisual tools help communicate complex scientific issues in a way that is easy to understand. They quote a Mozambiquean female farmer who, after watching a four-minute video of a similar workshop held in Argentina said: "...I had followed your explanations of global warming, but didn't really believe you ... But now in the film I see that white women at the other end of the world have the same problem we have! So maybe it is true that the global rainfall is changing..." (Suarez et al. 2008, p.98). Even though this video was not a participatory video as it was not made by members of the community, it shows a good example of how video is an effective channel for disseminating information about climate change.

Kindon (2003) says participatory video creates spaces for transformation by looking 'alongside' rather than 'at' research objects. That is to say, community members are active agents in the process, as opposed to passive beneficiaries. Lunch and Lunch (2006) argue that participatory video empowers a community to solve their own problems and to communicate their needs to decision-makers and/or other groups or communities. Therefore, participatory video gives communities a voice to broaden communication among themselves and with external stakeholders.

2.7. What are the main challenges in a participatory video project?

Some authors have identified challenges in participatory video processes. Baumhardt et al. (2009) says the project translator must have good communications skills, especially when the video is to be produced and edited in the local language. They also identified electrical power as an issue to be considered, since the constant power cuts during a participatory video process in Malawi generated delays in the editing process. Lunch and Lunch (2006) say time and lack of budget are potential bottlenecks in participatory video projects. The cost constraint was also identified by Menter et al. (2006) in a participatory video project for development of youth leadership skills in Colombia. However, based on the results of this project, they considered the use of participatory video to be worthwhile.

2.8. What has been the role of participatory video in adaptation to environmental change?

A relatively small portion of the literature related to participatory video reports on the use of this tool in adaptation to environmental change. The rationale for this study was partially based on this lack of information. The results of some projects that have used participatory video are presented here.

In 2008, a participatory video project was run by the Red Cross/Red Crescent Climate Centre and the Meteorological Services to promote climate change adaptation measures among farmers in Mphunga, Malawi. Farmers in Malawi had been experiencing poor crop yields and even total crop losses due to droughts and floods (Suarez et al. 2008). Baumhardt (2009) reported comprehensively on the results of the participatory video project in Mphunga³. The process started by sharing information about climate change between climate experts and members of the Mphunga community. As a result of a series of workshops, six climate change adaptation messages were selected to be presented in the video: a) diversification of crops, b) irrigation farming, c) duck versus chickens, d) storm drains and elephant grass, e) storage of food, and f) flood alert. The video was then recorded by Mphunga farmers in collaboration with the facilitators of the project. Following the recording, the video was screened in neighbouring communities. This study found that the Mphunga villagers' understanding of their changing environment and their willingness to adopt the six adaptation strategies presented in the video had increased after the participatory video project.

Suarez et al. (2008) report on a participatory video in Indonesia run by the Red Cross⁴. This project's initial plan was to focus the video on climate change. However, the project team decided to allow the local community to develop a sense of total ownership of the video-making process. As a result of this, a broader range of issues was covered and communication between the local community and project managers was strengthened. A video screening and an open discussion were organised in the community. Issues addressed in both the video and the discussion include flooding, waste management, violence, and health.

Plush (2009) reports on the results of a participatory video project in Nepal in 2008. This project's participants were children aged between 12 and 17. The video presented

³ This participatory video can be watched online: <http://www.youtube.com/watch?v=2PcVn4oy3NI>, accessed on July 8th 2011.

⁴ This participatory video can be watched online: <http://www.youtube.com/watch?v=jEs4VNngDDA>, accessed on July 8th 2011.

the children's views on how they had been affected by the negative impacts of climate change. Among other issues, children discussed the difficulty that they experienced to go to school during the flooding season. They had to cross the river in water up to their waist. A number of screenings of the participatory video to different stakeholders contributed to the allocation of resources for the construction of a bridge in 2009.

This research aims to contribute to the formalisation of participatory video as a method to articulate and communicate messages of adaptation to environmental change, as well as to provide useful guidelines and recommendations for future projects.

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Chapter 3

Case Study: The fuel-saving stoves participatory video project in Wage Worgaja, Ethiopia

3.1. Ethiopia, the Ebinat woreda, and Wage Worgaja

Ethiopia is located in eastern Africa. It borders Somalia and Djibouti to the east, Eritrea to the north, Sudan to the west, and Kenya to the south. The country's total population, as estimated for July 2011, is 90,873,739 inhabitants, of which 83% live in rural areas (CIA 2011a). Several lists of countries arranged by gross domestic product at purchasing parity (GDP (PPP)) have located Ethiopia among the poorest countries in the world⁵. The United Nations Development Program (UNDP) ranks Ethiopia 160 in a list of 172 countries in terms of their human development index⁶ (HDI) (UNDP 2010).



Figure 2. (Left) Ethiopia's location in Africa (Right) Ethiopia's map. (CIA 2011a)

It is believed that approximately 66% of Ethiopia's land was covered with forest or woodland before human settlement took place (Brittenbach 1961, Wood 1990, Kuru 1990, and Yirdaw 1996 in Bishaw 2001 p. 12). Progressive deforestation in the last 3,000 years has been exacerbated by population growth, forest clearing, overgrazing, and movement of political centres. The country's forest area was reduced to 16% in 1950 and to 3.1% in 1982 (UNEP 1983 in Bishaw 2001 p. 12).

⁵ 170 out of 183 (IMF 2011), 160 out of 172 (World bank 2010), and 213 out of 228 (CIA 2011b).

⁶ HDI is a comparative measure of life expectancy, education, literacy and standards of living in general.

The Ebinat woreda is located in the Amhara area in northern Ethiopia. A number of small kebeles make up the woreda. One of the kebeles in the Ebinat woreda is called Wage Worgaja. Wage Worgaja is located 23km (8-10 hours on foot) away from the largest kebele in the Ebinat woreda (also called Ebinat).

3.2. Fuel-saving stoves in the Ethiopian context

Information in sections 3.2 and 3.3 has been largely extracted from a manual written by GIZ (2008). Conversations with farmers in Wage Worgaja also provided valuable information that has been compiled in this section.

The vast majority of the population in the country uses firewood as a cooking fuel. This firewood is burned in an open fire, where only 10% of the heat is actually used to cook the food and the rest is wasted. As a result of this, fuel use efficiency at a household level has been identified by different entities in Ethiopia as a critical issue of concern. Different programmes aimed at promoting the use of fuel-efficient stoves have been implemented in the country in the last twenty years.

The most representative feature of Ethiopian food is injera. Injera is a type of bread and is normally eaten together with a variety of stews made out of meat, lentils, chickpeas, and different spices (Figure 3 (left)). The stews are normally called wat. The traditional stove for baking injera is an open fire, where a baking ring is placed on some stones (Figure 3 (right)). Most fuel-saving stoves produced and commercialised in Ethiopia have been specifically designed for users to bake injera and cook wat at the same time.



Figure 3. (Left) Injera (Right) Traditional stove

3.3. The fuel-saving stoves programme in Wage Worgaja

The ERCS's climate change adaptation office in the Ebinat woreda started working in May 2009. A number of programmes have been implemented to address climate change adaptation issues at a community level in the Wage Worgaja kebele. Some of these programmes are an environmental rehabilitation programme, a livelihood diversification programme, and a fuel-saving stoves programme.

The fuel-saving stoves programme started in August 2009. The community of Wage Worgaja was consulted and the details of the project were finalised in collaboration between community members and the ERCS. The project was also supported by the Ebinat Woreda Energy Bureau, Ebinat Woreda Women Affairs, and GIZ. A group of 21 women from Wage Worgaja attended a 5-day workshop where they were trained to make fuel-saving stoves. The workshop was facilitated by the ERCS, and led by experts from the government and a former GIZ trainee. Since the initial training in August 2009, the group of farmers has been producing and selling fuel-saving stoves in Wage Worgaja and its surrounding kebeles.

These are some of the benefits and characteristics of the fuel-saving stoves produced in Wage Worgaja:

- It is approximately 50% more efficient in fuel consumption than a traditional stove.
- All fuels that are commonly used in a traditional stove (firewood, animal dung, branches, and leaves) can also be used in a fuel-saving stove.
- The release of smoke is unidirectional. Women and their children are less exposed to the smoke than they are when cooking with a traditional stove. This reduces their likelihood to contract respiratory diseases such as Trachoma.
- The fuel burns in an enclosed structure. Women and especially children often get burned when playing around a traditional stove.
- The structure is levelled and stable.
- The injera is free of dirt particles on the baking ring.

3.4. The fuel-saving stoves participatory video project

The fuel-saving stoves participatory video made in Wage Worgaja can be watched online: <http://www.climatecentre.org/site/films-by-farmers> (accessed on July 13th 2011).

The fuel-saving stoves participatory video was not an isolated project; it was a component of a broader participatory video project run by ERCS in which three

participatory videos were produced (see section 3.4.1.2). Firstly, the broader project was aimed at encouraging farmers to critically discuss the impact of the intervention of the ERCS in their community, evaluate the benefits they had received from such intervention, and build a solid platform for projects to be scaled-up in the future. Secondly, the ERCS intended to produce inspirational videos that could be used to promote their programmes and gain acceptance in other kebeles for potential interventions in the future. For the purpose of this research, only the fuel-saving stoves participatory video project was chosen for the case study, given its suitability and direct relation to the research question.

Figure 4 shows the stages and sub-stages that made up the fuel-saving stoves participatory video project. Given the specific needs of this study, the second stage (*screening the participatory video*) was designed by both the researcher and staff members of the ERCS, in order to fulfil both the aim of this study and the aim of the project. For this reason, information about the second stage of the project has been included in both the Case Study chapter (section 3.4.2) and the Methodology chapter (section 4.1.2) according to its relevance to each chapter.

