

## ***Darwin Initiative Annual Report***

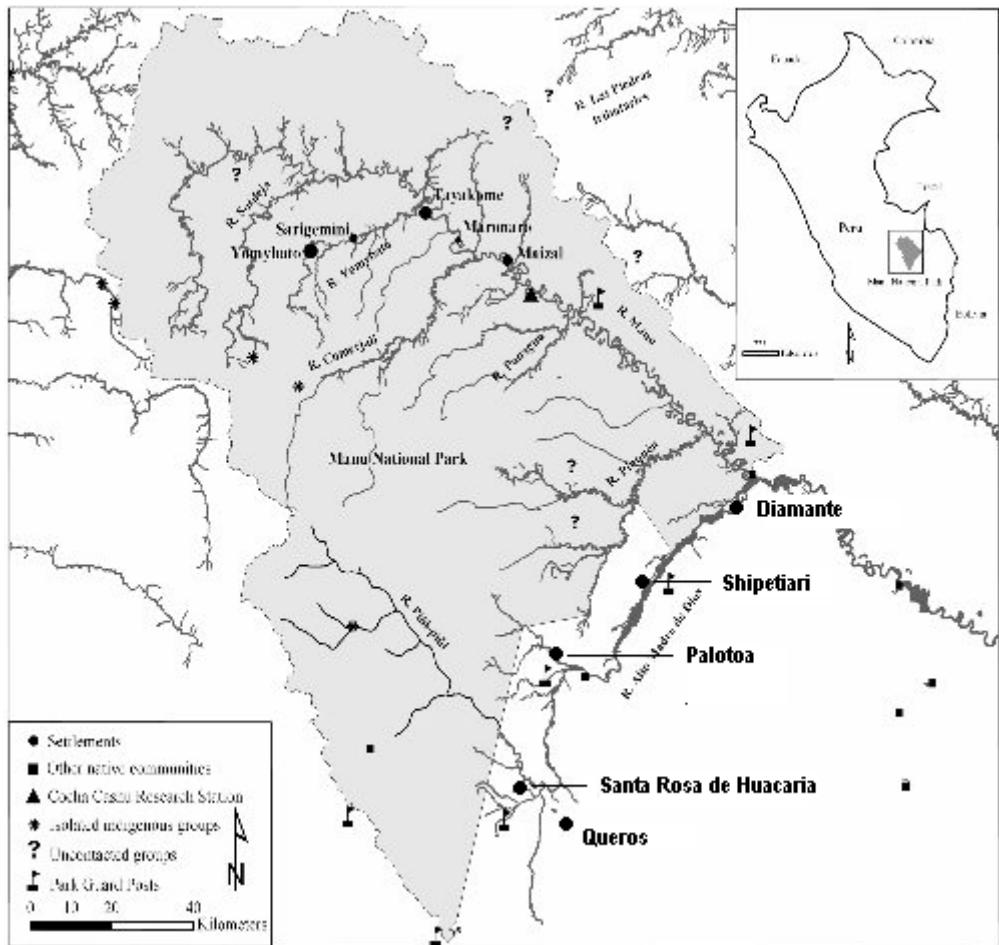
### **Darwin Project Information**

Project Ref Number	13/015
Project Title	Participatory forest management for medicinal plant production
Country(ies)	Peru
UK Contract Holder Institution	University of Oxford
UK Partner Institution(s)	Environmental Change Institute, University of Oxford
Host country Partner Institution(s)	Centro EORI de Investigación y Promoción Regional
Darwin Grant Value	£140257
Start/End dates of Project	1 Oct 2004 – 30 Sep 2007
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	1 Apr 2006 to 31 Mar 2007 Annual report number 3
Project Leader Name	Dr. Anna Lawrence
Project website	<a href="http://www.eci.ox.ac.uk/humaneco/Peru.html">http://www.eci.ox.ac.uk/humaneco/Peru.html</a>
Author(s), date	Charles Veitch, Edith Pipae, Anna Lawrence 30 <sup>th</sup> April 2007

### **1. Project Background**

The project is based in the Madre de Dios region in the Peruvian Amazon. Initiated at the request of seven indigenous communities, the project aims to collect and collate information about the use of medicinal plants in the area, promote cultivation techniques and sustainable harvesting methods for these plants, and develop forest management and commercialisation plans with local actors. Local communities are particularly interested in collating their medicinal plant knowledge for future publication and investigating the potential for commercialisation of these forest products.

