Local perspectives on climate change

Participatory Video in Somotillo, Nicaragua

Working Paper No. 100

CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

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Photos: Gian Betancourt (CIAT), Manon Koningstein (CIAT)

Abstract

Participatory Video is a methodology premised on particular attitudes and behaviors that value collective and consensual decision-making and equalized power relations, seeking local solutions to local problems, through coming together, reflecting, communicating, and taking positive action. The PV project has been conducted following the successful implementation of the Quesungual Agroforestry System in the community of La Danta in the municipality of Somotillo (department of Chinandega, Nicaragua). The objectives of this PV project were to 1) increase participants' awareness of ways they can influence and mitigate the effects of climate change they're subject to; 2) empower local groups to take part in a process of analysis and response that celebrates indigenous knowledge and practice; 3) generate a better understanding of gender differences as they relate to climate change adaptation and mitigation; 4) generate knowledge and information that allows future projects in the region to better understand the local context when creating inclusive climate change mitigation and adaptation strategies that have a higher potential for success. It can be concluded that the PV tool works especially well with young people, who tend to naturally present a certain curiosity for technology and creative, imaginative ways to approach various subjects. The PV methodology gave them confidence and ensured all participants had a voice in the final video message. An element that resonated is that giving community figureheads a more prominent role in project dissemination activities can increase the adoption of new technologies. Aside from being more effective than brief training sessions which may not necessarily be a part of a larger plan of long-term capacity development, it will help communities strengthen their trust in their indigenous knowledge.

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Acknowledgements

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Acronyms

CCAFS	CGIAR research program on Climate Change, Agriculture and Food Security
CGIAR	Consultative Group on International Agriculture Research
CIAT	Centro Internacional de la Agricultura Tropical (International Centre for Tropical Agriculture)
Humidtropics	Research Program on Integrated Systems for the Humid Tropics
PV	Participatory Video

Introduction

Following the successful implementation of the Quesungual Agroforestry System (*see Annex 1*) in the community of La Danta in the municipality of Somotillo (department of Chinandega, Nicaragua), which contributed to the mitigation of climate change vulnerability through the reduction of deforestation, the International Center for Tropical Agriculture (CIAT), through the CGIAR Research Programs on Integrated Systems for the Humid Tropics (Humidtropics) and Climate Change, Agriculture, and Food Security (CCAFS), piloted the use of Participatory Video (PV) methodologies as a follow-up tool to further build capacities and empower young women and men in rural communities.

After the Quesungual project worked with farm families in the region to replace traditional slash-and-burn farming with more sustainable resource management practices, PV was chosen as a

suitable tool to observe and examine rural livelihoods, particularly from a gender and youth perspective, to allow local populations to share their stories and voice their opinions about their community's way of life, how this is linked to their resource management practices, and the positive changes they are capable of generating through the improvement of their farm practices, both on an individual and community level.

Objectives

To increase participants' awareness of ways they can influence and mitigate the effects of climate change they're subject to, strengthening their understanding of the interrelation between sustainable intensification, increased crop yields, and improved environmental conditions.

To empower local groups to take part in a process of analysis and response that celebrates indigenous knowledge and practice while stimulating creative problem solving within and beyond the community, through the sharing of needs and ideas with key decision-makers and other communities.

To generate a better understanding of gender differences as they relate to climate change adaptation and mitigation, and indirectly their difference in vulnerability to climate change.

To generate knowledge and information that allows future projects in the region to better understand the local context when creating inclusive climate change mitigation and adaptation strategies that have a higher potential for success.

Justification

Now, more than ever, it is important that researchers understand the local context and needs of local target groups in order to adequately adapt their climate change strategies to achieve long-term

success. Participatory video (PV) is an ideal participatory method that allows for a thorough understanding of indigenous knowledge in order to identify the needs, hopes, and current knowledge of the local community, resulting in the creation of climate change strategies that are adequately adapted to all layers of a heterogeneous community.

By giving all groups (i.e. women, men, youth, indigenous and/or marginalized members) the chance to be in charge of writing, directing and filming their own short video, community members are encouraged to explain, from their personal perspective, how the effects of climate change have manifested in their lives and in which ways they hope to improve in the future.

Local community members are empowered through their active involvement in the climate change issues they face, which motivates them to implement sustainable development strategies that respond to their own needs and priorities. PV brings local voices to the global climate change debate, inspiring confidence and respect across social groups by recognizing the fundamental importance of the local perspective.

Furthermore, PV is an ideal medium to strengthen links between various organizations dedicated to strengthening local communities' advocacy power, thus creating a strong network of support amongst the most vulnerable and marginalized populations.

As part of the process, PV will highlight gender differences as they relate to relevant climatic issues, and will provide a deeper understanding of gender differences in climate change vulnerability. Researchers will utilize local knowledge as a valuable source of information: local proximity to nature will enable researchers to quickly recognize change and to explain more precisely the causes of this change and its effects on local agriculture (ISDR, 2008).
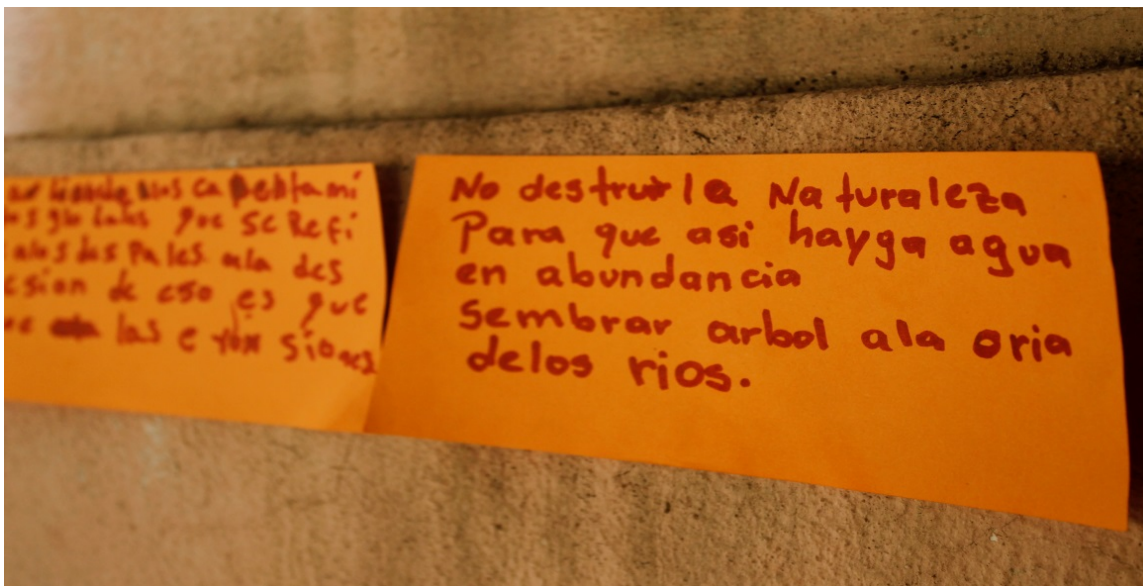
Methodology

Participatory video (PV) is a methodology premised on particular attitudes and behaviors that value collective and consensual decision-making and equalized power relations, seeking local solutions to local problems, through coming together, reflecting, communicating, and taking positive action. The methodology chosen is therefore participant-centered and participant-led at every opportunity; to engage local people, enable them to determine local needs and opportunities, and adjust the participatory video process to be an effective tool for them.

Demystifying technology

Participants had little to no previous exposure to using video technology. Thus, PV games and exercises were adapted to make participants feel comfortable with the camera and make the video production process simple and accessible. In this way, participants build confidence in their ability to try and succeed at new things, showing surprise at their own capacity.

Learning through doing

One of the key points during the project was to involve all of the participants through hands-on activities. The basic camera skills are learnt through games and exercises in which the participants practiced and played with the different ways of using the equipment.

Local knowledge and new perspectives

Exercises such as community mapping, timelines, and the recording of local areas by local people give the participants (and their community members) an opportunity to reflect on and appreciate their local environment, history and knowledge. This local appreciation can be useful and even crucial in terms of being able to help predict vulnerability to the impacts of climate change, as well as guiding farming decisions. Furthermore it helps the facilitators to understand the local context, seen from a local perspective, which will help adapt further research strategies.

Team work

The methodology used is participatory, in which there are many possibilities provided for working collectively whilst providing space and opportunity for each individual to step up, try new things, and explore their capacity. This can be done in various ways (such as through using the equipment, through sharing knowledge and ideas, in finding consensus, and collaborating in every step involved in making a video together), allowing for each participant to explore their strengths.

Gender and equalizing relationships
Because video production is a new tool and skill-set which most (or all) participants have not had previous exposure to, the women can show themselves as capable as the men, impacting on assumptions about the capacity of the different genders, and providing a non-threatening mechanism for women to speak out.

