



## ***Darwin Initiative for the Survival of Species***

### ***Annual Report***

<http://www.darwin.gov.uk>

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

Project Ref. Number	<i>162/13/020</i>
Project Title	<i>Conservation of Easter European Medicinal Plants: Arnica montana in Romania</i>
Country(ies)	<i>Romania</i>
UK Contractor	<i>WWF-UK</i>
Partner Organisation(s)	<i>WWF-DCP, USAMV</i>
Darwin Grant Value	<i>£ 199,945</i>
Start/End dates	<i>April 2004/March 2007</i>
Reporting period (1 Apr 200x to 31 Mar 200y) and report number (1,2,3..)	<i>1Apr 2004 to 31 March 2005, report no. 1</i>
Project website	
Author(s), date	<i>Dr Susanne Schmitt, May 2005</i>

## 2. Project Background

Arnica is considered critically endangered (IUCN category) in many countries of its range and listed in Annex D of the EU Fauna & Flora Habitats Directive (EU-FFHD). It can be found growing in nutrient poor, acidic mountain meadows, a priority habitat under EU-FFHD. Although endangered, Romania supplies a large volume of Arnica to rapidly growing European markets (28t traded in 2001, constituting over 50% of total European supply).

In addition to threats from over-harvesting, Arnica and its habitats are being affected by rapid habitat loss due to changing agricultural practices, such as increased fertiliser use an issue accelerating in the build-up to EU accession planned for 2007.

In the project area of the Apuseni Mountains of Romania, women and children are wild-harvesting large quantities of Arnica to provide much needed cash income, though prices are low. Recent research in the area indicates an urgent need to maintain stocks of Arnica and the traditionally managed hay meadows where Arnica and other associated biodiversity thrives.

This project therefore works with stakeholders (harvesters, farmers, traders) to develop a model for sustainable harvest and trade of Arnica. Principles from this project could then be used to inform development of models for endangered MAP and other habitats elsewhere.

The main components of the project are

- Research on biological sustainability of Arnica (stocks versus harvest levels)
- Evaluation of the cultural & socio-economic context of management
- Study of the trade chain (e.g., main actors, value along the chain)
- Training harvesters (mainly women & children) to develop more sustainable harvesting practices
- Investigating incentive systems for farmers to maintain their traditional management of Arnica meadows with no artificial fertilization
- Training in simple value adding (e.g. drying) and facilitation of improved marketing to achieve higher returns for harvesters

### **Project Purpose and Outputs**

#### ***Purpose***

To develop a model for the sustainable production and trade of Arnica montana resulting in benefits for biodiversity and livelihoods; the principles of which can be used to inform the development of conservation approaches and methodologies for other endangered medicinal and aromatic plants (MAP) and their habitats

#### ***Outputs***

- Resource management and Trading Association (RMTA) founded at Gârda de Sus (GdS)
- Arnica management plan written, accepted and implemented
- Harvesters & farmers trained in sustainable harvest, habitat management & drying.
- RMTA/company agreement based on sustainable sourcing guidelines
- Awareness raised on benefits of sustainable harvest of MAP among harvesters, farmers, government agencies and academics

No modifications to the log frame have been made

### 3. Progress

#### ***Brief history of the project***

The idea of the project came about as result of the need to have model projects that try to demonstrate how MAPs can be sustainably managed and ethically traded, with benefit for livelihoods and biodiversity (the species itself and wider biodiversity/habitat conservation). Arnica makes an ideal case study species as it is well known with many medicinal uses and it is a high value MAP, which is becoming threatened through trade and habitat conversion. Romania seemed an ideal place for a demonstration project on sustainable Arnica harvest and trade (i) because Romania is one of the two main source countries for Arnica (the other being Spain) and (ii) she faces rapid socio-economic change in post-communism era and the imminent accession to the EU with many threats to biodiversity associated with a loss of traditional management systems.

#### ***Summary of progress***

In its first year of implementation much has been achieved despite some fairly serious constraints (see difficulties). The achievements also have to be seen in the context of Romania, where the participatory and inter-disciplinary approaches we are using are still very new and require much capacity building with both the project staff and the community we work with.

**Project output 2: Attain masters.** Two students from Babes Bolyai University (UBB) in Cluj, Razvan Popa (RP) and Michael Klemens (MK), will write their masters thesis at UBB within the project. Before going for the masters degree, MK first had to complete his diploma, which he passed in early 2005. For his diploma, MK developed a concept for his thesis on consumer behaviour related to the purchase and use of Arnica products in Romania and a survey of the Romanian Arnica market. MK is now registered for masters on Arnica trade & supply chain in Romania. I am awaiting his first draft of a concept. RP has developed two iterations of a concept for his masters on Arnica ecology with special focus on Arnica pests. After initial difficulties of formulating his ideas he has made much progress through the help of the project officer, Barbara Michler, and his supervisor Dr Tamas and Dr Coldea. Fieldwork for both masters will be carried out this summer. Both MK and RP were starting from a low level of experience and knowledg, but it has been more than encouraging to see the progress made during this year.

