



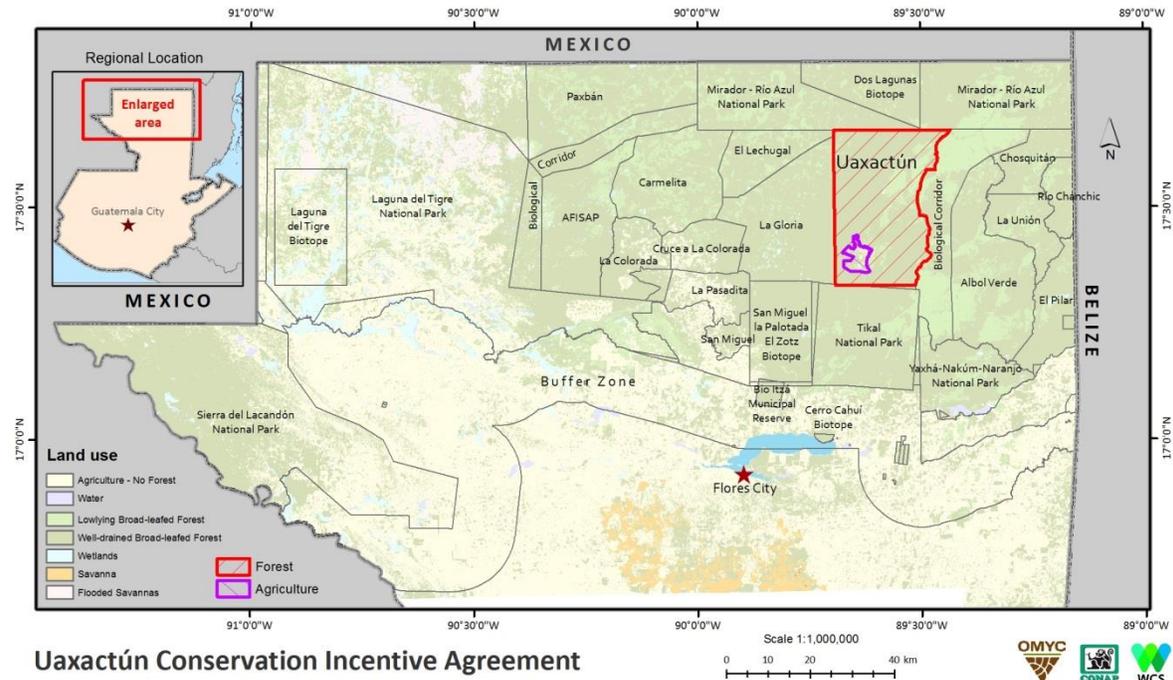
## CONSERVATION AGREEMENT CASE STUDY No. 4

### Uaxactún Conservation Agreement Maya Biosphere Reserve Multiple Use Zone

#### Administrative Management, Agricultural Zoning, Improved Sustainability of Xate Harvests, Increased Access to Solar Power, and Improved Education

In 2009, the community of Uaxactún implemented Guatemala’s first Conservation Agreement in an area spanning 83,558 hectares located within the Maya Biosphere Reserve (MBR) multiple use zone. The village was represented by the *Organización Manejo y Conservación* (OMYC) and by the Uaxactún Community Development Council (COCODE). Signatories also included Guatemala’s National Council of Protected Areas (CONAP) as the leading government agency responsible for the MBR’s management; and the Wildlife Conservation Society (WCS) as the “accompanying NGO”. Rainforest Alliance (RA), the Association of Forest Communities of Petén (ACOFOP), and *Asociación Balam* also participated as witnesses of honor. The village of Uaxactún contains approximately 186 families, and to date three two-year agreement phases have been implemented. (Figure 1) details the location of the Uaxactún management unit.