Triangulation
Participatory video renders the information immediately accessible and usable by many through regular screenings. These screenings function as a crucial triangulation process whereby other stakeholders can watch and give comment to contest, validate or expand on what they have seen, and they can do so by adding to the video in a quick and easy way. This encourages a process of inquiry and critical thinking, allowing people to experience how to investigate and learn about their situation, and draw key conclusions.

Advocacy and awareness tools
The process helped the community to define their own capacity to change, and above all, to identify and articulate where and from whom assistance is required.

Break from daily life
Many of the participants mentioned that the concentrated time participating in the PV workshop became a reflective space held by the process. By being surrounded by relatively new people, in a new environment, and creating new ideas, a brainstorming process was created with a tendency towards focusing on improvement for the future. This provided a rare opportunity for participants to stop and think, to look at themselves and their community, to re-imagine their future, their aspirations, their connection to a community, and to take part in positive actions within and for that community.

Creative stimulation
Drawing, drama, and improvising skills had not been practiced by most, if not all, of the participants. These creative processes allow people to come together to express themselves around issues by enacting typical situations in all their complexity, with the relative anonymity of fiction, as well as the opportunity to act out and demonstrate potential solutions.

Contextual background

The workshop took place in the municipality of Somotillo, in the northern part of the department of Chinandega, in the north Nicaragua. According to the Instituto Nicaragüense de Estudios Territoriales (INETER), the municipality of Somotillo measures 724.71 km² and lies approximately 41 meters above sea level. Water is of main importance in the area, for it is located on the northern bank of the Rio Gallo, also known as the Rio Grande. A seasonal stream known as the Tecomapa runs north of the town.

The climate is a dry tropical one, with strongly pronounced rainy and dry seasons. Soils are of volcanic origin and are deep and fertile. The area is largely agricultural with some cattle ranching. Common crops in the area are maize, cotton, sesame, and wheat, mainly grown by smallholders and tenant farmers. The economy is also influenced by the long border with Honduras. A major highway passes through the town of Somotillo to the border crossing at Guasaule, creating customs and immigration jobs in Somotillo, as well as opportunities for smuggling. The most current census figures suggest a population of approximately 33,000.

The group existed of 15 participants: 7 men and 8 women. Most of them are between 19 and 23 years old. One man is 32 years old, and two are around the 38 years old. All of the participants origin from the same community: La Danta. This community is part of the municipality of Somotillo, and is a purely agricultural community.

The participants are all involved in agricultural activities. The two older men are married, have children and live by themselves. The rest of the participants live with their families. In general the families seem to be big, with around six to ten children. When children get married, they tend to stay and live in the community.

Public transport from and to the community is scarce. Two daily buses leave for Somotillo, one at 6.20am and one at 15.20. From Somotillo the bus leaves at 17.40. The trip takes about 1 hour. The community is about 6km away from 'la entrada', which is where the paved road makes place for unpaved roads, and marks the entrance to 6km unpaved hills until you get to La Danta. Most of the inhabitants walk or bicycle these 6km to get to the main road and get to Somotillo. Some of the participants have a bicycle or a horse.

Activities and Results

(For a more detailed description of the PV methodology and activities, see Annex 2)

ACTIVITIES	RESULTS AND OBSERVATIONS
Explanation of Agenda	The explanation of the agenda went smoothly, and the group easily divided themselves into pairs for the recap games. However, the function of the recap exercise was not entirely clear. Therefore, the time intended for the recap exercise every morning was dedicated to recounting the previous day's experience. To ensure the exercise is done in a more interactive way, facilitators can act as recap volunteers on the first day, demonstrating how to be creative with the exercise.
Group Agreement	The group agreement went smoothly, and the main points mentioned consisted of respect, listening, and punctuality. The facilitators ensured the inclusion of the focus 'there is no such thing as mistakes'. The group showed understanding of the values and rules needed to function well as a team.
Question tree	The question tree was left mostly empty throughout the workshop, with only one of the more outspoken males adding a question on the first day, regarding technical aspects of filming ("How do you handle shots longer than five seconds?"). In practice, most of the questions were asked during the workshop, and many participants did not seem to have many questions that were not immediately related to the exercise being done at the time.
Draw your group members	Many participants were uncertain of what was expected from them in regards to representing their group members in a visual manner. For this reason, they were given the opportunity to combine drawings and words, which participants grasped more easily. Younger participants showed themselves eager to learn and quick to pick up on new skills. Older participants had a significant education level and played active roles in their communities. Young men were boisterous, while young women were more reserved. Although shy, several young women demonstrated a sharp character. During the team introduction, only the two older participants mentioned religion and church attendance as important aspects of their lives. Younger participants did not mention this at all. Most of the boys work in their family's farm in the mornings, while girls help with housework. Most are high school graduates, with only a few attending university. Young participants all contribute in the family farm, but none of them define themselves through agriculture, the way their parents' generation does. They all have a wide range of interests outside of agriculture and this inherited livelihood is both a blessing and a curse; it is a livelihood, but one that demands a lot of time and work, and any activities and interests they can develop outside of the farm is done "in spite" of agriculture. Most participants mention their marital status as an important aspect of their lives, all of them preferring to be in a relationship. Girls in particular speak of having a boyfriend as being "nice" but something they must hold off on as long as possible to retain independence: "Right now I only have to ask my mother for permission to do things, but if I had a boyfriend or if I were married I would have to ask my husband for permission and I would have less freedom."

Name game	During the "Which animal I would like to be" camera introduction game, participants mentioned birds (flight, freedom to go different places), lions and tigers (strength, self-reliance), and pets like cats and rabbits (gentle, lovable, "easy" life ("Cats spend all day in the house, sleeping.") without hard physical labour). A fragile type of beauty was also mentioned (a butterfly was mentioned by a young woman, while a deer was mentioned by a young man).
	Participants work effectively as part of a team. Although it was everyone's first time handling a video camera, they figured it out quickly and smoothly, and were able to provide constructive criticism on their own work.
	One of the things that was forgotten most often was to ask whether the other participant was ready, and counting down to three with the fingers, to prepare the interviewee prior to turning on the camera. Forgetting this resulted in cut off questions, or long pauses between turning on the camera and the actual question.
Shot-type challenge	Participants showed a clear understanding of each type of shot, although close-up and mid-shot were confused on occasion. During the group exercise, which involved filming an example of each shot type, most shots were made involving the rest of the group members (as opposed to focusing on surroundings or landscapes), such as close-ups of group members' faces.
Knotty problem	This exercise was very entertaining and brought the group closer together. When the volunteer came back and tried to untie the knot by giving only verbal instructions, the knot was not untangled within the allotted 3-minute timeframe. When the group tried to untangle themselves as a whole, they were able to do it within 10 seconds, which pleased participants. When asking how this could serve as an example for daily situation, participants came to the conclusion on their own that working as a group from within a problem helps them devise faster, more effective solutions.
Disappearing game	Two young men volunteered to unpack the camera equipment in front of the group, and with verbal help from the rest of the participants they successfully set up the equipment for the exercise. Letting participants explain to each other how to work the camera was very effective.
	For the desired "disappearing" effect, it is important that the group members do not move as people disappear from the frame. However, as various group members changed positions during the exercise, the visual effect was less clear.
Questions in a row	While conducting the questions in a row exercise, participants did not correctly connect the microphone to the camera, which resulted in the final video not having any recorded sound. However, this served as an example of the importance of conducting a sound check and playback prior to the main recording sessions.
	Participants' technical observations after watching the "Questions in a row" footage included being attentive to the interviewee's response while speaking to them, the best way to conduct themselves with interviewees and how to handle potential situations (managing nerves in front of the camera - some noted feeling more nervous while filming than while being filmed). An example was the microphone struggle, where the interviewee tried to grab the microphone from the interviewer's hand before answering the question, but the interviewer held it back, disrupting the flow of the interview. Other elements included observing image composition and how to handle distractions around the subject being filmed.

During the "Questions in a row" exercise, the given topic was "childhood memories and the environment". Questions asked by the participants were:

What was your favourite part of your childhood?

What is the environment?

What do you admire about the environment?

How do you look after the environment?

Questions asked by facilitators were:

Have you noticed any negative changes in the environment and the climate?

What activities that are harmful to the environment affect you as a farmer, and what do you do to minimize its impact on your farm?

The older participants are farmers who know about the Quesungual agroforestry system, as an example of improved natural resource management to increase productivity and improve their livelihoods.

When participants spoke of their childhoods, their favourite memories included freedom to play, not having to do heavy physical work, and parents being more loving towards them.