**Output number 5: Fieldwork and analysis.** Training of 4 young professionals (Florin Pacurar (FP), Horatiu Popa (HP), RP and MK) has started with the 2004 Arnica field season. The main tasks were: Overall co-ordination, especially initiating and maintaining contact with local population and authorities (FP); inventorying and mapping of Arnica meadows and maintenance of computer and IT equipment (HP; IT work taken over by Valentin Dumitrescu (VD) in October 2004); population survey of Arnica in the project area and organization of local events (RP); and interviews with collectors, local traders and companies and organization of field events (MK). All team members were supported by the project officer in the field and worked together whenever possible. Data analysis has started in October and will continue into spring 2005.

FP, HP, RP and MK learned a lot during the 2004 field season and became more familiar with the scientific methods of inventorying and monitoring of Arnica, as well as methods and techniques related to Arnica drying. RP was successfully trained in statistical analysis by the project officer. His new skill needs to be applied to the Arnica monitoring data and his data for the masters. He has also been attending a 6-month 'Eco-management course' (weekends until July). MK received specific training in Arnica drying. He would benefit from training by an experience socio-economic researcher to improve his trade survey work. We shall try and arrange this.

All project team members expressed at the review and planning meeting that they have learnt a lot during the past year. They are particularly interested the inter-disciplinary work of the project and the participatory approaches to working with communities. The later is still a new concept in Romania.

### **Project Output 6A: Training & Sensitisation**

During 2004, intensive sensitisation of the local population, which includes farmers, harvesters, local officials and local traders took place prior to more formal attempts at training, in particular harvesters. Table 4 and Table 5 show the number of events, meetings and contacts and number of people involved. In this way several hundred people were informed about the project and about 100 children and women were more intensively targeted through a one-day event that familiarised them with good harvesting and monitoring methods through presentations drawing contests, and games. A considerable success of the sensitisation was the agreement of the head teacher of the local school to include sustainable harvesting and quality control training in the children's teaching. This will allow project members to work directly with the local school children, many of whom collect Arnica.

An important part of sensitisation is to build the confidence and support of the local population and the local authorities. FP invested a lot of time and energy into confidence building, and was rather successful. The mayor of GdS (recently re-elected) offered particularly important and continuous support. His influence in the main Arnica collection area is high, as he is from Ocoale, a hamlet within the project area. The land-owners seem to be more open to the project and its concept now, as are some of the collectors.

Due to the late and hectic project start-up no full training concept could be developed and training of harvesters was conducted on a more opportunistic basis. Nevertheless, using the Training of Trainers (TOT) concept, a local collector Julia Pasca was intensively trained in sustainable collection methods already developed by the project officer. She then trained other local women in the methods. These sessions will be more formalised this year.

**Project Output 8: Travel.** The project officer, BM, is spending more time in Romania than initially planned. She feels that more intensive involvement and support on the ground is necessary. She was in the field/Cluj for about 8 weeks in this reporting period. The project leader (Wolfgang Kathe, maternity cover) spent two weeks in the field for the kick-off workshop in May 2004 and the interim-planning meeting in September 2004. The project leader (Susanne Schmitt) was in Romania for 1 week to hold the 1<sup>st</sup> annual review and planning meeting in February 2005. .

**Project output 11B: 1 peer reviewed-paper.** BM, Ioan Rotar and FP had a short paper reviewed and accepted for the proceeding of the 13<sup>th</sup> International Symposium of European Grassland Federation. This was fully peer-reviewed (see Table 2)

**Project Output 14A: Workshop organization.** In total three project workshops were organised: the project kick-off workshop in May 2004, and interim planning workshop in September 2004 and the 1<sup>st</sup> annual review and planning workshop in February 2005.

Due to the delayed project start, the kick-off workshop was organised in a hurry to get the project team into the field in time for the Arnica flowering season starting in June. This workshop proved rather difficult due to a lack of common understanding of the project objectives and unclear management roles. Only a short three-month workplan was developed and it was agreed to meet in September to plan for the remaining period of year 1. Due to the difficulty experienced at kick-off, it was decided to call a management meeting in Vienna in July with the main team members and finance officers. This meeting still left unresolved issues, but the importance and need for a common approach was accepted. This led to the

development of a project concept document (longer & shorter version) by the project officer, BM, and the project advisor Alan Hamilton, WWF-UK (see Annex 2), which received comments and acceptance by all project partners and members.

The second planning workshop in Cluj was a rather effective meeting, in which the team succeeded in developing and finalizing the annual work-plan and discussing, in a very constructive and target-oriented way, the further procedure relating to the RMTA development and design of interviews with locals. The atmosphere of the work-shop was good, but time constraints limited some in-depth discussions.