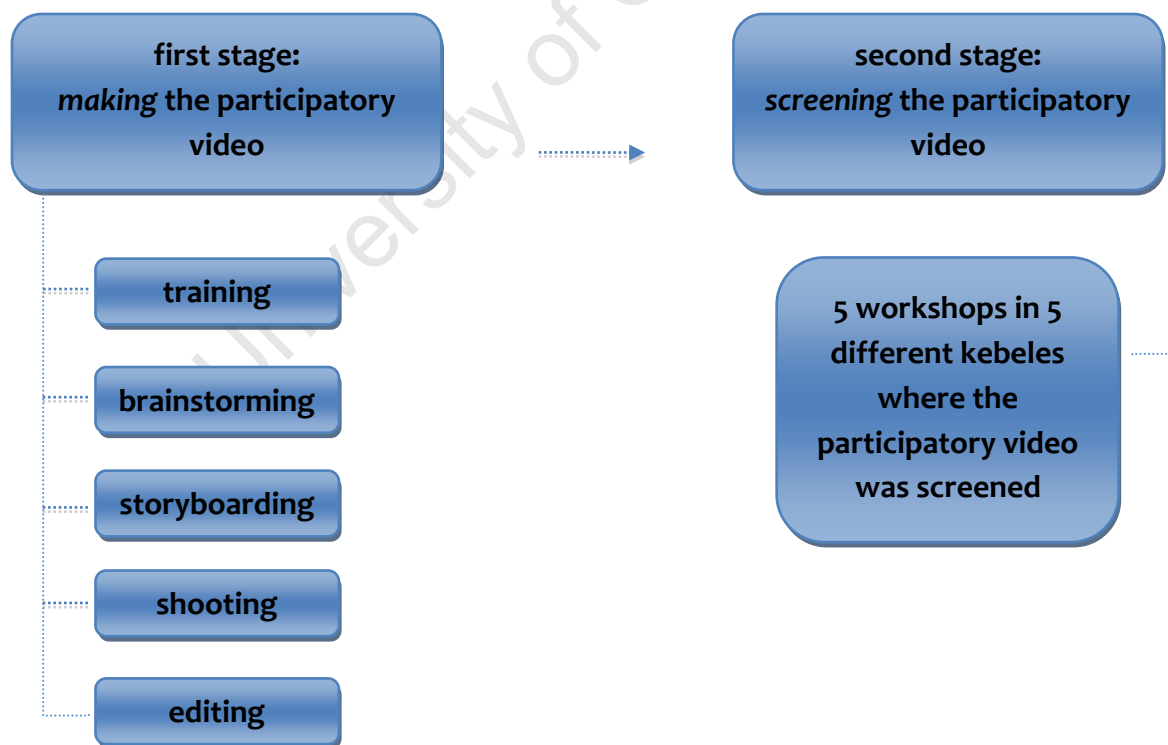


Figure 4. Stages and sub-stages of the fuel-saving stoves participatory video project

3.4.1. First stage of the project: *making the participatory video*.

Eleven farmers in Wage Worgaja attended a three-and-a-half-day participatory video workshop. The invitation to the workshop was made open by the ERCS to all farmers in Wage Worgaja who wanted to participate. The only criterion for participation was their availability to attend during the whole duration of the workshop. Even though the ERCS tried to encourage equal participation from both male and female farmers, only three of the eleven participants were women. The workshop was led by Ida Benedetto (referred to as *external facilitator* in this section), who is a participatory video practitioner hired by the ERCS to facilitate the project. Information was translated from English to Amharic, Ethiopia's national language, by an official translator and staff members of the ERCS. Information in section 3.4.1 has been largely extracted from Ida Benedetto's report to the ERCS (Benedetto, 2010).

3.4.1.1. Becoming familiar with the video-making equipment

The aim of this sub-stage of the process was to help farmers become familiar with the video-making equipment (i.e. video camera and tripod). For this purpose, the facilitator used an interview activity in which farmers sat in a circle and took turns recording a short and simple interview with the person sitting in front of them. In this activity, the external facilitator taught farmers how to turn the camera on and off, how to frame a picture in the viewfinder, and how to test the sound and conduct an interview. Farmers had the opportunity to be both in front of and behind the camera, as well as to see how they and their peers sounded and looked in a video.



Figure 5. Participants and external facilitator during the initial training

3.4.1.2. Brainstorming

After the initial technical training, the external facilitator asked farmers to identify three topics for the videos that were related to the different programmes run by the ERCS in their community. The three chosen topics were *fuel-saving stoves*, *environmental rehabilitation* and *livelihood diversification*. Farmers were then encouraged to list the benefits that they had received from each programme as well as relevant issues that they wanted to include in the videos. At this point, each one of the eleven farmers chose what group they wanted to be in. Each group was tasked to produce one video. The fuel-saving stoves group was made up of Azanu Mekonene, Tsehaye Andarge and Terefe Asefa (farmers in Figure 6), who are active fuel-saving stove producers.

The possibility of having the video made by farmers who are not fuel-saving stove producers was not evaluated in this project. The ERCS decided not to have any control over who made the video and rather encourage farmers to make this decision themselves.

3.4.1.3. Storyboarding

Farmers first created a storyboard of their daily routine as an exercise to become familiar with the storyboard technique (see section 2.5.3). Farmers then moved on to create the storyboard for the fuel-saving stoves participatory video, plan the locations where they wanted to shoot, and list the people they needed to contact to include in the video.



Figure 6. Participants creating the storyboard

3.4.1.4. Shooting

Farmers had the freedom to shoot their own video. They spent half a day shooting the video, during which the external facilitator was always present but did not intervene unless farmers came to her with questions. The shooting of the fuel-saving stoves participatory video happened during the third day of the workshop.



Figure 7. Participants recording the participatory video

3.4.1.5. Editing

Given the duration of the workshop, the farmers who made the fuel-saving stoves participatory video did not have the opportunity to watch their footage at the end of the shooting. The video was edited by Justin Benn, a filmmaker hired by the ERCS. This editing was done without the farmers getting a chance to select the final takes. This was not the case for the other two participatory videos (*livelihood diversification* and *environmental rehabilitation*), where the farmers had the opportunity to watch the footage they had produced and say which takes they wanted to be included in the final version of the video. In all three cases, the videos were edited between the end of the first stage of the project (September 2010) and the beginning of the second stage (January 2011). See the Recommendations section (section 7.2) for more information about this issue.

3.4.2. Second stage of the project: screening the participatory video

Once the video had been edited, the second stage of the project took place in January-February 2011. The ERCS's original plan for the second stage of the fuel-saving stoves

participatory video project was to organise two workshops in two different kebeles (Wage Worgaja and Tarasmba). The topic of the workshops was the introduction of the programmes facilitated by the ERCS in Wage Worgaja with a strong emphasis on the fuel-saving stoves project. The participatory video would be screened in these workshops. The workshop had two main objectives:

- I. To promote the use of the fuel-saving stoves produced in Wage Worgaja among other farmers in the Ebinat woreda by informing them about the benefits of the stoves.
- II. To introduce other farmers in the Ebinat woreda to the programmes that had been facilitated by the ERCS in Wage Worgaja, in preparation for future potential interventions in different kebeles.

For the aim of this research, a third objective was added to this stage of the project. This objective was to evaluate the effectiveness of the participatory video in improving Ebinat farmers' understanding of the benefits of fuel-saving stoves. For this reason, it was agreed between ERCS staff members and the researcher that instead of only two workshops, five workshops would take place in five different kebeles in the Ebinat woreda. The workshop was then designed to fulfil both the ERCS's initial objectives and this research's aim. Detailed information about the second stage of the project has been included in the Methodology chapter (section 4.1.2).

3.4.3. The content of the participatory video

The fuel-saving stoves participatory video was made by farmers in Wage Worgaja, Ethiopia, in September 2010. The video's duration is five minutes. The video starts by comparing a traditional stove with a fuel-saving stove regarding the amount of smoke they release. A farmer shares her experience using a fuel-saving stove and explains how her exposure to smoke was greater when she was using a traditional stove. Shots of farmers cooking with a traditional stove are shown while the farmer talks.

The same farmer then mentions how a fuel-saving stove uses less firewood than a traditional stove, while a shot of another farmer putting firewood into the new stove is shown. She also mentions how they have to walk very far to collect the firewood for cooking and how the firewood last three times more when she cooks with a fuel-saving stove.



Figure 8. (Left) Fuel-saving stove (Right) Farmer being interviewed. Images taken from the participatory video

The second farmer, Azanu Mekonene, is then interviewed. She too emphasises the fact that a fuel-saving stove uses less firewood and releases less smoke than a traditional stove. She mentions that Trachoma is a very harmful disease and that she is less exposed to it by using a fuel-saving stove. The same farmer then explains how her house used to get very dirty when cooking with a traditional stove due to the great amount of smoke released. A shot of the farmer in her house is shown as she speaks. Azanu is a fuel-saving stove producer and is also one of the three farmers who made the participatory video. She then explains how they make the stoves and what their price is⁷.



Figure 9. (Left) Azanu, one of the stove producers (Right) Azanu's house. Images taken from the participatory video

⁷ 60Birr, approximately 3.5USD as of June 15th 2011.

Chapter 4

Methodology

The aim of this study was to determine the effectiveness of participatory video in improving community members' understanding of changes they can adopt to adapt to their changing environment. This aim, applied to the relevant case study, refers to the effectiveness of participatory video in improving Ebinat farmers' understanding of the benefits of fuel-saving stoves and promoting a shift from traditional stoves to fuel-saving stoves.

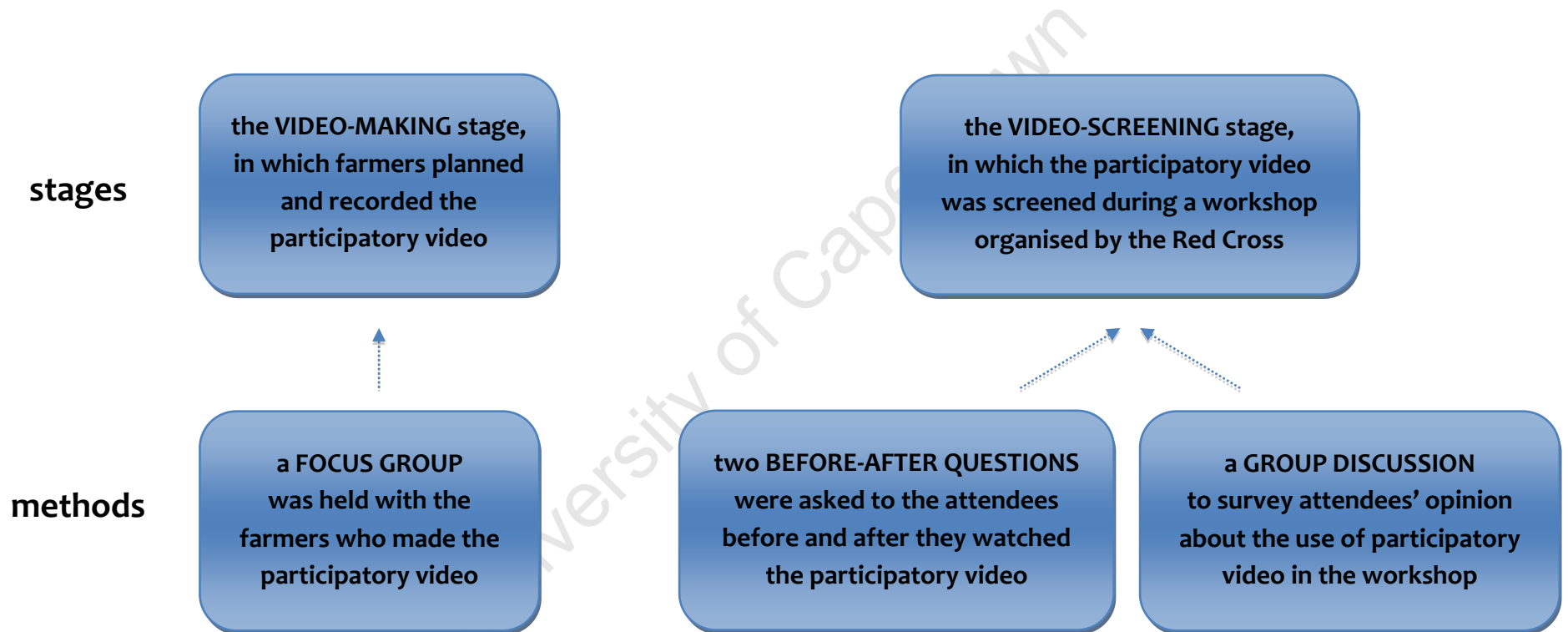
As shown in Figure 4 (p. 15), there were two stages of the fuel-saving stoves participatory video project. The first stage of the project took place during a three-day workshop in September 2010, during which the participatory video was made. A period of approximately five months followed this initial stage, during which the video was edited by an external facilitator. The second stage of the project took place between January and February 2011, once the participatory video had been edited and was ready to be screened. For logistic reasons, the researcher only visited the research site during the second stage of the project. For more information about the first and second stages of the fuel-saving stoves participatory video project, refer to the Case Study chapter.