The participants defined the environment as "natural resources" and "flora and fauna" which surround them. Trees are a valued resource. Negative changes in climate and the environment were identified from the following activities: deforestation leading to droughts, water shortages, trash, dead animals, and agrochemicals contaminating the water supply.

Activities which are harmful to the environment and affect farmers, including those who do not participate in such activities, include deforestation and the practice of the slash-and-burn system, both of which result in water shortages, lack of rainfall, and degraded soils.

Farmers who protect their resources from the negative impacts of harmful environmental practices do so by properly fencing their land to keep it from being damaged by neighbours' slash-and-burn, planting trees in their plots, and practicing safe waste disposal, including properly disposing of dead animals, garbage, and agrochemicals.

Participants' logic in devising their questions and answers, and thus their subsequent thought process regarding the environment, are a clear reflection of the traditional Nicaraguan school system, where study guides typically contain a stock answer to the question "What is nature/the environment?" or "What are natural resources?" as a way to encompass de topic of natural sciences. These stock answers usually consist of phrases like "Nature/the environment is the various flora and fauna which surround us and allow us to fulfil our basic needs." However, the weaknesses in developing critical and analytical thinking skills prevent students from delving deeper into the plethora of elements present in such a statement, which means people remain with a superficial, isolated concept of "environment" and "natural resources" as something that is external to them, rather than something they are inherently linked to and can manage in many different ways to achieve beneficial results (improved production, resilience to climate change, sustainability).

It is positive to work with young people to create a concept of environment and natural resources as elements that are at their disposal to make their lives ideal if they manage them properly, understanding that being successful in the agriculture work they have inherited from their parents can also serve as a stepping stone to a broader world with many more possibilities and

	opportunities.
Visioning	Being married and having a family where important aspects mentioned by nearly all participants during both scenarios. Older participants listed seeing their young children grown up and with families of their own as a source of satisfaction in both scenarios.
	Sources of satisfaction listed were having a family, having a well-paying job, having a beautiful home, traveling and seeing new places.
	In the worst case scenario, food and water shortages were the main concerns, along with unbearable heat and a desert-like landscape, poverty, and having no money to buy medicine.
	Participants showed an understanding of the human suffering, violence, and civil conflict that generally stem from a crisis situation such as the extreme negative impacts of climate change. Participants also showed a strong understanding of the relationship between vulnerability to climate variability and economic vulnerability.
	Remark: Do participants understand how environmental and economic vulnerability are both factors that can feed into each other in a vicious circle? Do they understand the role they can play in stopping economic vulnerability from being a driver of harmful environmental practices that worsen climate change vulnerability in their communities?
	When asked what changes could be made in current practices for participants to achieve their vision of their best case scenarios, most remained silent. Older participants said education was key, since projects are useless if the beneficiaries have no awareness of the impact their attitudes and activities are having on their environment and their own lives. However, younger participants don't seem to be able to conceive their visions as achievable goals beyond mere imagination.
	Participants highlighted the importance of instilling values of hard work, perseverance and good citizenship in children, as well as the importance of an education (the need for financial and psychological support from their families to be able to access higher education).
	When asked why "an increase in vehicles" had been an element of the worst case scenario of the future, participants mentioned the cost of vehicle maintenance, saturation of roads and infrastructure, an increase in car and motorcycle accidents, and air pollution.
	When asked why "an increase in population" had been an element of the worst case scenario of the future, male participants mentioned the increased difficulty to find work due to a saturated study/job market, while female participants referred to the necessity of family planning to avoid having a large number of children they would then be unable to support financially.
	Participants emphasized the importance of awakening in rural youth interests outside of agriculture, to help young people understand that through profitable agriculture they can access a wider range of life options.
Video comic strip	The groups were effective at improvising with the objects provided (the tablecloth was used as a wedding dress, a priest's robe, a nun's habit, and a picnic blanket; the chair was used for various positions, including a girl who was filmed standing on the chair to show she didn't know how to

	use a chair; and a storyline was created revolving around the ownership of the plastic crate).
	All participants showed they effectively retained the lesson on how to record with the camera, and they all effectively learned how to use a tripod. Elements of image composition were also taken into consideration. Women were more at ease than men in working with elements of storytelling and conveying the details of the story.
Twist in frame	This exercise helped to create a group spirit, and to give power and voice to those group members that tend to keep to themselves. It also helped participants look through the 'eye' of the camera, and understand how to work with different angles.
	This exercise may not be appropriate for all cultures and/or age groups, due to the physical closeness required to fit the correct number of eyes, hands, and feet in each frame.
Informed consent	Since participants had already given their consent for their participation in the PV project on the first day of the workshop, they were familiar with the situation and the questions they needed to ask when requesting an interviewee's consent.
	It was simple to explain the importance of respecting the interviewee's rights and provide a real life example of how not to film people and use their footage, since all participants were familiar with intrusive Nicaraguan news channels which do not respect the legal rights and informed consent of the subjects they film and televise (for instance, filming suspects and victims of murders and robberies without obscuring the face).
Community mapping	(For complete community mapping guide, see Annex 3.)
	Environmental conservation was mentioned by all groups, emphasizing that their community has a cooler climate and more rainfall than the city because of the presence of trees and mountains in the area.
	Community leaders are spiritual, political, and people who can provide important services, such as basic medical attention and teachers helping children with schoolwork.
	Churches were always included in the community maps, sometimes divided between evangelist and catholic (the two most prominent religions in Nicaragua).
	Improved road infrastructure and housing.
	Cell phone signal and internet access for students.
	Access to university scholarships.
	A health care facility and an ambulance to transport people to more specialized health care providers in case of emergencies.
	Parks with improved conditions for children.
	Sport facilities for young people. Sports were mentioned often as a way to keep young people

away from drugs and focused on work and studies.

Participants imagined a community where people from other areas would like to live.

Harmony and peace, understanding between individuals and groups. Teaching young people through example about unity, communication, and mutual support

People who don't earn a living through agriculture are professionals (such as teachers) and practice trades (carpenters, construction workers).

Vox Populi	Participants went out into the streets in three groups of five, each group with a tripod, a camera, and a microphone, to interview people from the town on the topic of climate change. The exercise included formulating questions, obtaining the interviewee's consent prior to recording, recording the interview keeping in mind all the technical aspects of filming (camera focus, lighting, audio, how to conduct themselves as interviewers), and sharing the recorded material with the interviewee to obtain consent after recording.
	The basic questions asked by the participants were "What is climate change?" and "How do you feel about climate change?" The answers of people in the community show a lack of differentiation between "climate change" and "pollution". Both have a negative connotation, but there is seldom differentiation between climate change causes, consequences, and possible solutions, and factors like deforestation, water pollution, and faulty waste disposal practices.
	Most people mentioned deforestation as a cause of climate change, but only one interviewee spoke of greenhouse gas emissions (he had participated in a seminar by INATEC on the subject).
	This suggests that, while there is a need to educate rural communities on greenhouse gas emissions as a factor of climate change, the way they perceive this change is by tangible elements (deforestation, desolate and desert-like landscapes, water shortages, lack of rainfall, hotter temperatures and sunlight during the day, hotter nights) rather than theoretical explanations.
	An interesting response was the mention of historical factors that resulted in a worsening state of the environment, highlighting that a population involved in constant social and political conflict such as Nicaragua does not dedicate enough resources and attention into finding and applying solutions to environmental issues. An interviewee said, "We were too busy with a rifle in our hands to prioritize the environment."
Role play	Although this exercise was meant to show the importance of planning shots with the use of a storyboard, most of the groups started talking and filming, and filled out the storyboard afterwards.
	Many questions and doubts were shared concerning the use of the storyboard. A recommendation is to give the groups a blank piece of paper and let them draw the amount of scenes they want to use. The dynamics within the group were good and the results were entertaining to the group as a whole.
	When discussing the use of the storyboard, one group pointed out that once they understood its purpose, it helped them structure the movie. However, all of the groups added that with just images and drawings it wasn't clear for them; they needed to add some words.

Storyboard technique	Participants still had some trouble using the storyboard. In the beginning they also had difficulty being flexible with the storyboard (for instance, if something was drawn a certain way, they felt obligated to film it in the exact same way, even if an obstacle emerged in the real life shot).

Participants were very enthusiastic about this exercise and needed more time than what had initially been allotted for this exercise. Facilitators dealt flexible with the time limit.

Finally, the theme of beauty was translated into three different stories: a movie presenting a beauty pageant, a short drama in a beauty salon, and two people fighting over the love of a transsexual female.