The project aims to address three main threats to sustainable livelihoods for indigenous people in lowland Peru. These are: deforestation, the loss of traditional knowledge about native species of medicinal plants and local management practices of resources; and exclusion from market economy.



## 2. Project Partnerships

The partnership between Oxford University and Centro EORI is now very positive and mutually beneficial. The UK coordinator is in constant contact with the three members of Centro EORI active on the project, Edith Pipa (coordinator), Humberto Payaba (field assistant), and Zoila Arredondo (Administrator) as well as the Director of the NGO, Adela Reategui who is based in Ecuador. Since the change of coordinator there have been no further delays and many advances have been made (community authored book ready for publication, first draft of management plan completed and under continual development, various training sessions carried out).

As is it the first management plan ever for medicinal plants in Peru and with the confirmed interest of the National Environment Council (CONAM), which contains the clearing house mechanism for implementation of the CBD, the partnership will provide direct support in this. The management plan has to be approved by the Institute of Natural Resources (INRENA), and as this has never been done before it will be used as a model for future projects. The methodology that comes out of this process will also be regionally applicable and will further strengthen capacity of Peruvian institutions to respond to their CBD commitments. This aspect will be further enhanced once the management plan has been completed and presented to stakeholders and other institutions in the regional workshop in September 2007.

There are many other beneficial partnerships. Contact with Natureserve and the National Herbarium of Lima have given the project assistance in the identification of plant specimens. The on-going experiments with plant yields being carried out at the Centro Takiwasi (from where the project contracted a specialist to run a training course on the preparation of herbal remedies) have yielded fruitful discussion and exchange of information.

The partnership has benefited from the close relationship the two coordinators have established, having both successfully dealt with previous project delays and staff changes (this has all been well documented in previous reports and in the Mid-Term Review). They share similar goals for the future of the project i.e. an agreement over the communities themselves running the project once technically capable and the means for this to happen.

The change in project staff and regularisation of office procedures have re-established good working relations which enable the UK partner to be more effective, through regular communication, longer field visits and receptivity to requests to vary the budget within the pre-established limits.

### **Other Collaborations:**

The project has collaborated with other projects as follows

- a) it has sought advice from Darwin project 14-019 regarding the formulation of the management plan
- b) it has been in contact with an NGO based in Cusco, CREES regarding future collaboration with their 500 hectare forest and educational centre near Pilcopata and the possibilities of project participants getting involved in teaching courses there and selling herbal remedies at the centre.
- c) it has been in touch with Carlos Reynel, the head of the National Herbarium in Lima who was project leader on a previous Darwin project (No. 9-006).

New links have also been established with Didier Lacaze who is coordinating a medicinal plants cultivation project in Ecuador, and with Campbell Plowden who works in northern Peru and has recently established an organisation called the Centre for Amazon Community Ecology. Both are interested in exchanging information and experiences, Mr. Lacaze in terms of the experience of a collaborative project which involves in situ medicinal plant cultivation, while Dr. Plowden is interested in working with communities and the ecological impacts of plant harvesting. They will be invited to the final workshop.

At the local level Centro EORI is coordinating with a Peruvian NGO, DRIS which works in the same communities in order to improve the plantations. They are interested in re-foresting around the villages with valuable timber species and the communities will plant medicinal plants with these also. Centro EORI is coordinating with PRONATURALEZA, another Peruvian NGO which is interested in the opening of a small shop in Pilcopata for the sale of handcrafts and medicinal products. The combination of forces will share the cost and further motivate the communities to renovate the building.

INRENA is providing guidelines and support for the presentation of the pending technical report which is a brief summary of the management plan.

Both project coordinators are in contact with the CBD focal point based in Lima, Maria Luisa del Rio who is the head of the Biodiversity and Biosecurity unit in the Consejo Nacional del Ambiente (CONAM). She is kept updated as to project developments and has agreed to come to the regional workshop to be held in September.