For the purpose of the study and considering the researcher's absence in the research site during the first stage of the project, three different research methods were designed and applied to the different stages of the project. These research methods were applied over a period of three weeks that the researcher spent in the research site, between January and February 2011. The details of the three research methods are explained in this chapter.

4.1. Research methods

Figure 10 shows the link between the stages of the project and the research methods designed for the study. One research method (*focus group*) was designed to evaluate the first stage of the project, and two methods (*before-after questions* and *group discussion*) were designed to evaluate the second stage of the project.

Figure 10. Research methods applied to different stages of the participatory video project



4.1.1. Evaluating the first stage of the project: Focus group. An insight into the perceptions of Wage Worgaja farmers' about the participatory video project

The main objective of the first stage of the fuel-saving stoves participatory video project was to bring farmers in Wage Worgaja together to collectively discuss the impact of the intervention of the ERCS in their community and how they had benefited from such intervention. The ERCS decided to use participatory video for this purpose, encouraging farmers to make their own video about fuel-saving stoves. For more information about the project refer to the Case Study chapter. As explained earlier, the researcher was not present in the research site when the first stage of the project took place. For this reason, and in order to evaluate the effectiveness of the first stage of the project, a focus group was held with the three farmers from Wage Worgaja who made the fuel-saving stoves participatory video. The three farmers are Azanu Mekonene, Tsehaye Andarge and Terefe Asefa (referred to as *participants* in this section). The participants had been producing fuel-saving stoves since August 2009 and were the ones who made the fuel-saving stoves participatory video in September 2010.



Figure 11. Participants during the focus group

The focus group was held on the 28th of January 2011 and lasted for approximately one and a half hours. It took place at the storage place where the stove-making materials are kept in Wage Worgaja. The focus group was led in English by the researcher and translated into Amharic for the participants by a staff member of the ERCS, who also translated participants' answers for the researcher. The focus group was a semi-structured conversation between the researcher and the participants. The following topics were discussed:

- **Training in video-making techniques**
 - a. *the process*
 - b. *level of difficulty*
 - c. *role of the facilitator*
- **Making the participatory video**
 - a. *the process*
 - b. *level of engagement*
 - c. *role of the facilitator*
 - d. *reinforcement of benefits of fuel-saving stoves*
- **Participatory video vs. other approaches**
 - a. *previous exposure to video-related approaches*
 - b. *previous advertising strategies*
 - c. *oral vs. video-based communication*
- **Suggestions for future participatory video projects**

Relevant information emerged from the focus group that allowed for an evaluation of the first stage of the fuel-saving stoves participatory video project. The results of the focus group are presented in the Results chapter (section 5.1)

4.1.2. Evaluating the second stage of the project: Before-After questions and Group discussion

As explained in section 3.4.2 in the Case Study chapter, the ERCS's original plan for the second stage of the fuel-saving stoves participatory video project was modified to fulfil this research's aim. The ERCS's original plan was to organise two workshops in Wage Worgaja and Tarasmba (the closest kebele to Wage Worgaja). The main component of these workshops was the screening of the participatory video. The researcher collaborated with

staff members of the ERCS to re-design the second stage of the project in a way that it could fulfil both the ERCS's objectives and the research's aim.

The topic of the workshops was the introduction of the programmes facilitated by the ERCS in Wage Worgaja with a strong emphasis on the fuel-saving stoves project. This topic remained the same as from the ERCS's original plan. Five workshops, instead of two according to the ERCS's original plan, took place in five different kebeles: Wage Worgaja, Tarasmba, Deber Abayale, Wonberoch and Ayhaquha, all of which are located in the Ebinat woreda. A total of 80 farmers (referred to as *attendees* in this section) attended the workshops. See Annex 2 for the attendance profile.

The content of the workshop was as follows:

- a) Brief introduction of the topic of the workshop.
- b) Introduction of the researcher and the aim of this research (translated to Amharic by the moderator).
- c) Attendees were asked to answer a set of questions before they watched the fuel-saving stoves participatory video. See section 4.1.2.1 for more information about this research method.
- d) Attendees watched the fuel-saving stoves participatory video.
- e) Attendees were asked to answer a set of questions after they watched the fuel-saving stoves participatory video. See section 4.1.2.1 for more information about this research method.
- f) Attendees watched the remaining two participatory videos (*environmental rehabilitation and livelihood diversification*). See section 3.4.1.2 for more information about these participatory videos.
- g) Attendees were asked to collectively discuss the lessons learned about the benefits of fuel-saving stoves and the role of participatory video in disseminating this kind of information. During the group discussion, attendees were also encouraged to ask any questions they had about the topic of the workshop. See section 4.1.2.2 for more information about this research method.

The ERCS's original plan for the content of the workshop encompassed components a), d) and f). Components b), c), e), and g) were added to fulfil the research's aim.

Each workshop lasted for about one and a half hours and was led by a staff member of the ERCS (referred to as the *moderator* in this section) in Amharic. Before the day of each workshop, the researcher and the moderator asked community leaders permission for the workshop to take place in their kebele. After their approval, the leaders appointed the farmers that they considered should be invited to the workshops, based on their age (older

than 20 but younger than 50) and their gender (as gender equality was requested by the researcher). The majority of the farmers who were invited to the workshop actually attended.



Figure 12. Attendees watching the participatory video during the workshop in Wage Worgaja

The research methods themselves (ie. the before-after questions and the group discussion) were part of the workshops. The findings that emerged from these two methods are directly linked to the screening of the participatory video and not to the workshop as a whole.

4.1.2.1. Before-After questions. A quantitative measure of the effectiveness of participatory video when screened in a workshop

Attendees were asked to answer the following two questions before and after they watched the participatory video:

- [1] Do you understand the benefits of cooking with a fuel-saving stove?**
- [2] Are you interested in shifting from a traditional stove to a fuel-saving stove?**

As informed by staff members of the ERCS prior to the researcher's arrival in the research site, it was expected that the majority of the attendees were illiterate (i.e. unable to write or read). For this reason, the questions were read and explained out loud by the moderator. Multiple-choice questions were used instead of open questions not only to allow illiterate attendees to take part in the questionnaire, but also to allow for a quantitative analysis of

the effects of watching the participatory video. Attendees were asked to choose between four options as explained in tables 1 and 2. The same two questions and choices were printed on both sides of the page. One side of the page was used for the before questions and the opposite side was used after attendees had watched the participatory video. Literate attendees were encouraged to write any extra information that they considered relevant according to the questions.

Options	Question [1]: Do you understand the benefits of cooking with a fuel-saving stove?
1. No understanding	The attendee <i>has never heard</i> of a fuel-saving stove or, alternatively, he/she has heard of them but he/she <i>does not know anything</i> about their benefits
2. Limited understanding	The attendee has a <i>very limited understanding</i> of the benefits of fuel-saving stoves
3. Fair understanding	The attendee <i>fairly understands</i> the benefits of fuel-saving stoves but he/she <i>needs to learn more</i> about their benefits before considering acquiring one
4. Full understanding	The attendee <i>fully understands</i> the benefits of fuel-saving stoves, or, alternatively, the attendee is <i>already using</i> a fuel-saving stove

Table 1. Choices for question [1]

Options	Question [2]: Are you interested in shifting from a traditional stove to a fuel-saving stove?
1 Not interested at all	The attendee <i>has no interest whatsoever</i> in shifting from a traditional stove to a fuel-saving stove
2 Somewhat interested	The attendee's interest in shifting from a traditional stove to a fuel-saving stove is <i>very limited</i>
3 Fairly interested	The attendee <i>is fairly interested</i> in shifting from a traditional stove to a fuel-saving stove and he/she <i>could eventually acquire one</i> in the future
4 Very interested	The attendee <i>definitely intends</i> to shift from a traditional stove to a fuel-saving stove, or, alternatively, he/she is <i>already using</i> one

Table 2. Choices for question [2]

This before-after comparison allowed for a quantitative analysis of the differences between both the attendees' understanding of the benefits of fuel-saving stoves and their interest in shifting from a traditional stove to a fuel-saving stove, before and after they watched the participatory video.



Figure 13. Attendees answering the questionnaire in Wage Worgaja

The questionnaire was designed in English by the researcher and translated into Amharic by one of the staff members of the ERCS. An example of the questionnaire is in Annex 1. The questionnaire also included extra information such as the attendee's name, age, and gender. This information was collected to create a demographic profile of the attendees (section 5.2.1).

4.1.2.2. Group discussion

As part of the workshops, and as the third research method designed for the study, attendees were asked to discuss the lessons learned about the benefits of fuel-saving stoves and the effectiveness of participatory video in communicating this information. The questions in the group discussion were designed in collaboration between the researcher and staff members of the ERCS. The discussion was led in Amharic by a staff member of the ERCS. Attendees were asked the following questions:

- What are the benefits of fuel-saving stoves?
- Did the participatory video help you understand these benefits? Why?
- What do you think are the advantages of using participatory video in a workshop?
- How would you compare this workshop to other workshops you have attended in the past?
- Do you have any suggestions for future projects that involve the screening of a participatory video?



Figure 14. Attendees during the group discussion in Ayhaquha

Relevant information emerged from these group discussions that allowed for a qualitative analysis of the effectiveness of participatory video in promoting the use of fuel-saving stoves among farmers in the Ebinat woreda. The results of the group discussions are presented in the Results chapter (section 5.2.3).

4.2. Post-fieldwork data analysis

Input given by the farmers during the *focus group* and the *group discussions* was recorded by the researcher with a video camera. This information was translated from Amharic to English by the moderator while the researcher was still at the research site. After the researcher returned from his fieldwork in Ethiopia, a qualitative analysis of this data took place. Information given by the farmers was divided into different categories according to the question they were answering. Extra information unrelated to the specific questions was also analysed and put in the relevant category. The key findings were then extracted from the different categories and put together to be presented in the Results chapter. During this process, the researcher went back to the research's aim and objectives constantly to ensure the results were relevant to the research. A series of diagrams were created in *Microsoft Office Word 2007* and included in the Results chapter to summarise some of the findings and help the reader understand the content of the document. Some quotations were extracted from the transcripts and included in the Results chapter as well.

Regarding the information collected from the *Before-After questions*, both a quantitative and qualitative analysis took place once the researcher returned from the research site. Attendees' answers were given a numeric value from 1-4 as shown in tables 1 and 2 (p. 27).

Microsoft Office Excel 2007 was used to tabulate the data, compare the before-after variations, calculate percentages, and generate graphics. This quantitative data was then analysed together with extra qualitative information provided by the attendees in the questionnaire sheet. Finally, the main findings obtained from the Before-After questions were compiled in the Results chapter.

Chapter 5

Results

The results of the study are compiled in this chapter. As explained in the Case Study chapter (p. 12), the fuel-saving stoves participatory video project was divided into two different stages: *making* and *screening* the participatory video. The results that are relevant to the first stage of the project are presented in sections 5.1. Section 5.2, on the other hand, shows the results that relate to the second stage of the project. A third section (5.3) has also been included in this chapter. This section includes an analysis of some of the results presented in section 5.2 in relation to some external factors.