It was interesting to note that the concept of beauty was always portrayed as female. In the beauty pageant video, contestants were played by two girls and a boy dressed and made up as a girl. In the beauty salon video, the only male character who dealt with the concept of beauty was portrayed as being flamboyantly effeminate. Lastly, in the final video the character which personified beauty was a transsexual female, although she also spoke of environmental aspects and the beauty of the region's landscape. |
| **Final storyboard** | Participants showed great difficulty grasping the concept of the video structure, so a video structure matrix (*Annex 4*) was elaborated to help them better visualize the way a topic is introduced, developed, and supported throughout a video.

Since film equipment was limited, a group rotation system was developed for conducting interviews and filming the backup footage, to make the most efficient use of available time and resources while giving all participants a chance to practice their newly acquired skills in the field.

The group continued working on the storyboard, defining the messages that will be expressed, who would be interviewed as a source, etc. The participants did this using the matrix designed by the facilitators to guide them.

The group was divided into three random subgroups. Each subgroup was responsible for filling out their part of the matrix, thinking about who to interview, when, where, which questions to ask, and how to get his/her informed consent.

Sources were defined to interview for each of the segments of the video, including teachers, farmers from their community and other nearby communities, technicians, farmer association leaders, and community leaders. Participants brainstormed ideas for footage they needed to capture to illustrate the various points of the video.

Interview guides and sample questions were outlined, and participants coordinated amongst themselves to make the best possible use of available time and resources (e.g. film equipment rotation, identifying connections in the community and within the group who could help contact interviewees).

The interviewees proposed as credible sources were all people from the community – well-known farmers, teachers, community leaders, and farmer cooperative directors. Other more "formal" sectors (such as municipal government figures) were not considered by participants. |

Two points of ethics were discussed:

1) What do you tell interviewees about who you are and what you're doing to motivate them to participate?

The conclusion was that the best way to motivate people to participate is to explain the topic that is being explored, why they were chosen as a source and what makes their knowledge and experience something valuable to be shared.

2) Can we use interviewees to illustrate a negative point?

The conclusion was that an interviewee's negative experiences can be used to enhance your point, however, a lot of care must be put into not portraying the source negatively, as this may go against what they were originally told to motivate them to participate, and may affect the interviewee's consent of the use of their interview in the final video product.

Most participants had difficulty coordinating shared resources and time use.

Although the video structure matrix exposes the video through a structure similar to the basic literary "storyline" structure taught in schools, participants have a very difficult time understanding how to introduce a topic and slowly develop different facets of the topic before stating their conclusion. This raised concerns about whether or not participants will be able to follow along with the paper edit exercise after filming was concluded.

| Final filming | One of the interviews planned with an organic farmer was cancelled. The farmer gave notice that he was no longer willing to do any more interviews, documentaries or videos on his farming practices, for he has had too many visitors in the past and has never seen any results of the interviews and videos he has made possible. Although disappointing, this served as an example to illustrate to participants the importance of making sure interviewees are properly included in every step of the elaboration of the video which is relevant to them.

This part of the process showed that participants have a lot of pride in their community, their people's stories, and their resources. They especially value the presence of trees in the area (mentioning Quesungual) and the freshwater spring nearby, which is the beginning of a river that runs through the area's rural communities and provides Somotillo with drinking water, and also makes La Danta one of the few communities with wells in every household.

One of the participants tells us that her sister is a community leader. At 25 years old, she is a teacher and has worked with the community on various initiatives. Two which stand out are the concrete laundry structures built along the river bank to protect the river from becoming contaminated with soap residue, and two community banks which were established with the help of two Peace Corps volunteers and are now continued by her and her sister, which are financed by local famers' savings and provide a fund for credit services for the community's farmers. |
|---|---|
| Paper edit | Simultaneous to this exercise, in-depth interviews were conducted with participants to obtain their feedback on the workshop and gain further insight into their lifestyle and their perspectives on their future as farmers and the future of agriculture (*see Annex 5*).

The facilitator did the actual editing of the movie due to logistical issues. Having only one computer and one screen, this would imply that the facilitator could do the editing, using the |

projector to share the process with participants and have their continued feedback. However, considering the fact that day 9 would be a national holiday in Nicaragua (Mother's Day), the group decided to do the final presentation of the movie on day 8, making sure that the invited audience would be present.

However, the facilitator strictly followed the paper edit created by the group and did not take liberties in editing. Also, the final video was shown to the group, comments were made, and changes were implemented to ensure that the final video was exactly as the participants wished. Final sound imperfections were corrected and the group picture was taken.

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Final screening and celebration	At 9am the participants had invited the interviewed farmers to come watch the movie, to ask for their final consent. In the end, only two of the five interviewed farmers arrived. They gave their consent. At 3pm that afternoon, the audience arrived and the selected participants gave their words of welcome and their words of closure. Here they thanked the participants, the audience and the facilitators for their presence, their help and their support. One of the participants told the audience how they themselves were amazed how much they had learnt in these couple of days. He said that on the third day they went out to interview people in Somotillo, and that they all felt proud when people came up to them to ask for an interview. He expressed the need to have journalists in the community, to keep people updated about what was going on in the country, and he was sure that through this workshop this dream was a step closer. A photo slideshow was put together to share the highlights of the workshop with the audience and participants. This created a lot of laughter and made the participants feel proud of the process they had undertaken. After this slideshow the certifications to the group were handed out, by calling their names one by one. The participants seemed to be proud of the work they had done, and some took the initiative to gather two groups of community members to interview about the final presentation, to ask them about their feedback, how they felt about the video and the message it portrayed. The message the interviewed community members gave, was that they were thankful to the group for the video they made. They expressed the message was very clear and left the community thinking about the ecosystem and its conservation. The interviewees were grateful and inspired by the group of young video makers, and felt that this gave a push for young people to take action regarding the issues being faced by the community. The audience agreed with the practices proposed in the video and asked for more young people in the community to take up these practices.

Conclusions and Recommendations

Participatory Video is a tool that engages people in a process of brainstorming, discussion, improvisation, and assessing their environment from a different perspective. This provides an opportunity to think about messages they would like to share, ask for help where needed and inform their fellow community members about important issues.
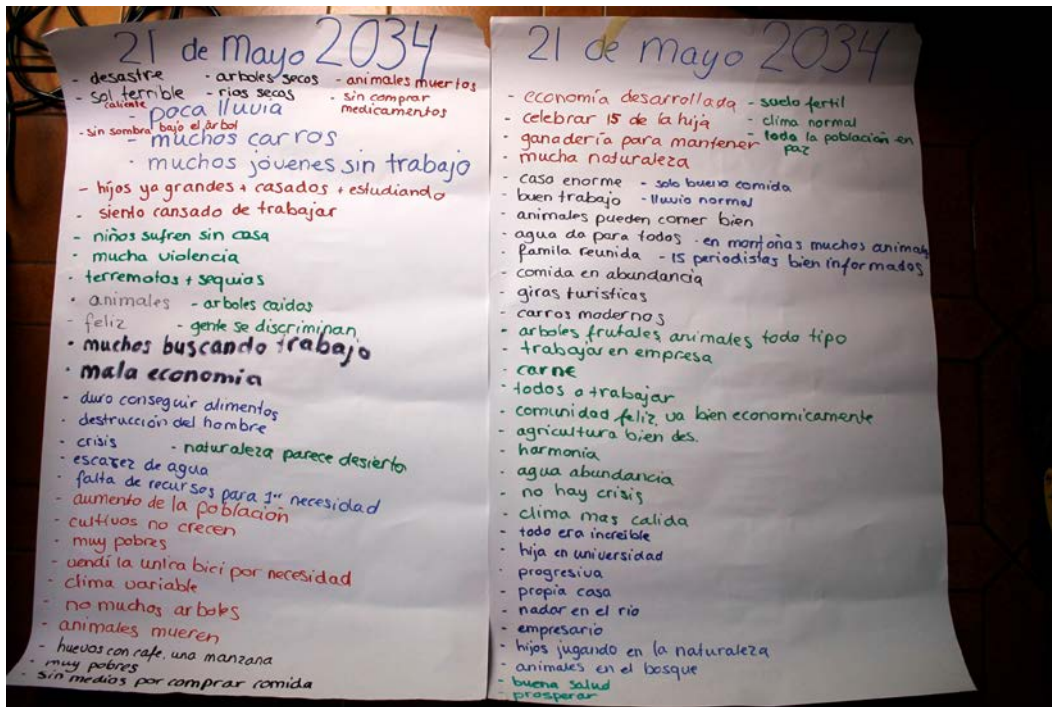
Based on the PV experience in Somotillo, it can be concluded that the PV tool works especially well with young people, who tend to naturally present a certain curiosity for technology and creative, imaginative ways to approach various subjects. The PV methodology gave them confidence and ensured all participants had a voice in the final video message.

An element that resonated throughout the elaboration of the PV is that giving community figureheads a more prominent role in project dissemination activities can increase the adoption of new technologies. Creating a network of groups of respected community figureheads – including leaders and young people – in each community, and investing in developing their leadership skills and technical knowledge, could be an effective system for communities to share new knowledge and information with the rest of their community and beyond.

