

### **Darwin Initiative Annual Report**

### Important note:



To be completed with reference to the Reporting Guidance Notes for Project Leaders: it is expected that this report will be about 10 pages in length, excluding annexes

**Submission Deadline: 30 April 2013** 

### 1. **Darwin Project Information**

Project Reference	EIDPO042	
Project Title	Implementing community-based landscape and resource monitoring to consolidate voluntary conservation	
Host Country/ies	Mexico	
UK contract holder institution	Global Diversity Foundation	
Host country partner institutions	Instituto de Ecologia (INECOL), GDF-Mesoamerica (Investigación y Acción Biocultural, Ánima Mundi), Oaxaca State Ministry of Agricultural, Forestry and Fisheries Development, Universidad de la Sierra Juarez and Centro de Investigaciones Tropicales - Universidad Veracruzana.	
Other partner institutions	Ethnoecology and Biocultural Patrimony Network of the National Council for Science and Technology; National Centre for Indigenous Missions.	
Darwin Grant Value	£157,686	
Start/end dates of project	April 2012 – March 2014	
Reporting period (e.g. Apr 2012 – Mar 2013) and number (e.g. Annual Report 1, 2, 3)	April 2012 – March 2013, Annual Report 1	
Project Leader name	Gary J. Martin	
Project website	General updates on the project are available on GDF's UK website, http://www.global-diversity.org/mesoamerica/projects/commty-monitoring-chinantla	
Report authors, main contributors and date	Claudia Camacho, Emily Caruso, Gary J. Martin. April 2013	

### 2. **Project Background**

The project is developed in the cultural region known as the Chinantla, in the cloud forest highlands of the state of Oaxaca, Southern Mexico. Here, we are working with three Chinantec indigenous communities (Santiago Tlatepusco, San Pedro Tlatepusco and Nopalera del Rosario) that are managing portions of their biodiversity-rich territories as state-certified Voluntary Conserved Areas (VCA), which are legally recognised Indigenous Peoples' and Community Conserved Territories and Areas (ICCAs).



Location of Oaxaca and CORENCHI communities. Green dot on the left map indicates the location of the enlarged section on the right.

This Darwin post-project is built on a three-year Darwin Initiative-funded project — *Management Programme for Voluntary Conserved Areas in Oaxaca, Mexico (2009-2012)* — that was particularly successful in promoting community-based research and on a participatory elaboration of community-based territorial management plans. With these plans in hand and after eight years of experimenting with community conservation, community members of these communities were keen to consolidate their capacities by establishing a monitoring programme to measure the outcomes of their resource management actions and practices, and thus begin a process of adaptive management of their territories. With a view to implementing this community priority, GDF launched the present project in collaboration with community researchers and leaders. The project works to provide communities and community researchers with the skills, tools and support necessary to implement ecological (flora and fauna) and socio-economic monitoring activities for adaptive management.

Such a monitoring programme contributes to the human resources and capacities needed for long-term community management, and makes a contribution in conducting research on the VCAs' biological diversity, conservation potential and natural resource management. The project also meets the need to expand the initial community mapping and participatory GIS to elaborate detailed and professional maps that will be effective in communication with representatives of government agencies and non-governmental organizations. These maps will document local vegetation zones, plant and animal registers and socio-economic related elements. Finally, the project satisfies the communities' desire to evaluate the economic and social consequences of their conservation initiatives, through qualitative and quantitative methods of social research.

### 3. **Project Partnerships**

GDF is working closely with a number of host country partners to implement this project. The most direct partnership is with Investigación y Acción Biocultural - Anima Mundi, the organisation created to implement GDF's regional programme in Mesoamerica, which we refer to as GDF-Mesoamerica. As set out in the original project document, the staff of GDF-Mesoamerica has direct contact with the Chinantec community partners and implements all aspects of the project. Claudia Camacho, GDF-Mesoamerica's director, has taken on the role of project coordinator in Mexico, with Carlos del Campo as co-coordinator. Ronny Roma, our field coordinator, is in charge of most of the fieldwork connected to the project, and he works directly with two Chinantec field biologists, Ana Laura Terán and Elisa Santana, for the implementation of project activities. As mentioned in the original project document, we are collaborating closely with David Jimenez of the Centre for Research in Environmental Geography of the National Autonomous University of Mexico. Although we noted that we would seek a female assistant field coordinator in order to mainstream gender perspectives into the community-based work, we think that this role is well distributed with the two female Chinantec field biologists. The relationship between GDF-UK and GDF-Mesoamerica is very strong, as we

are in constant contact with each other about all aspects of project decision-making and implementation. We mainly communicate via email and Skype, and Emily Caruso, GDF's Regional Programmes Director, travelled to Xalapa and Oaxaca in 2012, and will make a return trip in June 2013 for the implementation of specific aspects of the project.

GDF's closest institutional partner in Mexico is the Xalapa-based Instituto de Ecología (INECOL). Dr. Luciana Porter-Bolland and Federico Escobar, both senior researchers at INECOL, have led the process of development of the monitoring activities for plants, and are currently working with GDF-Mesoamerica on the development of fauna monitoring activities. As INECOL staff and students involved in the project are all based in Xalapa, we are able carry out regular face-to-face and phone meetings, which are essential for smooth implementation of project activities. GDF has also carried out one joint field workshop with INECOL to launch the implementation of plant monitoring activities (August 2012).

One project partnership that has taken slightly longer to develop is with the Institute of Environmental Studies, University of Sierra Juarez, with Maria Delfina Luna Krauletz, who is an expert in zoology and faunal surveys and monitoring. Dr. Luna was recently promoted to administrator of all biology degrees within her department, meaning she is less able to dedicate the time necessary to the project. In order to ensure that the faunal monitoring aspect of the project continues successfully, we asked Emma Villaseñor, a PhD candidate from INECOL who has extensive experience in animal monitoring and with whom we are already collaborating for our EU FP7-funded COMBIOSERVE project, to help us integrate the fauna project. Emma's PhD is being supervised by Luciana Porter-Bolland and Federico Escobar, ensuring continuity of expertise and support throughout all monitoring activities. Once the documents are set, Dr. Luna is helping us by reviewing and commenting on the proposed fauna programme.

Our ongoing partnership with the Centre for Tropical Research at the University of Veracruz (CITRO) has been productive through planning of the advanced GIS training programme, although the actual interaction will take place by the middle of Y2.

We continue to maintain a good working relationship with the Office of Regional Operations, Oaxaca State Ministry of Agricultural, Forestry and Fisheries Development, in particular with Irma Juan Carlos who is its director.

Beyond these working partnerships, established at the outset of the project, GDF-Mesoamerica has developed new working relationships with other institutions and organisations relevant to our work. In January 2013, Ronny Roma, our field coordinator, was invited to participate in a 'collaborative problem-solving' workshop in Santiago Comaltepec (a Chinantec community not far from where GDF partner communities are located), organised by a consortium of institutions led by Servicios Ambientales Oaxaca (SAO). The wokshop sought to bring together diverse institutions and consultants in order to establish an 'integrated approach' to the implementation of a Reduced Emissions from Deforestation and land Degradation (REDD) project in that community. This sparked an initial contact and exchange between GDF and SAO that may lead to a productive relationship in the future, in particular on the topic of community governance of natural resources, payments for environmental services and socio-economic monitoring of the consequences of the latter.

Another important partnership that has been strengthened is with the Network on Ethnoecology and Biocultural Patrimony, which belongs to the National Council for Science and Technology (CONACyT). From May to July 2012, we had the chance to coordinate efforts with it to conduct a process of community territorial planning (CTP) for the community of Nopalera del Rosario, which contributes to Output 1 of this project. Two of the activities related to the community cross-visits (Activity 5.7) were also conducted in collaboration with the Network.

In relation to the community cross-visits, two other partnerships were consolidated: 1) one with the National Centre for Indigenous Missions (CENAMI) which organised an exchange summer workshop in which community members participated; and 2) The Committee for the Integral Lang Planning of Cuetzalan, a civil-society organisation with which a campesino-to-campesino exchange was carried out, with supporting funding from the Beahrs Environmental Leadership Program, University of Berkeley.

### 4. **Project Progress**

### 4.1 Progress in carrying out project activities

As proposed in our project timetable, we dedicated the first year of the project to five outputs: 1) Monitoring programme and advanced pGIS; 2) training in participatory monitoring methods for VCA Chinantec personnel; 3) Adaptive management implementation through participatory research; 4) Advanced training for research centres and academic institutions; and 5) Sharing lessons, methods and results with different audiences. The last output includes two different kinds of activities: 5.1 Dissemination, and 5.2 Coordination, follow-up and evaluations. These activities have been developed in the three main recipient communities of the project: San Pedro Tlatepusco, Santiago Tlatepusco and Nopalera del Rosario, plus one activity in San Antonio Analco, a collaborating community.