The first annual review and planning meeting was organised in Cluj in February 2005. It was also the hand-over between Wolfgang Kathe (WK) and Susanne Schmitt (SFS) as project leaders after her return from maternity leave. Aware of the history of tension in the project, SFS felt it important to clarify again management roles and the overall vision and wider context in which the project is set. The intention was to focus attention on the wider issues rather than focusing only on problems (see Annex 2). This approach seemed to show success and very constructive discussion, both technical and on management and financial issues were held. The feedback from the project team was that there is now a more common sense of purpose and more energy. To improve communication and project planning, monitoring and management it was agreed that quarterly operational meetings will be held. These will be attended by the project manager Maria Mihul of WWF-DCP, the local co-ordinator (FP), the project officer (BM) and all other project members. The project leader will attend when possible (e.g. during field season in July 2005).

**Project output 14B: 1 International conference.** Although only planned for 2005, BM participated in an international conference in Cluj ('Prospects for the third millennium agriculture'), in which she presented the project and got new contacts to other people who work on medicinal plants in Romania.

**Project outputs 15 A; 15B; 15C: 1 press trip with coverage; 2 national radio broadcast; 2 regional newspaper articles.** The site of the Arnica project was included in the WWF-DCP press-trip "Discover the Carpathian Mountains", between September 21 and 26, 2004. Six international journalists from major European media joined the event (Alex Kroeger – BBC World Service, UK; Sarah Johnson – ORF, Austria; Katherine Duke – Central European News Agency, Austria; Christophe Schoune – Le Soir, Belgium; Kathrin Lauer – Deutsche Press Agency, Budapest; Urs Fitze – freelancer, Switzerland): The one day visit to GdS and to the project site resulted in the following media coverage:

- 4 minutes radio feature story broadcasted on BBC Radio News 24 (13&14/11/2004)
- a 5 minutes radio feature story for the Central European News Agency, October 2004
- a 4 minutes TV news broadcasted on BBC World News (13/11/2004)
- a 4 minutes radio feature on Deutsche Well International Radio (9/3/2005)

Two days running the project was featured in a national radio broadcast on "Radio Romania Actualitati" (13<sup>th</sup> and 14<sup>th</sup> of March 2005). Also two articles appeared in regional news papers: '*Arnica montana the unknown treasure from Apuseni*' in 'Accent, newspaper of Alba Julia district and 'Plants, faster entrance into the EU' in the Transylvanian newspaper 'Evenimentul' (Daily Event).

**Project Output 20: Demonstration plant drying house.** The plant drying house was constructed already in the first year and testing of best drying methods of Arnica started in 2004. At the end of the season 100 kg Arnica had been dried. The project bought this first output to have samples available for testing by potential buyers and

to offer for sale to interested buyers. It is clear that the project can not be seen as the guaranteed buyer of the whole dried Arnica harvest in the coming years.

**Project Output 21: establishment of RMTA.** Establishing a community-based institution that will be in charge of the management and trade of Arnica is a key element of the project.

An RMTA working group was set up in September 2004 consisting of local farmers, the mayor, the local doctor, local guest house owner, the local co-ordinator Florin Pacurar, Assistant local co-ordinator Valentin Dumitrescu and Dr H. Jakob, manager of the Apuseni Regional Development Project (GTZ). Dr Jakob has offered help with the design and setting up of the RMTA. He was most influential in the suggestion of a specific design of the RMTA. However, this design may not be the most suitable for our purposes. Several scenarios have been researched and discussions are being held with community members to get an idea of their attitudes towards such an association and what form it should take. One of the suggestions has been that the existing Tourism association, formed during the time of the Project Apuseni of the University of Freiburg (2000-2003), could also take on the tasks of Arnica management and trade. This and other scenarios are currently being evaluated before a decision is being made.

Research into the legal requirements of setting up such an association has already been conducted. The findings are that an association can not legally trade without also forming a company. This means that in any case we have to form both.

At the review & planning meeting in February 2005 the team discussed the need to have 'leading' examples in the community that are willing to become members of the association/scheme. The aim is to identify three families. One family has already been recruited.

#### **Outputs with no output number:**

**Project concept (see mention under 14 A):** The project officer and Alan Hamilton (AH) developed detailed project concepts, which were integrated into one project concept by the project leader WK in the summer 2004. This project concept comprises research, training and field-work, and provides a conceptual overview of the structure and goals of the project. It is a draft that is open for continuous improvement and amendment. It can also be used as a resource for publications of any kind.

#### ***Significant difficulties***

The start-up of the project was fraught with a number of difficulties. These were mostly related to internal communication problems between project staff. These were mainly the result of 1) a lack of common understanding of the objectives of the project and the various responsibilities of team members, 2) different motivational interests of team members, 3) personality conflicts, 4) overly dominant hierarchic structures within the project team, and 5) below-average communication skills of some team members.