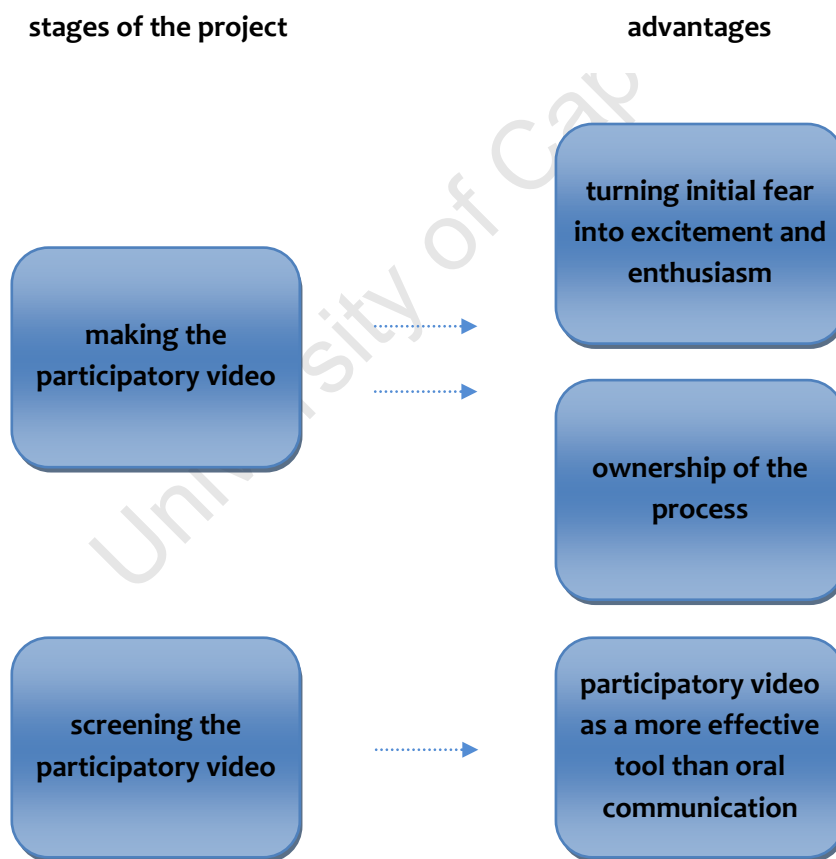


Figure 15. Stages of the participatory video project and their associated advantages

5.1. The first stage of the project: Making the participatory video. The effectiveness of the tool as perceived by the farmers in Wage Worgaja who made the participatory video

A focus group was held on the 28th of January 2011 with Azanu Mekonene, Tsehaye Andarge and Terefe Asefa, farmers from Wage Worgaja who are active fuel-saving stoves producers. Azanu, Tsehaye and Terefe (referred to as *participants* in this section) made the fuel-saving stoves participatory video in September 2010. The aim of this focus group was to survey the perceptions of the participants about the participatory video project. For more information about the focus group refer to the Methodology chapter (section 4.1.1). Participants were asked to identify the advantages of using participatory video, as well as to make recommendations for future projects. Three key findings emerged from the focus group. These findings are presented in sections 5.1.1, 5.1.2, and 5.1.3.

Figure 15 (p. 31) summarises the advantages of participatory video as perceived by the participants and associates them to the different stages of the project.

5.1.1. When farmers in Wage Worgaja overcame their initial fear of handling the video equipment, they turned that fear into excitement and enthusiasm for the following stages of the project

“... at first it was difficult to understand how to use the camera, but we eventually managed to do it with the help of the facilitator... then we felt happy...” (Azanu Mekonene, participant in the focus group)

Before embarking on the fuel-saving stoves participatory video project, farmers in Wage Worgaja were completely unfamiliar with video-related concepts and technology. The project started by participants becoming familiar with the video-making equipment (i.e. video camera and tripod). At first, participants found themselves intimidated by this equipment and the fact that it was something completely different to any human-made object they had ever used or witnessed in the past. However, once the training began, their fear slowly started to turn into a much more positive feeling of enthusiasm and willingness to participate in the project. Participants said that once they started to feel familiar with the video-making equipment they felt much more eager to continue with the project and make the most out of it.

The fuel-saving stoves participatory video project in Wage Worgaja constitutes a very good example of how community-based adaptation projects can benefit from the use of

innovative tools and methods by bringing in the excitement experienced by participants when they are exposed to new technology. Participants stated several times throughout the focus group that being capable of handling the video equipment by themselves was crucial to making them engage with the project. The initial stage of most participatory video projects is the technical training in the use of video-making equipment. A variety of innovative and participatory approaches are used at this stage. According to the participants, their interest in the fuel-saving stoves participatory video project was initially driven by the excitement of using the video-making equipment for the first time. This excitement was definitely determined by the success of the facilitator and the methods she used to make this learning process possible.

Making community members familiar with the video-making equipment at the initial stage of a participatory video project is very important as it directly affects the success of the following stages and therefore of the project in general. However, the ultimate objective of a participatory video project is not to produce highly skilled video-makers. The process of learning how to use the video-making equipment is a means to an end, but not the end itself. If this distinction is not made clear from the beginning, the focus of the project could easily be shifted towards mere entertainment and fun, leading to the real objectives not being accomplished. The farmers in Wage Worgaja who participated in the fuel-saving stoves participatory video project acknowledged this during the focus group. Thanks to the guidance they received from the facilitator during the training process, they clearly understood that it was not just about experimenting with the video-making equipment, but rather using it in the process of producing the participatory video. Once they became familiar with the video-making equipment they were ready to move on to the following stages of the project, driven by the enthusiasm and the excitement originated in the first stage of the project.

5.1.2. Farmers in Wage Worgaja saw the participatory video project as an extension of their own work. They felt that no one else could have done a better job at making a video about fuel-saving stoves

“...the participatory video project allowed us to make our own video about our own work, and we feel proud of it...” (Tsehaye Andarge, participant in the focus group)

One of the most acclaimed advantages of participatory video is that it allows community members to be the owners of the project by being the ones who produce their own video. Once the initial stage in which participants learn how to use video-making equipment has

been completed, most participatory video facilitators choose to intervene as little as possible in the rest of the process. In the case of Wage Worgaja, the facilitator's intervention after the initial stage was minimal. She only intervened when she considered it absolutely necessary, such as when farmers forgot to turn the camera on before recording or when they forgot to close the lens cap when the camera was off. When asked what they thought about the degree of freedom they were given in regard to planning and recording the participatory video, farmers in Wage Worgaja identified this as one of the key issues to which the project owed its success. *"...we felt very much engaged with the process because we were doing our own video...the facilitator helped us but we were the ones actually making the video..."* (Azanu Mekonene, participant in the focus group).

The study found that the reason why farmers in Wage Worgaja appreciated the degree of freedom they were given when making the video was the fact that they saw the participatory video project as an extension of their own work. They felt that no one else could have done a better job at making a video about fuel-saving stoves. They were the ones who had been producing and selling fuel-saving stoves since the end of 2009 and therefore it felt right that they were the ones who made the video. When asked about the alternative of someone else making the video as opposed to they themselves making it, farmers said it was their own work and they felt proud of it, and did not see any reason why they should not be the ones making the video about their own work.

Most farmers in Ethiopia have attended multiple workshops, ranging from agricultural training workshops to HIV prevention workshops. Farmers in Wage Worgaja identified the fuel-saving stoves participatory video project as a very effective and innovative type of workshop compared to previous approaches to which they had been exposed. According to them, the participatory video project was distinctive because of their level of involvement in the project.

5.1.3. Farmers in Wage Worgaja said that participatory video is an excellent way of showing others their work

"...we had no option other than oral communication to spread the word about the benefits of using fuel-saving stoves...we can now show our work to others by using video..." (Terefe Asefa, participant in the focus group)

Even though farmers from Wage Worgaja had never been exposed to videos of any kind, they acknowledged the advantages of communicating information through video rather than limiting it to oral communication.

Farmers in Wage Worgaja interact with each other (and with members of different kebeles) through oral communication during social activities such as weddings, funerals, and market days among others. It is during these activities that the fuel-saving stoves producers get a chance to tell others about their work. When the producers (participants) found out that the ERCS was planning to screen the fuel-saving stoves participatory video in neighbouring kebeles, they saw it as a very good opportunity for others to see their work. Participants compared this new way of disseminating information with the informal farmer-to-farmer oral communication they had been using since they started producing fuel-saving stoves. According to the participants, the farmer-to-farmer oral communication is not very effective when compared to communication through video for three main reasons:

- a) Informal oral communication is *easily forgettable*. Information received from a video could penetrate the audience more effectively due to the *visual impact* created by the images.
- b) Video is a *witness of reality*. Information gains *credibility* when disseminated through video as opposed to oral communication.
- c) Video reaches a *greater audience* in a *shorter period of time*. Oral communication between farmers in Wage Worgaja and surrounding kebeles is informal and the rate at which information is disseminated is relatively slow.

Participants also compared the dissemination of information about fuel-saving stoves through workshops organised by the ERCS in neighbouring kebeles with and without the use of video. In this case, the producers identified disadvantages a) and b) described above as also applicable.

5.2. The second stage of the project: Screening the participatory video in different kebeles in the Ebinat woreda. The effectiveness of the tool when used in a workshop to promote the use of fuel-saving stoves

For the purpose of this study and as part of the initiative of the ERCS to embark on the fuel-saving stoves participatory video project, five workshops were held to promote the use of the stoves in five different kebeles in the Ebinat woreda (Wage Worgaja, Tarasmba, Wonberoch, Deber Abayale and Ayhaquha). A total number of 80 farmers (referred to as *attendees* in this section) attended the workshop in their own kebele. The participatory

video made by farmers in Wage Worgaja was screened in these workshops. For more information about the workshops refer to the Methodology chapter (section 4.1.2).

Two different research methods were applied during the workshops:

- a) A set of questions before and after attendees watched the participatory video
- b) A group discussion about the benefits of using fuel-saving stoves and the advantages of participatory video

Both quantitative and qualitative information collected during the workshops will be presented in sections 5.2.2 and 5.2.3 respectively. A demographic profile of the attendees will be presented in section 5.2.1.

5.2.1. Attendees' demographic profile

Traditionally, Ethiopian women in rural areas are in charge of cooking for their husbands and children, as well as most cooking-related activities such as collecting firewood and water. Men, on the other hand, usually take responsibility for their animals and their crops, among other tasks. For the purpose of this study, efforts were made in order to assure a balanced gender distribution of attendees to the workshop, as shown in Figure 16.

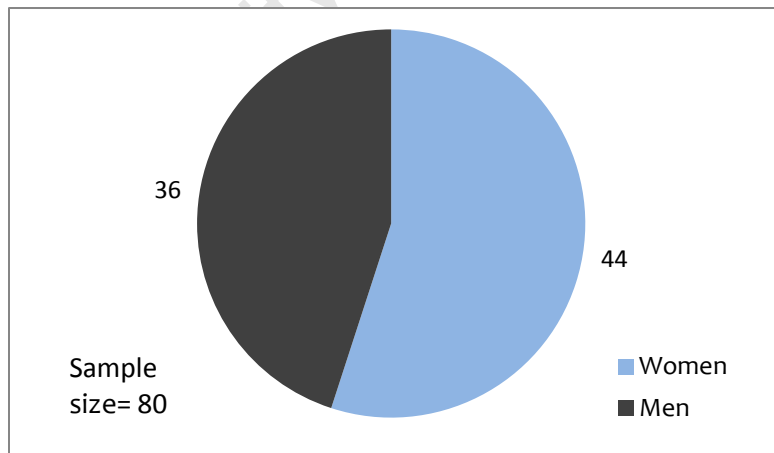


Figure 16. Gender distribution of attendees

As an initial hypothesis, it was expected that male attendees would not be as engaged with the topic of the workshop as female attendees, considering women are the ones who use

the stoves (traditional or fuel-saving). However, it became clear during the workshops that male farmers in Ebinat woreda were as interested in learning about fuel-saving stoves as the female farmers. Male farmers would even associate themselves with the use of the stoves by sentences such as “...I have been using a fuel-saving stove since...” or “...I want to start using a fuel-saving stove...” during the discussion after watching the participatory video. When asked, some male farmers gave three main reasons for this behaviour:

- It is their responsibility to ensure their wife and children are safe when cooking.
- The use of fuel-saving stoves helps reduce deforestation which is an issue of concern for both men and women.
- Food is a very important part of their culture, and everything that has to do with food has to do with them, even if they are not in charge of the kitchen.