Aside from being more effective than brief training sessions which may not necessarily be a part of a larger plan of long-term capacity development, it will help communities strengthen their trust in their indigenous knowledge (considering one of the more common thoughts voiced by local participants was, *"We're farmers, we don't know anything, we need others to come teach us."*).

Climate Change

One of the main objectives of this project was to use PV as a tool to understand the local concept of climate change in the community of Somotillo. For this reason, the facilitators deliberately refrained from introducing or discussing global climate change concepts with the participants, as this was primarily a process which sought to create spaces through which participating communities could share their own local perspectives, experiences, understanding and responses to the environmental patterns and pressures that affect their lives.

All participants had heard of the term "climate change" and when asking what they meant by this, they often answered using the official definition given during earlier project activities by Humidtropics.

It became apparent, however, that "climate change" and "conservation" have similar meanings to the participants. Subsequently, climate change was linked to "good" and "bad" agricultural practices.
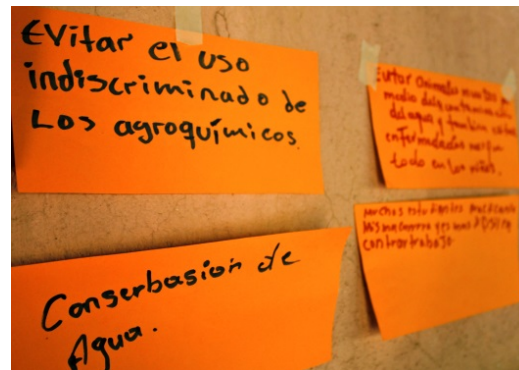
Participants defined the environment as the "natural resources" and "flora and fauna" which surround them. Trees are a valued resource, and negative changes in climate and the environment were identified from the following activities: deforestation leading to droughts, water shortages, garbage, dead animals, and agrochemicals contaminating the water supply.

Activities which are harmful to the environment and affect farmers, including those who do not participate in such activities, include deforestation and the practice of the slash-and-burn system, both of which result in water shortages, lack of rainfall, and degraded soils. Farmers who protect their resources from the negative impacts of harmful environmental practices do so by properly fencing their land to keep it from being damaged by neighbors' slash-and-burn, planting trees in their plots, and practicing safe waste disposal, including properly disposing of dead animals, garbage, and agrochemicals.

Unpredictable Climates: Climate change was often explained through unpredictable climate. At the time of the PV workshop (during the month of May) it was mentioned that it was officially the rainy season but they had not had any rainfall yet. Another change in the climate participants noted is the steady increase in temperature, with less periods of coolness. These observations also

manifested as fear of future water shortages. High temperatures and absence of water were both linked to economic vulnerability, lack of jobs and a high level of poverty and food insecurity.

Reforestation and other adaptation/conservation practices: Although local deforestation can be considered a contributing factor in changing rainfall patterns, participants repeatedly blamed themselves and their own actions for shifts in climate that are likely to be a result of global climate changes. However, the community members of Somotillo praise their local reforestation initiatives, explaining that this is the reason they have more water than the surrounding communities. One of the most important messages they wished to share with other farmers was to start reforestation efforts in other communities, as well as stopping the indiscriminate use of agrochemicals and start using organic alternatives.

Youth and Agriculture

Young participants all contribute to the family farm, but none of them define themselves through agriculture, the way their parents' generation does. They all have a wide range of interests outside of agriculture and this inherited livelihood is both a blessing and a curse. Although it is a livelihood, it is one that demands a lot of time and work, and any activities and interests they can develop outside of the farm is done "in spite" of agriculture.

Some young participants mentioned a desire to study, their main obstacles to this goal being a lack of family support or financial support from the government. Participants repeatedly mentioned that the community's youth are losing their interest in agriculture, and many of them migrate in search of new opportunities or other fields of work. However, at the end of the session, it was concluded by many that they are the new generation, and that they have to take the responsibility of changing their practices and conserving the ecosystem. Saying this out loud, as well as hearing it from their interviewees, gave some of the participants a higher feeling of confidence.

Traditional Gender Roles

According to the participants, gender roles tend to be quite typical in Somotillo. However, it appears that the new generation is more open to change in these gender roles. The elder participants mentioned female roles as preparing dinner for their husbands or fathers and cleaning the house.

However, it was mentioned that the men in Somotillo help women with household tasks, especially when work on the fields is low and if the women are sick. This collaboration was called something unique and something that should be promoted.

After discussing with the participants, it came up that all of them had the desire to marry and start a family, stating that this is often expected from their own families. However, family planning and having the ability to educate and sustain their children were important factors considered by both men and women participants interviewed.

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Key Challenges

One of the first challenges faced were budget constraints. Since a generic budget was applied to the project, this led to some logistical limitations, including the amount of sites and the resources available to implement the methodology. However, these were resolved through sharing and rotation systems to ensure the available resources were used to every participant's benefit.

Another issue faced was the strong gender roles and expectations that permeated the group of young participants. Although the PV methodology is specifically designed to ensure equal participation from all members of the group, often female participants needed to be coaxed to express themselves and participate in the presence of men. This is not an insurmountable obstacle, but something that facilitators must be vigilant about to ensure no participant is left out of the process.

The final key challenge presented itself in regards to participants' expectations of the workshop. Although the aim of the project was to create a space for local farm communities to articulate their perspectives on climate change, the time and budget frame of this project did not allow for long-term capacity development within the community (either at a community level in video production, or at a partner level in facilitating the participatory video methodology).

However, at the end of this pilot initiative, participants expressed great interest in continuing to use video in this way, so it is possible to conclude that establishing a more long-term capacity development initiative based on PV within rural communities, as well as with extension partners, would be the natural next step for this project.

Appendix

Annex 1: Quesungual Agroforestry System Project Brief

Project title: Eco-efficient crop and livestock production for the poor farmers in the sub-humid hillside areas of Nicaragua

A. Introduction

The Quesungual Slash and Mulch Agroforestry System (QSMAS) project seeks to improve the livelihoods of poor smallholder farmers in the sub-humid hillsides of Central America by offering a sustainable and resilient alternative to the widespread practice of slash-and-burn. By enhancing eco-efficiency in rural landscapes, integrating stress-adapted crop and forage options that facilitate generation of ecosystem services, and improving crop productivity and profitability, QSMAS enables smallholder farmers to withstand extreme climate conditions while safeguarding long-term soil fertility and food production.

The slash-and-burn method traditionally used by farmers in the region has many negative environmental implications, including poor soil quality, erosion, nutrient leaching, and the loss of ecosystem diversity. While slash-and-burn allows for only one to three years of land use before plots are degraded and must be abandoned, QSMAS proposes an easily established yet biologically complex option, combining traditional knowledge with new insights into sustainable land management to maintain crop productivity for many years.

How does QSMAS work?

Different kinds of trees are scattered at a density of up to 1,000 per hectare of cropland. Their roots act as deep anchors, stabilizing hillsides, minimizing soil erosion caused by wind and rain, and improving nutrient recycling from deeper soil layers.

Most of the trees are heavily pruned at regular intervals, and the green cuttings are laid around the base of the crops as nutritious mulch. This helps retain soil moisture, protecting crops against failed rains while reducing the leaching of nutrients. It also encourages earthworms and other insects, which break down organic matter, move nutrients around and aerate the soil. Farmers don't plough or till the land, but rather plant trees and crops straight into the ground, thus preserving soil structure and stability. Eco-efficient use of chemical fertilizers replaces the nutrients that slash-and-burn farmers would normally obtain from ash.

Some of the trees are kept small and sprouting with new shoots, in preparation for the following season's mulch. Others are left to grow big enough to provide timber and fruits. As well as capturing carbon dioxide, many of the trees promoted by QSMAS also fix nitrogen and draw

essential crop nutrients such as phosphorous and potassium from deep in the soil, helping to improve soil fertility. The overall result is a more productive, reliable farming system that can withstand the extreme climate conditions of many parts of Central America, ranging from periods of extreme drought to periods of intense rain. This is especially important as climate conditions are expected to become more unpredictable as a result of climate change.

Figure 1. Soil phosphorous content within plots at the Condega and Somotillo research sites in the different land use systems in evaluation.