### 3. Project progress

#### 3.1 Progress in carrying out project activities

##### **Output 2: Natural populations of medicinal plants evaluated and monitored**

###### 2.4 Planning and supervision of monitoring (Mar 06 – Sep 07)

After validating the methodology with project participants and making appropriate changes two rounds of harvest impact monitoring have now been carried out, one in April 2006 and the other in November 2006 (see attached reports XX VV). Due to the very low current levels of plant harvesting and in consultation with participants we decided to cancel any further harvest impact monitoring within the project timeframe, having seen no change in the data on this timescale. Instead, periodic monitoring is incorporated into the management plan and will form the basis of future management decisions after October 2007 when the next phase begins.

###### 2.5 Supervision of community tasks and six month evaluations (Apr 06 – Sep 07)

This has been an on-going process and the bi-annual evaluations also continue (see informe tecnico Feb-Marzo 2007 on CD). The evaluations serve as a means to gauge progress, identify problems, and discuss the practicalities of the project with participants and receive feedback and suggestions from them.

###### 2.6 Mid term workshop to analyse findings, and first draft of management plan (Apr 06)

The mid-term workshop took place later than planned, in November 2006 and a very preliminary first draft of the management plan was discussed with project participants. A second draft of the management plan will be analysed by the community representatives at the workshop in June.

##### **Output 3: Selected medicinal plants propagated and cultivated**

###### 3.1 Seeds and seedling banks established for species with unknown cultivation practises (Apr – Sep 06)

Seeds and seedling banks have now been established in each community and 72 species of plants in total have been propagated (see Informe Tecnico Final Marzo Septiembre 2006 on CD). The photo below shows the plant nursery in Palotoa Teparo.



###### 3.2 Areas for botanical gardens selected and planted (Dec 05 – Mar 06)

Areas for botanical gardens have been located and they have been planted in all five communities. These are popular with local people as it means there are many useful plants close to the community, it give the intact forest near the village extra value and are considered an important tourist attraction due to visitors' interest in medicinal plants. Therefore they are often located in areas where tourist trails have been made and on the route to the purpose built rustic tourist accommodation for example.

### 3.3 Establishment of plantation areas (Nov 06 - Mar 07)

Plantation areas have been established in three of the five communities, and in the case of Shipetari and Palotoa are already being expanded. Diamante and Santa Rosa de Huacaria have identified and prepared the area but have not yet planted due to the current wet season.



### 3.4 Maintenance of gardens and plantations (Mar 06 – Sep 07)

Plant nurseries, gardens and plantations are constantly supervised and periodically maintained as part of communal village activities. Plants are transplanted to the gardens and plantations on an on-going basis when necessary. The above photo shows part of the plantation in Palotoa Teparo.

## Output 4: Management plan developed, and methodology and project lessons promoted regionally

### 4.1 Training in production of herbal medicines and introduction to basic business administration (July 06)

Training in the production of herbal medicines occurred in November 2006 and was carried out by a specialist hired from the Centre Takawasi, a renowned centre for the rehabilitation of drug addicts and investigation into traditional medicine (see informe tecnico Feb Marzo 2007). Two separate workshops were held in two different communities and were attended by a total of forty participants. In addition the Peruvian team ran an additional course in the community of Palotoa Teparo whose members had been unable to visit either of the other workshops due to other commitments. The workshops were carried out in Spanish with translation into local languages when necessary, and in the case of the workshop in Palotoa it was carried out entirely in Matsigenka, translated by one of the participants. Business administration was not covered in these workshops but was left for a separate workshop (see below) in order to make best use of time available and concentrate on one element at a time.

#### 4.2 Training in business administration (Aug - Sep 06)

This was carried out in March 2007 in Pilcopata and a total of 17 people attended. The course was made to be as didactic as possible as many participants have at most only a basic level of education and little or no knowledge of maths or accounting.

#### 4.3 Workshop to reflect on and consolidate methodological lessons and develop second draft of the 20 year management plan (Nov 06)

This has been postponed in order to combine the workshop with the presentation of the book on the uses and preparation of medicinal plants (see below) and will be carried out in June 2007 during the UK coordinator's penultimate trip to Peru.

#### 4.4 Final draft and publication of book on the ecology, use and preparation of key herbal medicines (Apr - May 07)

The book is in its final draft and due to be published by the end of May. It is a very impressive body of work which reflects the enormous efforts that have been put into it by not only the contributors from the five communities but also the Peruvian project staff who have spent an enormous amount of time on this. It has already been tested with local participants and changes made for clarity and according to their suggestions. The project has been sensitive to the intellectual property rights of the five communities and it has been ascertained that all species in the book have previously been documented for their medicinal properties. However In accordance with participants' wishes copies of the book will be restricted and they hope to legally confirm their rights to this knowledge through the book's publication. The final draft is included with this report, on a separate CD.

