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# CASE STUDY OF THE EXPERIENCE OF FIVE USAID PROJECTS IMPLEMENTING CLIMATE CHANGE ADAPTATION IN RURAL COMMUNITIES

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## EXECUTIVE SUMMARY



Photo: Elena Borasino

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# PURPOSE OF CASE STUDY

The purpose of this systematization is to identify challenges, best practices and lessons learned from working with rural communities on climate change adaptation interventions from five selected projects executed with funds donated by USAID/Peru, to provide best practices that can be implemented in the future activity of USAID/Peru “Green infrastructure for water security”.

The systematization questions are: I. How did the projects engage with the rural communities to reduce the vulnerabilities of those communities to the impacts of climate change? And II. Given that expected benefits of green infrastructure extend beyond the boundaries of lands that rural communities use and/or own, how can they be motivated, and their participation be ensured? The first question has five sub-questions related to the selection and approach, participation, social and cultural factors, community engagement strategies and aspects to improve. The second question has two sub-questions of systematization related to green infrastructure interventions and the compatibility between watershed conservation efforts and local livelihood practices.

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## METHODOLOGY

The methodology was applied in four stages. In the first, an exhaustive review of key documents was conducted for each of the five projects. The second stage consisted of field work carried out in the intervention areas of the five projects. The third stage was to analyze the information collected. The fourth stage identified the lessons learned in each project from the evidence and findings of the previous stage. Then, a comparative analysis was made among the five projects to identify general lessons learned to take as reference the analytical framework proposed below.

The analytical framework includes USAID Local Systems Framework and the good practices of participatory processes in the management of natural resources by Reed (2008). The present systematization proposes to answer the questions and sub-questions through the analysis of the 10 principles of Local Systems with a focus on learning-action-replicability dynamics and the 8 key characteristics of good practices in community participation.

It is important to highlight that for the present systematization, an adaptation measure consists of the implementation and execution of initiatives that reduce the vulnerability of a society to the real or expected effects of climate change (IPCC, 2001).

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## CASE STUDY BY PROJECT

The five projects implemented that are part of this systematization have as their common objective the improvement of the adaptive capacity of families in high mountain ecosystems. Beyond some programmatic differences between the projects, as well as some aspects of the execution (execution time, territorial scope, intervention approach), all the projects aimed to implement adaptive measures against climate change through training activities, strengthening of the management capacity of local government instances, and/or joint activities and internships.

### **STRENGTHENING CLIMATE CHANGE ADAPTATIVE CAPACITY IN LOCAL GOVERNMENTS AND ORGANIZATIONS IN RURAL SOUTHERN PERU - AEDES**

*Location:* Provinces La Unión, Condesuyos and Caylloma, Arequipa  
Sub-basins Cotahuasi and Armas Chichas (Ocoña basin) and Sub-basin Colca (Colca-Majes-Camaná basin)

*Duration:* 3 years

The *Asociacion Especializada para el Desarrollo Sostenible* (AEDES) initially identified and prioritized the intervention with the most vulnerable communities to climate change, and within them with the most influential people, as shown by their work with leaders. This consolidated the group of people who already have a high level of commitment in applying the adaptive practices for climate change. The selection of communities and their initial approach were based mainly

## >>CASE STUDY BY PROJECT

on the previous experience of both AEDES and their technical team. This knowledge allowed them to understand the dynamics within the local system and its key actors. Likewise, the team of specialists and technicians of AEDES stands out for their facilitation and demonstrated commitment in working with the beneficiary communities. The training planning work was quite participatory, but there was less participation in the monitoring and evaluation of the measures implemented. Local and scientific knowledge was integrated in the preparation of risk maps and the bases for the competition of adaptive practices, through the application of participatory methods according to the context. AEDES ensured the participation of the most vulnerable population and women through empowerment and learning, which has developed from the learn-act-replicate model in its strategy with leaders, both men and women. However, it has not yet achieved a greater empowerment of women that would be reflected in key positions within the community as leaders of the associations or as officials in the municipality.

### **CLIMATE-SMART TERRITORIES FOR THE DESIGN, IMPLEMENTATION, MONITORING AND EVALUATION OF PUBLIC INVESTMENT PROJECTS, CONSIDERING VARIABILITY AND CLIMATE CHANGE IN PERU - CATIE**

*Location:* Districts Huancayo and Tambo, province Huancayo, Junín  
Sub-basin Shullcas (Mantaro basin)