B. Achievements

One of the main challenges that QSMAS has successfully tackled consists in combining long-term goals with short-term benefits that will motivate farmers to adopt this land management alternative. While the project has the long-term environmental goal of improving natural resource and ecosystem integrity in vulnerable areas, it has also included improved varieties of maize, bean, and forage options in order to boost productivity and profitability for farmers.
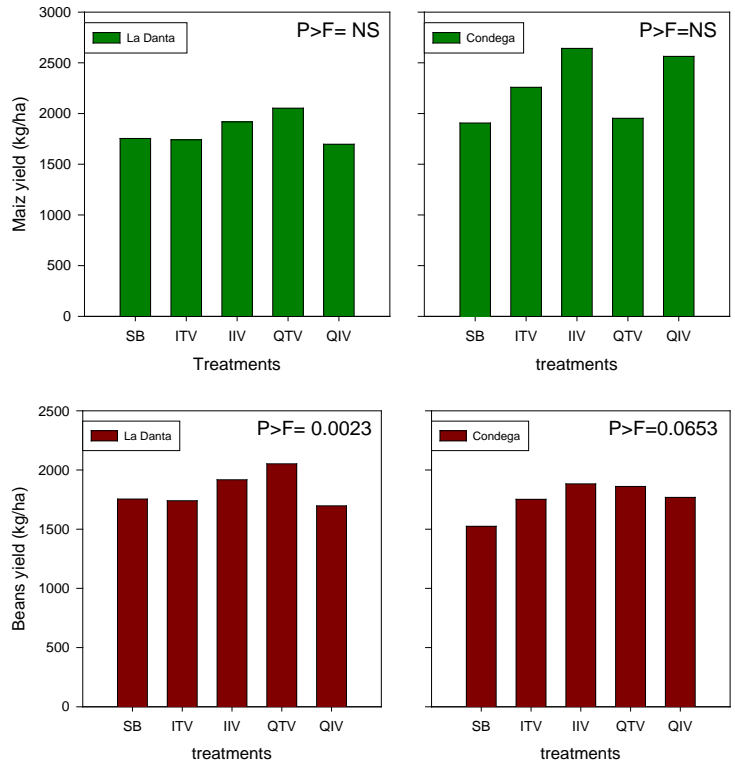
Figure 2. Maize and bean yields at the Condega and Somotillo research sites in the different land use systems in evaluation.

In tropical areas, trees grow quickly and soil conditions change rapidly. This means that farmers who practice the Quesungual system are more likely to see immediate benefits. As time progresses, this resilient food production system ideally suited to hillsides is adopted by more and more smallholder farmers as environmental improvements, which translate into economic benefits, become evident.

"We used to manage our plot in the traditional ways. We would cut everything down and set fire to all the remnants, and the land would be destroyed, and things wouldn't get better. After we started working with the Quesungual system and received technical support from INTA and CIAT, we've started seeing changes. Our yields used to be around 10 quintals per manzana, and now we get 30 to 40 quintals per manzana. Now we have trees in our plots, whereas before we didn't have any trees, and we had very little rain." -- Roberto Pineda, farmer from La Danta, Somotillo
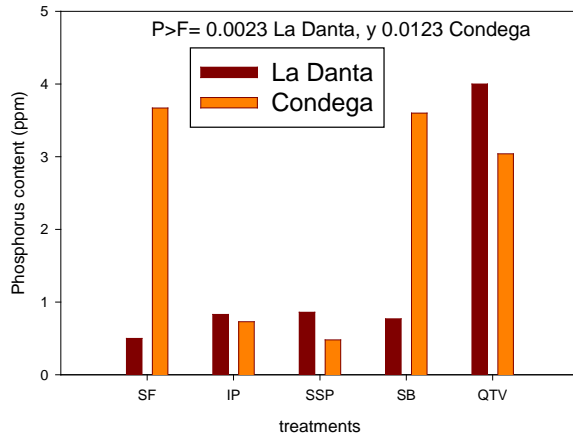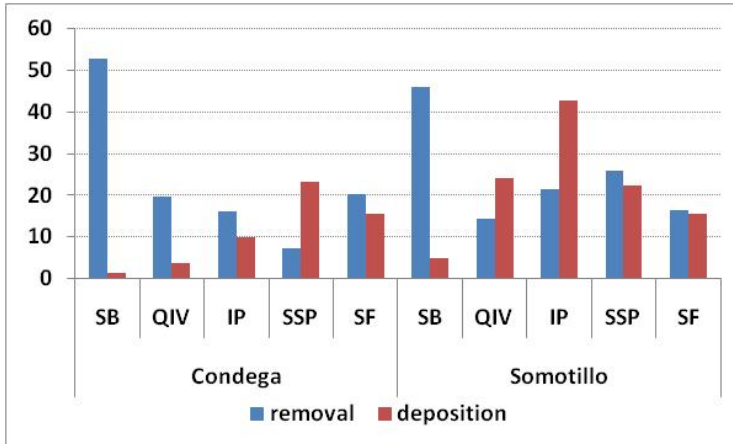
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Figure 3. Soil loss and deposition within plots at the Condega and Somotillo research sites in the different land use systems in evaluation (t ha-1).

Among the project's main outputs are the integration of improved food crop and forage options into QSMAS and naturalized pastures, in order to boost crop productivity and profitability; the assessment of environmental benefits from crop-livestock systems adapted to climate change; the identification of socio-cultural and socioeconomic factors that drive the adoption of eco-efficient crop-livestock systems, including linkages with markets for food products and opportunities for ecosystem services; and the development of tools and implementation strategies for the adaptation and dissemination of eco-efficient agroforestry and livestock systems suitable for the sub-humid tropics.

One of the project's main achievements is the implementation of experiments in smallholder farmers' plots, where, in close collaboration with project partners, 16 farmers from five communities located in Somotillo and Condega, Nicaragua, compared different treatments for improved varieties of maize and bean and impacts on crop yields, as well as animal production parameters (grass biomass production and milk yields). Carrying out these experiments alongside the farmers is a useful approach, as it involves them directly in the process, provides an opportunity to learn by doing, and allows them to observe changes and benefits firsthand. This has also motivated farmers who were not participating directly in the project to adopt the Quesungual system.
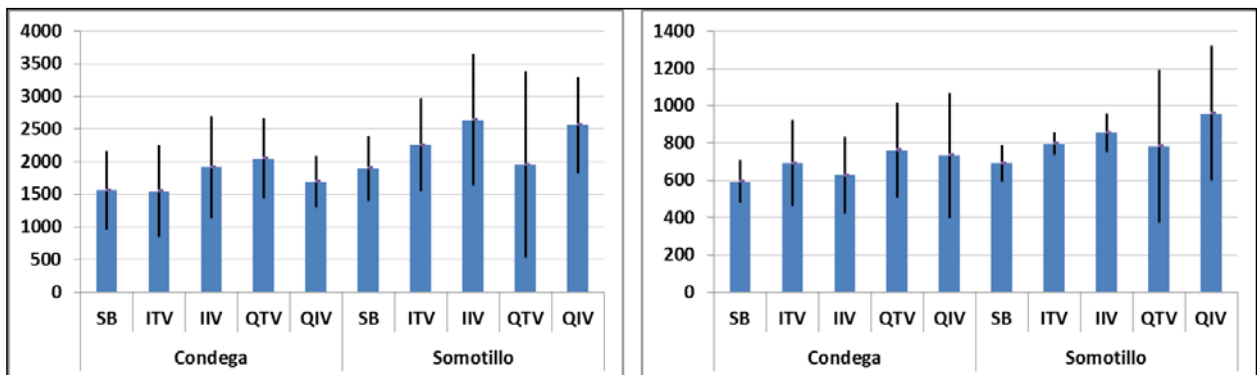
Figure 4: Maize (left) and bean (right) yields of the different treatments in 2012 where crops are involved (kg ha^{-1}). Values are averages from 8 replications (farms). Bars represent the Standard Deviation.
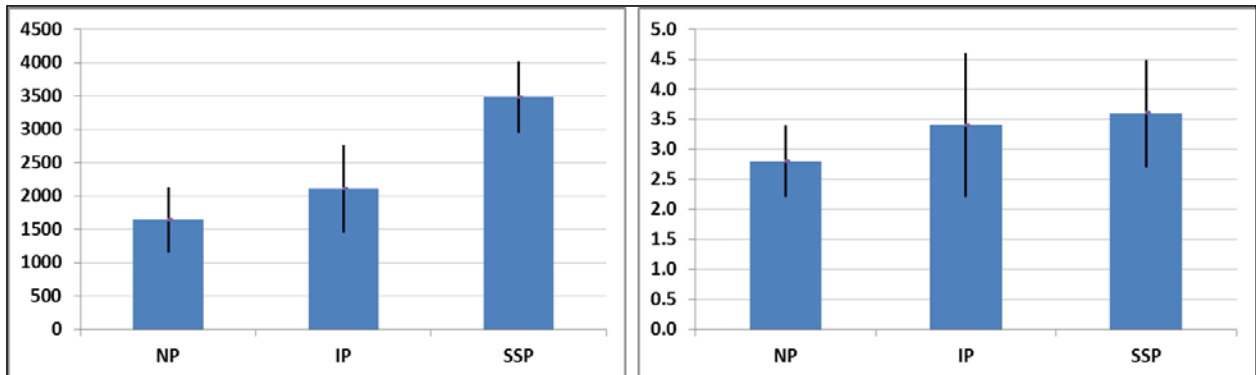

Figure 5: Biomass (left) and milk (right) yields of the different treatments where pastures are involved (kg ha-1, kg animal-1 day-1 respectively), Somotillo, 2012. Values are averages from 4 replications (farms). Bars represent the Standard Deviation.