### 3.2 Progress towards Project Outputs

The first two project outputs have been successfully completed. The third output, "selected medicinal plants propagated and cultivated" is on-going and continuous as more plant species are propagated and then planted out into the gardens and plantations and more plants are also propagated in order to have a sufficient in-situ stock of growing plants for local use and for the market. Numbers of plants are increasing all the time and some communities are more advanced in this than others. The fourth output, "Management plan developed and methodology and project lessons promoted regionally" is under way and the second draft is due for completion in May for discussion at a workshop with project participants. Project lessons will be promoted regionally through the final workshop where regional stakeholders will be invited, information will be disseminated and project results and the management plan presented and advertised nationally. This information will also be made available on the internet to allow international access.

Measuring of output indicators has been carried out through assessment of all reports and other outputs by the Peru project staff, the board of Centro EORI and the UK team where relevant and this has ensured a consistently high standard of reporting. The output level assumptions have continued to hold true.

### 3.3 Standard Output Measures

**Table 1 Project Standard Output Measures**

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	TOTAL
Established codes						
6A	Number of Peruvians	45	50			95

	trained in production of herbal medicines				
6B	Number of Days training delivered in production of medicines	4	3		7
6A	Number of Peruvians trained in business administration	28	17		45
6B	Number of Days training delivered	3	4		7
7	Training materials for the preparation and production of herbal medicines; Training materials for business administration	2	2		4
8	Number of weeks spent by UK coordinator in host country	10	8		18
10	1 book documenting traditional knowledge of use, management and ecological characteristics of medicinal plant species in the area	1	1		2
13A	Number of medicinal plant species reference collections established and handed over to communities	3	5		8
14A	Project dissemination conference carried out by promoters and communities' committee with NGO's and other Organisations.	1			1
15C	Number of National Press releases in UK – two in the form of University of Oxford website updates; one article for the FAO's NWFP newsletter and		4		4

	electronic digest and one article for the 8 <sup>th</sup> issue of the Darwin newsletter				
20	£3,000 of computer and scientific equipment handed over	£3000			3000
22	8 permanent monitoring plots established per community.	8			8
New Project specific measures -					

**Table 2**

Type * (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £ (if applicable)
Book (sent on CD)*	Las plantas medicinales del Alto Madre de Dios, las comunidades nativas de Santa Rosa de Huacaría, Queros, Shipetiari, Diamante, y Palotoa Teparo con Centro EORI y la Universidad de Oxford	CENTRO EORI Puerto Maldonaldo-Madre de Dios	centroeori_pem@yahoo.es	£10

### 3.4 Progress towards the project purpose and outcomes

The data has been collected and nearly all the activities have been completed. The management plan is currently being revised. This will guide the future management strategy for the five communities. All the purpose level assumptions continue to hold true and the indicators are still adequate towards measuring outcomes. What is in question is the extent to which the communities will be able to commence production of medicinal products relying only on cultivated plant stock. None of the communities have sufficient cultivated stock at present for large scale medicinal production, however a partial reliance on wild plants does not mean that the production will not be sustainable and this scenario is being incorporated into the management strategy. Cultivated stock will be increased through the second phase of the project according to the needs of each community.

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

The project will leave a working example of a 20 year management plan for medicinal plants for five communities with all the information, contacts and bibliography necessary for the sustainable production of medicinal plants to occur and for the same management strategy to be repeated elsewhere subject to time and resources. Implementation of the management plan is dependant on further funding, sound management and the willingness of the five communities to do this. If implemented, it will enhance economic benefits to indigenous communities, whilst assuring sustainable use and therefore reducing threat of overharvesting and loss of biodiversity.

#### **4. Monitoring, evaluation and lessons**

Having received criticism for a lack of this in the past (see 13 015 AR2R review of april 2006 annual report), we have made an effort to improve these aspects. Firstly we have made sure that our Peruvian partner, Centro EORI co-authors all reports and evaluates the role of Oxford in the project within these reports. Secondly, when in Peru the UK coordinator has requested feedback from project participants regarding Oxford and Centro EORI's role and how this could be improved, thirdly evidence is provided of progress in delivering outputs (e.g. draft management plan, final draft of book, EORI technical reports).