## Output 1. Monitoring programme and advanced GIS for three Chinantec communities engaged in community conservation

During May to July, we had the chance to coordinate efforts with the Mexican Network on Ethnoecology and Biocultural Patrimony, which funded a process of community territorial planning (CTP) for the community of Nopalera del Rosario. Implemented by GDF-MA and its consultant David Jiménez, this process complemented the work of the management plans produced for Santiago and San Pedro Tlatepusco and integrates the efforts towards designing local monitoring strategies for natural resources. The process consisted of a three-module workshop (May 8-11, 23-28 and July 2-8), and contributes to Activity 1.5.

Training on basic and intermediate pGIS (Activity 1.1) was carried out on September 23 to 29 in the community of San Pedro Tlatepusco, directed to 11 community researchers, and on December 11 to 14 in the community of Nopalera del Rosario, directed to 9 community researchers and other local people. The training consisted in community workshops for local teams of Community Researchers, in which they were trained on the importance and usefulness of maps, reading maps and their elements, micro- and macro-location, scale mapping, base maps and technical maps. All the themes followed a theoretical and hands-on approach, with practical exercises to learn the techniques and the production of community maps (Activity 1.2). These techniques will be further put into practice and integrated with the rest of the monitoring activities.

Activity 1.1 continued on December 3 to 9 (San Pedro Tlatepusco) and February 25 to March 1<sup>st</sup> (Nopalera del Rosario), with a community workshop on GPS use. Directed to local teams of Community Researchers (7 in San Pedro and 9 in Nopalera), this workshop aimed to link mapping activities with monitoring activities, as GPS apparatus will be used throughout the project for positioning the relevant information on plant and animal monitoring (Activity 1.2).

Activity 1.3 Community workshops in advanced GIS were planned to start in Q4 of FY1, nevertheless we have postponed its beginning until FY2, once enough monitoring information has been gathered to produce integrated GIS maps.

## Output 2. VCA personnel in 3 Chinantec communities trained in participatory monitoring methods

Participatory monitoring methods are inserted in the wider methodological approach of collaborative research, in which local community researchers conduct research and reflect on the methods and results of the monitoring processes. Therefore, the training on participatory methods started with a workshop to train the new teams of community researchers in basic research abilities and concepts. The workshop was developed in the three recipient communities of the project San Pedro Tlatepusco (August 12-14, 7 community researchers),

Santiago Tlatepusco (August 15-16, 10 community members) and Nopalera del Rosario (February 4-8, 35 community members). This first workshop was designed in coordination with project partner INECOL, and in it the participants were trained on the general process of research, identification of conflicts and opportunities regarding natural resource management, and posing research questions based on those conflicts and opportunities.

After setting this basis for research, the community workshop to create expanded plant registers (Activity 2.1) started in February 2013, through a plant collection workshop in San Pedro Tlatepusco. The plant collection workshop built on all the information previously gathered in the original Darwin project, where a digital herbarium was created, with a printed copy held by the community. The workshop included the revision of that digital herbarium for inconsistencies, lack of information and missing plant speciments. Hands-on plant collection techniques were taught to the new research team, as a basis for other more advanced techniques in the study of plant community structure. Later, on March 3-6, training on plant studies continued through a workshop on floristic composition, vegetation characterization and monitoring (Activity 2.2) directed to the community research team of San Pedro Tlatepusco. Both activities 2.1 and 2.2 were also implemented in the community of Nopalera del Rosario on March 10-15 in a joint workshop where all the vegetation-related techniques were taught to the local team.

Activities 2.3, Community workshop on animal species abundance and monitoring; 2.4, Community workshop on methodologies to assess the socioeconomic contributions and effects of conservation initiatives; 2.5, Community workshop on nutrition surveys; and 2.6, Community workshop on basic weather monitoring, have been postponed to the next financial year, although we have been designing the methods and concrete research questions for these themes have been defined during this period.

We have also conducted other training activities not originally planned, but that integrate well with the needs and activities of participatory monitoring. These have been: computer training for community authorities and community researchers at Analco (June 13 and 14), San Pedro Tlatepusco (January 29 to February 2), and Nopalera del Rosario (February 25 to March 1st), which will allow them to register information of projects related to natural resources management and support with the register of information produced during the project. A workshop on "Story, Agrarian Law and Ethnodevelopment in Mexico" was carried out on July 6 to 11 in Nopalera, Santiago and San Pedro Tlatepusco. Finally, with the purpose of continuing to integrate natural resources management and monitoring with cultural expression and dissemination among community youth, on July 15-23, external consultant and collaborators from "Kooperativa Rayenari", Cristóbal López and Nydia Prieto conducted a workshop called "Kasa de las Historias" (House of stories). In this workshop, primary school students at Santiago and San Pedro Tlatepusco told, recovered and illustrated local stories related with local plants, animals, vegetation, water and other natural resources. Considerable material was produced, including children's books of poetry, poetry illustrations, and a book of children's stories. Complementarily and based on all this material, "Kooperativa Rayenari" has produced a book on oral traditions of Tlatepusco and a children's colouring book. The material will also be analysed by GDF-MA intern Brenda Lira, through her undergrad thesis on Chinantec stories as indigenous literature related to biocultural diversity.

## Output 3. Adaptive management of VCAs implemented as an ongoing process in 3 Chinantec communities in support of community conservation management programme

Although the community training workshops for monitoring were in general delayed during FY1, the protocols for training and research in every monitoring theme that we will cover have been developed along with our partners from INECOL. The expanded inventories of useful plants (Activity 3.1) started by making a detailed revision of the digital herbarium databases produced in the previous Darwin project. The specialist on Chinantec flora Claudia Gallardo (Inecol) has reviewed the material to determine scientific names. A community revision of the local herbaria

was also made in San Pedro Tlatepusco and Nopalera del Rosario, to determine inconsistencies, lack of information and missing relevant plant species. Although it is not detailed in the activities, the main participatory research that was developed during the last months of Y1 was the research and monitoring on local plant communities. It started with activity 2.2 (workshop on floristic composition, vegetarion characterization and monitoring) with systematic research on local *acahuales* (forest fallow fields) to understand the structure of the plant communities depending on the age of the *acahual*. Activity 3.2, Expanded inventories of animals, their abundance and distribution in key zones, has been postponed for Y2, when the training to create expanded animal registers (Activity 2.1) and on animal species abundance and monitoring (Activity 2.3) have started. The monthly weather monitoring (Activity 3.3) has not started due to the lack of a meteorological station.

## Output 4. Advanced training received by colleagues at research centres and academic institutions in Oaxaca and Veracruz

A 4-session advanced course on Biocultural Diversity and Conservation (Activity 4.1) was planned to start in the last quarter of FY1. It has been moved one quarter to start and be finished during FY2, to allow more time for project partners to plan and organise themes and to fit the academic calendar in Mexico. Besides this activity, GDF-MA is guiding the undergraduate thesis of intern Brenda Lira on Chinantec stories as indigenous literature related to biocultural diversity. Accompanied with this project's context and process, Brenda is learning about the biocultural diversity approach, specific ethnographic and anthropological methods to gather information and ethical good-practices for research with communities.

# Output 5. Lessons, methods and results shared with community members, government officials, civil society representatives and academic colleagues locally and internationally

#### 5.1 Dissemination

On April 25 to 27 2012, Claudia Camacho, along with GDF-MA field biologists Ana Laura Terán and Elisa Santana, participated in the VIII Mexican Congress of Ethnobiology, at Tabasco, Mexico, where they presented general project approaches through the work "Knowing and protecting a problematic zoological group: the bats of the Chinantla, Oaxaca" (Activity 5.1). This work synthesises the community approach through training, monitoring, environmental education and integration of local culture.

On May 21 to 25 2012, project leader Gary J. Martin and GDF-MA staff Claudia Camacho and Carlos del Campo participated in the 13th International Congress of Ethnobiology at Montpellier, France, where they presented the project approaches through two presentations: a) "Community-based studies of territory and habitats to support traditional management and biodiversity conservation in a Chinantec community in northern Oaxaca, Mexico" within the session, "Traditional Ecological Knowledge Related to Vegetation and Habitats"; and b) "The denial of biocultural diversity: how conservation market mechanisms disrupt food sovereignty in an indigenous community of Oaxaca, Mexico" within the session, "Exploring the linkages between biodiversity, rural food systems and institutions within diverse landscapes" (Activity 5.2)

The community cross-visits (Activity 5.7) started through an exchange summer workshop developed at the National Centre for Indigenous Missions (CENAMI, in Spanish) entitled "Agrarian and community territorial defence". From July 29 to August 3, diverse representatives from Santiago Tlatepusco, San Pedro Tlatepusco and Nopalera del Rosario participated in the workshop. They exchanged experiences, information and lessons learnt with people from other Mexican communities, regarding the effects and consequences of the Mexican agrarian legislation, the new mechanisms of territorial privatisation, extractive megaprojects, agricultural

re-conversion, experiences on territorial defence, REDD initiatives and green economy. All these subjects form the basis of the problems and opportunities that the Chinantec community researchers will deal with through the monitoring activities of this project. Later, in coordination with a parallel project funded by the Beahrs Environmental Leadership Program, University of Berkeley, community researchers had the opportunity to attend to a community exchange between Chinantec and Masehualmej de Cuetzalan. The event, entitled "Chinantec and Masehualmed knowledges encounter" aimed to promote the learning of Chinantec communities from others who have built strong local institutions and sustainable management practices. It was carried out on October 14-17 in the city of Cuetzalan, in Puebla state, México.