"We have seen a lot of good things, improvements on how things used to be. We used to burn the land and cut down all the trees, all things that we shouldn't do because the earth then gets washed away, and if we cut down the trees there won't be any leaves to cover the ground." -- Juana Rodríguez, farmer from La Danta, Somotillo

"We're going to be like a mirror for the rest of the farmers in our communities. Right now we're only three farmers who have associated and are working together to improve our farms, but there are others who really want to try the system and gain better land management practices, who are seeing the benefits." -- Francisco Loza, farmer from Condega, Estelí

Another of the project's achievements is the implementation of research protocols, whereby baseline studies were executed to provide an accurate picture of soil quality and fertility, including soil macro fauna indicators, detailed soil and forest cover maps, soil erosion, carbon stocks, and socioeconomic and cultural surveys. These databases, aside from providing a strong base upon which to evaluate current and future interventions, are also a valuable insight for future projects in the area.

QSMAS has also excelled in the dissemination of technologies. Through field days with farmers, technicians, researchers, and representatives from the municipalities of Condega and Somotillo, research results and socioeconomic surveys have been presented and discussed with different stakeholders. The project also conducted visits to a total of 100 farmers and technicians from other regions in Nicaragua, looking to scale the initiative out to a broader range of beneficiaries.

C. Project Innovations/Strategic Approaches

Seeking to understand the socio-cultural background of the communities in relation to eco-efficient agriculture, as well as supporting the development of QSMAS within a broader farming context to

facilitate its implementation, the project established a collaborative learning community between farmers, women, and young people.

Interaction with the beneficiaries through a broader, systemic perspective reaching beyond the QSMAS proposal and into the issues of day-to-day life helped build trust between researchers and stakeholders and increased motivation for participants to engage in new farming techniques. This approach also allowed researchers to identify management strategies relevant to the strengthening of farming systems, promoting efficiency in research innovation.

Farmer perspectives, indigenous knowledge, economic perceptions, customs, attitudes, and socio-cultural practices were assessed, in order to identify how these factors, coupled with institutional networks and market availability, influence smallholders' adoption of eco-efficient agricultural techniques.

Through this approach the project was able to find that building trust with farmers and their families is essential in developing mutual understanding and increasing acceptance of agricultural innovation. As a result of these workshops, a broader understanding was gained of the communities' life perspectives, helping the project to take on an active role within the community regarding the development of QSMAS's goals and how they relate to the families' hopes for the future.

The final collaborative evaluation, which was carried out with the participation of technicians, researchers, farmers, women, and young people from the communities, revealed that this kind of interaction with target beneficiaries is crucial, not only in introducing the project to the farmers, but also in helping them feel capable of continuing with the project's techniques on their own and sharing their knowledge and experiences with other farmers.

Among the positive changes observed within the communities, four main elements stood out: pride, satisfaction, strength, and motivation. This was due to having acquired new knowledge through the Quesungual system and having been able to demonstrate tangible results in their own farms, as well as the ability to share their experience with other farmers and students visiting from the city. The need to safeguard natural resources to ensure ecosystem services is beginning to take hold in the communities' mentality, including better water management and learning the value of trees in the fields.

Farmers and their families held great value in continuous, lifelong learning in order to improve their standard of living, emphasizing the importance of sharing this knowledge to create a more efficient work distribution among family members in the farm. This way, each family member observes the benefits of QSMAS and applies them within their daily context, replacing ineffective practices with more beneficial innovations. Women in the community were especially interested in the improvement in crop productivity, which brought with it improved household nutrition. Another aspect that was taken into consideration is the importance of involving the communities' youth in the process, since they are the future of the farms.

The project, implemented by CIAT, is working in direct collaboration with partners from BOKU (survey implementation, farmer group sessions and field days on socio-economic and cultural aspects of the project), INTA (crop and forage components), UNA (soil and vegetation components), Universidad del Valle Foundation (Colombia), and the Farmer to Farmer program (a collaboration effort between US universities and Nicaraguan institutions that has participated in field days and visited farms where the experimental treatments are established).

E. Conclusion

Overall, QSMAS has many characteristics that point towards its success. The project's integration of improved food crop and forage options to boost productivity and profitability has served as a strong motivation for farmers to adopt this alternative, allowing them to see quick benefits as they observe long-term environmental improvements take place. Involving the farmers in the research process through the implementation of experiments in their plots has also been an important aspect in ensuring adoption of the Quesungual system.

Another innovative element that stands out in the QSMAS project is the identification of socio-cultural and socioeconomic factors that drive the adoption of eco-efficient crop-livestock systems. Establishing a collaborative learning community between farmers, women, and young people is crucial, not only as part of the project's ongoing research, but also to strengthen the communities' ability to carry on the system on their own and share their acquired knowledge and new experiences with others.

This combination of agricultural and socio-cultural research is directly aligned to Humidtropics' goals. By taking into account the multidimensional nature of farm families' livelihoods and incorporating this diverse set of factors into the project's design, QSMAS gains a better understanding of the approach it takes to ensure a higher adoption rate of alternative farming techniques. This links to Humidtropics' objective of building capacities in scientific research, technical skills, and dissemination approaches related to systems integration.

CIAT research suggests that the principles of QSMAS can be applied in other tropical, sub-humid parts of Latin America and the Caribbean, sub-Saharan Africa, and Asia. This links to Humidtropics' objective of developing an integrated research program on sustainable intensification of rain-fed smallholder farming systems in the humid and sub-humid tropics, leading to place-based Research for Development.

Finally, the project's main focus on sustainable intensification is directly aligned with Humidtropics' Strategic Research Theme (SRT) on Integrated Systems Improvement, through the increase of systems productivity and the improvement of natural resource management. It also links to the Program's SRT on scaling and institutional innovation, reaching past traditional research approaches and implementing a more systems-oriented focus that gives beneficiaries an active role in the process and promotes innovative actions from all involved partner organizations.

Annex 2: Participatory Video Workshop Methodology

Day 1	Initial visit to the community and preparations		Entire day
Day 2	Making guidelines, getting to know the group and first steps on how to use a camera	Explanation of the agenda Drawing your group members Group agreement Making a question tree Name game Conclusion of the day and planning for tomorrow	1 hour 1 hour 30 minutes 30 minutes 1 hour 0.5 hour
Day 3	Working with camera techniques and creating trust among the group	Recap of the first day Show and Tell Exercise Disappearing Game Shot Type Challenge Conclusion of the day and planning for tomorrow	0.5 hour 1.5 hour 1 hour 1.5 hour 0.5 hour
Day 4	Working with camera techniques and setting first steps towards interviewing skills and discussion of topics of interest for the final movie	Recap of the second day Questions in a Row Visioning Video Comic Strip Devil's advocate Conclusion of the day and planning for tomorrow	0.5 hour 1 hour 1 hour 1 hour 1 hour 0.5 hour
Day 5	Practicing interviewing skills, informed consent and discussing important topics	Recap of the third day Twist in Frame Interview Method + consent Body Mapping Vox Populi Conclusion of the day and planning for tomorrow	0.5 hour 1 hour 1.5 hour 1 hour 1.5 hour 0.5 hour
Day 6	Preparations for the story board technique, things to take in account	Recap of the fourth day Community Mapping Audience Pathways Role Play Conclusion of the day and planning for tomorrow	0.5 hour 2 hours 1 hour 1.5 hour 0.5 hour
Day 7	Small practice on the design of the storyboard and creation of the final storyboard for the movie	Recap of the fifth day Storyboard Technique Energy graph Knotty Problem Final Storyboard Conclusion of the day and planning for tomorrow	0.5 hour 2 hour 1 hours 0.5 hours 3 hours 0.5 hour
Day 8	First filming day and first community screening	Recap of the sixth day Looking over the story board again and final division of tasks Filming Day Screening Conclusion of the day and planning for tomorrow	0.5 hour 1 hour 4 hours 1 hour 0.5 hours

Day 9	Second filming day and second community screening	Filming Day Screening Conclusion of the day and planning for tomorrow	All Day
Day 10	Preparing for the participatory editing of the movie	Logging Paper cuts Getting group agreement Conclusion of the day and planning for tomorrow	3 hours 3 0.5 hours 0.5 hours
Day 11	Final editing	Final editing Screening for those interested Conclusion of the day and planning for tomorrow	4 hours 2 hours 0.5 hours
Day 12	Final editing, showing of the movie and celebration of the result	Continue final editing Preparation for final community screening Showing of the movie to the community and 'celebration'	3 hours 2 hours At night…

Annex 3: Community Mapping Guide

VISIONING AND COMMUNITY MAPPING EXERCISE GUIDE

The purpose of the guided visioning and community mapping exercise is to help participants think about their current way of life, how it impacts their community, what their view of a successful community entails, and the changes that need to be made to reach that goal.