**Figure 1: Map of the Uaxactún Management Unit and Agricultural Zone within the Maya Biosphere Reserve**



Uaxactún Conservation Incentive Agreement

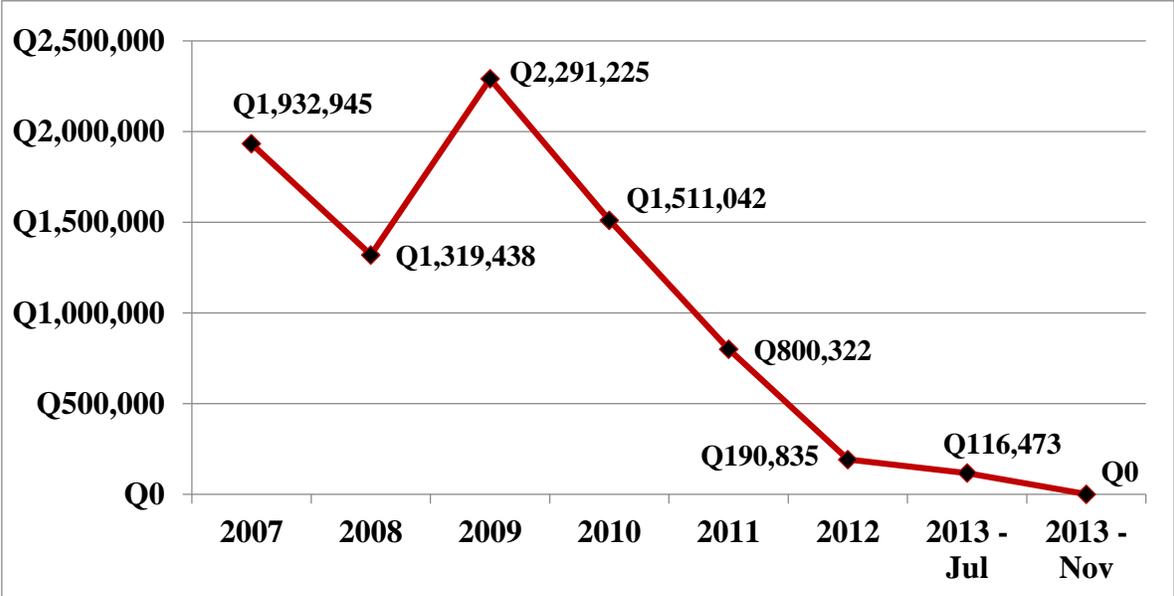
The agreement contained two key components: “Conservation Actions” focused on the prevention of forest fires, control and surveillance, land-use planning, enhancing understory xate palm populations and maintenance of forest cover; and “Community Benefits” consisting of investments in education, incentives for harvesting only market-quality xate, and technical and financial support to improve OMYC’s administrative management. Below we highlight four notable outcomes that were either directly produced or leveraged by the investments of the Uaxactún Conservation Agreement since its initiation in 2009.

**1) RECUPERATION OF OMYC’S FINANCIAL SOLVENCY**

The administrative management component of the Conservation Agreement specified that OMYC’s financial resources should be well-managed. This clause was included in the agreement because in 2009, when the agreement was initiated, CONAP, NGO, and community leaders collectively recognized significant weakness existed in OMYC’s administrative and financial capacity. This weakness had manifest as a 2.29 million quetzal debt (\$306,000) owed to local suppliers and national lending institutions. The concession was on the brink of bankruptcy and community leaders and CONAP authorities alike recommended that urgent action was required.

Within the framework of the agreement, a financial manager was employed to improve administrative management and assist OMYC to repay its debts. An annual investment plan was developed to define specific administrative procedures for all financial transactions. This process, implemented between 2009 and 2013, allowed OMYC’s leaders to implement from cost-benefit analyses for all major transactions, and ultimately resulted in the complete repayment of OMYC’s debts (Figure 2).

