

## HUMANITARIAN INNOVATION FUND

### Final Report

<b>Reference Number</b>	HIF/L/2011/2-140
<b>Organisation Name</b>	Stitching CARE Nederland

<b>Project Title</b>	Bio-rights: linking community- and ecosystem-based approaches to disaster risk reduction
<b>Location</b>	Guatemala, Sololá department, Nahualá municipality
<b>Start Date</b>	1 <sup>st</sup> of February 2012
<b>Duration</b>	21 months
<b>Total Funding Requested</b>	£ 150,000.00

<b>Partner(s)</b>	Wetlands International
<b>Total Funding</b>	HIF: £ 150,000 Own in-kind contribution: £ 31,807 Total: £ 181,807

<b>Innovation Stage</b>	Implementation
<b>Type of Innovation</b>	Service
<b>One sentence description of the innovation</b>	A financial incentive mechanism that unites community and ecosystem based Disaster Risk Reduction measures.
<b>Project Impact Summary</b>	<p>The Bio-rights methodology, applied as a tool in reducing disaster risk, has increased disaster preparedness, and reduced the vulnerability of 4 communities in Guatemala.</p> <p>Loans provided were invested in emergency preparedness, while the re-payment through conservation and management of the landscape, investments in more sustainable management of the environment, capacity strengthening as well as linking communities to responsible authorities has led to more holistic and community owned approach to DRR.</p>

<b>Reporting Period</b>	1 <sup>st</sup> of February 2012 – October 31, 2013
<b>Total Spent</b>	£177,416.08

## **ACTIVITIES CARRIED OUT**

### **1.1 Development and signature of contracts**

Agreement documents were signed between the project participants with the 4 communities. In the original bio-right methodology these documents are called "contracts" but due to cultural issues in Guatemala these documents were referred to as "Agreements". In 2 communities, Pak'im and Chicorral these were signed between CARE, community representatives and municipal mayors of the municipalities Santa Catarina Ixtahuacán and Nahualá. In Tzamabaj and Pasaqajuyub and they were signed only between CARE and community representatives. The advantage of the commitment of the mayors is a financial and administrative contribution in the investments. This sustains and grounds the community work and requests in a formal structure. It gives it a 'real' value and creates ownership, and inclusion of duty bearers.

It is important to note that although formal documents were signed, in the Maya culture and tradition oral commitments by the people of the communities at the start of the project have the same level of confidence and commitment as agreements established in formal documents. The agreements are included in Annex 1.

In all agreements witnesses signed for the commitments for the project and communities : community mayors , heads of government schools of communities and the regional representative of Wetlands International. Also representatives of key stakeholders participated in the ceremony, with the intention that this initiative is tied to development planning in the micro watershed.

The bio-rights project was handed over to the PfR programme in the region between November and December 2013, in which additional agreements are signed specifically with women's groups in two of the four communities. The women groups are interested in developing productive activities, through the provision of revolving funds, which will be the first replica of the implemented Bio-rights model, now with a sector with prioritized interest within the community

### **1.2 Distribution of loans**

With the signing of the agreement the planned investments were included, and the payment conditions. The value of the investments was established, and the programme financed the investments directly. The COLRED organizations and women's groups to receive the loans are no legal entities as a group, allowing them to receive cash resources. Therefore the loans were provided in-kind.

The investments financed with the loan have the objective to reduce vulnerability in disaster events and strengthen the conservation of ecosystems with a crucial role in reducing disaster risk.

### **1.3 Execution of loans (investment in development / DRR actions and repayment through conservation actions)**

The loans are invested in works prioritized by communities to deal with emergencies: Community hall/shelter of 7,85 x 12 meters (Pak'im), strengthening of 2 pieces of access road (Pasaqajuyub), and construction of a Classroom/shelter of 8 x 7 meters (Chicorral and Tzamabaj).The project contracted the external services that were needed.

As for the committed payment activities for the loan received, for the agreed DRR mitigation and soil conservation measures were measured by the number of cubic meters and meters of terraces of soil (re)moved and time provided per family for the removal and clean-up. For the payment through management and conservation of community, private and mancomunales forests the rate was applied of the protection component of the Forestry Incentive Program for Small Holders ( PINPEP ) of the National Forest Institute (INAB).