WK reported in the 6-monthly report that these issues could pose a serious danger to project. My assessment after returning from maternity leave in January is that the majority of the tensions and conflicts have been overcome or defused (see under output 14 A mechanisms employed). A major factor is that the difficult start-up is over and progress can be seen. There is also the fact that project members are more relaxed and have clearer understanding of common goal, whilst having a chance to meet their personal aspirations. A good example, is Horatiu Popa, who resigned from the project in September 2004. However, he never really left the project. He was

unhappy in his mixed role as IT person and general assistant as well as being the GIS and mapping specialist. At the meeting in February we discussed openly with all participants his aspirations and he is now working part-time for the project finishing his mapping commitment, but otherwise engaging more in the socio-economic work with the local community and in relationship building with the PNA administration. Likewise, the aspirations versus the project's requirements were openly discussed amongst all participants at the workshop, which was at first uncomfortable but then much appreciated. Last year, WK in his role as project leader, worked very hard to encourage this openness, which is not necessarily common practice in Romania.

In summary, I feel confident that the team spirit has now been created and that this will not be an obstacle to achieving the project objectives.

### ***Changes to design***

The design of the project itself has not been changed, but adjustments to the project management and staffing have been made. It was felt that quarterly operational meetings would be helpful to improve internal communication, project monitoring and regular adjustments to the workplan according to progress. The GIS & mapping specialist, Horatiu Popa, now only works part-time. He has nearly finished his commitment on the Arnica inventory and mapping. He has designed the project leaflet. From this year he will concentrate more on the socio-economic work with the community and the relationship building with the Park Natural Apuseni (PNA).

### ***Workplan for year 2***

The workplan for April 2005 to March 2006 is attached as Table 3 (excel file attached electronically)

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

- Not applicable

### **6. Partnerships**

After a relatively difficult start-up period that required a lot of clarification of management structure and roles the partnership between staff from USAMV, WWF-DCP and WWF-UK is now working well. The MOU between WWF-DCP and USAMV was finally signed in March 2005 and USAMV has delivered on its commitments to provide office space, meeting rooms and accommodation for workshop participants when in Cluj. Professor Ioan Rotar, Head of the Department of Fodder Production and Conservation at USAMV has been very helpful in facilitating contacts and meetings with government officials and academics relevant to our project.

The local partnership with the major, Marin Vârciu, of GdS has been working extremely well. He is very supportive of the project and actively involved in regular discussions about the implementation. He is also a member of the RMTA working group formed in September 2004. As he has recently been re-elected, he should be able to support our efforts throughout the project period.

Collaboration with the Director of the Institute of Biological Research, Dr G. Coldea and Dr Dan Munteanu, President of the Commission for Natural Monuments, Academy of Sciences, Romania has also been good. In particular, Dr Coldea has started to support the work of the master students Michael Klemens and Razvan Popa with information on Arnica distribution and trade.

Through contacts of the project leader this project is part of a number of projects that are being followed with great interest by a small group of people, ranging from private (IMO organic certifier, etc.), government (Swiss Import Promotion Programme), UN (Biotrade Programme) to NGO (WWF Germany) background, working on developing

ways of sustainable supply chain management for medicinal and aromatic plants. As part of this, the Arnica project will be presented at a side-event to the International Botanical Congress in Vienna in July. The side-event will focus on all aspects related to sustainable supply chain management.

## **7. Impact and Sustainability**

As this has only been the first year of implementation it is early to speak about impact and sustainability. However, the interest in the project from the media and, from the Park Natural Apuseni (PNA) administration has been very encouraging. Mr Alin Mos the Director of PNA has shown great interest in integrating the project work and the Arnica management plan in the wider management planning of the park. He is keen to follow the 'Parc Regional' protected area example developed in France and also implemented in Italy, which places a lot of emphasis on culture, heritage as well as nature conservation. The concept includes the promotion and marketing of local produce with distinct branding related to the park. This could be advantages for the marketing of Arnica and value-added products such as Arnica tincture from our project area.

## **8. Post-Project Follow up Activities (max 300 words)**

not applicable

## **9. Outputs, Outcomes and Dissemination**

All planned outputs for this reporting period were achieved. In fact, the plant-drying house was already constructed this year, rather than the planned construction in FY05/06. The WWF-UK project advisor, Alan Hamilton (now left WWF-UK) and the major of GdS both recommended construction for the first field season (i) to be able to demonstrate to local people what the drying process actually involves and to have practical experience of it; (ii) to develop experience and protocols for best drying-results of Arnica under local conditions; and (iii) to be able to have dried Arnica samples to supply to potentially interested companies.