One month later, on November 17-19, 5 Chinantec community representatives participated in the workshop on agrarian, indigenous and environmental law: "Exchange of Experiences on Territorial Defence". Held at the School of Environmental Sciences of the Autonomous University of Tlaxcala, this workshop was organised by the GDF-MA team along with the CONACyT Research Network on Ethnoecology and Biocultural Patrimony. It aimed to share information with communities, CBOs and rural practitioners on the agrarian, indigenous and environmental legal context in Mexico and to analyse the impact of such legislation in the use, enjoyment and stewardship of rural territories. Finally, on January 25 and 26, GDF-MA team and community representatives from Nopalera del Rosario participated in the annual meeting of the CONACyT Research Network on Ethnoecology and Biocultural Patrimony. In this meeting, GDF-MA coordinator Carlos del Campo coordinated a round table about the protection of Chinantec biocultural patrimony in which Fidel Eduardo, from Nopalera, presented the community experience on conservation and green-economy projects.

In addition to the activities included in the original project timetable, on April 11-14, former GDF-MA collaborator Antonia Barreau participated at the Society of Ethnobiology Annual Meeting in Denver, Colorado, where she presented the work: "Neoliberal conservation and the division between nature and culture: Payments for environmental services disrupt food sovereignty in an indigenous community of Oaxaca, Mexico", based on the work that she and Tomás Ibarra developed in Santiago Tlategusco, during the previous Darwin project. On May 16-19, as an international dissemination activity, project leader Gary J. Martin and GDF-MA staff Carlos del Campo and Claudia Camacho participated in the pre-congress workshop "Conservation by Indigenous Peoples and Local Communities: Advances in Participatory Action Research, Dissemination and Advocacy", organised by GDF, BEDE, and the ICCA Forum, with Christensen Fund support. There, all the methodological, research, dissemination and ethical aspects of this project were shared with an international and very diverse group of indigenous representatives, practitioners and academics. The paper "When formal and market-based conservation mechanisms disrupt food sovereignty: Impacts of community conservation and payments for environmental services on an indigenous community of Oaxaca, Mexico" written during the last project, was translated into Spanish to be disseminated to the Chinantec communities we work with. On October 22-26, field biologists Ana Laura Terán and Elisa Santana participated on the XI Mexican Congress of Mastozoology in Xalapa, Veracruz, again presenting the poster "Knowing and protecting a problematic zoological group: the bats of the Chinantla, Oaxaca". On January 25, within the annual meeting of the CONACyT Research Network on Ethnoecology and Biocultural Patrimony, David Jimenez made a poster presentation about the experience of community territorial planning (CTP) with the community of Nopalera del Rosario.

### 5.2 Coordination, follow-up and evaluations

On June 15 2012, we carried out the first partners meeting (Activity 5.5) with the participation of Luciana Porter (INECOL), Federico Escobar (INECOL), Claudia Gallardo (INECOL), Matthias Röss (INECOL), Irma Juan Carlos (SEDARFP Oaxaca), María Delfina (ISNJ- Oaxaca), Eddi Ellis (CITRo U.V.), David Jiménez (Altepetl A.C.), and GDF-MA staff Claudia Camacho, Carlos del Campo, Ronny Roma and Maricruz Rodríguez Audirac. We reviewed the whole project, its approaches, detailed activities, responsibilities and logistical arrangements. Six additional work meetings were carried out with our partner INECOL with the objective of designing and evaluating the first research workshop and to design the methods to be applied in Activity 2.1,

Community workshop to create expanded plant and animal registers and Activity 2.2, Community workshop on floristic composition, vegetation characterization and monitoring, according to local categories. The meetings took place August 8 and 10, October 16 and 19, and January 18 and 29.

Apart from the training sessions, GDF-MA staff has also participated in regional and local community assemblies and work meetings with authorities of Corenchi (May 12), Nopalera (June 16-18, January 14), San Pedro (June 27, July 18, September 20), Santiago (June 30, July 29-30, September 18, October 6, November 8-12, January 15-19). We have also had planning meetings with the community researchers (henceforth CR) teams (May 14 to 23, July 25 to 31, September 19, January 18-23). Additionally, on May 7 to 13, GDF Regional Programmes Director, Emily Caruso, visited the communities along with GDF-MA field coordinator Ronny Roma, to meet the field sites, the community research teams and the authorities at San Pedro and Santiago. The first community evaluation (Activity 5.6) was planned to be conducted on the last quarter of FY1, but has been postponed to FY2 once more training activities have been carried out. Nevertheless, GDF and GDF-MA teams conduct frequent meetings for internal coordination and follow-up (May 23, June 7, July 23, August 29, September 4-5, November 28, and January 24.

### 4.2 Progress towards project outputs

## Output 1. Monitoring programme and advanced GIS for three Chinantec communities engaged in community conservation.

The main output at the end of this project will be a document that integrates a monitoring programme with locally produced Geographic Information Systems for adaptive management of voluntary conserved areas in three Chinantec communities. During the first year, we have made progress towards this output through the development of methods for agro-ecosystem monitoring, and the development of guidelines to integrate the information generated during the continuous monitoring on Y2. Additionally, thanks to a collaboration with the Mexican Network on Ethnobiology and Biocultural Patrimony, the community of Nopalera del Rosario has produced a Community Territorial Planning and *Plan de Vida* (Life plan) as the basis for the monitoring programme. Advanced GIS is on its way as the CR in two communities (San Pedro Tlatepusco and Nopalera del Rosario) have received training in basic and intermediate GIS techniques and are producing scale and thematic maps that will incorporate the monitoring information. These maps will, in turn, be transformed into integrated GIS files.

The indicator proposed was to measure the development of the monitoring programme and advanced GIS. The means to verify the progress are the actual writing of the programme, the production of maps, workshop attendance, evaluation and assessment records, and the results of participatory field research. The indicator is still valid as we expect to have a high quality monitoring and GIS programme at the end of the project. The means of verification are also valid as we are producing an early draft of the monitoring programme and monitoring methods protocols; maps are being produced and will be feed with field information produced during monitoring activities; the community workshops are being attended by a good number of community researchers in two communities (6 in San Pedro Tlatepusco and 35 in Nopalera del Rosario), while Santiago Tlatepusco has opted for conducting selected research activities during Y2. Simple community evaluations have been conducted after each workshop, with the community researchers; and during Y2, two formal and more structured community evaluations will be developed to obtain feedback for the fieldwork and for the monitoring programme.

The first assumption considered at the beginning of the project was that we would count on adequate environmental and social conditions to gather and produce enough information, which has been the case in San Pedro and Nopalera. In the community of Santiago Tlatepusco, social conditions have changed, as they have opted to limit their participation and the work of external organisations in their territory; therefore they have chosen to conduct certain selected research and monitoring activities during Y2. The second assumption was that we would count on experts and students from partner research organisations available

according to the established timetable, which has been the case, with important inputs from INECOL and Universidad de la Sierra Juárez.

## Output 2. VCA personnel in 3 Chinantec communities trained in participatory monitoring methods

The process of creating a monitoring and advanced GIS programme for Chinantec communities (Output 1) consists of applying monitoring methodologies with a participatory and community approach. To do so, one of the first steps is consolidating local research teams and training them on monitoring methods that can be easily reproduced in the mid- and long-term.

The original indicator was having 12 community members trained through community workshops on plant and animal registers, vegetation and fauna characterization, abundance and monitoring, socioeconomic aspects of the conservation initiatives, nutrition surveys and weather monitoring. We added one workshop on the basic approaches and concepts of community research, as the baseline for the other training and research processes, in which 52 people were trained in the three communities involved. We made further progress with the training of 10 community researchers in plant collection, floristic composition, vegetation characterization and monitoring. The indicator was to be verified through attendance, evaluation and assessment records of community workshops, forums and exchanges, and through field research results. At the end of Y1, we have a result a of core group of 10 people trained in monitoring tools, plus 42 people more trained in basic research concepts and tools.

The assumption considered to reach this output was that the community researchers would be recruited and available throughout the project period, therefore the indicator of a core group of 12 community members will be appropriate when the Santiago community researcher team starts monitoring activities in FY2. The training subjects are still valid, except for the weather monitoring techniques.

## Output 3. Adaptive management of VCAs implemented as an ongoing process in 3 Chinantec communities in support of community conservation management programme

The second main step to apply monitoring methodologies with a participatory and community approach, is putting in practice the monitoring methodologies learnt during the training activities, in a way that resolves real community concerns. Therefore, Output 3 consists of practical monitoring research on fauna, vegetation zones and socio-economic concerns related to conservation initiatives. This output has had a delay in Y1 due to local timing and availability of local researchers, nevertheless, good advances have been made in the plant section of the project, creating expanded inventories of useful plants and through research and monitoring on local plant communities.

The indicator proposed at the beginning of the project was having adaptive management strategies in 3 communities agreed upon by general assembly and authorities. This indicator can only be measured at the end of the project when all the research is integrated into a final document, with specific measures to be taken, modified community statues if needed, and final GIS maps indicating boundaries and use zones.

