

Contents

1. Darwin Project Information	2
2. Project Background/Rationale	2
3. Project Summary	4
4. Scientific, Training, and Technical Assessment	6
5. Project Impacts	9
6. Project Outputs	12
7. Project Expenditure	12
8. Project Operation and Partnerships	13
9. Monitoring and Evaluation, Lesson learning	14
10. Actions taken in response to annual report reviews (if applicable)	16
11. Darwin Identity	17
12. Leverage	18
13. Sustainability and Legacy	18
14. Value for money	19
Appendix I: Project Contribution to Articles under the Convention on Biological Diversity (CBD)	20
15. Appendix II Outputs	22
16. Appendix III: Publications	26
17. Appendix IV: Darwin Contacts	28
18. Appendix V: Logical framework	29
19. Appendix VI: List of published materials and other materials enclosed with this report.	33

Darwin Initiative

Final Report

1. Darwin Project Information

Project Reference No.	162/12/029
Project title	Steppe Forward Programme: Training Conservationists for Mongolia's Future
Country	Mongolia
UK Contractor	Zoological Society of London
Partner Organisation (s)	National University of Mongolia
Darwin Grant Value	£187,921
Start/End date	1 May 2003 – 1 May 2006
Project website	www.steppeforward.com
Author(s), date	Sarah King, 15 July 2006

2. Project Background/Rationale

- Describe the location and circumstances of the project

The project is located in Mongolia, based in the capital, Ulaanbaatar, at the National University of Mongolia. Mongolia is a vast country with a relatively small population. Historically the country was isolated due to its geography, but in the 20th Century it was isolated due to its Soviet government. This resulted in a country with great natural resources that were largely undamaged. However since the Soviet withdrawal in the early 1990s and subsequent change to a market economy there has been a great increase in the number of livestock, infrastructure development and mineral extraction has expanded, and almost half of the population has become urbanised.

- What was the problem that the project aimed to address?

The biodiversity of Mongolia is at threat from unregulated mining and illegal hunting of wildlife, as well as a huge increase in livestock numbers over the past 20 years. Despite this, there is a great desire to conserve biodiversity – the government has pledged to have 30% of its territory as protected areas. However with little training available on modern ecological methods it is hard for local scientists to conduct research to western standards. This project aimed to address these problems by training Mongolians at different levels of society, from herders to students to environmental professionals, how to gather ecological data that can then be analysed and used to show change. The project also worked with students and communities to raise awareness of issues affecting biodiversity in Mongolia.

- Who identified the need for this project and what evidence is there for a demand for this work and a commitment from the local partner?

The need for this project arose out of discussions between Kate Oddie (the project proponent), lecturers at the National University of Mongolia and other conservation personnel working in Mongolia. The thirst for knowledge by professionals and students alike showed the need for further training here – most training courses were filled to capacity and when training has been offered to local people and rangers there has always been a good response. The lack of foreign literature available and techniques being applied meant that most local ecological research was being carried out ineffectively, and when conducted by foreign researchers the results tended to leave the country. Commitment from the local partner has been shown by the interest and involvement in project activities, and by their substantial in-kind and financial donations.

3. Project Summary

- What were the purpose and objectives (or outputs) of the project? Please include the project logical framework as an appendix if this formed part of the original project proposal/schedule and report against it. If the logframe has been changed in the meantime, please indicate against which version you are reporting and include it with your report.

The Steppe Forward Programme aims to empower Mongolians to create and manage conservation programmes by providing them with the tools necessary to design and monitor their own conservation initiatives, assess wildlife populations and design ecological studies.

See Appendix V for logical framework. Publications and training materials enclosed are listed in Appendix VI.