The outputs and outcomes can be shown to contribute to the project purpose because they are pre-requisites and key parts of a management plan. In order for the management plan to be of use and sufficient detail it must include these elements. In order for the five communities to commercially exploit medicinal plants they need permission from the Institute of Natural Resources (INRENA) and permission will not be given without the provision of information (e.g. inventory and monitoring data, community maps showing harvesting areas, market and commercialisation information, evidence of in-situ cultivation of plants, traditional and scientific knowledge on the plants) and prior to issuing licenses visits are made to each community by INRENA staff to assess the reality on the ground. These are the indicators of achievements and permission to commercially exploit medicinal plants in each of the five communities will be the yardstick by which the indicators of achievements will be measured.

Various lessons have been learnt in the past year. We have learnt that it is important to have a flexible attitude in terms of project planning and that any project is dynamic and may change according to the changing needs of participants. We have learnt that some activities and outputs take longer than expected and there are inevitable delays many of which cannot be foreseen. With this in mind we will plan for this in the second phase of the project by allowing more time for the completion of activities and being flexible when considering and operating under timescales.

In addition we have learnt that it is essential to have a few months at least in order to establish relations with any community even though it may have been involved from the start of the project and this is one of the great strengths of the current Peruvian team.

All issues in the last annual report review have been covered – see “response to 13015 AR2R review of April 2006” sent the 21<sup>st</sup> of December 2006. We did not receive any comments from project partners on the review. Briefly various actions were taken:

The Peruvian team is included in all reports and discussions and kept informed of Oxford's progress as well as evaluating Oxford's progress as recommended; since the review full documentation has been provided concerning project progress and outputs as well as how they are contributing to the project purpose; an exit strategy is in place (see below); the logical framework has been revised as requested and is included in annex 2; relations between Oxford and our Peruvian partner Centro EORI have improved enormously since the new Peru project coordinator took over and the completion of outputs and other information reflect this.

## **5. Other comments on progress not covered elsewhere**

The exit strategy has been refined. Currently there are two organisations considering funding the project after September 2007, the Seventh Generation Foundation and the Living Bridges Foundation. The UK coordinator's intention was to raise money for Centro EORI to continue the work but on the request of the Director of Centro EORI he has agreed to continue overseeing the project, managing the financial and technical reporting to future donors. The idea is for another three year phase to commence from October building on what has been achieved in this project and using the management plan as a tool to guide a strategy for the five communities. We hope that after this three year period the communities will be able to assume control of the project, have the means to make collective decisions regarding the management and attract funding.

In contrast to the previous year where there were a lot of difficulties, staff changes have brought recovery in line with the revised log frame.

We have not perceived any risks in addition to those already identified in the log frame.

## **6. Sustainability**

The profile of the project is improving after the meeting held in Puerto Maldonado last year and various contacts subsequently made (see other collaborations above). Evidence of increasing interest in the work may be seen by the fact that the Centro EORI office was visited by representatives from two Matsigenka communities deep within the Manu National Park, Yomybato and Tayakome who expressed their desire to start similar projects in their communities.

Centro EORI is constantly in contact with many other native communities, not only in Manu but those in the areas of the rivers Tambopata and Madre de Dios. They exchange ideas and information with their community representatives regarding the sustainable use of medicinal plants and the Institution has been solicited to replicate the project in many communities.

In addition Project findings are being shared with FENAMAD (Federación de Comunidades Nativas de Madre del Dios) who are the principal Indigenous Organisation representing the communities of the region.

An exit strategy is in place subject to funding being approved which will ensure that outputs, outcomes and impacts will be sustained.

## **7. Dissemination**

A meeting was held in Pilcopata to which local people, the Mayor and other NGO's were invited during which the advances of the project were presented. A local radio station in Pilcopata ran a show advertising the project for the benefit of other communities during which the objectives and advances of the project were highlighted.