**Figure 2: Evolution of OMYC’s Debt in Quetzales between 2007 and 2013**



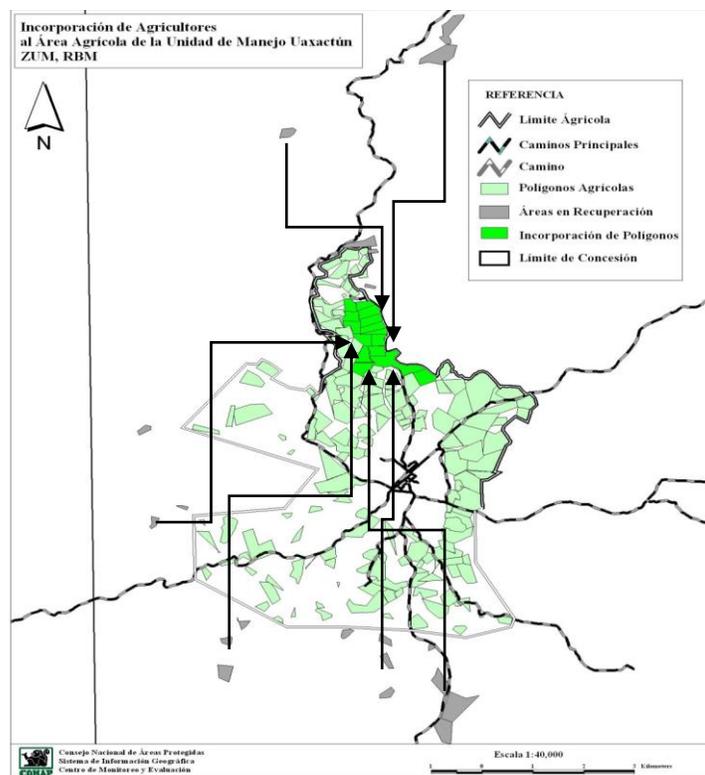
Due to a strong commitment by OMYC’s community leaders, OMYC has subsequently been able to maintain stable finances without any significant debt. Since 2013, OMYC has not taken out any high-interest loans to sustain their timber and non-timber forest management activities. As a result, savings have been increasingly invested in community benefits such as education, enrichment of wild xate stocks, and the prevention of forest fires. An additional benefit of OMYC’s recuperated finances has been increased enthusiasm among OMYC’s members for sustainable natural resource management and the concession concept in general.

## 2) LAND-USE PLANNING FOR AGRICULTURE

The “Conservation Actions” component of the Conservation Agreement included a clause relating to land-use planning for agricultural areas. In order to proceed with this commitment, in 2010 partners undertook an assessment of the present agricultural land use patterns, and compared the results with the agricultural zone stipulated in the original General Management Plan for Uaxactún, developed shortly after the concession was signed in December, 1999.

The assessment revealed 22 areas used for agriculture by Uaxactún inhabitants that were located outside the agricultural zone permitted in the Management Plan and the concession zone map (**Figure 3**). These areas subsequently became known as “satellite areas”, with some located as far as 12 kilometers from the village, deep within the jungle. Concerns about these areas included the potential for creeping expansion of agriculture into areas zoned for sustainable timber and non-timber resource management, the potential for fire affecting intact forest areas, the difficulty of fire prevention support in remote areas, and the possible impacts on CONAP’s eventual evaluation regarding compliance with OMYC’s original concession contract.

**Figure 3: Map depicting relocation of Uaxactún’s “satellite agricultural plots” within the permitted agricultural zone**



With the help of technical personnel from OMYC, CONAP, WCS, all 22 satellite plots were voluntarily relocated within the agricultural zone, and OMYC developed an updated agricultural land-use map including a list of active farmers. Since the relocation, no new agricultural plots have since been detected outside the agricultural zone, and the abandoned satellite plots are recovering ecologically. Reinforcement for this new agreement has subsequently been provided by OMYC's guards and agricultural/fire prevention support personnel supported in part through the Conservation Agreement.

### 3) INCENTIVES TO IMPROVE XATE SUSTAINABILITY

Another agreement "Conservation Action" consisted of the enhancement of wild xate populations through improved harvesting, and the planting of 20,000 xate plants annually into forest areas affected by over harvesting. Since the agreement's inception, Uaxactún has fully achieved this objective every year, thereby helping to ensure the long-term viability of one of Uaxactún's most important sources of household income. Xate harvesting in Uaxactún generates an estimated 1.3 million quetzals annually. The majority of this income (55%) is used to pay xate collectors, while the remainder is used to cover marketing costs such as packaging, materials and transport.