Traditionally, Ethiopian women are almost entirely in charge of taking care of their children, especially when they are babies. For this reason, children are also affected by the negative impact of using traditional stoves. Hence, it became clear from the workshops that attendees, both men and women, saw the use of fuel-saving stoves as relevant to the entire household.

The day before the workshops, community leaders of each of the five kebeles were approached by the researcher and staff members of the ERCS, who explained the purpose of this study and of the workshops themselves. Each leader selected a group of members of the community to be invited to the workshop. Leaders based their decision on the level of interest the potential attendees would have in fuel-saving stoves. All leaders said most community members under the age of 20 were too young to be concerned about what kind of stove was used in their household. Community members over the age of 50 were also considered by the leaders as unlikely to be interested in the topic of the workshop. Leaders then appointed attendees mostly between 20 and 50 years old, as shown in Figure 17. The mean age of the attendees was 31.75.

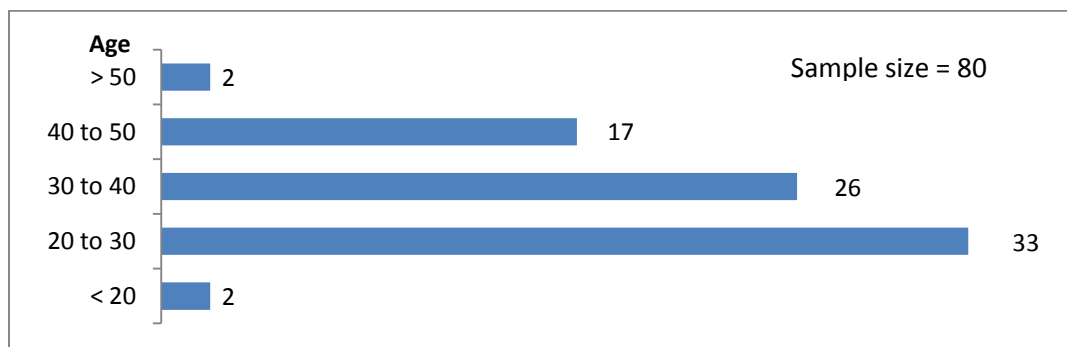


Figure 17. Age distribution of attendees

Finally, it is important to say that no difference in attitude towards the use of fuel-saving stoves and their associated benefits, implications or considerations was observed between male and female farmers in the Ebinat woreda, and neither was the case among different age groups between 20 and 50 years of age.

5.2.2. First part of the workshops. Screening the participatory video and the comparative before-and-after questions

The aim of this part of the workshop was to collect quantitative information that reflected how both attendees' understanding of the benefits of fuel-saving stoves and their interest in shifting from a traditional stove to a fuel-saving stove were influenced after watching the participatory video.

For this purpose, attendees were asked to answer two questions before they watched the video:

[1] **Do you understand the benefits of cooking with a fuel-saving stove?**

[2] **Are you interested in shifting from a traditional stove to a fuel-saving stove?**

Attendees were asked to answer these two questions by selecting between four options, as presented on tables 1 and 2 in the Methodology chapter (section 4.1.2.1). Attendees were asked to answer the same two questions after they watched the participatory video. This before-and-after set of questions allowed for an analysis of how watching the participatory video influenced attendees' understanding of the benefits of using fuel-saving stoves compared to traditional stoves, and whether they were encouraged by the participatory video to incorporate this adaptation into their daily life.

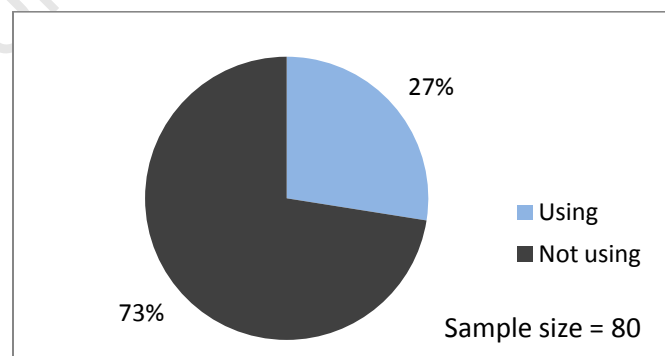


Figure 18. Attendees who were and were not using a fuel-saving stove before the workshop

A set of complementary questions was also included in the questionnaire. One of these questions was whether attendees were already using a fuel-saving stove at the time of the workshop. As shown in Figure 18, out of all attendees, 22 (27%) were already using a fuel-saving stove.

For the quantitative analysis taking place in this section only the responses of the 58 attendees (73%) who were not using a fuel-saving stove at the time of the workshop will be taken into consideration. The understanding of the benefits of fuel-saving stoves of the remaining 22 attendees (27%) was already at the highest possible level before the workshop. However, some of these attendees provided relevant input during the group discussion after watching the participatory video. This information has been compiled in section 5.2.3.

5.2.2.1. How attendees' understanding of the benefits of fuel-saving stoves was influenced by watching the participatory video

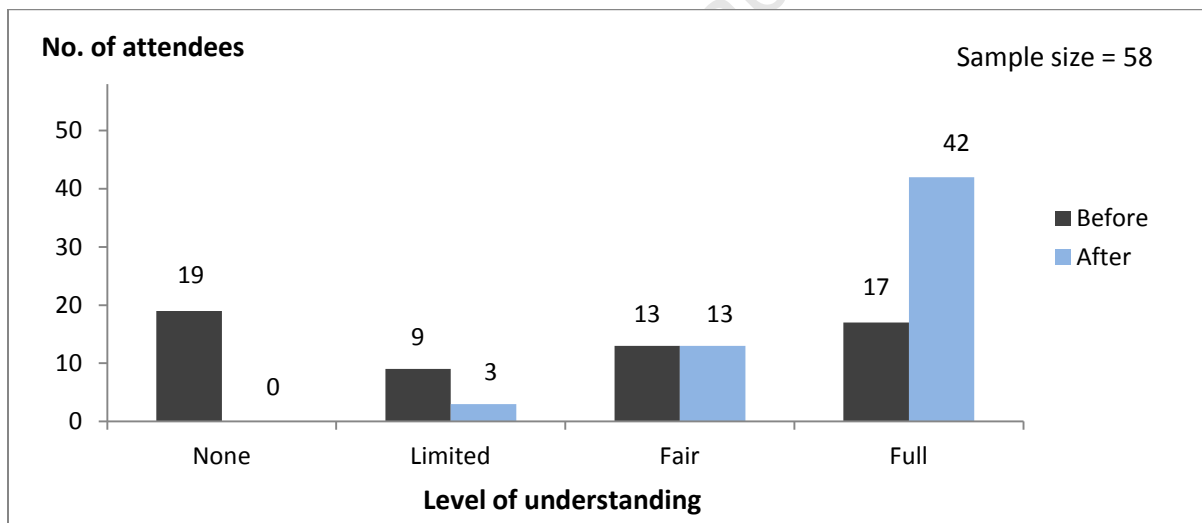


Figure 19. Attendees' understanding of the benefits of fuel-saving stoves before and after watching the participatory video

As shown in Figure 19, there was a significant increase in the attendees' general understanding of the benefits of fuel-saving stoves after watching the participatory video. It became clear from these results that the participatory video tool was successful in disseminating such information. From 28 attendees (48%) who had a limited or non-existent understanding of the benefits of fuel-saving stoves before watching the workshop, only 3

attendees (5%) were still not sure about the benefits after watching the participatory video, although their understanding increased from 'None' to 'Limited'.

As shown in Figure 19, 17 attendees (29%) said they already had a high level of understanding of the benefits of fuel-saving stoves before they attended the workshop ('Full' understanding). When asked for the reason why they were not using a fuel-saving stove, 13 attendees said they did not have the financial capacity to buy a stove and 4 of them said they had not been able to find one, as shown in Figure 20. All of them claimed to have reinforced this understanding after watching the participatory video, and the four of them who did not know where to find a fuel-saving stove were glad to know they could now buy one in Wage Worgaja, as they had seen in the participatory video. The remaining 13 attendees said that even though their interest in shifting to a fuel-saving stove had increased after watching the participatory video, they still could not afford the cost of one.

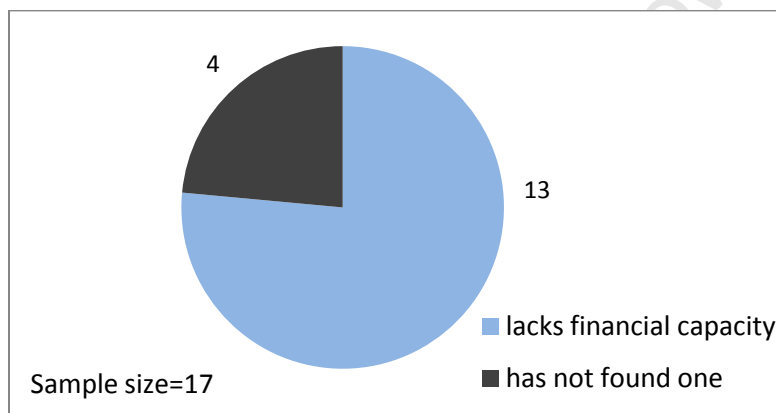


Figure 20. Reasons for not using fuel-saving stoves

Looking at individual responses, it became clear that in the majority of the cases there was an increase of at least one level of understanding of the benefits of fuel-saving stoves. For this analysis, only the responses of those whose level of understanding before watching the participatory video was different than 'Full' were taken into consideration (41 attendees). Only three attendees (7%) claimed their level of understanding did not increase at all after watching the participatory video. The remaining 93% of the attendees said their understanding increased by one level (35%), two levels (41%) or three levels (17%). None of the attendees said their understanding of the benefits of fuel-saving stoves decreased after watching the participatory video. These results are presented on Figure 21.