The main assumption for this output is that the general assembly of each community will agree on changes in community conservation approach. We also expect that this adaptive management strategy will be supported by government agencies and NGOs that work in the region or with similar issues. These assumptions are still valid.

## Output 4. Advanced training received by colleagues at research centres and academic institutions in Oaxaca and Veracruz

The methodological and field experienced gained through the creation of the monitoring programme is to be shared with students, researchers and practitioners from research centres and academic institutions through a 4-session advanced course on Biocultural Diversity and Conservation. This course was planned to start on the last quarter of FY1, nevertheless, in order to make the most of the resources and project partners' time and support, the course has been moved forward one quarter to start and be finished during FY2.

The plan to conduct four seminars (that will integrate a 4-session advanced course) continues and will be able to be measured by the end of the project; it is still a good indicator. The means of verification are still valid, as the success of this activity will be measured through the existence and quality of participant attendance lists, evaluation and assessment records of advanced seminars; seminar syllabuses and readers; intranet with readings and participant dialogues.

The assumption that postgraduate researchers, UK experts and Mexican counterparts will be interested in and available for seminars still holds.

# Output 5. Lessons, methods and results shared with community members, government officials, civil society representatives and academic colleagues locally and internationally

The dissemination of the project approaches and results to different audiences is an important component of the project, as a way to share our work and to obtain feedback from researchers, practitioners and communities involved in the same kind of work or addressing similar concerns.

The indicators for this output were to complete one international conference presentation, two national conference presentations, one final advanced seminar, four articles submitted or published in international journals, informational website, participatory research protocols, community evaluations, cross-visits and project partners meetings. Of these, we have accomplished the participation into one national conference (poster presentation) and one international conference (two oral presentations) to share the project approaches and preliminary results to academic audiences. Seven partners' meetings have been conducted, plus 16 work meetings with community authorities and local teams. Community representatives from Santiago Tlatepusco, San Pedro Tlatepusco and Nopalera del Rosario have participated in four exchange meetings during FY1. Therefore, all the dissemination activities are being carried out, some of them, as for the partners meetings and cross-visits, with more events than planned. The specific indicators that have not been fulfilled yet are set in our plans for FY2.

The means of verification for these activities are varied and are already available for the conducted activities, including pdfs of conference papers; participatory research protocols available online in interactive format; attendance lists and memorandums of project partners' meetings, evaluations and cross-visits results.

#### 4.3 Standard Measures

**Table 1** Project Standard Output Measures

Code No.	Description	Year 1 Total	Number planned for reporting period	Total planned during the project
2	Number of people to attain Masters qualification (MSc, MPhil etc)	0	0	1
3	Number of people to attain other qualifications (ie. Not outputs 1 or 2	0	0	1

	above)			
4A	Number of undergraduate students to receive training	Mexican undergraduate student Brenda Lira had a short period of work experience in Chinantec communities and GDF-MA	1	2
4B	Number of training weeks to be provided	2 training weeks provided to Mexican undergraduate student Brenda Lira.	2	3
4C	Number of postgraduate students to receive training	Mexican post-graduate student Emma Villaseñor had a short period of work experience in Chinantec communities.	1	2
4D	Number of training weeks to be provided	training week provided to Mexican postgraduate student Emma Villaseñor.	1	3
5	Number of people to receive at least one year of training (which does not fall into categories 1-4 above)	13. Research experience gained by 1 field coordinator, 2 field biologists, 10 community researchers, through continuous practice in the field sites.	14	14
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above)	10 community researchers plus 42 community representatives, as follows:  - Three-session workshop on	12	12
		Community Territorial Planning. (3 weeks, Y1, 35 participants) - Training workshop on basic and intermedate pGIS, San Pedro. (1 week, 11 participants) - Training workshop on basic and and intermedate pGIS, Nopalera. (.60 week, Y1, 9 participants) - Training workshop on GPS use,		
		San Pedro. (.60 week, Y1, 7 participants) - Training workshop on GPS use, Nopalera. (.60 week, Y1, 35 participants) - Workshop in research basis, San Pedro. (.40 week, Y1, 7 participants) - Workshop in research basis, Santiago. (.40 week, Y1, 10		
		participants) - Workshop in research basis, Nopalera. (.40 week, Y1, 35 participants) - Workshop on plant collection, San Pedro. (.60 week, Y1, 5 participants)		
		- Workshop on plant collection, Nopalera. (.20 week, Y1, 5 participants) - Workshop on floristic composition, vegetation characterization and monitoring, San Pedro. (.60 week, Y1, 5 participants)		
		- Workshop on floristic composition, vegetation characterization and monitoring, Nopalera. (.60 week, Y1, 5 participants)		
6B	Number of training weeks to be provided	9 weeks in total	10	20

Number of ice different types - not volume - of material produced) training materials to be produced for use by host country   The training workshops (Community Territorial Planning, basic and intermediate pGIS, GPS use, research basis, plant collection, floristic composition, vegetation characterization and monitoring)   2 weeks spent by GDF Regional Programmes Director Emily Caruso in Mexico.   2 weeks spent by GDF Regional Programmes Director Emily Caruso in Mexico.   2 weeks spent by GDF Regional Programmes Director Emily Caruso in Mexico.   2 weeks spent by GDF Regional Programmes Director Emily Caruso in Mexico.   2 weeks spent by GDF Regional Programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   3 with the programmes Director Emily Caruso in Mexico.   4 with the programmes Director Emily Caruso in Mexico.   4 with the programmes Director Emily Caruso in Mexico.   4 with the programmes Director Emily Caruso in Mexico.   4 with the programmes Director Emily Caruso in Mexico.   4 with the programmes Director Emily Caruso in Mexico.   4 with the programmes Director Emily Caruso in Mexico.   4 with the programmes Director Emily Caruso in Mexico.   5 with the programmes Director Emily Caruso in Mexico.   5 with the programmes Director Emily Caruso in Mexico.   5 with the programmes Director Emily Caruso in Mexico.   5 with the programmes Director Emily Caruso in Mexico.   5 with the programmes with the programme					
project staff on project work in the host country    Number of individual field guides/manuals to be produced to assist work related to species identification, classification and recording   Number of papers to be published in peer reviewed journals	7	volume - of material produced) training materials to be produced for	the training workshops (Community Territorial Planning, basic and intermediate pGIS, GPS use, research basis, plant collection, floristic composition, vegetation	4	7
guides/manuals to be produced to assist work related to species identification, classification and recording  11A Number of papers to be published in peer reviewed journals  11B Number of papers to be submitted to peer reviewed journals  12B Number of competure hased databases to be enhanced  12B Number of species reference collections to be enhanced  13B Number of species reference collections to be enhanced  14A Number of conferences/seminars/ workshops to be organised to present/disseminate findings  14B Number of conferences/seminars/ workshops to be organised to present/disseminate findings  14B Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.  14A Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.  15B Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.  15B Number of local press releases in host country(ies)  15B Number of local press releases in host country(ies)  15D Number of local press releases in loux number of local press releases	8	project staff on project work in the	Programmes Director Emily Caruso	3	6
Peer reviewed journals   Pumber of papers to be submitted to peer reviewed journals   Pumber of papers to be submitted to peer reviewed journals   Pumber of computer based databases to be enhanced   Pumber of computer based databases created by the communities that will remain in their possession, but specific data may be shared with local partner institutions as free, prior informed consent and biodiversity transfer protocols are established.   Pumber of collections to be enhanced   Pumber of collections to be enhanced   Pumber of collections established   Pumber of conferences/seminars/ workshops to be organised to present/disseminate findings   Pumber of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.   Per-congress workshop Matchage is a pumber of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.   Per-congress of Ethnobiology, 2) 13th International Congress of Ethnobiology, 3) Society of Ethnobiology, 4) International Congress of Mastozoology, 6) Exchange warmer workshop Montpellier. S) XI Mexican Congress of Exchange of Experiences on Territorial Defense*. 9) Annual meeting of the CONACyT Research Network on Ethnoecology and Biocultural Patrimony.    15B   Number of local press releases in host country(ies)   Number of local press releases in host country(ies)   Number of newsletters to be   Pumber of newsletters to be   Pum		guides/manuals to be produced to assist work related to species identification, classification and recording	0	0	
Deer reviewed journals		peer reviewed journals	0	0	
Number of computer based databases to be enhanced   2 computer based floristic and faunal databases created by the communities that will remain in their possession, but specific data may be shared with local partner institutions as free, prior informed consent and biodiversity transfer protocols are established.   2 floristic and faunal reference collections to be enhanced   2 floristic and faunal reference collections established by the communities that will remain in their possession, but some duplicates may be deposited in local partner institutions as free, prior informed consent and biodiversity transfer protocols are established.   2 floristic and faunal reference collections established by the communities that will remain in their possession, but some duplicates may be deposited in local partner institutions as free, prior informed consent and biodiversity transfer protocols are established.   3	11B	Number of papers to be submitted to	0	0	2
collections to be enhanced  collections established by the communities that will remain in their possession, but some duplicates may be deposited in local partner institutions as free, prior informed consent and biodiversity transfer protocols are established.  Number of conferences/seminars/ workshops to be organised to present/disseminate findings  Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.  9 Conferences, seminars & workshops attended to present project approaches: 1) VIII Mexican Congress of Ethnobiology. 2) 13th International Congress of Ethnobiology. 3) Society of Ethnobiology. 3) Society of Ethnobiology Annual Meeting. 4) Pre-congress workshop Montpellier. 5) XI Mexican Congress of Mastozoology. 6) Exchange summer workshop "Agrarian and community territorial defense". 7) "Chinantec and Masehualmed knowledges encounter". 8) "Exchange of Experiences on Territorial Defense". 9) Annual meeting of the CONACyT Research Network on Ethnoecology and Biocultural Patrimony.  15B Number of local press releases in host country(ies)  15D UK  Number of newsletters to be  2 dollar their possession, but their possession to the possession by the possession by the construction in their possession, but their possession, but their possession to the possession by		Number of computer based	faunal databases created by the communities that will remain in their possession, but specific data may be shared with local partner institutions as free, prior informed consent and biodiversity transfer		6
Number of conferences/seminars/workshops to be organised to present/disseminate findings	13B	•	collections established by the communities that will remain in their possession, but some duplicates may be deposited in local partner institutions as free, prior informed consent and biodiversity transfer	3	6
Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.  9 Conferences, seminars & workshops attended to present project approaches: 1) VIII Mexican Congress of Ethnobiology. 2) 13th International Congress of Ethnobiology. 3) Society of Ethnobiology Annual Meeting. 4) Pre-congress workshop Montpellier. 5) XI Mexican Congress of Mastozoology. 6) Exchange summer workshop "Agrarian and community territorial defense". 7) "Chinantec and Masehualmed knowledges encounter". 8) "Exchange of Experiences on Territorial Defense". 9) Annual meeting of the CONACyT Research Network on Ethnoecology and Biocultural Patrimony.  15B Number of local press releases in host country(ies)  0 0 1  15D Number of local press releases in UK  16A Number of newsletters to be 2 4 8	14A	workshops to be <b>organised</b> to	0	2	14
host country(ies)  15D Number of local press releases in UK  16A Number of newsletters to be  2 4 8	14B	Number of conferences/seminars/ workshops <b>attended</b> at which findings from Darwin project work will	workshops attended to present project approaches: 1) VIII Mexican Congress of Ethnobiology. 2) 13th International Congress of Ethnobiology. 3) Society of Ethnobiology Annual Meeting. 4) Pre-congress workshop Montpellier. 5) XI Mexican Congress of Mastozoology. 6) Exchange summer workshop "Agrarian and community territorial defense". 7) "Chinantec and Masehualmed knowledges encounter". 8) "Exchange of Experiences on Territorial Defense". 9) Annual meeting of the CONACyT Research Network on Ethnoecology and	2	3
15D Number of local press releases in UK  16A Number of newsletters to be 2 4 8	15B		0	0	1
		Number of local press releases in UK		0	1
	16A		2	4	8