Since 2009, a total of 193,400 plants of three species have been transplanted into the forest, with 54% comprising xate "jade" (*Chamaedorea oblongata*), 44% Xate "hembra" (*Chamaedorea elegans*) and 2% Xate "cola de pescado" (*Chamaedorea ernesti-augustii*). Monitoring of the success rate of xate transplanted from OMYC's nursery into the forest has revealed that at least 85% of the transplanted stock survives long-term.



*Xate "cola de pescado" in nursery areas / WCS*

The agreement also provided a two-cent per frond financial incentive to the xate collectors to stimulate their selective harvest of only market-quality fronds. On average, 12 million fronds are collected each year that qualify for the incentive payment, helping to transform the Uaxactún's xate harvest from a quantity-based, to a quality-based payment system. This transformation has in turn helped reduce over harvesting of an economic resource essential for the village's forest-based economy, provided collectors (mainly men) with a 30% increase in their monthly income, and increased employment for village women "sorting" xate (i.e. evaluating each frond to ensure market quality) in OMYC's xate bodega. The incentive has also helped channel tangible benefits of the agreement directly to at least 100 harvesters annually. These individuals typically lack full time employment, and they often rank among the least wealthy inhabitants of the village.

Based on monitoring undertaken by WCS with the support of Rainforest Alliance and the U.S. Agency for International Development, harvested xate in OMYC's bodega has consistently exceeded the quality standard set by CONAP (at least 80% of harvested xate must be of market quality). This information has helped to improve the annual Uaxactún Management Unit performance evaluations conducted by CONAP.

#### **4) INCREASED ACCESS TO SOLAR POWER**

In 2014, Uaxactún experienced a considerable increase in access to solar panels, surging from 38% to 95% of the village's households. This was achieved through support from a project implemented by NRECA International and funded by the National Institute for Electrification (INDE) titled "Community Electrification through Photovoltaic Systems".

To obtain this benefit Uaxactún was required to comply with obligatory prerequisites to demonstrate that the proposal was legally and technically viable. Essential contributions were made by the village mayor, the village COCODE, and OMYC's financial manager, who was responsible for delivering all the required technical and legal documentation related to Uaxactún village and OMYC as the local institutional sponsor of the project. Technical support was provided by WCS, the Rainforest Alliance, and OMYC's Forest Manager, who developed the environmental and technical review as part of the project proposal, which was presented to the Ministry for Environment and INDE.

NRECA personnel examined OMYC's financial management capacity, including a review of their financial status and debt to evaluate OMYC's ability to collect monthly maintenance fees from village residents provided with the panels. They concluded that OMYC was indeed a solvent and competently managed organization, allowing Uaxactún to become the first rural village in Guatemala to implement the project. The project demonstrates that the recuperation of OMYC's administrative capacity allowed the village of Uaxactún to leverage increased governmental investment on behalf of village residents, thereby propelling improved livelihoods and wellbeing among village residents.

#### **Solar panels installed by INDE in the village of Uaxactún / Photo: WCS**



## 5) IMPROVED EDUCATION

The principal social investment in the Uaxactún Conservation Agreement consisted of support for basic education within the village school. This particular project dates back to an informal agreement established between village leaders and WCS in 2003, when Uaxactún inhabitants requested improved educational opportunities for their children as their top development priority. As a result, in 2005 WCS assisted village leaders and OMYC to establish the first secondary school (*Básico*) in the Maya Biosphere Reserve. Since then, the secondary school has graduated eleven classes totaling 152 students, of which 43% have been female.