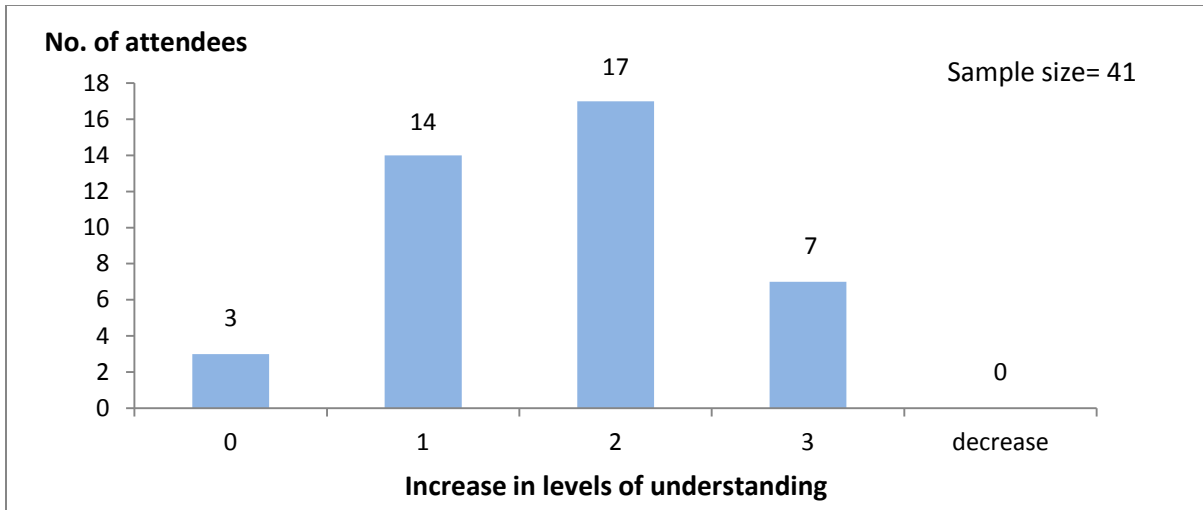


Figure 21. Increase in levels of understanding of the benefits of fuel-saving stoves after watching the participatory video

5.2.2.2. How attendees' interest in shifting from a traditional stove to a fuel-saving stove was influenced by watching the participatory video

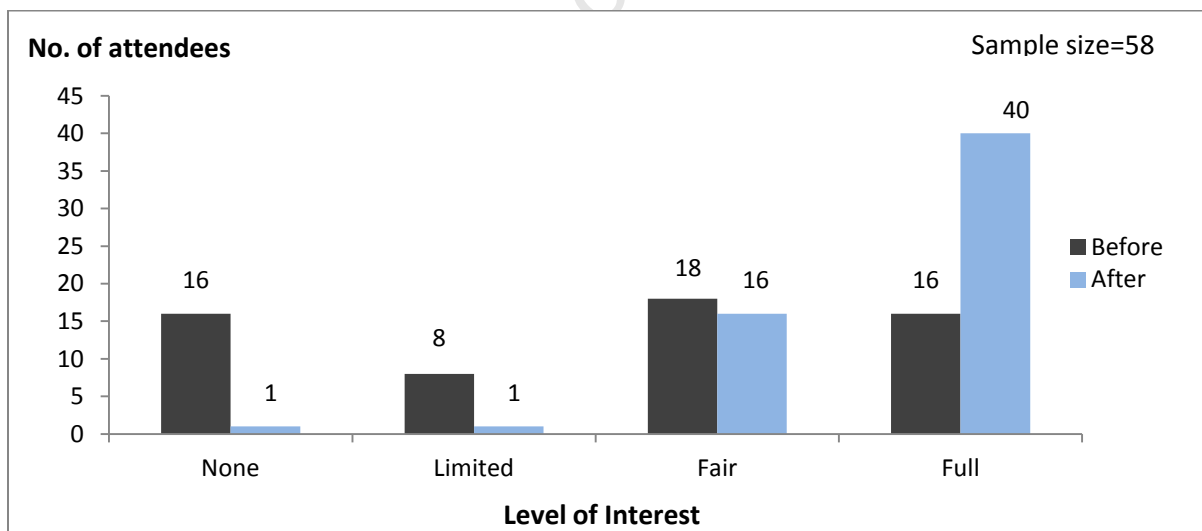


Figure 22. Attendees' interest in shifting from a traditional stove to a fuel-saving stove before and after watching the participatory video

As shown in Figure 22, the level of interest of the attendees in shifting from a traditional stove to a fuel-saving stove increased after watching the participatory video. The study found that the participatory video tool was successful at promoting this adaptation among

farmers in the Ebinat woreda. From 24 attendees (41%) whose level of interest in shifting to a fuel-saving stove was ‘None’ or ‘Limited’ before watching the participatory video, only 2 attendees (3%) remained uninterested after watching the video.

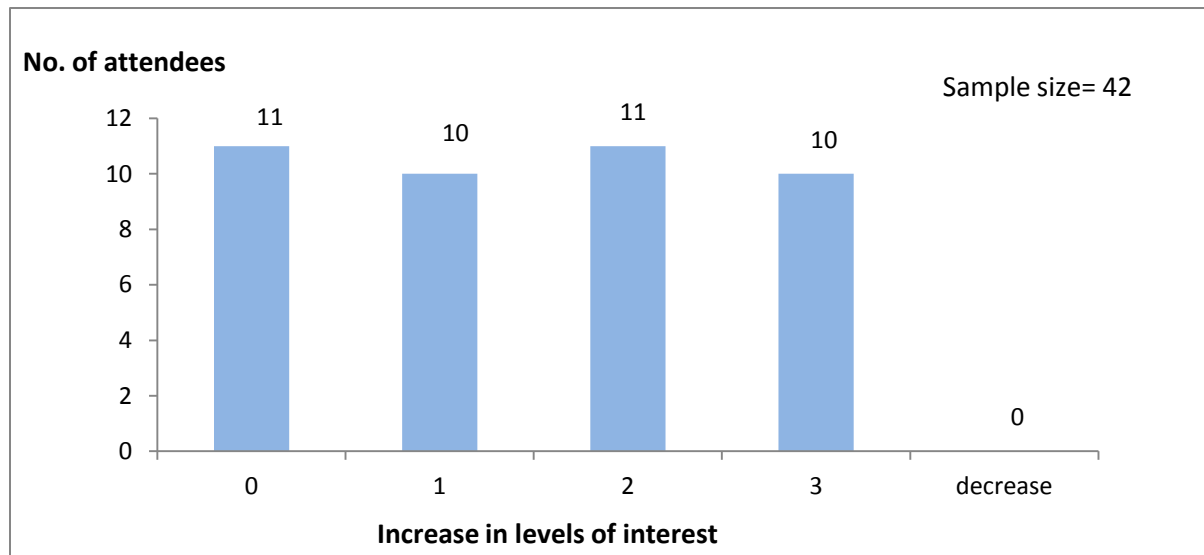


Figure 23. Increase in levels of interest in shifting from a traditional stove to a fuel-saving stove after watching the participatory video

In question [2], the general increase in the level of interest was not as evident as it was in question [1] (section 5.2.2.1). For this analysis, the responses of those attendees who claimed to be ‘Fully’ interested in shifting to a fuel-saving stove before watching the participatory video were not taken into consideration. As shown in Figure 23, 11 attendees (26%) claimed their interest did not increase at all after watching the participatory video. When asked for the reason why their interest did not increase, all attendees said their financial capacity was far below the price of a fuel-saving stove, and they were being realistic when saying they would not buy one despite wishing they were able to. The remaining 74% of the attendees said their level of interest increased after watching the participatory video by either one, two, or three levels, and none of the attendees said their interest in shifting from a traditional stove to a fuel-saving stove decreased.

5.2.3. Second part of the workshops. *Discussing the effectiveness of the participatory video tool and the lessons learned about the benefits of fuel-saving stoves*

After watching the participatory video and answering questions [1] and [2] (presented at the beginning of section 5.2.2), attendees were asked to discuss the lessons learned about the

benefits of fuel-saving stoves and the effectiveness of participatory video in communicating these benefits. The key findings of these discussions are presented in sections 5.2.3.1 and 5.2.3.2 respectively.

5.2.3.1. Lessons learned by attendees about the benefits of fuel-saving stoves after watching the participatory video

Figure 24 presents the benefits of fuel-saving stoves identified by attendees and divided into three categories: 1) *health care*, 2) *fuel saving* and 3) *cooking efficiency*. Attendees also explained why these benefits were relevant to them.

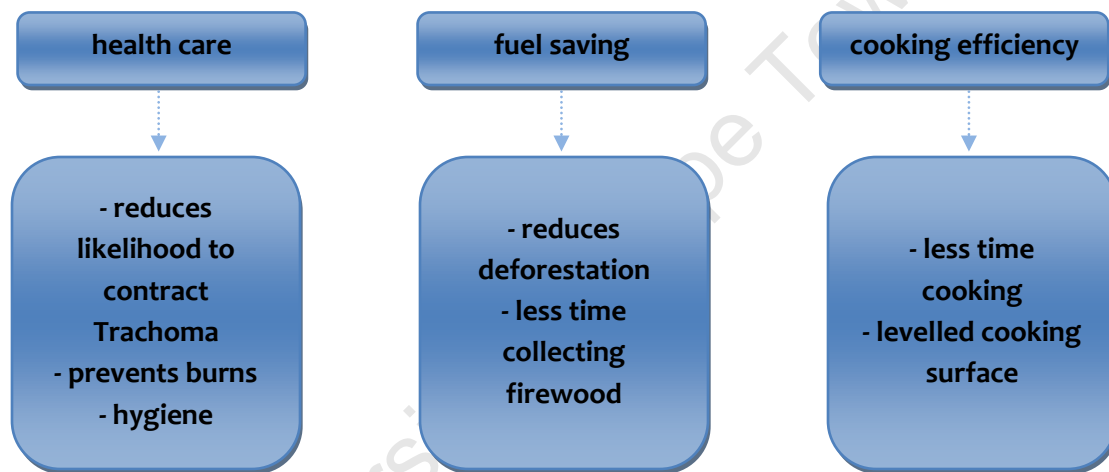


Figure 24. Benefits of fuel-saving stoves as perceived by attendees

Health care

Attendees in all workshops were very aware of their likelihood to contract Trachoma as a result of low-hygiene practices in their daily life. This level of awareness was due to a number of workshops organised by the Ethiopian government in which farmers had had the opportunity to learn about this disease, its causes, and how to prevent it. Attendees said they learned from the participatory video that they are more exposed to dirt particles when cooking with a traditional stove than when cooking with a fuel-saving stove, and hence more likely to contract Trachoma. One of the attendees in *Ayhaquha* provided a detailed description of one of the ways in which the use of traditional stoves makes farmers and their families more likely to contract Trachoma: “*Traditional stoves release a lot of smoke, which*

accumulates on the ceiling of our houses. This creates dirt particles. These particles will eventually fall from the ceiling while our children are lying on bed, making them more vulnerable to contract Trachoma...”.

As explained in section 5.2.1, Ethiopian women in rural areas are generally not only in charge of all cooking-related activities but also in charge of their babies. This practice means that babies are, in most cases, next to their mothers when they are cooking. Several attendees mentioned during the discussion that their children often get burned when playing around a traditional stove. The reason for these burns is the uncontrolled direction of the open fire which is driven by the wind and could easily be reached by the hand of a baby who is not aware of the risks involved. Attendees acknowledged that fuel-saving stoves reduce the likelihood of burns due to the fire being enclosed inside a round structure below the baking ring.