16B	Estimated circulation of each newsletter in the host country(ies)	300	300	300
16C	Estimated circulation of each newsletter in the UK	1500	1500	1500
17A	Number of dissemination networks to be established	1 dissemination network Mexican North-South	1	1
17B	Number of dissemination networks to be enhanced/ extended	1 Previous mailing list of people interested in GDF activites	1	1
20	Estimated value (£'s) of physical assets to be handed over to host country(ies)	£633, 1 laptop	£2,822	£5,644
21	Number of permanent educational/training/research facilities or organisations to be established and then continued after Darwin funding has ceased	2 community research teams in San Pedro Tlatepusco, and Nopalera	0	0
23	Value of resources raised from other sources (ie in addition to Darwin funding) for project work	£71,469 Co-funding from GDF, Combioserv project EU FP7, INECOL, University of Sierra Juarez, Chinantec communities and GDF-Mesoamerican Regional Programme, Research Network on Ethnoecology and Biocultural Patrimony	£67,969	£130,794
New -Proj ect speci fic meas ures	N/A			

### Table 2 Publications

Туре	Detail	Publishers	Available from	Cost £
(e.g. journals, manual, CDs)	(title, author, year)	(name, city)	(e.g. contact address, website)	

### 4.4 Progress towards the project purpose and outcomes

Good progress has been made during the first year of the project towards the monitoring programme that will enable to have a long-term adaptive management of Chinantec Voluntary Conserved Areas (VCAs). To reach our purpose different approaches are followed: a) enhancing community researchers' capacities to acquire monitoring abilities and techniques; b) participatory research to produce new knowledge; and c) innovative learning processes about the concepts, methods and socio-political implications of these processes. With these approaches we expect to have an integrated document that will guide the local monitoring of natural resources and long-term adaptive management of local territory. Community researchers' capacities have been strengthened, as 52 people have been trained in basic research, and a core group of 10 local researchers were trained in plant collection, floristic composition, vegetation characterization and monitoring. Production of new knowledge during Y1 started on the themes of GIS for resource monitoring and vegetation. The advanced GIS is on its way as the CR in two communities (San Pedro Tlatepusco and Nopalera del Rosario)

have learnt GIS and are making scale and thematic maps that will incorporate the monitoring information and that will be transformed into integrated GIS files. We expect that an integrated GIS database will be in use to guide resource monitoring by the end of the project. The programme on floristic composition, vegetation characterization and species abundance in selected ethnoecological zones had a successful start in Y1, and the team is producing expanded botanical reference collections and vegetation analysis results that will be complemented with the continuous community research carried out during Y2. The innovative learning process on community monitoring is reflected on the training activities and research processes, but their main outcomes are work guidelines and protocols that will integrate the information generated during the continuous monitoring on Y2. The general assumptions to reach our purpose still hold true as two of the three communities involved in the project are committed to the sustained implementation of participatory resource monitoring, and we have been asked by the third community (Santiago Tlatepusco) to resume activities with them in Y2. We have a sustained collaboration from local communities and research institutes and project partners are committing sufficient staff time to project activities. We feel that participatory methodology is being adequately developed and acquired by community researchers, and the integration of this Darwin post project and our EU FP7 project has been effective.

## 4.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

During this first year, we have been supporting the conservation of 13,550 hectares in three Chinantec communities (San Pedro Tlatepusco, Santiago Tlatepusco and Nopalera del Rosario), which include considerable expanses of Oaxacan cloud forest, a biodiversity-rich ecosystem endangered both in Mexico and globally. Although they comprise less than 1% of the national territory, Mexico's cloud forests contain 11% of the country's plant species – many of them endemic – and a higher number of rare and endangered animal species such as jaguar, tapir, spider monkey, toucans and other fauna. Only 50% of Mexico's cloud forest remains intact, and the Chinantla holds the largest contiguous area. The watersheds of these Chinantec communities provide important hydrological resources for lowland ecosystems.

To support local sustainable use of these ecosystems, the project is creating a monitoring programme that will enable the involved communities to optimize the management of their mosaic of bio-cultural landscapes. This monitoring programme aims to contribute to a long-term adaptive management of Chinantec Voluntary Conserved Areas (VCAs) enhanced by building the capacity of community researchers. Community monitoring processes and research are already generating new information on plant, animals, and landscapes that will contribute to better understandings and management and conservation decisionmaking. As in the original Darwin project, the process of community-based research promotes reflection on and appreciation of local resources and traditional ecological knowledge, which in the case of the Chinantec communities has assured the healthy state of the forests over the years.

The dissemination of the project approach, methodologies and results have multiple impacts: (1) they ensure greater recognition of VCAs as a functioning form of Indigenous Peoples' and Community Conserved Area, perhaps encouraging other communities to explore it as a possible form of territorial management; (2) they highlight the importance of traditional systems of ecological knowledge in the management and conservation of biodiversity; and (3) they widely promote collaborative research and community-led monitoring programmes as positive strategies for compliance with CBD obligations.

### 5. Monitoring, evaluation and lessons

The programme of work includes two formal community evaluations (Activity 5.6) and an international external evaluation (Activity 5.8) that will allow for consistent feedback of the project progress. The first community evaluation, planned for at the end of Y1 has been postponed to Y2. Nevertheless, after each workshop conducted during Y1 (Activities 1.1, 2.1)

and 2.2) brief evaluations of the training were conducted with the community researchers teams to receive feedback and adjust methods, training approaches and logistical details.

Partners meetings have also provided a means for constant monitoring of the project, particularly about the methods used. During 6 out of 7 partners meetings held in Y1 (August 8 and 10, October 16 and 19 and January 18 and 29), GDF-MA and the Inecol team designed and evaluated the training and monitoring methods to be used.

Furthermore, the project leader, GDF's Regional Programmes Director and the GDF-MA team have frequent work meetings to evaluate whether the methodological approaches, outputs and outcomes are contributing positively to the overall objective of the project. The project field coordinator and field biologists monitor the progress of the work during every field visit, allowing us to register all the achievements and problems encountered, and helping us to refine our methodological approaches and tools.

The indicators for the achievements are the actual logical framework and timetable that allow us to check the completion of activities and the quality of these, against the original plan.