The project team did particularly well in their dissemination and awareness raising efforts at the local, regional and international level. This has been achieved locally through numerous local presentations at festivals, local council meetings, church gatherings (See Table 5); at regional/national level through visits and presentation to the Ministry of Agriculture, Forests and Rural Development, Head of the Park Natural Apuseni (PNA), Member of the Scientific Council of PNA, prefect of the county council of Alba Julia, etc.; at the international level through one conference and one international workshop attendance and presentation by the project officer and project leader (maternity cover, Wolfgang Kathe) respectively.

The media coverage achieved was much greater than expected at this early stage of the project. This is partly a reflection of the great interest in this type of work, which is new for Romania, and partly a reflection of opportunities that the project team took maximum advantage of.



**Table 1. Project Outputs (According to Standard Output Measures)**

Code No.	Quantity	Description
2	2	<i>2 Romanian project staff attain masters:</i> M. Klemens successfully completed his diploma and is now registered for masters on Arnica trade & supply chain in Romania; R. Popa is registered for masters on the 'Arnica ecology'. He has produced a concept and done a basic literature review. He is also attending a 6 - month 'Eco-management course' (weekends). Fieldwork for both masters will be carried out this summer. (ongoing)
5	3	<i>3 Romanian project staff trained in fieldwork &amp; analysis:</i> H Popa trained in Arnica inventoring, mapping & GIS analysis; good progress made with only small areas to complete in FY05/06; R Popa successfully trained in Arnica monitoring & statistical analysis of data; M Klemens conducted interviews with local Arnica collectors, farmers, traders & some companies; he would benefit from training by experience socio-economic researcher; he was trained in Arnica drying  All 3 build their capacity in participatory approaches to working with the local community in project area; particularly in raising awareness and obtaining their views & opinions
6A	several hundred local people (incl. harvesters, farmers, officials) & 3 park staff & member of scientific council	<i>Sensitisation &amp; training</i> <i>Intensive sensitisation</i> of local population (see attached Tables 4 & 5), incl. farmers, officials, harvester & local traders during 2004. <i>Sensitisation &amp; training</i> of harvesters (children & women) in good harvesting & monitoring method during a day event, incl. presentation, games & drawing contest; Head teacher agreed to incl. sust. Harvesting & quality training in teaching time; preliminary training of MK & 1 student in drying Arnica; training in storing Arnica in cloth-bags to all interested harvesters & some introduction to value-adding from tincture production;  Project manager made presentation to Maria Moise member of Scientific Council of Park Natural Apuseni. She agreed that project in line with management planning process and objectives of park & encouraged regular communication. PNA staff visited field centre and head of PNA attended annual review & planning meeting; He is keen on collaboration and an MOU with project is planned.
8	3 wks/yr	2 weeks in 2004 for project kick-off & interim-planning meeting in Sept. (W. Kathe, maternity cover); February 2005 1 week for Review & planning meeting (Susanne Schmitt)
11B	1 peer-reviewed paper	Short paper accepted for proceedings of 13 <sup>th</sup> International Symposium of European Grassland Federation;

14A	1 project workshops	Kick-off workshop in May 2004; Interim planning workshop in Sept. 2004; 1 <sup>st</sup> Annual review & planning workshop Feb. 2005;
14B	1 international conference	presentation of project and its goals and objectives by Dr B. Michler, project officer, at 3 <sup>rd</sup> International Symposium 'Prospects for the 3 <sup>rd</sup> Millennium Agriculture', Cluj-Napoca, Romania;
15A, 15B, 15C	1 WWF-DCP press trip with resulting coverage; 2 nat. radio broadcast; 2 nat. newspaper articles	project included in WWF –DCP press trip 'Discover the Carpathian Mountains', Sept. 2004 resulted in: <ul style="list-style-type: none"> <li>• 4 minute radio feature story on BBC Radio broadcasted (13 &amp; 14/11/2004),</li> <li>• 5 min. radio feature story for Central European News Agency, Oct. 2004</li> <li>• 4 min. TV news item broadcasted on BBC World News (13/11/2004)</li> <li>• 'Preserving a way of life in the Carpathians', Deutsche Welle International Radio (9/3/05)</li> </ul>
20		<p>Broadcast about the project on national radio station "Radio Romania Actualitati" (on 13 &amp; 14. 3.05)</p> <p>Accent' newspaper, Alba Julia district: '<i>Arnica montana the unknown treasure from Apuseni</i>' &amp; Evenimentul' (Daily Event) Transylvanian newspaper: 'Plants, faster entrance into the EU'</p> <p>land-rover purchased in May 2004</p> <p>2 computers &amp; office furniture purchased in May 2004</p> <p>1 plant drying house built in July 2004 (one year early)</p>