## **8. Project Expenditure**

**Table 3      Project expenditure during the reporting period (Defra Financial Year 01 April to 31 March)**

Item	Budget (please indicate which document you refer to if other than your project schedule)	Expenditure	Balance


**9. 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 ECTF and the Darwin Secretariat to publish the content of this section

## Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2006/07

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
<p><b>Goal:</b> 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</p> <p><i>The conservation of biological diversity,</i></p> <p><i>The sustainable use of its components, and</i></p> <p><i>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</i></p>		The participants have carried out two rounds of plant harvest impact monitoring which has heightened their awareness of the dangers of overharvesting and perfected their knowledge of monitoring methods. They have also learnt and practised the preparation of different herbal remedies which has provided them with the necessary knowledge and skills to produce a value-added product from locally available materials, some of which has been successfully sold in the local town of Pilcopata as part of a pilot study.	(do not fill not applicable)
<b>Purpose</b>  With indigenous communities, develop a management plan to conserve cultivate and commercialise medicinal plants in the RBM, and a regionally applicable methodology for the process.	<ul style="list-style-type: none"> <li>- Traditional and scientific knowledge, and market information documented (end y1)</li> <li>- Natural populations of medicinal plants mapped, and monitoring plan implemented (end y2)</li> <li>- Experimental plots, seed banks, botanical gardens and plantations established (end y2)</li> <li>- Management plan written and implemented (end y3)</li> </ul>	All the information for the management plan has been gathered and it is being drafted. Once this is completed and accepted by INRENA the strategy will be in place. Villagers have the equipment and knowledge to produce herbal preparations and continue cultivating plants for communal use and commercialisation.	Presentation of second draft of management plan and book authored by communities – May 07 Continual maintenance of plant nurseries and botanical gardens, and expansion of plantations Approval needed for five community management plans by INRENA
<b>Output 1.</b> Indigenous, scientific and market information on medicinal species documented.	Workshops and training days completed with 25-35 participants; 1 internet and literature survey; 1 Survey	Information on the traditional and scientific knowledge of ecology, uses and management of medicinal plants collected and compiled for key species.  Market and commercialisation study has been completed, and lists of prioritised	

	of markets for commercialisation; 1 List of prioritised medicinal plants; Market analysis	medicinal plants completed – appropriate indicators. Communities' committee organised and formalised. The committee also made a two week tour of principal medicinal plant markets in southern Peru and met the list of contacts from the market study for future commercial opportunities. Community monitoring of harvest yields is ongoing.
Activity 1.1 Planning workshop (Oct 04)		Completed
Activity 1.2 Collect and document information on the traditional knowledge of ecology, uses and management of medicinal plants (Feb 06)		Completed
Activity 1.3. Scientific information on ecology, use and management of medicinal plants reviewed and documented (Jan 06)		Completed
Activity 1.4. Collection of information of local market, commercialisation opportunities, market study, prioritisation of medicinal plants. (Jan 06)		Completed
Activity 1.5. Organisation of communities' committee. (Jan 05)		Completed
Activity 1.6. Community monitoring of harvest yields (Feb 06)		Completed
Activity 1.7. Production and signature of Intellectual Property Rights Agreement (Feb 06)		Completed
<b>Output 2.</b>  Natural populations of medicinal plants evaluated and monitored	Workshops and training days completed with 25-35 participants; 2 Databases enhanced; 5 community inventories of medicinal plants; 5 Permanent monitoring plots established and mapped; 3-5 species selected for cultivation; Analysis of findings; draft management plan	Training workshop on inventory and participatory biodiversity monitoring techniques completed and re-training done with new methodology – not appropriate as indicator.  Participatory systematic inventories completed and species have been selected for cultivation – appropriate as indicator. Planning and supervision of monitoring carried out, at least 8 permanent monitoring plots established in each community - appropriate indicators.
Activity 2.1. 2.1 Training workshop on inventory and participatory biodiversity monitoring techniques (Feb 05)		Completed.