The main lessons learnt through this reporting period are related to: a) the challenge of coordinating the project timing with productive local timing; and b) the importance of distributing tasks among community researchers according to their abilities and preferences. Regarding time coordination, this project involves considerable time dedicated to field research and monitoring. Local productive calendars also include extensive time spent in agricultural fields and forests to carry out agro-forestry activities Community researchers and community authorities participate in both activities. Therefore, the external team has to dedicate enough time to build work calendars along with the community researchers and authorities that consider all the productive activities along the year, plus other cultural and economic activities such as local holidays, participation in civil activities at the municipality, etc. A mutual commitment has to be achieved in order to comply with that agreed-upon calendar, but there has to be enough flexibility to adapt to changing conditions. The practice of creating mutual calendars was done during Y1 and will continue during Y2 to make the work more efficient. Regarding the distribution of tasks, we reasserted that in this kind of complex project we have to take advantage of the abilities and preferences of local participants in order to make the activities more engaing for them, and to make the outcomes more efficient. Community researchers and other community participants have a low degree of academic preparation, but some of them are more interested than others in learning academic-related topics or techniques than others. There are others who have more facility in talking with people and conducting interviews, in capturing data on the computer or facilitating research work in the field plots. The distribution of the varied activities according to these strengths, facilitates the work for all the involved participants (internal and external) and helps keep local interest in the project. In order to do so, the field coordinator has to be very attentive to each participant's preference and ability, and distribute the tasks accordingly. This way of working will be continued during Y2.

## 6. Actions taken in response to previous reviews (if applicable)

### 7. Other comments on progress not covered elsewhere

The design of the project has been enhanced over Y1 specifically on the methods to be used in the training workshops and research and monitoring processes. These methods are continuously designed, improved and reviewed by the project partners and a methodological evaluation of the methods application in the field is done constantly.

A significant difficulty that the project encountered during Y1 was that one of the communities included in the original plan, Santiago Tlatepusco, faced numerous socio-political issues related to conservation projects and payment for environmental services. Therefore, they decided to reduce the number of external projects carried out in the community. This project was put in stand by during some months. Nevertheless, as the project will provide them with information

and tools for better decision-making on natural resources management and conservation projects, they want to resume activities during Y2.

### 8. Sustainability

The profile of the project in Mexico is defined by the relationships and partnerships we have established with a wide range of people in the country: government institutions, academic and research centres, non-governmental organisations (NGOs) and community-based organizations (CBOs). Presentations at national events, community cross-visits, and participation in national networks allow for promotion of the work, including methodology, approaches and preliminary results. For example, thanks to our work, the GDF-MA team was invited to coordinate a round table about the protection of Chinantec biocultural patrimony, in which Fidel Eduardo, from Nopalera, presented the community experience on conservation and green-economy projects (January 2013). This round table was part of the annual meeting of the Research Network on Ethnoecology and Biocultural Patrimony, an event where academics, practitioners and community representatives from all over the country gather to find out about and share project and research approaches.

GDF is also participating in a multi-institutional, related project, "COMBIOSERVE, Assessing the effectiveness of community-based management strategies for biocultural diversity conservation," financed by the Seventh Framework Programme of the European Commission. Additionally, a process of community territorial planning (CTP) for the community of Nopalera del Rosario was conducted in Y1, in partnership with the Research Network on Ethnoecology and Biocultural Patrimony. These projects have allowed the work we are doing under the Darwin Initiative to be extended to other forums and working networks in Mexico and Europe that tackle the theme of community-based management strategies.

By the end of the Y1, no completion strategy has been developed; however, the project will end when the integrated programme for community monitoring is finished and ready for implementation. This implies that the communities and their teams of community researchers will have expanded inventories of plants and animals in hand, will have information on the state of natural resources in their territories, and will have the skills to carry out continuous monitoring of flora and fauna. They will also have developed an advanced pGIS that will allow them to have graphical information on the state of natural resources. Adaptive and sustainable management of landscapes and resources will be underway. More broadly, they will have the skills and information needed to make more informed decisions on natural resources management and conservation projects.

### 9. **Dissemination**

Output 5 of this project is dedicated to dissemination of lessons learned, methods and results. Detailed activities can be seen in section 4.1 of this report, output 5.1 Dissemination. In general terms, dissemination in the host country has been carried out through presentations at national events (VIII Mexican Congress of Ethnobiology, April 2012; XI Mexican Congress of Mastozoology, October 2012) and community cross-visits and community presentations (Mexico D.F. July 2012, Cuetzalan October 2012, Tlaxcala November 2012, Oaxaca January 2013). These activities were targeted to regional and national audiences of government, NGO and CBO representatives, as well as postgraduate students and researchers.

As a community dissemination activity, we translated into Spanish the paper "When formal and market-based conservation mechanisms disrupt food sovereignty: Impacts of community conservation and payments for environmental services on an indigenous community of Oaxaca, Mexico". This paper was written during the last project, but translated into Spanish it can be easily disseminated to the Chinantec communities we work with.

In addition, we give regular updates on the project in the GDF e-Newsletter, which is sent to some 2,700 people around the world several times a year. See, for example, our 11th issue,

which featured our article exploring our concerns about the impact of the green economy on local livelihoods in the Chinantla in a special issue of the International Forestry review.

As stated in section 4.5, these dissemination activities ensure greater recognition for VCAs as a functioning form of Indigenous Peoples' and Community Conserved Area, highlight the importance of traditional systems of ecological knowledge in the management and conservation of biodiversity, and promote collaborative research and community-led monitoring programmes as positive strategies for compliance with CBD obligations.

### 10. **Project Expenditure**

Table 3 project expenditure <u>during the reporting period</u> (1 April 2012 - 31 March 2013)

Item	Budget (please indicate which document you refer to if other than your project application or annual grant offer letter)	Expenditure	Variance/ Comments
Staff costs specified by individual			
GDF Administrator	£ XXX	£ XXX	£0
Project coordinator	£XXX	£ XXX	- £ 2, Slight variance due to exchange rates.
Project administrator	£ XXX	£ XXX	£ 71, Slight variance due to exchange rates.
Assistant field coordinator	£XXX	£XXX	- £ 79 Slight variance due to exchange rates.
Project partner	£XXX	£XXX	£0
Overhead costs	£XXX	£ XXX	£0
Travel and subsistence	£ XXX	£ XXX	£ 1, Slight variance due to exchange rates.
Operating costs	£XXX	£XXX	- £ 42, Slight variance due to extra office costs.
Capital items/equipment (specify)	£0	£0	£0
Others: Consultancy	£XXX	£XXX	£ 3, Slight variance due to exchange rates.
Others (please specify)			
Community researchers' costs	£ XXX	£XXX	£0
Field support for students	£XXX	£XXX	£0
TOTAL	£XXX	£XXX	- £ 48

# 11. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for LTS and the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

Under the Darwin Initiative-funded project entitled 'Implementing community-based landscape and resource monitoring to consolidate voluntary conservation' (EIDPO042), three indigenous Chinantec communities (Santiago Tlatepusco, San Pedro Tlatepusco and Nopalera del Rosario) continue to strengthen their capacities in managing their territories in the cloud forest highlands in northeastern Oaxaca, Mexico. These communities have obtained the skills needed to establish a monitoring programme to measure the outcomes of the communities' resource management actions and practices, contributing to the long-term adaptive management of Chinantec Voluntary Conserved Areas (VCAs).

A series of training sessions in basic and intermediate participatory GIS techniques were held throughout the first year of the project. The communities of San Pedro Tlatepusco and Nopalera del Rosario learned techniques of making scaled and thematic community maps that will incorporate monitoring information and be transformed into integrated GIS files. To support the process of creating a monitoring and advanced GIS programme, 52 people from all three communities were trained in the basic approaches and concepts of community research, and a core group of 10 received further training in plant collection, vegetation characterization and monitoring. Community monitoring processes and research conducted have already generated new information on plants, animals and landscapes in the biodiversity-rich Chinantla region.

Further key products are work guidelines and protocols that will integrate the information generated over the course of the following few years. Beyond these productive outcomes, close collaboration between GDF and the communities continues to empower these indigenous groups, serving to encourage their continued interest and engagement in community conservation. The participation of Fidel Eduardo from Nopalera del Rosario at the annual meeting of the CONACyT Research Network on Ethnoecology and Biocultural Patrimony held at the city of Oaxaca in January this year, where he presented the community experience on conservation and green-economy projects, was a true reflection of the community's commitment towards protecting their Chinantec biocultural patrimony.