The time invested by people in the above activities, the livelihood activities and the capacity building component was monetized according to the days contributed by each family in the community, accounted for on the minimum wage rate for agriculture in Guatemala. The unskilled labour provided by each community in the works financed by the loan was not considered.

The compliance with the payment commitments is included in Annex 2.

#### **1.4 Finalization and settlement of loans; conversion to grants**

The conversion of the loans to grants is done once all agreed payment activities are successfully completed. At the closure of the pilot project this is largely achieved, but due to seasonal patterns that direct community availability and ecosystems, this is not 100% in all cases yet. As mentioned, the pilot project, its obligations and responsibility for monitoring are transferred to the PfR programme in the same area. See Annex 2 for the activities and their monetization (approximate).

Under the PfR programme the targets will be achieved and the conversion will be done with the signing of agreements similar to the ones at the start of the commitment to serve as a settlement, in which the communities and the project met all established and committed obligations.

#### **2.1 Presentation to authorities and community organizations**

At the start of field activities, the Bio-rights project, its objectives, scope and the expected commitment of people, were presented in community meetings that were attended by 35 leaders and women leaders, as well as to local and traditional authorities of the communities.

At the level of local authorities, the project was presented by specific meetings in each town and these authorities and/or their representatives participated in exchange events and the signing of agreements. After, during the capacity building phase, the project was also presented to various institutional authorities and their regional delegations (national council for protected areas/CONAP, Ministry of Agriculture/MAGA, and the national forestry institute/INAB) to request their support in the workshops.

#### **2.2 Awareness-raising on DRR/CCA/EMR in project communities**

During each community activity, awareness components (lectures, group reflections, walks ) were included, visits were made on average every 15 to 20 days to each community. In addition, other awareness activities were developed: the development of community risk maps, work with schools (principals, teachers and students), and the celebration of the International Day for Disaster Risk Reduction in 2012 and 2013 in coordination the Partners for Resilience programme, with the participation of schools. This celebration included educational and fun activities such as the game Riskland and a first aid lottery.

In addition, in coordination with the Technical Administrative Coordinator of the Ministry of Education, the celebration of World Wetlands Day (February 2013) was organized, with various educational and fun activities and materials. This celebration involved students and teachers from schools in the communities involved in the Bio-rights project and PfR programme and aimed to make the educational community aware of the importance of conservation of biological diversity.

For awareness raising on disaster risk and adaptation to climate change, in collaboration with the PfR programme materials have been printed and distributed to students, teachers, principals, educational authorities, COLRED members, local authorities. The topics were "the way we act in our environment affects weather conditions", "Beware of landslides", "What to do in an earthquake", and "the Emergency Kit or 72 hours backpack". Also calendars were printed and distributed with key messages related to the issues addressed by the project, and linked with the Information, Education and Communication strategy of PfR.

Finally, as a commitment in the agreements with communities, people developed and placed awareness raising message signs on the topics addressed in the project.

### **2.3 Selection of community organizations and formulation of work agreements**

For the identification and prioritization of communities, meetings were held with staff of the PfR programme, implemented by CARE Guatemala, local partner Association Vivamos Mejor, and local government representatives. Four neighbouring communities to PfR areas were selected with similar characteristics, such as being prone to multiple hazards, isolated and neglected by authorities, poverty level of the population, vulnerability levels, capacity in DRR, amongst others. Also, it was decided to work in a watershed, not purely along administrative borders, due to the interconnectedness of communities in the same watershed. The prioritized communities are:

1. Pasaqajuyub, municipality of Santa Catarina Ixtahuacán
2. Tzamabaj, municipality of Santa Catarina Ixtahuacán
3. Chicorral, municipality of Santa Catarina Ixtahuacán
4. Pak'im, municipality of Nahualá

The total population of the 4 communities, geographically located in the middle of the Mas'a river sub-basin is 285 families and 1513 persons.

The community committees prioritized and planned to work with were the 4 Local Coordinators for Disaster Reduction (COLREDs) that were formed and strengthened during the project implementation in each of the above communities. The COLRED are local coordinating bodies in each community, recognized by the national disaster reduction system, and they assumed a leadership role in the activities and implementation of the conditional loans. Other direct project partners were the Community Development Councils (COCODE), families and other stakeholders in communities, for example resource or forest rangers.