*Duration:* 2 years

The *Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)* not only took advantage of the previous experience of the implementing team but also recognized that the local system had other previous similar experiences in facing climate change effects. The link with such an important urban center as Huancayo means that the experience's context shows a higher level of education of the different actors of the social system and of their communities, all of them in a process of fragmentation. Thus, CATIE was able to take advantage of the prior knowledge of the communities to promote participation in the planning of investment profiles. This best practice has been highly valued by the communities when comparing CATIE's experience with previous experiences with other implementers. The highly participative component from the beginning of the project marked a precedent in the study zone. This ensures its sustainability because the communities themselves are working with the relevant stakeholders in the area to carry out the investment projects. Likewise, inter-communal training courses reflect an important characteristic of good practices: the empowerment of communities. Being able to work together and exchange information with similar problems strengthened trust (reduced by the urbanization process) and improved the learning they already had. The participation of women only occurred through the fulfillment of a minimum quota in the trainings and workshops, which does not necessarily reflect a greater empowerment of women in their community. Nevertheless, the project, in its two years of operation, has been concentrated in few activities, but each of them has been carried out in a very participative manner.

### **SECURING MOUNTAIN WATERS AND LIVELIHOODS – TMI**

*Location:* Mancomunidad “Tres Cuencas”, provinces Recuay and Bolognesi, Mancomunidad “Waraq”, province Huaraz  
Mancomunidad “Río Yanamayo”, province Carlos Fermín Fitzcarrald

*Duration:* 3 years and 5 months

The Mountain Institute (TMI) considered all the key local actors and designed actions to work with each one of them (project components) and interrelate them. However, in this design there was no communal participation. In the selection and initial relationship, TMI worked with the communities and municipalities with which they had a prior relationship, as well as with new actors and spaces that are more influential or affected by climate change. In both cases, TMI sought to strengthen them and generate autonomous processes of action and replication, and thus consolidate the actors that were already involved in adaptation processes. Likewise, TMI adequately recognized and mapped the local system through a participatory process and took advantage of USAID's convening authority to create synergies among the community and technical-scientific knowledge in the implementation of adaptive measures. The role of facilitator that TMI applied throughout all its intervention strategies is highlighted. Among these, the family participation approach and the Participatory Action Research methodology with the Local Research Committees stand out. In these strategies, TMI tapped into local knowledge in the planning and implementation of activities, especially adaptation measures. Based

## >>CASE STUDY BY PROJECT

on the learn-act-replicate model, these strategies have allowed the institutionalization of community participation. The process of capacity development of women leaders is also highlighted as a strategy for the reform of the participation of women at the local level and in the political level of the areas of intervention in order to scale up to the regional level. Finally, there is no evidence of planning or management of the sustainability of community participation in the monitoring and evaluation of results.

### **ADAPTING TOGETHER - LWR**

*Location:* Distric Hualgayoc, province Hualgayoc and province Cajamarca, Cajamarca  
Micro basins Tingo-Maygasbamba and Hualgayoc

*Duration:* 3 years

Lutheran World Relief (LWR) took advantage of the previous experience of CEDEPAS Norte and consolidated its role in the area as a promoter of climate change adaptation activities. LWR worked with organizations or groups of families created for the project. One of the most successful strategies applied by LWR in its work with the communities was the internships. With them it was possible to identify natural leaders (village authorities or not), increase participation and empower communities in the implementation of adaptive measures. The leaders and their support groups, after the internships and considering their reality in the face of climate change, were willing to grant part of their resources and not receive wages to apply adaptation measures. This proves that the internships are successful with communities that have little knowledge of climate change, but that live facing its effects, even in areas of conflict (in this case due to the presence of mining companies). Due to the demand approach, the level of appropriation of the measures was high, but its sustainability depends on the relationship of these family groups with other actors in their villages and even with external actors such as the mining company. Local knowledge was integrated with the scientist in the planning of micro watershed management instruments and in the competitions of talking maps for the implementation of adaptation measures. This last strategy increased the demand and replication of systems for planting and harvesting water. At the same time, the articulation of work with the municipality accelerated the appropriation of these instruments. However, their legislation is still not very clear, so its sustainability can be questioned.

### **CLIMATE CHANGE ADAPTATION FOR COMMUNITIES OF LIMA WATERSHED - TNC**

*Location:* Province Huarochirí, Lima  
Sub-basin Santa Eulalia and sub-basin San Mateo, Rímac basin