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2012-2013

Project summary	Measurable Indicators	Progress and Achievements April 2012 - March 2013	Actions required/planned for next period
Goal: To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve		Support the conservation of 13,550 ha of cloud and tropical forests in Oaxaca, México.	
<ul> <li>⇒ The conservation of biological diversity,</li> <li>⇒ The sustainable use of its components, and</li> <li>⇒ The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>		Development of a monitoring programme that will enable the communities involved to optimize the management of their mosaic of bio-cultural landscapes.	
		Development of local capacity to conduct natural resource monitoring and research.	
		Generation of new information on plants, animals, landscapes that will contribute to improved decision-making for management and conservation.	
		Dissemination of project approaches to wider audiences for promoting the importance of VCAs in biodiversity conservation, of traditional systems of ecological knowledge, and collaborative research and community-led monitoring programmes as positive strategies for compliance with CBD obligations.	
Purpose Long-term adaptive management Chinantec Voluntary Conserved A (VCAs) enhanced by building the capacity of community researches trained in the original Darwin projimplement a monitoring programment that enables them to optimize management of their mosaic of clandscapes and natural protected areas.	Areas yr 1  New knowledge on floristic composition, vegetation characterization and species abundance in selected ethnoecological zones by yr 1  New techniques and tools for	Progress towards the monitoring programme has been achieved through: a) enhancing community researchers' capacities to acquire monitoring abilities and techniques; b) participatory research to produce new knowledge; and c) innovative learning processes about concepts, methods and socio-political implications of these processes. 52 people have been trained in research basics, and a core	Actions planned for next period  Community researchers will continue receiving training on animal species abundance and monitoring, methodologies to assess the socioeconomic contributions and effect of conservation initiatives, and nutritio surveys. The training will be followed monitoring practices and research that will generate new information and knowledge on species abundance and

	New knowledge on socio-economic impacts and contributions of community conservation and PES by yr 2 Innovative learning about new concepts and methods in participatory monitoring by yr 2  Participatory resource monitoring programme for VCAs implemented by yr 2	group of 10 local researchers were trained in plant collection, floristic composition, vegetation characterization and monitoring. Production of new knowledge was achieved on the themes of GIS for resource monitoring and vegetation. Community researchers in two communities (San Pedro Tlatepusco and Nopalera del Rosario) have learnt to and are making scale and thematic maps that will incorporate the monitoring information and that will be transformed into integrated GIS files. Local teams are producing expanded botanical reference collections and vegetation analysis results. Through the innovative learning process on community monitoring work guidelines and protocols are being produced.	location, and the socio-economic impacts and contributions of community conservation. Vegetation monitoring and GIS products will continue to be integrated. Finally, all the information will be integrated into a monitoring programme that will help to achieve the long-term adaptive management of local territories and conserved areas.	
Output 1. Monitoring programme and advanced GIS for three Chinantec communities engaged in community conservation	Development of monitoring programme and advanced GIS for adaptive management of voluntary conserved areas	the continuous monitoring process planning Community Territorial Planning was conditionally basis for the monitoring programme. Advice communities (San Pedro Tlatepusco and and are making scale and thematic maps information and that will be transformed in Appropriateness of indicator  The objective to complete a monitoring process planning proc	integrate the information generated during ed for Y2. Also, a 3-module workshop on ducted at Nopalera del Rosario as the vanced GIS is underway as the CR in two Nopalera del Rosario) have learnt GIS at that will incorporate the monitoring into integrated GIS files.	
Activity 1.1. Community workshops in basic and intermediate GIS		Progress  2 community workshops on basic and intermediate GIS: San Pedro for 11 CR (September 2012) and Nopalera del Rosario for 9 people (December 2012), conducted by GDF-MA consultant David Jimenez and GDF-MA field biologist Ana Laura Terán.		
		2 community workshops on GPS use at San Pedro for 7 CR (December 2012) and Nopalera for 35 people (February-March 2013), conducted by GDF-MA field		

		coordinator Ronny Roma.	
Activity 1.2. Production of local maps and pGIS of monitored species and habitats		Progress	
		First scale maps produced during the 2 community workshops on basic and intermediate GIS at San Pedro and Nopalera del Rosario (September-December 2012)	
		Actions	
		Resources maps to be produced once more ground information is gathered in Year 2.	
Activity 1.3. Community workshops in ac	Ivanced GIS	To be conducted in Y2 once enough monitoring information has been gathered to produce GIS integrated maps.	
Activity 1.4. Production of maps and ana	llysis of local GIS	To be conducted in Y2.	
Activity 1.5. Production of monitoring pro	ogramme documents	Progress	
		3-module workshop on Community Territorial Planning at Nopalera del Rosario (May – July 2012).	
		Internal development of work guidelines that will integrate the information generated during the continuous monitoring in Y2.	
		Actions	
		Integration of field research information and methodologies in Y2.	
Output 2. VCA personnel in 3	2. 12 community members trained in	Progress	
Chinantec communities trained in participatory monitoring methods	weather monitoring techniques , socio-economic methods, and	52 people have been trained in basics of research.	
January 1 de 3	enhanced floristic, faunal and vegetation analysis.	10 people have been trained in plant collection, and floristic composition, vegetation characterization and monitoring.	
		Appropriateness of indicator	
		A core group of 10 people has been trained in monitoring tools. An additional group of 42 people have been trained in research basic concepts and tools. The indicator of a core group of 12 community members will be appropriate if the Santiago community researchers team start monitoring activities in FY2. The training subjects are still valid.	
Activity 2.1. Community workshop to cre	ate expanded plant and animal registers	Progress	
		3 workshops on research basis: San Pedro Tlatepusco for 7 community members (August 2012), Santiago Tlatepusco for 10 community members (August 2012) and Nopalera del Rosario for 35 community members (February 2013).	

		2 community workshop on plant collection: San Pedro Tlatepusco for 5 CR (February 2013), Nopalera del Rosario for 5 CR (March 2013).
		Actions
		Community workshops to create expanded animal registers to be conducted in Y2.
		Continuous plant collections during Y2.
Activity 2.2. Community workshop on flor		Progress
characterization and monitoring, according	ng to local categories	2 community workshop on floristic composition, vegetation characterization and monitoring: San Pedro Tlatepusco for 5 CR (March 2013) and Nopalera del Rosario for 5 CR (March 2013).
Activity 2.3. Community workshop on an	imal species abundance and monitoring	Actions
		2 community workshops to be conducted in year 2.
Activity 2.4. Community workshop on me		Actions
socioeconomic contributions and effects	or conservation initiatives	2 community workshops to be conducted in year 2.
Activity 2.5. Community workshop on nu	trition surveys	Actions
		2 community workshops to be conducted in year 2.
Activity 2.6. Community workshop on bar	sic weather monitoring	Actions
		To request the cancellation of this activity
Output 3. Adaptive management of	3. Adaptive management strategies in	Progress
VCAs implemented as an ongoing process in 3 Chinantec communities in support of community conservation management programme	3 communities agreed by general assembly and authorities	Adaptive management is the product of a process of community monitoring and research. Although there is a delay that will be corrected during Y2, good progress has been made in the plant-related section of the project, creating expanded inventories of useful plants and through research on and monitoring of local plant communities.
		Appropriateness of indicator
		Adaptive management strategies will be produced once all the local research is conducted, so the indicator continues to be appropriate for end-project measurement of project success.
Activity 3.1. Expanded inventories of use	ful plants	Progress
		Detailed revision of digital herbaria database by INECOL's specialist Claudia Gallardo. Community revision of local herbaria in San Pedro Tlatepusco and Nopalera del Rosario, to determine inconsistencies, lack of information and missing relevant plant species.
		Actions

		Integration of new information into the existing databases in Y2.	
Activity 3.2. Expanded inventories of animals, their abundance and distribution in		Actions	
key zones		Research to be conducted in Y2 after activity 2.1 is completed.	
Activity 3.3. Monthly weather monitoring		Actions	
		To request the cancellation of this activity	
Activity 3.4. Research on local perception	ns towards conservation initiatives	Actions	
		To be conducted in Y2.	
Activity 3.5. Households and livelihoods	characterisation and analysis	Actions	
		To be conducted in Y2.	
	contribution and effects of PES and other	Actions	
conservation subsides		To be conducted in Y2.	
Activity 3.7. Research on household nutr	ition related to local food resources	Actions	
		To be conducted in Y2.	
Activity 3.8. Production of adaptive mana	agement strategies	Actions	
		To be conducted in Y2.	
Output 4. Advanced training received by colleagues at research centres and	4. Four seminars for 20 postgraduate researchers on methods and concepts	Progress	
academic institutions in Oaxaca and Veracruz.	of participatory monitoring of resource abundance, weather variability, livelihoods and landscape change	The 4-session advanced course on Biocultural Diversity and Conservation planned to start on the last quarter of FY1, has been moved forward one quarter to start and be finished during FY2.	
	3	Appropriateness of indicator	
		The plan to conduct four seminars (which will integrate a 4-session advanced course on Biocultural Diversity and Conservation) continues and will be able to be measured by the end of the project.	
Activity 4.1. 4-session advanced course	on Biocultural Diversity and Conservation	Actions	
		To be conducted in Y2.	
Output 5. Lessons, methods and	5. One international conference	Progress	
results shared with community members, government officials, civil society representatives and academic colleagues locally and internationally.	presentation, two national conference presentations, one final advanced seminar, four articles submitted or published in international journals, informational website, participatory	Three presentations (one poster, two oral) have been given to share the project approaches and preliminary results with academic audiences in national and international fora. 7 partners' meetings have been conducted, plus 16 work meetings with community authorities and local teams. Community representatives from Santiago Tlatepusco, San Pedro Tlatepusco and Nopalera del Rosario have	