### **2.4 Identification of community capacity building needs**

Through community meetings involving community mayors, traditional leaders, rangers, members of water committees of Community Development Councils – COCODE, the community priorities in the areas of disaster risk reduction were consulted. Other elements that helped prioritizing training needs were risk mapping, the results of the Climate Vulnerability Capacity Assessment (CVCA) performed in the region of the micro basin Masa', and the Micro-watershed Management Plan of the Masa' River. Capacity building needs identified were:

1. Training to local people and organizations in: Basics concepts of Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA) and Ecosystem Management and Restoration (EMR); the structure of the national system of disaster reduction of the National Coordinator for Disaster Reduction (CONRED). Early Warning Systems (EWS), monitoring and evaluation of the behaviour of landslides and collapses with simple methods, models and agroforestry systems, soil conservation, land management and community planning, among other topics.
2. Strengthening of the community organization (Local Coordinators for Disaster Reduction - COLRED ) specializing in issues of DRR / CCA / EMR.
3. Technical assistance for the implementation of DRR / CCA / EMR measures in community and family land: Construction of contour lines, drains, soak pits , natural and hard barriers, and planting cover crops, establishment of home vegetable gardens, establish windbreaks curtains with alder and pine, river clean-ups, improving storm drains and preventive circles or firewalls.

## **2.5 Development of community action plans**

Local Disaster Risk Reduction and Response plans have been developed with the communities. The four organized COLREDS will be accredited in the national disaster response system when SE-CONRED approves the plans, estimated in the beginning of 2014. These plans are regularly updated in coordination with the participating communities under the PfR programme. The intent of the Comprehensive Community Disaster Risk Reduction Plans is to use it as a planning model linked with other plans such as the Masa' micro watershed management plan, contingency and disaster response plans, and municipal development plans. This comprehensive planning tools seeks to provide communities with only one planning tool that includes the priorities identified in other DRR/CCA/EMR documents and also serve for possible advocacy and (resource) mobilization for their community. An example of such a "Community Plans Disaster Risk Reduction through Ecosystem Management and Restoration measures and Climate Change Adaptation" Is included in the Annex 3.

## **2.6 Input of vulnerability assessments into community action plans**

Community risk maps including information about the vulnerabilities and capacities of the members of each community were developed and have become a useful tool that provided input for the elaboration of comprehensive community DRR plans. Other inputs were obtained from the risks analysis through Climate Vulnerability Capacity Analysis (CVCA) methodology, in which different sessions were held with participation of population and community leaders to understand the factors associated with increased risks of disasters by climate change. Both the map and some participatory tools of the CVCA built on the perception of communities.

## **2.7 Technical assistance during loan implementation period**

Technical assistance was provided by 2 specialists, one on DRR and CCA, and one on Ecosystem restoration and conservation, as well as a college student who did his forestry internship.

Also, specific technical assistance was contracted for the development of comprehensive DRR plans, for administrative training for implementation and management of revolving funds, and on an Ad Honorem basis technical assistance was received from the Ministry of Agriculture, Association Vivamos Mejor, National Forestry Institute, Private Institute on Climate Change, and others. This assistance is mainly provided for training activities aimed at COLRED and others in the community.

A study on agro-biodiversity for food security of the PfR programme also benefitted the bio-rights communities. This study took into account the local/traditional knowledge and aimed to identify species used, the (agricultural and agroforestry) production systems and farming practices (new and native), which generates proposals for agricultural and agroforestry models with the intention of diversifying livelihoods of communities, considering the potential for climate change adaptation of species. The products of this study will serve as resource management tools for communities. Ultimately, the intention is to promote a comprehensive reduction of social and economic vulnerabilities of the population.

## **3.1 Community trainings on DRR/CCA/EMR**

Community trainings, primarily for members of the 4 COLREDS, aimed at issues related to Disaster Risk Reduction, including the specific topics of COLRED organization and preparation for emergency and disaster response, as established by the Executive Secretariat of the National Coordinator for Disaster Reduction (SE-CONRED). The content was on: Early Warning Systems at Community level, damage assessment and needs analysis, shelter management, global warming, risk scenarios, information management, emergency services and population care.