Activity 2.2. 2.2 Dissemination of project information to communities/ local publicity event (Dec 05/Feb 06)	Completed.
Activity 2.3. 2.3 Participatory systematic inventories (Feb 05 – Nov 05)	Completed.
Activity 2.4. Planning and supervision of monitoring (Mar 06 – Sep 07)	Two rounds of harvest impact monitoring carried out - last round of harvest monitoring has been cancelled due to small scale and low impact of harvesting.
Activity 2.5. Supervision of community tasks and six month evaluations (Apr 06 – Sep 07)	Rigorously carried out and on-going – there will be two final evaluations.
Activity 2.6. Mid term workshop to analyse findings, and first draft of management plan (Apr 06)	Workshop completed but first draft was not ready at this point – second draft will be discussed with participants in May 2007.
<b>Output 3. . Selected medicinal plants propagated and cultivated</b>	Workshops and training days completed with 25-35 participants; Map of areas for seed banks; 5 Botanical gardens established. Plantations established and re-forestation commenced  Training in scientific methods of seed collection, propagation and cultivation of selected species completed – not appropriate as indicator.  Nurseries with seed and seedling banks have been established – appropriate indicator.  Botanical gardens and plantations have been established – appropriate indicators.
Activity 3.1. Training in scientific methods of seed collection, propagation and cultivation of selected species (Nov- Mar 05)	Completed
Activity 3.2. Seed and seedling banks established for species with known cultivation practises. (Nov 05 - Mar 06)	Completed with continual expansion of plant gardens an on-going process.
Activity 3.3.Seeds and seedling banks established for species with unknown cultivation practises (Apr – Sep 06)	Completed, see activity 3.2.
Activity 3.4.Areas for botanical gardens selected and planted (Dec 05 - Mar 06)	Completed - see comment for activity 3.2
Activity 3.5. Establishment of plantation areas (Nov 06 - Mar 07)	Completed but still being continually expanded.
Activity 3.6. Maintenance of gardens and plantations (Mar 06 – Sep 07)	On-going process and participants evaluated every six months on this.

<b>Output 4.</b> Management plan developed, and methodology and project lessons promoted regionally	Workshops and training days completed with 25-35 participants; Management plan approved; Findings analysed; List of workshop participants (50); 3 academic papers written.	All training and most workshops now completed – not appropriate as indicators.
Activity 4.1. Training in production of herbal medicines and introduction to basic business administration (July 06)		Completed.
Activity 4.2. Training in business administration (Aug – Sep 06)		Completed.
Activity 4.3. Workshop to reflect on and consolidate methodological lessons and develop second draft of 20 year management plan (May 07)		Postponed to May 2007, in order to present book to communities and for UK coordinator to be present.
Activity 4.4. Final draft and publication of book on the ecology, use and preparation of key herbal medicines (Apr - May 07)		Completed, final draft to be evaluated and published for May workshop and book presentation.
Activity 4.5 Evaluation of final version of management plan (July 07)		N/A.
Activity 4.6. Final report written (July 07)		N/A.
Activity 4.7. Regional evaluation workshop on processes developed and awareness of conservation measures for medicinal plants, academic papers submitted to peer review journals (Sep 07)		N/A.