evalua	arch protocols, community ations, cross-visits and project ers meetings	participated in four exchange meetings during FY1.  Appropriateness of indicator  All the dissemination activities are being accomplished, some of them, such as the partner meetings and cross-visits, with more events than planned. The specific indicators that have not been fulfilled yet are set in our plans for FY2.		
Activity 5.1. Presenting project approaches and		Progress		
Mexican Congress of Ethnobiology, at Tabasco, Mexico		Poster presentation at the VIII MCE (April 2012) by field biologists Ana Laura Terán and Elisa Santana.		
Activity 5.2. Presenting project approaches and I	•	Progress		
International Congress of Ethnobiology, at Montp	pellier, France	Two oral presentations at the 13 <sup>th</sup> ICE (May 2012).		
Activity 5.3. Presenting project approaches and	final results in a Mexican event	Actions		
		To be conducted in Y2.		
Activity 5.4. Final advanced seminar to share pro	oject approaches and results for	Actions		
postgraduate students, researchers and NGO co	olleagues	To be conducted in Y2.		
Activity 5.5. Project partners meetings		Progress		
		First partners meeting (June 2012).		
		6 work meetings with project partner INECOL (August 2012 – January 2013).		
		12 work meetings with community authorities (May 2012 – January 2013).		
		4 planning sessions with CR teams (May 2012 – January 2013).		
		Actions		
		Second partners meeting on Y2		
Activity 5.6. Community evaluations		Actions		
		To be conducted in Y2.		
Activity 5.7. Communimty cross-visits		Progress		
		Community representatives from Santiago Tlatepusco, San Pedro Tlatepusco and Nopalera del Rosario participated in: a) the exchange summer workshop "Agrarian and community territorial defence" of CENAMI (July-August 2012); b) "Chinantec and Masehualmed knowledges encounter" (October 2012); c) Workshop on agrarian, indigenous and environmental law: "Exchange of Experiences on Territorial Defence" (November 2012); and d) CONACyT Research Network on Ethnoecology and Biocultural Patrimony annual meeting (January 2013).		

Activity 5.8. International external evaluation	Actions
	To be conducted in Y2.

### Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Goal:			
			)), the Convention on Trade in Endangered by countries rich in biodiversity but constrained in
Sub-Goal:			
Effective contribution to <i>in situ</i> conservation of cloud forest ecosystem and sustainable use of its components drawing on local ecological knowledge and practice	Long-term conservation and maintenance of the forest, its biological components, ecosystem services and associated mosaic of anthropogenic landscapes	Trained stakeholders capable of monitoring the impacts of conservation on biodiversity and livelihoods; adaptive management based on monitoring effective	

Purpose  Long-term adaptive management of Chinantec Voluntary Conserved Areas (VCAs) enhanced by building the capacity of community researchers trained in the original Darwin project to implement a monitoring programme that enables them to optimize management of their mosaic of cultural landscapes and natural protected areas.	New knowledge on participatory GIS techniques for resource monitoring by yr 1 New knowledge on floristic composition, vegetation characterization and species abundance in selected ethnoecological zones by yr 1 New techniques and tools for monitoring weather variability acquired by yr 1 New knowledge on socio-economic impacts and contributions of community conservation and PES by yr 2 Innovative learning about new concepts and methods in participatory monitoring by yr 2 Participatory resource monitoring programme for VCAs implemented by yr 2	GIS database in use and new maps produced to guide resource monitoring  Expanded botanical and zoological reference collections, patrol records and vegetation analysis results; Chinantec ethnoclassification of vegetation and landscape types Initial data on rainfall, temperature and other parameters recorded systematically over two years Synthesis of local perceptions of community conservation; analysed research results from livelihoods analysis & household nutrition survey Participatory research protocols and evaluation of Biocultural Diversity and Conservation course VCA Management Plans enhanced by incorporating participatory resource monitoring of critical subsistence activities; production of final GIS maps for communication with government agencies and NGOs	Communities committed to sustained implementation of participatory resource monitoring  Local communities, research institutes and government agencies achieve sustained collaboration on adaptive management of cultural landscapes and conserved areas  Project partners commit sufficient staff time to participate in and implement project activities  Participatory methodology adequately developed and acquired by community researchers at outset of research phase  Seamless integration of Darwin post project with EU FP7 project; effectiveness of community-based management strategies for biocultural diversity conservation
Outputs:  1. Monitoring programme and advanced GIS for three Chinantec	Development of monitoring	Monitoring programme; enhanced	Environmental and social conditions adequate
communities engaged in community conservation	programme and advanced GIS for adaptive management of voluntary conserved areas	GIS maps; community workshop participant attendance, evaluation and assessment records; results of participatory field research	to gather and produce enough information; experts and students from partner research organisations available according to established timetable
VCA personnel in 3 Chinantec communities trained in participatory monitoring methods	2. 12 community members trained in weather monitoring techniques, socio-economic methods, and enhanced floristic, faunal and vegetation analysis	2. Attendance, evaluation and assessment records of community workshops, forums and exchanges; field research results	Community researchers personnel recruited and available throughout the project period

3. Adaptive management of VCAs implemented as an ongoing process in 3 Chinantec communities in support of community conservation management programme	3. Adaptive management strategies in 3 communities agreed by general assembly and authorities	3. Adaptive management document detailing specific measures to be taken; modified community statues; final GIS maps indicating boundaries and use zones	General assembly of each community agrees on changes in community conservation approach; support by government agencies and NGOs of adaptive management strategy
Advanced training received by colleagues at research centres and academic institutions in Oaxaca and Veracruz	4. Four seminars for 20 postgraduate researchers on methods and concepts of participatory monitoring of resource abundance, weather variability, livelihoods and landscape change	4. Participant attendance, evaluation and assessment records of advanced seminars; seminar syllabuses and readers; intranet with readings and participant dialogues	Postgraduate researchers, UK experts and Mexican counterparts interested in and available for seminars
5. Lessons, methods and results shared with community members, government officials, civil society representatives and academic colleagues locally and internationally	5. One international conference presentation, two national conference presentations, one final advanced seminar, four articles submitted or published in international journals, informational website, participatory research protocols, community evaluations, cross-visits and project partners meetings	5. Participant attendance, evaluation and assessment records of advanced seminar; pdfs of conference papers and articles available online; participatory research protocols available online in interactive format; attendance lists and memorandums of project partners meeting, evaluations and cross-visits results	International interest in participatory monitoring and adaptive management of community conservation experiences  Papers and sessions accepted at national and international conferences  Community members, researchers and students interested and available to learn and participate

#### **Activities**

- 1.1 Community workshops in basic and intermediate GIS
- 1.2 Production of local maps and pGIS of monitored species and habitats
- 1.3 Community workshops in advanced GIS
- 1.4 Production of maps and analysis of local GIS
- 1.5. Production of monitoring programme documents
- 2.1 Community workshop to create expanded plant and animal registers
- 2.2 Community workshop on floristic composition, vegetation characterization and monitoring, according to local categories
- 2.3 Community workshop on animal species abundance and monitoring
- 2.4 Community workshop on methodologies to assess the socioeconomic contributions and effects of conservation initiatives
- 2.5 Community workshop on nutrition surveys
- 2.6 Community workshop on basic weather monitoring
- 3.1 Expanded inventories of useful plants
- 3.2 Expanded inventories of animals, their abundance and distribution in key zones
- 3.3 Monthly weather monitoring
- 3.4 Research on local perceptions towards conservation initiatives
- 3.5 Households and livelihoods characterisation and analysis
- 3.6 Research of socioeconomic contribution and effects of PES and other conservation subsides
- 3.7 Research on household nutrition related to local food resources
- 3.8. Production of adaptive management strategies
- 4.1 Four-session advanced course on Biocultural Diversity and Conservation
- 5.1 Presenting project approaches and preliminary results at the VIII Mexican Congress of Ethnobiology, at Tabasco, Mexico
- 5.2 Presenting project approaches and preliminary results at the 13th International Congress of Ethnobiology, at Montpellier, France
- 5.3 Presenting project approaches and final results in a Mexican event
- 5.4 Final advanced seminar to share project approaches and results for postgraduate students, researchers and NGO colleagues
- 5.5 Project partners meetings
- 5.6 Community evaluations
- 5.7 Communimty cross-visits
- 5.8 International external evaluation

## Annex 3 Onwards - supplementary material (optional but encouraged as evidence of project achievement)

This may include outputs of the project, but need not necessarily include all project documentation. For example, the abstract of a conference would be adequate, as would be a summary of a thesis rather than the full document. If we feel that reviewing the full document would be useful, we will contact you again to ask for it to be submitted.

It is important, however, that you include enough evidence of project achievement to allow reassurance that the project is continuing to work towards its objectives. Evidence can be provided in many formats (photos, copies of presentations/press releases/press cuttings, publications, minutes of meetings, reports, questionnaires, reports etc) and you should ensure you include some of these materials to support the annual report text.

### **Checklist for submission**

	Check
<b>Is the report less than 5MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	Х
Is your report more than 5MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	
Have you involved your partners in preparation of the report and named the main contributors	Х
Have you completed the Project Expenditure table fully?	Х
Do not include claim forms or other communications with this report.	ļ