The training modules on ecosystem management and restoration and climate change were developed with support from staff of the Private Institute on Climate Change (ICC), also working in this region, as well as with support from Association Vivamos Mejor (AVM) and the National Forests Institute INAB.

80% of training activities were conducted in each community or in nearby communities with the aim of ensuring more participants and assistance of female COLRED members and/or community leaders. This would not be possible outside the community, for cultural/traditional reasons related to the lack of opportunities and gender inequality.

## **3.2 Capacity building workshops on fund management**

Assistance in administrative matters was provided through training of COLREDS in the implementation of monitoring tools and management measures that will serve for the payment or conversion of the loan.

In addition, support and training for capacity building process of women's groups in 3 of the 4 communities was provided. In 2 of the 3 communities where women's groups were trained, revolving funds are implemented, managed

directly by them. These funds seek to reduce their vulnerability through the implementation of pilot projects on income diversification and livelihood, which contain a savings component for use in emergencies at the community level. Inputs for the implementation of one of the two revolving funds are purchased, and the PfR programme will support the second. For both funds financing agreements are established and describe the conditional payment measures that will apply for these small grants. The same principle applies as for the large community funds: access to the funds requires payment in the way of ecosystem management activities, with the difference that small incomes can be generated with the investments, strengthening the ability to re-pay or re-invest the loan.

### **3.3 Exchange of experiences between communities**

At various occasions exchange between communities was facilitated, such as at the training event in October 2012, for exchange between COLREDs on community risk maps and outcomes, also attended by municipal authorities.

Also informally there have been various exchanges at the level of the community leaders, for example during an Outcome Mapping monitoring event, which were performed in joint meetings. In other community activities representatives of the coordination board of the Masa' micro-watershed and other leaders were present, to learn about the project and its progress.

In the last stage of the project exchange events were organized at the level of community leaders participating in the Bio-rights project and the DIPECHO 8 funded project implemented by CARE in the municipality Chichicastenango to wider promote the bio-rights methodology in other areas in Guatemala. Secondly, exchange between municipal authorities of Santa Catarina Ixtahuacán (Bio-rights) and Chichicastenango (DIPECHO) took place.

Also, a large final learning event was organized with the leaders of the 4 communities, staff of the PfR partner organizations (Caritas Zacapa, Guatemalan Red Cross, Association Vivamos Mejor, Wetland International), and representatives of other institutions: University of San Carlos of Guatemala, Association Friends of the River Ixtacapa and its youth group called ECO CLUB, representatives of health services of the Ministry of Health in the region.

### **4.1 Monitoring of loans**

To ensure quality in materials and compliance with the structural designs of infrastructure works financed by the project, project staff with experience and training in this conducted monitoring visits. To monitor the degree of progress in the implementation of payment measures, regular field visits were conducted. In the Annex 4 and 5 examples of a field visit logbook, and payment measure compliance registration are included.

External project staff also conducted monitoring visits. For example, a technical staff member from the PfR programme conducted a field visit to monitor the community forestry nursery, management of private plantations, reforestation in private areas, tree growing base building in Pak'im, and reforestation in a communal area of Pasaqajuyup. In Chicorral the reforestation monitoring was performed on individual plots through 2 experts of the National Forestry Institute.

### **4.2 Outcome mapping**

The outcome mapping started with an event with Bio-rights and PfR staff to strengthen the understanding of the link between PfR and the Bio-rights model and project monitoring using Outcome Mapping and participatory video. A first draft of the Bio-rights Outcome Mapping strategy, including the Vision and Mission of the project were developed. During regular visits and community activities so called progress markers were monitored. Additionally in meetings and community visits with the Outcome Mapping advisor the progress in achievement and updating the progress markers were done in a participatory manner. A report on Outcome Mapping is included in the Annex 6.

### **1.3. Linking and learning**

Project activities have been linked largely with PfR programme. The tested methodology and learning was shared at the community level, with local leaders and authorities, municipal authorities and officials at the level of the Integrated Management of DRR, Mitigation Directorate and the Director of Cooperation of the National Coordinator for Disaster Reduction, who in turn have provided comments and observations that will be taken up with Bio-rights and PfR project communities.