**Table 2: Publications**

Type *	Detail	Publishers	Available from	Cost £
(e.g. journals, manual, CDs)	(title, author, year)	(name, city)	(e.g. contact address, website)	
article *	<i>Arnica montana</i> , an endangered species and a traditional medicinal plant: the biodiversity and productivity of its typical grasslands habitats, Michler B., Rotar, I., Pacurar, F. and Stoie A. (accepted)	Proceedings of the European Grassland Federation	<a href="http://www.egf2005.ee/indexen.php">http://www.egf2005.ee/indexen.php</a>	
Article*	Conservation of Eastern European Medicinal plants: <i>Arnica montana</i> in Romania. Michler B, Kathe W., Schmitt S. and Rotar I.	USAMV, Cluj-Napoca	USAMV, Cluj-Napoca	

## 10. Project Expenditure

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

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Item	Budget (please indicate which document you refer to if other than your project schedule)	Expenditure	Balance
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### *'Postage, telephone, stationery'*

A possible explanation received from the project officer may be that her financial reporting to the WWF-DCP finance officer resulted in a mis-match in the allocation of the cost. Several materials purchased for training & research purposes (e.g. note books, white boards) should have been the 'others budget' line but were recorded under 'postage, telephone, stationery'. A meeting to harmonise financial reporting is scheduled to iron out these problems.

### *'travel & subsistence':*

**a)** the project manager, the communication officer & the advisor from WWF DCP in Bucharest had to make their annual work plan before the approval came through. This resulted in less time available for project visits. Similarly, planned visits of two Romanian advisors to the project could not take place anymore during the short field season. **b)** Travel by M Klemens (young professional for supply chain studies) was also less than anticipated. Due to the late start he did not have sufficient time to fit in visits to more distant Medicinal plant traders and manufacturer firms for his interviews. Over the winter he had to concentrate fully on completing his diploma thesis. **c)** travel & subsistence of external socio-economic trainer & advisor was not spent

### *'printing':*

It took some time to decide on the strategy regarding the production of leaflet, flyer and posters. This had to wait until after the frantic start-up and field season in June-July 2004. After that the team decided that to design and print the material in-house has several advantages, such as the ability to be flexible on numbers printed,

adjustment on design and content based on feedback from the community and other target audiences. The local co-ordinator and the GIS and mapping specialist have taken on the task to design, write content and print the project leaflet, A4 flyers and two types of small posters. They are also building their capacity in the production & design of awareness raising material at the same time.

All this had two effects, first a delay in the production and spending on this budget line, and second a considerable saving on external printing cost. Also as a result of more in-house work, the anticipated printing spend next year is likely to be reduced.

#### *'Conference, seminars'*

The one conference attended by BM in Cluj did not require a registration fee and thus expenditure was very low.

#### *'others (training & advisory cost, awareness raising event)'*

- a) school events could not be carried out in time before school holidays. Only more informal activities could be organised with children during some festival days.
- b) fewer local awareness raising meetings & interviews conducted than planned, which during the winter month was also hampered by inaccessibility of field site due to snow.
- c) external socio-economic survey trainer & advisor not hired due to lack of time to gain understanding of requirements and identification of suitable expert at the beginning of project. Now planned for this summer/autumn.

## **11. Monitoring, Evaluation and Lessons**

Bi-monthly bullet-point reports are sent by all team members to the project leader, who compiles it and then circulates it to all team members. The information is structured under the headings successes, initiatives, failures, threat & lessons learnt. This regular update on progress, issues and difficulties from all project members independently allows the project leader to monitor progress very directly and intervene and support the project team at very regular intervals. This method has been tried and tested during another Darwin funded project (Kenya woodcarving) and was extremely useful and appreciated by all team members. The appreciation from team members relates to the fact that the compiled bi-monthly helps internal communication. As this has been a particularly difficult issue at the beginning of this project, the project leader will be paying particular attention to the bi-monthlies.

Annual review & planning meetings are integral to this project. The first meeting in February 2005 has given the project leader the opportunity to monitor the progress directly through a review of the workplan. The meeting was also an opportunity to re-enforce the project vision and clarify issues. The feedback from team members has been very positive.

At this meeting it was also decided that quarterly operational meetings should be instituted to allow more regular monitoring and exchange between the WWF-DCP project manager Maria Mihul and the WWF-DCP communications manager, Luminita Tanasie, and the rest of the project team. This was previously an issue as the local project team in Cluj mostly deals with the project officer, Barbara Michler, without communicating sufficiently with WWF-DCP management staff. The operational meeting will also allow a regular monitoring of progress against the annual workplan with a regular opportunity of adjustment understood by all team members.

It is still early to demonstrate how the outputs achieved so far will contribute to the project purpose.

See Annex 1 for lessons. The bi-monthlies also have a lessons learning section and the project leader usually discusses the issues raised with respective team members and adjustments and appropriate action are taken for short-term (quarterly planning) or longer-term improvement (annual planning)

An important lesson has been that one of the major contribution the project is likely to make is the capacity building of the young professionals/students and the local co-ordinator employed on the project. Although this is not stressed in particular in the proposal and this report, FP,MK, RP, HP and now also VD have already learned and improved their capacity enormously due to exposure to real issue in an international conservation project rather than a purely academic setting. All stated that despite some of the conflicts and difficulties at the beginning they all feel they have profited significantly from the involvement in the project. These young professionals will be the future generation of conservationist in Romania. Through experience gained in this project they are likely to be much better equipped to face the challenges of modern conservation with the accession into the EU.