*Duration:* 3 years

The Nature Conservancy (TNC) adequately recognized and mapped both the physical and social characteristics of the local system. However, it did not design its intervention holistically and this is evident in the selection and in the initial approach. In the design of its intervention, TNC identified potential communities with which to work; however, in the implementation the target population changed based on Aquafondo's previous experience. Likewise, TNC made the initial relationship with the communities through the local governments, but this interrelation was not positive due to the conflicts between the municipality and the peasant community, so TNC had to deal directly with the communities. Regarding community participation and relationship strategies, although TNC tapped into local knowledge for the implementation of adaptation measures, it has not been able to achieve synergies between the population and the technical-scientific in monitoring the effectiveness of the measures of adaptation. Through flexible schedules, TNC has achieved greater assistance of women to trainings and tasks for the implementation of measures. However, women's participation is still limited because men do not respect or value their perception or ideas. The process of capacity development on climate change issues and adaptation measures carried out by TNC in each of the communities is highlighted. In addition, internships for sowing and harvesting water are highlighted, as they have motivated the participating communities to replicate and appropriate the measures, which empowered them to provide their own internships and promote local replicability. On the other hand, although the payment of wages assured the community participation in the implementation of the measures, this has generated that they request or expect wages in any type of initiative, even in those that benefit the community. To some extent, this may affect the appropriation of the practice by the communities and even affect its sustainability.

# LESSONS LEARNED

## POSITIVE LESSONS

### Selection and initial approach

All the projects took advantage of the previous experience of the implementer or the technical team in the territory to select and approach the communities. At the same time, it has made it possible to identify the most vulnerable populations in the face of climate change (due to poverty conditions, vulnerability to hydro meteorological events, marginalized areas with migration processes, among others), and even to consolidate systems or certain actors, within the system, committed to the measures and adaptive practices implemented. When the intervention was concentrated only in the communities or hamlets (CATIE, TMI and LWR), the initial approach was developed directly with them through the authorities or community board. If it involved a multiplicity of different community organizations (AEDES or TNC), the approach was through other actors, such as the municipal authorities. In both cases, the implementers used formal mechanisms to establish the initial link with the communities. In the first case, the work with local leaders legitimizes and reinforces its position as a communal leader and has the advantage of achieving a minimum level of appropriation by local actors. In the second case, the initial approach through local governments (mayors), taking advantage of the convening capacity of USAID, has the advantage of ensuring the sustainability and scaling of the measures implemented.

### Community participation and relationship strategies

Through the principles of local systems and characteristics of good practices, the following aspects that contributed to the success of the projects have been identified:

- i) participatory processes guided by the philosophy of empowerment, equity, trust and learning that involve the actors of the local system during the implementation of the projects.
- ii) use of local knowledge, and its integration with technical-scientific knowledge for the implementation of adaptation measures. All participatory methods or tools employed by implementers are equally valid. The highlight in all of them has been that they have been adapted to the context and to the actors, avoiding imposing the technical-scientific knowledge on the premises.
- iii) incorporation of flexibility and adoption of facilitation to ensure active participation and relationship. Most implementers (AEDES, CATIE, TMI and LWR) had a local technical team that facilitated the interactions of the different actors of the local system and gave flexibility to the interventions. Therefore, in cases of adaptation to climate change, the application of these principles is essential to be able to work with communities. This is because the most vulnerable areas to climate change in mountain ecosystems are inhabited by populations that have limited scientific knowledge of the concept of climate change and its implications, and depend on economic activities that consume most of their time. This makes it necessary for the implementers or technicians to interact frequently with the communities and locate their operations center close to them, having to live in limited conditions and adapt to them.

### Sustainability

A positive lesson is that most of the projects sought to ensure the sustainability of the implemented measures through the identification and articulation of the community with other stakeholders related to water resources and management instruments. This, in turn, makes community participation itself more sustainable.

The training and involvement of communities in the formulation of management instruments is key for communities to take ownership of the instrument and to empower themselves to promote its implementation. The highly participatory work in the formulation of public investment projects by CATIE has resulted in a greater appropriation of these instruments by the communities than the local plans prepared by LWR and TNC. Likewise, institutionalizing participation at the community level also provides sustainability. CATIE and TMI ensured the participatory process in a different way: the first supported the work with the Management Committee of the Sub-Basin and the participation of the communities through a representative; the second, institutionalized active participation through CIALs and local researchers.

## >>LESSONS LEARNED

Likewise, the projects adopted the facilitation to ensure the sustainability of what was transmitted and implemented through competitions and internships. Most implementers used these practical activities so that communities learned that adaptation measures are successful and can be carried out in a sustainable way by communities. These techniques have proven to be the most effective in the application of the elements of participatory community action —Learning-Acting-Replicating— for the “see to believe” mentality of the community members. Thus, the community members not only attended, learned and replicated the adaptation measures of the internships, adapting them to their reality in their communities; but these were then converted into internship areas for other communities.

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## CHALLENGES

### **Selection and initial approach**

To achieve that the communities and the diverse local actors participate from the design of the project. Without their participation, it is unlikely that a holistic project design will be carried out - all local actors will be considered, their interrelationships, problems and potentials to generate concrete lines of action and that the implementation will be successful.