At the international level Linking & Learning PfR has been promoted between partners, and the methodology is developed to be applied in other countries. Also, at the UNISDR Global Platform for DRR May 2013 in Geneva, the experiences of the Bio-rights methodology is presented as a mechanism to promote the inclusion of ecosystem management as conditionality in DRR investments, to address root causes related to ecosystem degradation.

Experiences of the project are captured and widely disseminated in a brochure (Annex 7), a case study (Annex 8), complementing the original book 'Bio-rights in theory and practice' is produced, as well as an online presentation (Annex 9) available at the websites of the partners.

### **4.4 Meetings and monitoring visits**

To assist and ensure the proper implementation of the works funded with the loans and the implementation of the payment measures, as well as to provide feedback throughout the project implementation, monitoring meetings were held by project staff, and occasionally together with external staff from CARE, Wetlands International, and the National Forest Institute (INAB). Monitoring visits to support the progress of the project and discuss finances were conducted by staff of CARE in the Netherlands.

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## **ACHIEVEMENTS**

- 285 families improved their capacity for environmental protection, through training and the specific implementation of mitigation measures, management and conservation of forests and soil conservation measures. In the Annex 1 all achieved works and implemented measures are presented.

A level of understanding is created of how the payment activities contribute to reducing disaster risk levels at each location. Likewise, the organization and the involvement of family members in the process of implementing measures for community was achieved. For example, for the committed payment

activities, a group of women in Pak'im manages a nursery bed for the production of passion fruit. In two other communities, women have participated in the design and construction of the hillside contours and implementation of soil conservation measures.

- 4 community organizations (COLRED) in as many communities were established and strengthened in the areas of disaster risk reduction associated with ecosystem management and climate change adaptation . The organizational structure is strengthened through the implementation of comprehensive DRR plans. Improvements in humanitarian actions have been proven, e.g. for small emergencies generated by heavy rains in 2013 and strong earthquakes in November 2012 and September 2013 that hit western Guatemala, the COLRED had strengthened ability to handling information on the situation of communities, transfer information to the municipal level and CARE staff that was stand by in the situation.

Also, the ability of the community to request and obtain other resources in addition to those provided by the Bio-rights project of benefit to the whole community was increased. For example , the request towards the Ministry of Agriculture, Livestock and Food (MAGA), who in Chicorral distributed 10 pounds of bean seeds, improved by the Institute of Agricultural Science and Technology (ICTA), to each family in order to diversify their livelihoods. For this, MAGA technical field staff conducted a technical demonstration for proper planting of the distributed seed.

- Replication and support for expansion was achieved through the financial support of the projects by municipal authorities. In addition, through coordination with the Municipal Forestry Offices of the two municipalities for forest management and reforestation. In Santa Catarina Ixtahuacán 5,000 tree seedlings of the common cypress and pine (at a cost of Q.18,000) were provided, for the communities Tzamabaj and Chicorral. Similarly, it was possible that the Association Friends of the Ixtacapa River collaborated with input of 1,500 tree seedlings (at a cost of Q.5,000) for the reforestation of particular areas in the community of Pak'im, Nahualá.

Coordination is initiated and expected to be maintained within the PfR programme with the Ministry of Agriculture, Livestock and Food ( MAGA ) for technical assistance to the population of the 4 communities that promote the implementation of crop varieties on demonstration plots that are resistant to pests and diseases , caused by climate change and will help in the process of building community resilience.

The COLRED of Tzamabaj submitted a support request to the neighbouring municipality of Santo Tomas La Union, Suchitepéquez, for reforestation and agroforestry systems to be developed in the region of this community, identified as a water recharge area that supplies the population of downstream Santo Tomas. This request is awaiting response.

Also, through dialogue the interest to support the communities is generated of the Incentive Program for Small Holders (PINPEP ) of the National Forest Institute ( INAB). Concrete support of the Ministry of Agriculture (MAGA ) was also made as mentioned before.