Attendees also emphasised the importance of good hygiene practices to prevent infections and diseases (one of them being Trachoma). They mentioned that when women cook in a traditional stove, their hands get very dirty, and this dirt is then easily in contact with their faces, with their babies, and with the *injera* itself when it is baked. Attendees said it became clear from the participatory video that fuel-saving stoves are much cleaner than traditional stoves, and therefore both women and their children are less exposed to dirt and its associated infections and diseases. One of the attendees in Ayhaquha said: “...*the fuel-saving stove is free of dirt ... both women and their children are clean and safe when they’re using it or when they’re around the stove...”.*

Fuel saving

Similarly to the causes of Trachoma, farmers in the Ebinat woreda are very aware of the high level of deforestation in the area. This awareness is also due to a series of workshops organised by the Ethiopian government in which farmers learned about the causes and effects of deforestation. Attendees said it was very important to reduce deforestation in the area, and as they had learned from the participatory video, using fuel-saving stoves was a very good way of doing so because of the amount of firewood needed to cook a meal was less than when using a traditional stove. One of the attendees in Tarasmba said: “...*there’s a scarcity of firewood in the area due to deforestation. The fuel-saving stove uses less firewood than a traditional stove, and that is the main reason why I now want to buy one. When cooking with a traditional stove we use a lot of firewood. As we saw in the video, we can cook for 2 or 3 days with the fuel-saving stove using the same amount of firewood...”.*

It also became clear in the discussions that the firewood-collecting process was very time-consuming. Attendees saw the fact that fuel-saving stoves use less firewood than traditional stoves as a great advantage because they could then spend more time in other activities.

Cooking efficiency

Traditional food is one of the most distinctive features of Ethiopian culture. However, cooking traditional Ethiopian food is highly time consuming. One of the most popular advantages of fuel-saving stoves among attendees seemed to be the dual function of the stove: *wat* can be cooked at the same time that *injera* is baked. Attendees said they learned from the participatory video how this characteristic of fuel-saving stoves helps save a considerable amount of time when cooking. Attendees saw this as a very significant advantage of fuel-saving stoves compared to traditional stoves. One of the attendees in Wage Worgaja said: “...we used to use a lot of firewood cooking *injera* and *wat* separately, but now with the fuel-saving stove we can do both things at the same time so we can also save time ... the new stove helps us save time that we can use for other activities such as agriculture...”

Some attendees also mentioned how traditional stoves are not usually levelled, making the *injera* thicker on one side. They said they learned from the participatory video that this would not be a problem with a fuel-saving stove because of its levelled structure.

5.2.3.2. Attendees’ perceptions of the effectiveness of participatory video in communicating the benefits of fuel-saving stoves

As mentioned previously, most attendees had attended several workshops about different topics such as agriculture, deforestation, climate change, and women empowerment among others. However, participatory video was not used in any of these workshops. Attendees said they had never been exposed to any video-mediated approach in previous workshops they had attended. As part of the discussion, attendees were asked to identify advantages and shortcomings of participatory video compared to previous approaches to which they had been exposed. Three main advantages (Figure 25) were identified. Attendees did not identify any shortcoming of participatory video.

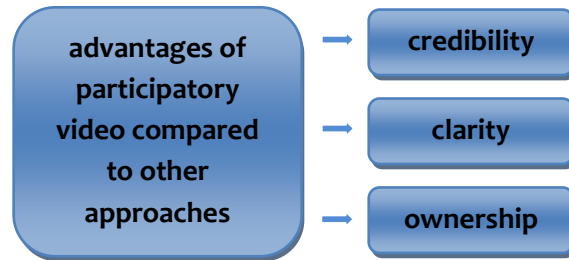


Figure 25. Advantages of participatory video as perceived by attendees

Credibility

Attendees identified credibility as the main advantage of using participatory video as a tool to disseminate information in a workshop. Some attendees said they had heard about the benefits of fuel-saving stoves before the workshop, but watching the participatory video was definitely more convincing than any comments they had heard in the past. Watching the participatory video gave attendees the opportunity to hear farmers from Wage Worgaja speaking about the benefits of fuel-saving stoves, while at the same time seeing them using a fuel-saving stove. Two attendees – one in Ayhaquha and one in Wage Worgaja – used the same quote to emphasize how the benefits of fuel-saving stoves had gained credibility by being shown in the participatory video: “...seeing is believing...”.

One of the attendees in Tarasmba said: “... today we could see other farmers in Worgaja and it felt real, it felt like we were physically with them. I think video is a very effective way of communicating this kind of information.”.

Clarity

Attendees said information presented in the participatory video was very clear and well structured. They said the participatory video provided them with a very detailed explanation of the advantages of fuel-saving stoves compared to traditional stoves.

Ownership

Attendees said they felt proud of the farmers in Wage Worgaja because they were not only producing high quality fuel-saving stoves, but also they learned how to make a video and used it to show others their work. Attendees acknowledged that the participatory video project in Wage Worgaja gave farmers the ownership of the project by allowing them to

craft their own video, and most of them said they would be very interested in participating in similar projects in their own kebeles.

5.3. The effectiveness of the tool affected by the context in which it is used

In this study, one of the determinants of the effectiveness of participatory video was the two quantitative questions ([1] and [2]) presented in section 5.2.2. Attendees answered these questions before and after they watched the participatory video. The study found that the effectiveness of participatory video in this project, measured in terms of the increase in the attendees' understanding of the benefits of fuel-saving stoves and their interest in using one after watching the participatory video was affected by two external factors. These two factors are the distance from the kebele where the attendees lived and Wage Worgaja (the kebele where the fuel-saving stoves are produced) and whether they had had any previous training in fuel-saving stoves before the workshop took place. The results of this analysis are presented in table 3.

Kebele	Understanding of benefits of FSS*		Interest in shifting to a FSS*		Distance from Wage Worgaja	Trained by the government in FSS*?
	Before	After	Before	After		
Wage Worgaja	96%	100%	96%	100%	0 km	NO
Tarasmba	68%	90%	66%	80%	7.5 km	NO
Wonberoch	45%	92%	59%	82%	15.6 km	NO
Ayhaquha	0%	76%	0%	90%	28.5 km	NO
Deber Abayale	100%	100%	100%	100%	22.4 km	YES

Table 3.

* FSS = Fuel-Saving Stoves

Deber Abayale was the only kebele in the study where farmers had previously attended a workshop organised by the Ethiopian government about the use of fuel-saving stoves and how to make them. The majority of the attendees in this kebele had made their own fuel-saving stoves as they had learned in the workshop. Attendees said the quality of these stoves was not very high and they eventually broke after a few months of use – only three

attendees said they still had their stoves even though they did not work well. All attendees (12 in total) in *Deber Abayale* said they were fully aware (100%) of the benefits of fuel-saving stoves before they watched the participatory video, as they had learned during the government workshop or by personal experience with their own fuel-saving stove. However, all attendees agreed during the discussion after watching the participatory video that the stoves they had learned to make were different than the ones that farmers in Wage Worgaja were producing. Attendees said the fuel-saving stoves they saw in the participatory video seemed to be of a much higher quality than the ones they had made. Attendees then said they were very interested in acquiring one of these new stoves after they had seen in the participatory video how other farmers in the Ebinat woreda were benefiting from them.

Deber Abayale was therefore the only kebele where the attendees' understanding of the benefits of fuel-saving stoves and their interest in shifting from a traditional stove to a fuel-saving stove before watching the participatory video was not affected by how far the kebele was from Wage Worgaja. The determining factor in *Deber Abayale* was the previous workshop where farmers had learned about fuel-saving stoves. As shown in table 3, all attendees (100%) said they were "fully aware" of the benefits of fuel-saving stoves when they answered question [1].

As for the rest of the kebeles in the study, the attendees' understanding of the benefits of fuel-saving stoves and their interest in using one before watching the participatory video was affected by how far their kebeles were from Wage Worgaja. In the Ebinat woreda (where all kebeles in the study are located), farmers' access to public transport is extremely limited. For the most part, farmers have to walk to all places where they need to go. This remoteness directly affects their interaction with farmers from other kebeles and limits the information to which they have access. As shown in table 3, the attendees' understanding of the benefits of fuel-saving stoves and their interest in shifting from a traditional stove to a fuel-saving stove before watching the participatory video were inversely proportional to the distance between their kebele and Wage Worgaja. In other words, the further the farmers were from the place where the fuel-saving stoves were produced, the less they knew about them and the less interested they were in using them before they watched the participatory video.

The increase in the attendees' understanding of the benefits of fuel-saving stoves and their interest in shifting from a traditional stove to a fuel-saving stove after watching the participatory video were used to measure the effectiveness of the tool in this project. The results of this analysis were presented in section 5.2.2. The results presented in this section suggest that the effectiveness evaluated in section 5.2.2 was affected by external factors (i.e. distance from the kebele to Wage Worgaja and any previous knowledge attendees had

regarding fuel-saving stoves). This has relevant implications for future participatory video projects as it became evident that the effectiveness of the tool is highly determined by the context in which it is used. A further discussion of this issue will be presented in the Analysis and Discussion chapter (section 6.5).

Chapter 6

Analysis and Discussion

6.1. The dual nature of participatory video

Most participatory video projects could be divided into two main stages. The first stage is the one in which the video is made and the second stage is when the video is used for a specific purpose (e.g. screening the video in a workshop). This dual nature of participatory video provides project managers with the possibility to accomplish, whether partially or fully, the objectives for which the tool was used at two different stages or as a combination of the two. In the case of the fuel-saving stoves participatory video project in Wage Worgaja, the first stage took place in September 2010 and the second stage took place in January-February 2011. For logistic reasons, the researcher only visited the research site during the second stage of the project. However, as explained in the Methodology chapter, a focus group was held with the farmers who made the video in September 2010. Relevant information emerged from this focus group which allowed the researcher to evaluate the first stage of the participatory video project. These results are presented in the Results chapter (section 5.1). In addition to this, the researcher evaluated and helped coordinate the second stage of the project in collaboration with staff members of the ERCS. The results of the evaluation of the second stage of the project are presented in the Results chapter (section 5.2).

The main objective of the first stage of the fuel-saving stoves participatory video project was to bring farmers in Wage Worgaja together to collectively discuss the impact of the intervention of the ERCS in their community and how they had benefited from such intervention. The project also aimed to reinforce the roots of the fuel-saving stoves programme so that it could continue benefiting the community. The study found that throughout the process of collectively planning and making the participatory video, farmers in Wage Worgaja acknowledged the significance of the fuel-saving stoves programme and reinforced their understanding of its associated benefits. As explained in section 5.1, one of the key factors that made this stage of the participatory video project successful was the farmers' enthusiasm, which was driven by the excitement of learning how to use the previously unknown video equipment. Farmers at first felt intimidated by this new technology and it was not until the facilitator successfully broke through this barrier that the farmers began to feel comfortable with the video equipment and eager to continue with the rest of the process. The second key factor was the sense of ownership of the process

perceived by the farmers in Wage Worgaja. Farmers, who had been producing fuel-saving stoves since August 2009, felt empowered by the opportunity that they were given to make a video that promoted the use of their own product. Farmers crafted their own video from the beginning; they came up with the initial ideas, they created a storyboard, and they recorded the video.