The basin approach is a very complex system. Despite being the ideal territorial space for the implementation of adaptation measures, especially for Mechanisms of Retribution for Ecosystem Services (MERESE), its approach presents challenges. Thus, the heterogeneity of the local beneficiary populations is one of the main challenges faced by any initiative to promote adaptive practices in high mountain ecosystems. If the complexity of the basin is not recognized at the ecosystemic and socioeconomic level, the conflicting interrelations between actors can damage the objectives of the project, its implementation and the community relationship.

The institutionalization of the “on demand” approach. Projects where this approach has been partially used (at the request of a beneficiary population) show to be successful in ensuring higher levels of ownership and replication since it is a flexible strategy that seeks community empowerment. However, from the perspective of escalation it is not clear how this approach can be institutionalized.

### **Community participation and relationship strategies**

Although the efforts deployed by the implementers have achieved greater assistance and participation of women in the different activities of the projects, their real empowerment continues to face limitations. Therefore, the challenge of the projects is to provide safe spaces where women participate and make sure that this participation is maintained and consolidated after the project ends.

Integrate local knowledge with scientific knowledge through facilitation. Generally, the capacities of local populations to monitor the effectiveness of adaptation interventions through scientific information are underestimated, which does not allow their empowerment and even they do not know their purpose.

### **Sustainability**

Participation strategies have been applied in most projects only at the time of implementation (including the identification of the measure (s)). A level of community participation has not been documented in the design phase of the interventions. Likewise, in none of the projects, except for CATIE, was a monitoring and evaluation system implemented that would help the continuity of the measures implemented. Neither were accountability and transparency relations adopted for the implementation of measures or feedback mechanisms between the community and the project or between the community and other local actors. The absence of all these considerations does not allow adequate communal involvement or sustainable intervention.

Among these, one of the biggest challenges is the active participation in the design and planning of adaptation measures and their integration in public management instruments, such as PIP, to ensure not only the sustainability of these measures, but also the community participation. In this sense, it is also a challenge to institutionalize community participation in the different stages of the projects, even after their completion.

## >>CHALLENGES

### **Recognition and direct benefits of green infrastructure for communities and/or organizations**

The communities and/or organizations consider that the conservation activities of the ecosystems in the watersheds do not contradict their local livelihood practices. Moreover, they are willing to participate in the implementation of green infrastructure projects if they are also beneficiaries of the ecosystem services they conserve. Some communities consider that their contribution must be paid as a wage. Others ask to be recognized for their work of water harvesting.

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## RECOMMENDATIONS

From the positive lessons and challenges outlined, the following specific recommendations have been identified for future interventions of adaptation to climate change in high mountain:

- **Implement adaptation measures under a territorial approach and scale of the watershed.** This is a functional unit that allows true social and territorial integration through water resources, especially for the implementation of green infrastructure projects that seek to increase availability and water coverage, as well as for the Mechanisms of Compensation for Ecosystem Services (MERESE in Spanish).
- **Encourage the articulation of the actors of the local system to give sustainability to the process and the implemented measures.** Interrelating the actors allows to consolidate the systems and empower the actors committed to continue implementing the adaptive measures or the adaptation processes. This articulation must occur at two scales: (i) communal scale and (ii) institutional scale.
- **Raise awareness and give evidence to local governments about the political benefits of working under the watershed approach** and elaborate green PIP. At this level we can think of the creation of *mancomunidades* whose objective is the management of water resources to increase the availability of water for human consumption and the development of productive activities.
- **Facilitate community research, the design of adaptation measures and the preparation of public investment projects** in a participatory manner to ensure their implementation, and the institutionalization and sustainability of community participation.
- **Adopt facilitation to ensure the sustainability of what is transmitted and implemented through competitions and internships.** These techniques have proven to be the most effective in the application of the elements of participatory community action —Learning-Acting-Replicating— to respond to the “see to believe” mentality of the community members.
- **Promote a reform of the participation of women** at the level of their locality and in the political level to scale to a regional level. This reform should start by raising awareness of men on issues of gender equality and the importance of the role of women at the community level. At the same time, a process of capacity building of women leaders must be implemented to procure communal and local government management positions.

**Implement strategies for community participation in the design of projects and in their evaluation and monitoring.** Promote the active participation of community leaders (men and women) in the initial stages of formulating an intervention, as well as in the different monitoring and evaluation activities. This implies monitoring and evaluation that provide local perspectives and ensure that adaptive measures are useful locally.

The content of this document is based on the study of “Case study of the experience of five USAID projects implementing climate change adaptation in rural communities”. You can find the complete report on PGRD: [http://pdf.usaid.gov/pdf\\_docs/PA005W56.pdf](http://pdf.usaid.gov/pdf_docs/PA005W56.pdf)

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