The Bio-rights framework is not bound to site-specific socio-economic or environmental characteristics and can be replicated in other areas, with the appropriate analysis and links to local actors, and linked to a longer term

programme of local or external actors. The project has documented the approaches and actively disseminated these among NGOs involved in the Partners for Resilience programme, present at the UNISDR Global Platform for DRR, government institutions at various levels in Guatemala, including the Executive Secretary of CONRED, interested in replication. Other PfR partners and countries are planning for replication. For guidance in the replication interested parties can consult the case study elaborated, complementing the original book ' Bio-rights in theory and practice' as well as an online presentation available at the websites of the partners.

- The mechanism of conditional loans granted to each community was an initiative that helped strengthen internal community coordination, improved collective responsibility and allowed communities to establish an economic value to the various DRR, CCA and EMR activities performed. It also generated experience that can be useful when communities choose to access other incentive programs such as the Programme of incentives for Small Holders (PINPEP) promoted by the National Forest Institute (INAB) throughout Guatemala.

The overall achievement of this project is the establishment of a financial incentive mechanism that strengthened the relationship between the community and its ecosystem, for disaster risk reduction.

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## **METHODOLOGY**

The basic steps of the Bio-rights methodology, implemented during this Project are described in the case study:

1. Project initiation – planning: In this step the general plan to be implemented throughout the project develops. Accompanied by representatives of communities, in meetings workshops to present the methodology and adapt it to the context in which it is applied, determining what are:
  - a. Detail of loans, agreements and obligations
  - b. Definition of the exact project locations
  - c. Determination of generation of funds
  - d. Identification of direct stakeholders
  - e. Determining the type of project to be implemented
2. Project development: together with the 4 selected communities the countours for the contracts, implementation of loans, payment conditions and support were defined. At the same time authorities and other organizations were approached for support. Several methods were used to collect information, such as, risk mapping, Natural Resource Mapping, analysis of the estimated payment capacity of communities. Also the initiative was linked with the broader context, such as the watershed management plan for the Nahualate micro-watershed.
3. Signing of agreements: Agreements were extensively discussed and prepared after which they were signed with community groups describing the nature and purpose of the loans, and the requested contribution of communities for recovery and payment of these loans.
4. Project implementation:

- a. Loans are disbursed through the Bio-rights project (according to the analysis of payment ability of each) and the 4 prioritized projects (works) are implemented.
  - b. Communities implement the agreed payment measures and receive technical support in the implementation of disaster risk reduction and conservation measures.
  - c. Awareness raising and capacity building: In the 4 communities COLREDs were trained, who together with the COCODEs were responsible for the loans received. Training and awareness raising activities to communities and implementers of the project ensured understanding and ownership of the plan.
5. Monitoring and evaluation before conversion of loans: The achievement of the contractual obligations (as set out in the agreements) and overall project progress was monitored, together with the community.

Compared with the original method, the most important adjustments made were:

- The implementation of loans at the community level, in a single work prioritized by representatives of the community. These loans were provided in kind, not in cash.
- Payment measures were established and implemented per family, having a direct benefit to the family, and also for the entire community.
- In the Maya culture written contracts are not more valid than the word, or agreements with witnesses. So this element was adjusted to the context.
- Considering the period of implementation of the HIF fund and its connection with PfR programme at the end of project, the PfR program will monitor the successful fulfilment and maintenance of activities and results of the HIF funded project and consolidate these in existing processes.

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## MAJOR OBSTACLES

1. Delay was experienced in the collaboration with the communities, respecting their schedules: The processes of organization and strengthening of communities on DRR / CCA / MRE required more time than expected, based on the cultural and traditional conditions requiring processes and commitments that communities assume must be consulted widely throughout the population, thus requiring more time for decision making. Also There has been an interruption in the implementation of field activities, partly in November and December 2012 and fully in January 2013 , a period that the population of the communities increased their marketing activities and cutting coffee and mainly Maxán leaves, and were not available for activities related to the project.
2. Natural (hazard) events caused delays: Heavy rains in June and July 2013 delayed the implementation of the repairing (ballast) of the road to Pasaqajuyub community, funded with the loan. The total closure of the road to Chicorral and Tzamabaj communities, for about 2 months due to the implementation of two road improvement projects funded by the municipalities of Santa Catarina and Nahualá Ixtahuacán, complicated the implementation of the works. As a result, the families of both communities had to move (carry

on back and shoulders) building materials and some of the seedlings that served for the payment activities.