**12. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum)**

Project summary	Measurable Indicators	Progress and Achievements April 2003-Mar 2004	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 poor in resources to achieve</p> <ul style="list-style-type: none"> <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>			
<p><b>Purpose</b></p> <p>To develop a model for the sustainable production and trade of Arnica montana resulting in benefits for biodiversity and livelihoods; the principles of which can be used to inform the development of conservation approaches and methodologies for other endangered medicinal and aromatic plants and their habitats.</p>	<p>Association at GdS (RMTA) able to secure conservation &amp; increased livelihood (e.g. income) by yr 3; appropriate agreement with company</p> <p>30% of farmers at GdS commit to long-term traditional habitat management by yr 3</p> <p>40% of harvesters at GdS adopt sustainable harvest practices by yr 3</p> <p>Model documented (incl. biodiversity &amp; social aspects &amp; sust. sourcing guidelines), disseminated &amp; considered useful by yr 3</p>	<p><i>(report impacts and achievements resulting from the project against purpose indicators – if any)</i></p>	<p><i>(report any lessons learned resulting from the project &amp; highlight key actions planning for next period)</i></p>
<p><b>Outputs</b></p>			
<p>RMTA founded &amp; effective at GdS (incl. harvesters, landowners, park staff)</p>	<p>Association exists by yr 2 &amp; achieves objectives</p>	<ul style="list-style-type: none"> <li>• Local working group founded &amp; meeting held</li> <li>• Legal requirements researched</li> </ul>	<p>founding a RMTA/company that is accepted by majority of community is challenging; estlment of assoc. in stages is likely, with in-built development over time; recruiting 'leading example' members will be used in yr2; lack of demand for</p>

			<p>Arnica in 2004 is blamed on project; thus key that we can find buyers for 05 harvest.</p> <ul style="list-style-type: none"> <li>• 5 different scenarios with costings discussed/tested (May 05);</li> <li>• socio-economic &amp; attitude interviews/survey (Oct. 05)</li> </ul>
<p>Arnica management plan written, accepted &amp; implemented</p>	<p>Plan written, incl. setting of annual quotas, by yr 3</p>		<p>establ.ment of good contact with park essential for eventual integration; understanding of local community on meaning of plan in relation to RMTA &amp; park needs to be built;</p> <ul style="list-style-type: none"> <li>• MOU/agreement with park by June 05</li> <li>• Ecological &amp; farm mngment &amp; attitude research as basis of plan completed by Oct. 05</li> <li>• draft plan produced &amp; disseminated by Nov. 2005</li> </ul>
<p>Harvesters &amp; farmers trained in sustainable harvest, habitat management &amp; drying</p>	<p>Training conducted &amp; manual disseminated to 200 harvesters &amp; 300 farmers by yr 2; drying facilities installed &amp; tested by yr 3</p>	<p>1 drying house built &amp; testing started;</p> <p>Training of harvesters <u>started</u></p> <p>Focus on sensitisation in yr1</p>	<p>progress on drying faster than expected; locals very interested in drying &amp; selling <i>Boletus edulis</i>; progress with training less than expected because school term already finished due to late project start, also lack of time for training plan;</p> <ul style="list-style-type: none"> <li>• further testing of drying house to get optimum quality in min. time</li> <li>• experimentation with</li> </ul>

			<p>mushroom drying</p> <ul style="list-style-type: none"> <li>• training drying &amp; tincture production</li> <li>• draft harvester manual (May 05)</li> <li>• training &amp; testing of manual completed Nov 05</li> <li>• training within school lessons (spring 05)</li> <li>• TOT training particularly for training of women harvesters</li> </ul>
RMTA/company agreement based on sustainable sourcing guidelines	Sourcing guidelines exist (draft yr 2); agreement signed by yr 3; final guidelines by yr 3	<ul style="list-style-type: none"> <li>• Diploma on consumer demand for Arnica products in Romania completed.</li> </ul>	<p>Connected to this output &amp; the RMTA development is the supply chain research; the student in charge of this component (MK) is in need of more guidance; project leader is trying to provided some, but not likely to be sufficient</p> <ul style="list-style-type: none"> <li>• market &amp; trade analysis in Romania</li> <li>• feasibility study for organic certification</li> <li>• identify buyers for 2005 harvest;</li> <li>• contact with export/import promoters</li> <li>• pursue company contacts UK &amp; Germany</li> </ul>
Awareness raised on benefits of sustainable harvest of MAP among harvesters, farmers,	15 local meetings (incl. school & church events); min. 1 national workshop, 2 conferences,	5 local meetings (1 church; 1 day-event in pasture; 2 at local fairs) 1 international conference	media interest has been stronger than anticipated; opportunities were used to full; development of