Aside from promoting a view of their community and individual lives as something that can be improved and transformed, it allows participants to identify the key issues influencing their quality of life, the challenges stemming from these issues, and the steps that need to be followed to deal with these issues and challenges.

As a part of the Participatory Video workshop, this exercise is crucial to define the gaps where development interventions can contribute to a positive change, as well as bringing participants into a state of mind where they can identify the most important messages that need to be transmitted to their communities to promote such a change at a collective level.

Visioning and Community Mapping Question Guide:

1. Guide participants through a typical day in a perfect future, beginning with, "You have woken up and you are lying in bed looking around your room. What do you see?" Don't speak continuously.

2. Allow time in between sentences for people to imagine fully their surroundings. Ask leading questions to guide them through a typical day, from waking up to going to bed at the end of the day.

3. Elements to consider include:
- What are they seeing?
- How are they feeling?
- Who are they with?
- What are they doing?
- Include all aspects of life: Family, home, work, friends, neighbors, community, environment, culture.

4. Compare and contrast the elements participants saw during their "journey to a perfect future" and their current reality.

In a perfect scenario...

Which individual and community elements changed or improved?
Which individual and community elements stayed the same?
What does your community look like?
Describe your community's environment and available natural resources.

Where and how do people live?

Who do you have strong relationships with?

What buildings/infrastructure does your community have?

What organizations or institutions exist inside the community?

What initiatives/services are available to you (health care, education, spiritual guidance, etc.)?

What values and beliefs guide your community?

What makes a community leader? Where do you find them?

What are the livelihoods of people in the community?

Would your ideal community be very different or rather similar to your current reality?

Annex 4: Video Structure Matrix

PARTICIPATORY VIDEO STRUCTURE MATRIX

The Participatory Video Structure Matrix allows participants to delve deeper into their selected topic and the message that will stem from it, why this message is important in their community, and who will benefit from it. Furthermore, it provides a visual representation of what would otherwise be an abstract flow of information as it translates into video. It helps participants break down a broad topic into more manageable sections (Introduction, Topic Development, and Conclusion), and makes them think about the information sources and visual representations they have access to within their own community, adding to the elements of empowerment.

Once participants are ready to head out into the field to record the selected scenes and interview their selected sources, an interview guide is provided as a reminder to follow the ethics of interviewee consent. Participants formulate their own questions prior to interviewing the source, which also provides valuable insight as to who they consider important community leaders, and how they approach the issues that affect their daily lives.

Below is an example of the Participatory video structure matrix which filled out by the young people who participated in the Participatory Video workshop in Somotillo (Chinandega, Nicaragua).

Topic: Alternatives for solutions to improve the ecosystem

Audience:

Youth from various communities

Teachers and students

Municipal government representatives

Institutions that support environmental activities

Families to educate their children

Message: People in their communities can do things to improve the ecosystem and their environment

	INTRODUCTION	TOPIC DEVELOPMENT				CONCLUSION
CONTENT	Incorrect use of agrochemicals harms ecosystems	What is the ecosystem?	2.Why is it important to improve the ecosystem?	3.How do organic farmers help the ecosystem?	4.What can people do to improve their farms' ecosystem?	Correct use of organic products improves crops and the ecosystem
SOURCE						
SCENE	"Sad" crops alongside chemicals					"Happy" crops with organic products

PARTICIPATORY VIDEO INTERVIEW GUIDE

1) Obtain source's consent before starting to record
2) Obtain recorded consent from the source
3) Ask for source's name
4) Questions:
5) Thank the source for their time and participation
6) Show the source the recorded footage and obtain final consent

Annex 5: In-depth Interview Guide

PARTICIPATORY VIDEO WORKSHOP

Participant Interview Guide

Name:

Age:

Workshop Feedback

Have you ever participated in a similar workshop? What other types of workshops or training sessions have you participated in?

What did you think when you were first contacted to participate in this workshop?

What was your first impression following the first day of this workshop?

Now that we have reached the last day of the workshop, what do you think of the experience?

Which part of the workshop did you like the most?

Was there anything you didn't enjoy very much, or something you wish would have been done differently?

Did you have any unexpected lessons? (Not necessarily regarding the development of the video, it can also be regarding group exercises, etc.)

What aspect of the workshop would you be most interested to explore further?

What do you hope the audiences who view this video will learn? Is there anything you would like to tell the audience *(be it about yourself, about the young people in your community, etc.)*?

If you were approached to participate in another similar workshop to this, would you be interested in participating?

Young Participants

Does your family own a farm?

In what type of activities do you support the work in your family's farm?

Does farm work take up your entire day, or only a few hours?

Do you enjoy the work you do in your family's farm/home?

Is there a particular division of the work that is carried out by each family member in the home/farm? Is there a reason for this?
Males: Do you ever contribute to housework?
Females: Do you ever contribute to field work?
Would you like to make different contributions from the ones you make now, or are you okay with the obligations you currently have?

When you're not helping out in the farm, what do you do with your free time? Do you do any other type of work? What are your pastimes?

When you need money to buy something, how do you get it? Do you receive any sort of monetary compensation for the work you do? Do you seek monetary compensation elsewhere?

On what types of things do you spend your money?

What is your schooling/education level?

Would you be interested in further education? *(If yes: what would you like to study?)*

Do you know if someone in your family will inherit your parents' farm at some time? How is this inheritance decided?

Who in your family decides how the farm/house is managed?

Do you think young people do things the same way adults do them, or do they have new ideas for doing things?

Have you ever tried to suggest new ways of managing the farm/house? Do you have a specific example? Were your opinions taken into account?

Do you think your community values young people's opinions and suggestions? (If no: Why do you think this is? What do you think could change this situation?)

Do you have a partner? What do you think of marriage and family? Is this very important in your community?

Do you have children? Would you like to have them? Have you given thought to how many?

Is there anything you would like to do before starting a family?

Will you continue working in agriculture in the future? Are you interested in any other types of work? *(If yes: What kind of work interests you? Why? How about other young people in your community?)*

How do you see the future to live from agriculture?

Adult Participants/Farmers

Have you always worked as a farmer?

How many manzanas is your farm? How did you obtain your farm?

Have you always worked with organic methods? *(If yes: Why? If no: What made you switch to organic methods?)* Have you had better results with organic methods?

Have you ever heard about the Quesungual Agroforestry System? How did you hear about this System? Did you ever speak to other farmers who were implementing the System? What did they say about it? What did you think about it?

Did you try the System in your farm? Did you notice any differences in your farm and in your production after trying it?

Would you recommend the System for other farmers? Do you think they would adopt it?

Do you consider yourself a community leader?

(If yes:) When did you become a community leader? Did you always think you wanted to become a community leader? Or was it something that happened unexpectedly?

What kind of activities or obligations do you have to fulfill in your role as a community leader?

Do people in your community seek you out? For what kind of things do they ask for your help? Why do you think people seek you out? Do you enjoy this role in your community?

Do you have children? *(If yes: How many?)*

Do your children help you with the work in the farm? Do they help in the home?

Is there a particular way labor is divided in the farm/home? Why?

Who decides how the farm is managed?

Do you think young people have new ideas about how to do things in the farm? Or do they simply follow what is already being done?

Have your children or other young people in the community ever made suggestions about the farm's management? Do you have a specific example? Did you take their suggestion into consideration, or was there a reason not to try it?

Do you believe people in the community listen to young people's opinions and suggestions? Why or why not?

Do you think it's necessary to listen to young people's opinions and suggestions? What do you think could be done to empower young people's voice?

Do you think it is important for young people to have professional training?

What is your view on the future of agriculture for younger generations?

References

The methodology used is mainly based upon the methodology used by Insightshare:

Benest, Gareth (2010) *'A Rights-Based Approach to Participatory Video: toolkit'* Insightshare

Lunch, Nick and Lunch, Chris (2006*) 'Insights into Participatory Video a Handbook for the Field'*. Published by InsightShare, February 2006

Further references:

Panos, (2003). Giving Voice - Practical guidelines for implementing oral testimony projects. Contact: www.panos.org.uk

https://www.v4c.org/wiki/index.