In November 2012 there was one major earthquake which, although no major damage was reported in the region, diverted the attention from the population, and generated alarm throughout the south western region of Guatemala. Another earthquake of lesser magnitude occurred in September 2013, without causing damage to the population.

3. Establish / clarify the conditions for ownership of the areas to be preserved or restored in order to avoid future problems between authorities, local leaders and the community at large was another situation that hindered the progress of work. There were limitations on what could be done on the preservation of water sources, as they belonged to several other communities not involved.
4. No micro-financing structure could be set up. It proved to be difficult to link with institutions and since the investment were done in emergency preparedness measures, not in activities generating direct cash, the communities are still considered insufficiently capable to repay in cash. Still, to improve economic resilience of communities, women-groups were supported with loans for income generating activities contributing to revolving funds.
5. After the initial training on the bio-rights approach, the programme team has been learning by doing, as the implementation in this particular context required its own process and considerations, sometimes causing deviations from the theory.

For most obstacles presented greater investment of staff time in the field was needed for compliance with the planned activities. Also, a constant attention to weather forecasts of the meteorological institute INSIVUMEH, alerts emitted by CONRED and other information related to extreme events mostly of hydro-meteorological origin.

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## **BENEFICIARIES/HUMANITARIAN INTERVENTIONS IMPACTED**

*Humanitarian operations in the project area:*

With the project intervention the capacity of communities in humanitarian operations improved. In emergencies in the western region of the country this was shown primarily handling and transfer of information.

*At the household level:*

This project benefitted approximately 1,513 people in 4 communities participating in this project. In each of the communities were progress was made in the following areas:

- People of communities know the risk conditions they live in, and know and have implemented some measures to improve social skills in disaster response.
- Mitigation measures, such as the stabilization of slopes and terraces, natural barriers are helping to reduce levels of vulnerability and risk of landslides and erosion around homes. The commitment of each family for the protection, management and conservation of natural resources increased.
- The soil conservation works are helping to protect livelihoods.

- Increasing community requests for other resources to supplement the activities of this project to local authorities and government and private institutions were supported.

*At the level of community organizations:*

With the organization and strengthening of COLREDs the level of participation in community organization increased. The level of interest from other local organizations on DRR issues are also increasing.

*At regional or sub -basin level:*

This intervention improved the capacities of community organizations that are part of the Masa' micro-watershed coordinating board, a regional organization, with the support of Association Vivamos Mejor, implementing partner in the PfR programme.

*At municipal, provincial and national levels:*

The experience of this project was known by the municipal authorities, increasing the level of interest of key persons in the authorities to better serve the communities in this region , especially in emergencies and / or disasters.

At national level, there was some interest of CONRED for the model, as well as from the foundation 'Defensores de la Naturaleza' and the private Institute for Climate Change (ICC), with whom there have been preliminarily conversations about future funds for similar projects in other communities.

*At Central American and Global level:*

The lessons learnt of this initiative are shared and promoted at regional and global level, especially through the PfR programme. Other countries participating in PfR (such as the Philippines and Uganda) are interested in implementing a Bio-rights approach under the PfR programme. Also, wider attention and awareness is raised for the link between ecosystems management as DRR measure at global platforms, such as the UNISDR GPDRR.

Globally this was a very different experience to the very "green" the Bio-rights methodology implemented previously in Indonesia and Mali. It "proved" (with its shortcomings...) that the model works for a DRR context and is sufficiently flexible to more local situations.

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## **PARTNERSHIPS AND COLLABORATION**

The collaboration between the project partners CARE and Wetlands International has established opportunities to continue working together in other DRR initiatives.