<p>government agencies &amp; academics</p>	<p>numerous media contributions</p>	<p>presentation;  1 poster for GdS community  1 BBC TV report; 3 radio features (BBS, Deutsche Welle, Central European News Agency)  1 peer review paper submitted  1 paper published</p>	<p>project publicity material took longer than anticipated, but now produced in house with additional experience gained by project staff.</p> <ul style="list-style-type: none"> <li>• project flyer (April 05)</li> <li>• project web-site (May 05)</li> <li>• folder, poster, T-shirts, (May 05)</li> <li>• presentation &amp; stand at 'National Biodiversity Day', Turda, Apuseni (June 05)</li> <li>• 2<sup>nd</sup> international conference presentation at side-event on sustainable supply chain management (Intern. Botanical Congress, Vienna, July 05)</li> <li>• 3<sup>rd</sup> international conference presentation: European Grassland Federation, Aug. 2005</li> <li>• several school events in spring/early summer</li> <li>• 1 nat./intern. meeting for Arnica buyers/traders (Nov. 05)</li> <li>• 2<sup>nd</sup> Gds community poster (Arnica management, Jan06)</li> </ul>
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**Table 4: Overview of local and intermediate traders, collected volumes and prices<sup>1</sup>: Preliminary rough estimations**

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<sup>1</sup> 41 000 ROL refers to 1€ 1 €refers to 0,693 GBP

**Table 5: Overview of sensitisation meetings, events and training.**

<b>Date</b> <i>day, month, year</i>	<b>Place</b>	<b>Participation</b>	<b>Purpose</b>	<b>Persons attending (rough estimation)</b>
26.05. –27.05.04	Gărda, Ghețar	Major, priest, forester, businessman, doctor, director of the school	Project presentation to the locals: presentation of the village by the locals	Around 20 (locals, team members, park stuff)
31.05.04	Ocoale, church	Major, priest	Project presentation; intensify contact with locals	120-150 locals
01.06.04	Commune pasture	Priest	Intensifying contact with locals	20 locals
23.06.04	Commune pasture	Major, priest	Project presentation, intensifying contact with locals; Invitation to harvester sensitisation	120-150 locals
27.06-04.07	Ghețar	5 families from Ghețar to organise raw materials and tools	Building a small drying house	10 locals
29.06.04	Intersection to commune pasture, meadow	Major, locals, teacher	Project presentation, intensify contact with locals; sustainable harvester training	100 children 70 adults 10 tourists
13.07.04	Commune pasture, fair	Major	Project presentation at regional level	Due to cold and rainy weather only about 20 persons visited the pavilion; locals, tourists
16.07.04	Gărda, fair	Major	Project presentation at regional level	About 300 locals, tourists

06.08.04	Day of Ghețar	Major, local stakeholders, many locals	Project presentation on at regional level	About 300 locals, tourists
22.09.04	Meeting with the local council	Major	Project presentation Political level	2 council members
24.09.04	Meeting with reporters press trip in Gârda, (WWF-DCP)	Major, physician, 4 families of Ghețar	Project presentation; presentation of the village, the landscape and the people	6 reporter
28.10.04	meeting with stakeholders (including a few landowners) and Apuseni Regional Development Project	major, business man, GTZ, 2 landowners	forming local advisory group	8 persons, 6 locals

## **Annex 2: Documents included with Report**

- Project concept
- Conservation of Eastern European Medicinal plants: *Arnica montana* in Romania. Michler B, Kathe W., Schmitt S. and Rotar I. (2004) Buletin USAMV-CN, Seria Agricultura, Volume 60: 228-230 (hard copy only)
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- *Arnica montana*, an endangered species and a traditional medicinal plant: the biodiversity and productivity of its typical grasslands habitats, Michler B., Rotar, I., Pacurar, F. and Stoie A. (accepted)
- Conservation of Eastern European Medicinal Plants: *Arnica montana* in Romania, Dr Barbara Michler, presentation at 3<sup>rd</sup> International Symposium 'Prospects for the 3<sup>rd</sup> Millennium Agriculture', Cluj-Napoca, Romania; (PPT file attached electronically)
- Project vision, Dr Susanne Schmitt, presentation to team, February 2005 (ppt file attached electronically)
- 2 newspaper articles (hardcopies only)
- Annual workplan April 2005 – March 2006 (excel file attached electronically)
- project leaflet (word format; attached electronically)

## **Annex 3: Reports and Documents available on request**

- Bi-monthlies
- Extended project concept
- Annual review and planning meeting workshop protocol
- WWF-UK Technical report by Barbara Michler, Project Officer (July-December 2004)
- 1<sup>st</sup> RMTA model and flow-chart
- Workplans ( May – September 2004; September 2004- March 2005)