For the second stage of the project, staff members of the ERCS and the researcher designed a workshop that included the screening of the participatory video. The workshop aimed to promote the use of the fuel-saving stoves produced in Wage Worgaja among farmers in the Ebinat woreda. The workshop was replicated in five different kebeles in the woreda: Wage Worgaja, Tarasmba, Wonberoch, Deber Abayale and Ayhaquha. The study found that participatory video was very effective in promoting the use of fuel-saving stoves among farmers in the Ebinat woreda. To arrive at this conclusion, the study surveyed farmers' understanding of the benefits of fuel-saving stoves and their interest in shifting from a traditional stove to a fuel-saving stove. These two variables were surveyed before and after farmers watched the participatory video. For both cases, the increase after watching the participatory video was significant. The study also gathered qualitative data by promoting a discussion about the benefits of fuel-saving stoves after screening the participatory video and the effectiveness of participatory video itself as a tool to communicate this information. The study found that participatory video constitutes a powerful tool when it is used to disseminate information about adaptation to climate change among farmers. Farmers compared previous approaches to which they had been exposed in workshops they had attended in the past. They concluded that using participatory video in a workshop was a very adequate tool as it communicated information in a very clear and understandable way. Farmers in all kebeles were fully engaged with the workshop. Most of them associated this behaviour with the fact that instead of just an oral presentation of the topic, the workshop had been accompanied by the screening of a participatory video.

Some of the benefits of participatory video as described by Lunch and Lunch (2006) and White (2003) became evident in the evaluation of the fuel-saving stoves participatory video in Wage Worgaja. Through the use of participatory games and activities in the initial training, the facilitator of the project achieved a high level of engagement and interest among participants. However, most of the benefits associated to participatory video available in the literature refer only to the stage of the project when the video is made. The study also found that the use of the participatory video in the second stage of the project was of great contribution to the objectives of the project established by the ERCS. The screening of the participatory video in the five different kebeles helped promote the use of fuel-saving stoves among farmers in the Ebinat woreda. Further research would be necessary to follow up on the adoption of fuel-saving stoves in the area.

6.2. The power of video as a communication tool

Farmers who attended the workshops in the five different kebeles were asked to discuss the effectiveness of participatory video in promoting the use of fuel-saving stoves. Farmers identified three main advantages of having used participatory video in the workshop compared to more traditional methods to which they had been exposed in the past. These advantages were credibility, clarity and ownership.

Farmers said information gained credibility by being communicated through a participatory video. The study found that this gain in credibility was partially linked to the power of video itself as a communication tool. The participatory video gave farmers a sensation of reality that oral communication lacks. The study also found that the gain in credibility was linked to the fact that farmers saw other farmers in the participatory video. Farmers identified themselves with the characters in the video because they lived in the same area, had a similar cultural background, and had similar needs. This benefit of participatory video, as seen by farmers who watched the video, agrees with the views of Suarez et al. (2008) when they say that audiovisual tools can help communicate complex scientific issues in ways that can be understood by a broader audience.

6.3. Participatory video compared to other video-related approaches

Although the abovementioned advantages of participatory video make it a very effective tool in CBA, the study found that only one of them – ownership – is exclusive to participatory video when compared to other video-related approaches. Both the credibility that the information gains when it is communicated via video and the clarity that a well-structured video provides are also applicable to other video-related approaches where the video is not necessarily made by the local community.

This then raises the question of whether it is worth making a participatory video if eventually it could be easier to use another video-related method given the nature of certain projects. The study found that the most significant difference that participatory video makes when compared to other video-related approaches happens at the stage of the process when the video is made. It is the level of engagement and the awareness that are raised among the participants during the process of making the video that makes participatory video an empowering and effective tool to communicate messages of adaptation to climate change. This does not mean that once the participatory video has been made there is no point in using it as a tool to disseminate information among communities different than the one where the video was made. The study found that it is actually a useful and powerful tool, but most of its attributes are not exclusive as they are also applicable to other video-related

approaches. Thus, it is the process of making the participatory video that makes it a unique tool. This reflection is intended to emphasise the need for project managers to have a very clear vision of the objectives for which participatory video will be used.

6.4. Adaptation to environmental change vs. other livelihood concerns

The aim of the study was to determine the effectiveness of participatory video when used to improve community members' understanding of changes they can adopt to adapt to their changing environment. The study found that in the case of the fuel-saving stoves participatory video project in Wage Worgaja, farmers linked the message to a number of different issues and not only to environmental concerns. Farmers gave equal importance to the benefits of fuel-saving stoves in terms of health care, cooking efficiency, and fuel saving, as presented in section 5.2.3.1. Within the fuel saving category, farmers saw this as a benefit not only because of the reduction of deforestation in their area, but also because of the reduction in the time they would spend collecting firewood, allowing them to spend more time in other activities.

It is crucial that project managers acknowledge the necessity for environmental change adaptation projects to have a holistic approach that understands the context of the area and addresses the needs of the local inhabitants. The study found that the fuel-saving stoves programme of the ERCS in Wage Worgaja, and therefore the participatory video project as an adaptation project, encompassed a wide range of issues and properly addressed the needs of the local farmers. The project allowed farmers to freely express their needs and concerns without forcing or imposing any biased views.

Going back to the aim of this research, the study not only found that participatory video is an effective tool to articulate and communicate messages of adaptation to environmental change, but also suggested that it could be a powerful tool to be used in different sectors of social work such as health care, income diversification, and community empowerment, among others. Further research would be necessary to evaluate the effectiveness of participatory video in simultaneously addressing these issues together with issues of adaptation to climate-change.

6.5. Participatory video as a context-specific tool

As presented in section 5.3, two external factors affected the attendees' knowledge of fuel-saving stoves before they watched the participatory video. These two factors were the distance between their kebele and Wage Worgaja and whether farmers had had any previous training in fuel-saving stoves. Two of the determinants to evaluate the effectiveness of participatory video in this study were the increase in the attendees' understanding of the benefits of fuel-saving stoves (question [1]) and the increase in their interest in shifting from a traditional stove to a fuel-saving stove (question [2]) after watching the participatory video. It is then possible to suggest that the two external factors also influenced the evaluated effectiveness. This does not mean that participatory video was not effective in kebeles such as Deber Abayale where farmers' answers to questions [1] and [2] were 100% before they watched the participatory video. This rather suggests that participatory video is a context-specific tool and the impact it has on the community is determined by the context (i.e. social, spatial, and temporal) in which it is used. Thorough planning is necessary when deciding how the participatory video will be used once it has been made in order to maximise its benefits.

Chapter 7

Conclusions

7.1. Summary of findings

The study found that the first stage of the participatory video project in Wage Worgaja was successful at encouraging farmers to collectively discuss the impact that the fuel-saving stoves programme had in their community. The farmers who made the video were already aware of the benefits of fuel-saving stoves because they had been using, producing, and selling the stoves since August 2009. However, as claimed by the farmers themselves, the process of making the participatory video reinforced their understanding of the benefits of fuel-saving stoves compared to the traditional stoves they were using in the past. It also became clear that farmers felt empowered by the opportunity they were given to make a video promoting the use of their product. Farmers saw the fuel-saving stoves participatory video as an extension of their own work.

As for the process of making the video, two main findings emerged from this research. Firstly, farmers in Wage Worgaja were highly motivated to participate in the project because they were learning new skills and having fun. They had never been exposed to any video-related technology in the past and the excitement of learning about something new was crucial to gaining their interest in the project. Secondly, farmers found that making the video was very engaging as they were given ownership of the process and the freedom to express their own views.

Based on the literature reviewed for this research (i.e. mainly Reid et al. 2009, Koelle and Oettle 2009, and Warrick 2009), one of the main principles of CBA is that the starting point of a project must be the community's real needs and views. The project must then prioritise these needs and views and incorporate messages of adaptation to climate change within that frame. Consequently, the findings of this research suggest that participatory video can be a very empowering tool in CBA. It catches participants' interest in the project by allowing them to learn new skills that are fun and then gives them ownership of the video-making process in which they can express themselves. As a result of this, participants' openness and willingness to critically discuss practices that can help them adapt to their changing environment are enhanced.

Moreover, the outcomes of the first stage of the project described in the previous paragraphs were not the only manifestations of the benefits of participatory video in this

case study. The study also found that the physical product of the first stage of the project (i.e. the video) greatly contributed to the objectives of the ERCS. The five-minute video that features farmers from Wage Worgaja sharing their experiences with fuel-saving stoves was used in a workshop to promote the use of such stoves among farmers in five different kebeles in the Ebinat woreda. The screening of the participatory video in the workshops increased attendees' understanding of the benefits of fuel-saving stoves as well as their willingness to shift from a traditional stove to a fuel-saving stove. During a group discussion following the screening, attendees acknowledged that the information presented in the video gained credibility because they were learning from other farmers. It also became evident that it was very beneficial for the aim of the workshop to provide attendees with a space for discussion and reflection after the video screening. In this way, the message of the use of fuel-saving stoves as an adaptation was analysed in the specific context of each kebele where the workshop took place.

Hence, the findings of the project's second stage suggested that screening a participatory video is beneficial to communicate messages of adaptation to environmental change. It could increase viewers' receptiveness to the message of adaptation that is being communicated. The video screening must be accompanied by a space for critical discussion to contextualise the lessons learned and avoid a top-down transfer of knowledge.

7.2. Recommendations

In regard to the process of making the participatory video, it is recommended that project managers allocate enough time for participants to get a chance to select the takes that they want to include in the final video. This was not the case in the fuel-saving stoves participatory video in Wage Worgaja. Even though farmers who made the video said they were happy with the takes selected, this issue conflicts with the principle of giving communities ownership of the process.

Farmers in Wage Worgaja also said that they would have liked to have had more time to make the video. They said that if the first stage of the project had lasted more than three and a half days they could have had more time to work on the video and a larger number of farmers could have been involved in the project. Although this is not always possible due to budget and time constraints, it is an important recommendation for the Red Cross and other project managers to take into consideration for future participatory video projects.

A more thorough planning of the second stage of the project would have allowed for better results. As argued in section 5.3 the effectiveness of participatory video depends highly on the context in which it is used. When planning to screen a participatory video in different

kebeles, it is very important to have a clearly defined set of criteria for the audience, in order to maximise the benefits of the screening. These criteria are context-specific and must ensure the video topic is relevant to the audience.

7.3. Limitations of the study

A comparison between a more top-down approach (such as a verbal presentation by an ERCS's staff member on the benefits of fuel-saving stoves) and participatory video as methods to disseminate information about adaptation to climate change would have helped to compare participatory video to other approaches. This was not possible due to time constraints and previous commitments of the ERCS's staff members to other activities.

For logistic reasons, the researcher could only be present in the project site during the second stage of the project. Had the researcher visited Wage Worgaja in September 2010 when the video was made, a more thorough evaluation of the first stage of the project would have been possible.

Another limitation of the study was the language barrier. Even though an ERCS's staff member served as a translator for the researcher, a deeper and more meaningful interactive process between the researcher and the local community would have been possible had the researcher spoken the local language.

7.4. Final conclusion

This study has shown that participatory video is a powerful tool to articulate and communicate messages of adaptation to environmental change. Project managers could benefit from the use of this tool by providing communities with a space of creativity where they can express their real needs and concerns as related to the environment as well as other livelihood concerns. Participatory video provides an opportunity to critically discuss changes that can be adopted to adapt to their changing environment and importantly, provides the opportunity for members within the community to articulate this message themselves. Finally, this message can also be shared with other communities.

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የሀገሪቱን አጠቃላይ

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6.

Annex 2. Workshops attendance profile

Date	Kebele	No. of female attendees	No. of male attendees	Total No. of attendees
January 25th 2011	Wage Worgaja	12	8	20
January 27th 2011	Tarasmba	10	7	17
January 28th 2011	Wonberoch	8	9	17
February 1st 2011	Deber Abayale	4	8	12
February 3rd 2011	Ayhaquha	10	4	14

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