Other strategic collaboration was established the Association of Friends of Ixtacapa River (ADRI), seeking the possibility that communities in the watershed of this river are supported in the medium and long term by ADRI to implement conservation of natural resources in the middle and upper part of the sub basin of the Masa' and Ixtacapa river. They are supported through the technical assistance of the Institute of Climate Change, which is funded by private enterprises in the sugarcane agro-industry at the southern coast of Guatemala, who's interest is also is to protect water sources upstream. Additionally, the

alliance with the University of San Carlos de Guatemala (USAC) developed through the contribution made by a college student in forest engineering from the North West University Centre. Some partnerships were built around specific activities, such as capacity building of the COLREDS and community leaders, in which technical staff supported from the National Council of Protected Areas (CONAP), University Mariano Gálvez, Ministry of Agriculture, Livestock and Food (MAGA), the National Forest Institute (INAB), Private Research Institute on Climate Change (ICC) and Association Vivamos Mejor (AVM). Good communication is maintained with these stakeholders to coordinate activities that will be developed together in the future.

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## DISSEMINATION

The project has been spreading his experiences: achievements and lessons learned through the following specific actions:

1. Participation in celebrations within Guatemala, for example, the celebration of the International DRR Day and World Wetlands Day.
2. Exchanges between communities, institutions and other beneficiaries of DRR projects, for example: Community Exchange with beneficiaries of the DIPECHO 8 project implemented by CARE in Chichicastenango, El Quiché; meetings and exchanges with local authorities and representatives of institutions involved in Municipal Coordinators for Disaster Reduction and Santa Catarina Ixtahuacán Chichicastenango, El Quiché. Meetings with the PFR Alliance Technical Committee has spread the project experiences to other partner organizations in this alliance.
3. Dissemination of the project experiences at the South West University Centre of the University of San Carlos, with the Private Climate Change Institute, the Association of Friends of the Ixtacapa River and government institutions who have collaborated in the project specific activities.
4. Interactive presentation and case study of the process and impact of the project, with the intention of promoting experience at the national, regional and international levels. These products can be accessed through [www.careneland.org](http://www.careneland.org) and [www.wetlands.org/lac](http://www.wetlands.org/lac). The case study is complementary to the original book: Bio-rights in theory and practice (Van Eijk & Kumar, 2009).
5. Production and dissemination of two-page booklet "Bio-rights for Disaster Risk Reduction" on the website with more than 800 views and printed and distributed together with the following calendar:
6. Production and dissemination of calendar 2014, "Community Resilience: discovering our own strengths" on the web page with over 400 views, and distributed to national and international actors such as UNISDR, IFRC, amongst others.
7. Blogs published on the HIF website.
8. News and project blogs published on the website of Wetlands International Latin America and the Caribbean [www.wetlands.org/lac](http://www.wetlands.org/lac) (more than 1500 views):
  - a. New Notebook for Awareness of Risk Reduction and Environmental Conservation in small villages of Guatemala

- b. Training with Experts Prepare K'iche Communities to Climate Change.
  - c. Signature of Bio-rights agreements for Ecosystem Restoration and Reducing Vulnerability of Communities, Department of Sololá
  - d. Blog: Playing we learn to conserve!
  - e. Blog: Trust and Hospitality in the Community Chicorral , Ixtahuacán, Sololá, Guatemala (also published on the website of Global Wetlands International with over 2900 views)
9. 4 Contributions to Wetlands International Global Newsletter sent to 5,000 contacts worldwide .
10. A special highlight article was attributed to Bio-rights in the CARE Nederland annual report 2012, distributed widely to relations and private donors of CARE Nederland.
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## **TRANSFERABILITY**

Some possibilities have been identified to replicate the experience of this project, mainly within other DRR initiatives that are developed in the future. Within Guatemala the essence of the Bio-rights approach was shared with SE-CONRED, for consideration of inclusion in DRR at national level. Also it is being promoted internally in CARE Guatemala, with the possibility of replicating aspects of this methodology in the proposed DIPECHO project 2014 – 2015.

Also some other partners in the PfR programme in Guatemala are considering the bio-rights, conditional loans approach for the implementation of so called Micro-Projects, small DRR, mitigation or adaptation works in communities. Specifically, the Red Cross is looking at implementing temporal shelter in Quiché, and it is suggested that EMR measures are included as conditions, under the same 'payment' scheme as in the HIF funded project.

Globally, Within the PfR programme replication of the Bio-rights approach as a DRR measure is considered in other countries, applying it again in the local context and ecosystem, amongst others in the Philippines and Uganda.