Through the Conservation Agreement as of 2010, \$6,757 has been provided annually to support the complete salary of one secondary teacher, the partial salary of a second teacher, and the provision of miscellaneous scholastic supplies. During that period, the secondary school has graduated 100 of the 152 students, with a majority receiving scholarships to continue their studies (i.e. *diversificado*) in the central area of Petén. Some of these students have returned to Uaxactún to work as accountants and other related professions within OMYC.

Lessons learned during the six years of implementation of the Uaxactún Conservation Agreement include:

- Collaboration and technical support key to improving OMYC's financial solvency: The support of numerous individuals and institutions permitted the remarkable improvement in OMYC's financial solvency witnessed during the first four years of the implementation of the agreement in Uaxactún. First and foremost, the dedication of the members of OMYC and local leaders in Uaxactún was the essential factor that made it possible to sustain the recovery which began in earnest at the end of 2009, when the financial administrator was named by CONAP and supported by the agreement. Second, the sustained engagement by CONAP throughout the entire process made it clear to OMYC managers that it was imperative to implement the financial plans as developed, avoiding deviation for other objectives that could potentially derail the recovery. Finally, consistent support from all other CSO's engaged in Uaxactún, including the agreement witness of honor institutions, sent a consistent message that continued support for the concession would be forthcoming, if and only if OMYC labored seriously to ensure its economic viability in the future. These elements combined helped propel OMYC to a spectacular economic recovery that has been sustained throughout the subsequent years of the agreement's implementation. As of 2016, some six years into the agreement, the new challenge identified consists of transferring the technical knowledge and skills for solid financial administration from the OMYC financial administrator to Uaxactún residents – potentially to future university graduates as they graduate with degrees in business administration.

- Efficacy of xate incentives: Uaxactún xate incentive provided a unique model for a comparatively equitable distribution of agreement resources among the village's least financially secure inhabitants. These incentives eventually helped to eliminate independent xate middlemen that were effectively in competition with OMYC for access to the concession's natural xate stocks. This was of great relevance to the sustainability of the resource, since these middlemen continued to use the quantity-based payment system to remunerate harvesters, sustaining the traditional harvest system that resulted in the over harvesting xate palm fronds.
- Increased access to land and food security through agricultural land use planning: Though well-known as a "forest village", many Uaxactún residents have always maintained agricultural areas for subsistence crops (corn, beans) as insurance when food costs rise, and in case other sources of employment become scarce. The consolidation of the original agricultural zoning plan in Uaxactún apparently provided farmers with security, as demonstrated by a notable increase in the reporting of agriculture as a main source of livelihoods in the concession. We presume that additional security was provided by the agricultural committees and fire prevention teams, which helped ensure that farmers reduce the risk of fire while burning their plots to prepare soils for planting. A similar, though less pronounced increase in the prevalence of agriculture was reported by Carmelita residents, also likely linked to the increased security of farmers once the agricultural zoning plan advanced. The key message here is that despite the diversification of livelihoods from forest resources and tourism, agriculture remains an important source of rural livelihoods in the forest villages, and a key safety net that merits additional consideration in future agreements.
- Administrative capacity led to increased government investment: The example of the solar infrastructure installed by NRECA/INDE was just one example of the ability of OMYC and the Uaxactún COCODE to obtain governmental support for greater investments. Other notable investments obtained during the six-year period included improvements to the educational infrastructure, and the improvement of road access to Uaxactún.
- Education investments a top priority among inhabitants: Investments in education were the most recognized agreement benefit among Uaxactún inhabitants. Increased attendance and reduced scholastic desertion has led to a greater number of village youth continuing their studies in the central area of Peten, thereby contributing to the extremely low population growth rate in the village.

**Source:**

McNab, R., Castillo, M., Zetina, J, Rodriguez, A., Ramos, V.H., Solis, N., Trujillo, D., Chacon, R., Obando, O., and A. Castellanos. (2016). *"Evaluating Conservation Agreements as a Tool for Conserving Nature and Improving Wellbeing of Rural Households in the Maya Biosphere Reserve, Guatemala"*. Wildlife Conservation Society Guatemala Program, Technical Paper No.01