## Annex 2 Current logframe

Figure 1 Project summary	Figure 2 Measurable indicators	Figure 3 Means of verification	Figure 4 Important assumptions
<b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.			
<b>Purpose</b> <i>With indigenous communities, establish a long-term management strategy to conserve cultivate and commercialise medicinal plants in the RBM, with a regional application.</i>	<ul style="list-style-type: none"> <li>- Traditional and scientific knowledge, and market information documented (end y1)</li> <li>- Natural populations of medicinal plants mapped, and monitoring plan implemented (end y2)</li> <li>- Experimental plots, seed banks, botanical gardens and plantations established (end y2)</li> <li>- Management plan written and implemented (end y3)</li> </ul>	<ol style="list-style-type: none"> <li>1. Report</li> <li>2. Maps, report</li> <li>3. Maps, report</li> <li>4. Management plan</li> </ol>	<i>Commitment of the indigenous communities to utilisation of strategy.</i> <i>That project partners will maintain good relations and open collaboration. That flexibility and openness to new ideas will be shown. That literature on plant use and commercialisation will be consulted and used to guide decision-making process.</i>
<b>Outputs</b> <b>1. Indigenous, scientific and market information on medicinal species documented.</b>	Workshops and training days completed with 25-35 participants; 1 internet and literature survey; 1 Survey of markets for commercialisation; 1 List of prioritised medicinal plants; Market analysis by: yr 2	List of names on Communities' Committee, IPR agreement, finalised project plan; List of participants and report; Community Pamphlets followed by Book of uses and management strategies for medicinal plants, authored by the communities; Literature review; Report;	<ul style="list-style-type: none"> <li>- Interest and commitment of the Indigenous communities maintained</li> </ul>
<b>2. Natural populations of medicinal plants evaluated and monitored</b>	Workshops and training days completed with 25-35 participants; 2 Databases enhanced; 5 community inventories of medicinal plants; 5 Permanent monitoring plots established and mapped; 3-5 species selected for cultivation; Analysis of findings; draft management plan by: yr 3	List of participants and report; Training materials, Information leaflets, poster calendar Maps and inventory results Reports Draft management plan	<ul style="list-style-type: none"> <li>- Continuity of project technical staff</li> </ul>
<b>3. Selected medicinal plants propagated and cultivated</b>	Workshops and training days completed with 25-35 participants; Map of areas for seed banks; 5 Botanical gardens established. Plantations established and re-forestation commenced by: yr 3	List of participants and report ; Training materials, and leaflets Map and reports	<ul style="list-style-type: none"> <li>- Training and continuity of local staff</li> </ul>
<b>4. Management plan developed, and methodology and project lessons promoted regionally</b>	Workshops and training days completed with 25-35 participants; Management plan approved; Findings analysed; List of workshop participants (50); 3 academic papers written by: end of yr 3	Report and Commercialisation plan; Maps; Recipes ; List of participants and report; Training materials; Management plan; Report; Workshop proceedings; acknowledgement of submission of papers.	<ul style="list-style-type: none"> <li>- Commitment of partner institutions and local people in executing the programme</li> <li>- Climatic stability</li> <li>- Physical access maintained</li> <li>- Funding forthcoming</li> </ul>
<b>Activities</b>	<b>Activity Milestones (Summary of Project Implementation Timetable)</b>		
Output 1	1.1 Planning workshop (Oct 04) 1.2 Collect and document information on the traditional knowledge of ecology, uses and management of medicinal plants (Feb 06)		

	<p>1.3 Scientific information on ecology, use and management of medicinal plants reviewed and documented (Jan 06)</p> <p>1.4 Collection of information of local market, commercialisation opportunities, market study, prioritisation of medicinal plants. (Jan 06)</p> <p>1.5 Organisation of communities' committee. (Jan 05)</p> <p>1.6 Community monitoring of harvest yields (Feb 06)</p> <p>1.7 Production and signature of Intellectual Property Rights Agreement (Feb 06)</p>
Output 2	<p>2.1 Training workshop on inventory and participatory biodiversity monitoring techniques (Feb 05)</p> <p>2.2 Dissemination of project information to communities/ local publicity event (Dec 05/Feb 06)</p> <p>2.3 Participatory systematic inventories (Feb 05 – Nov 05)</p> <p>2.4 Planning and supervision of monitoring (Mar 06 – Sep 07)</p> <p>2.5 Supervision of community tasks and six month evaluations (Apr 06 – Sep 07)</p> <p>2.6 Mid term workshop to analyse findings, and first draft of management plan (Apr 06)</p>
Output 3	<p>3.5 Training in scientific methods of seed collection, propagation and cultivation of selected species (Nov- Mar 05)</p> <p>3.6 Seed and seedling banks established for species with known cultivation practises. (Nov 05 - Mar 06)</p> <p>3.7 Seeds and seedling banks established for species with unknown cultivation practises (Apr – Sep 06)</p> <p>3.8 Areas for botanical gardens selected and planted (Dec 05 - Mar 06)</p> <p>3.9 Establishment of plantation areas (Dec 05 - Mar 06)</p> <p>3.10 Maintenance of gardens and plantations (Mar 06 – Sep 07)</p>
Output 4	<p>4.1 Training in production of herbal medicines and introduction to basic business administration (July 06)</p> <p>4.2 Training in business administration (Aug - Sep 06)</p> <p>4.3 Workshop to reflect on and consolidate methodological lessons and develop second draft of 20 year management plan (June 07)</p> <p>4.4 Final draft and publication of book on the ecology, use and preparation of key herbal medicines (June 07)</p> <p>4.5 Evaluation of final version of management plan (July 07)</p> <p>4.6 Final report written (July 07)</p> <p>4.7 Regional evaluation workshop on processes developed and awareness of conservation measures for medicinal plants, academic papers submitted to peer review journals (Sep 07)</p>