Main outputs since inception:

- Seven ecological field courses organised (reports enclosed); 127 Mongolian undergraduate students have received advanced ecological training on field courses. 17 National Park and Special Protected Area rangers were also trained (report enclosed). Fifty-seven alumni of the field courses went on to get jobs in research projects in 2004 and 2005.
- Teachers from every soum (village) in Omnogovi aimag (province) received training to teach ecology (report enclosed).
- Six issues of the Mongolian Journal of Biological Sciences have been published (enclosed).
- Twenty-seven monthly networking events (Biobeers) have been held (between December 2003 and June 2006).
- The newsgroup MongolBioweb, designed to facilitate communication and news sharing between different groups working in Mongolia, currently has a growing list of 238 members and has had 228 posts since April 2003.
- The undergraduate conservation (Ecology and Erdem) club has over 100 members and runs activities every month. A colour newsletter was produced (enclosed) Seven articles on their activities have appeared in newspapers and three on TV. They also won the university prize for best student club in 2004.
- Documents containing funding opportunities and conservation organisations working in Mongolia (enclosed on CD) are available from the website, as well as other resources about free software and useful links.

- The Steppe Forward Programme has been in 15 newspaper articles, four radio interviews, two television interviews and in an article on BBC news online. Seven reports have been produced.
 - The community project has been very successful with establishment of seven community groups. Experience sharing workshops have been conducted for these groups (reports enclosed) and three mobile forums teaching them about ecology have taken place. A photo guide to the fauna and flora of the south Gobi was produced (enclosed), and is used by eco-herders (ecological monitors) living inside and outside Gobi Gurvan Saikhan National Park to monitor the wildlife (database enclosed on CD). Forty eco-herders were trained by two students in 2005, and this project is ongoing with six students in two areas in 2006.
 - By its reputation and presence in Mongolia, the Steppe Forward Programme has been able to leverage new grants. These include grants from the World Bank Netherlands-Mongolia Trust Fund (NEMO) for a Mongolian Biodiversity Databank, and for bank and environmental consultancy refresher training, and also a Whitley Award to Jargal Jamsranjav to conduct a community project.
 - The Mongolian Biodiversity Databank workshop trained over 70 Mongolian fish and mammals specialists in assessing species using IUCN Categories and Criteria. It also generated a large amount of publicity as one result was that the Przewalski horse was recommended for downlisting from extinct in the wild to endangered under IUCN categories. Three articles were published on the proceedings of the workshop and a red book and booklet of Conservation action Plans for threatened species has been published (enclosed).
 - Forty-two environmental consultants were given refresher training in methods of conducting Environmental Impact Assessments, forming a list of recommendations for the government. Twenty-six bank credit line officials were trained in how to make their banks 'greener' by giving preferential loans to companies that follow environmental guidelines. Training materials are enclosed on a CD.
- Were the original objectives or operational plan modified during the project period? If significant changes were made, for what reason, and when were they approved by the Darwin Secretariat?

No significant changes were made, except for addition of new projects.

- Which of the Articles under the Convention on Biological Diversity (CBD) best describe the project? Summaries of the most relevant Articles to Darwin Projects are presented in Appendix I.

The project directly aided implementation of the CBD by establishing and maintaining programmes for scientific and technical education and training in measures for the conservation and sustainable use of biodiversity (Article 12), and allowing exchange of scientific and technical information (Article 17) through creation and continuation of the Mongolian Journal of Biological Sciences. Through the community project, the programme followed Article 8 by promoting environmentally sound and sustainable development in areas adjacent to protected areas, and through its training work and discussion with communities emphasised the importance of protecting ecosystems, natural habitats and viable populations of species. The programme promoted and co-operated in the use of scientific advances in research in developing conservation measures (Article 12). Programme activities, both directly and through training provided, allowed Mongolian professionals to uphold Article 14 – carry out impact assessment and produce scientifically and socially viable strategies to minimise adverse impacts. The programme directly encouraged understanding and importance of measures required for

biological conservation, produced educational material and initiated public awareness programmes with respect to conservation and sustainable use of biodiversity (Article 13). Field courses, including scientific project work, were carried out in three of the thematic programme areas (dry/sub-humid lands, forest and inland waters) with community projects focused in dry/sub-humid lands intended as model community conservation initiatives for other ecosystems in Mongolia. Central to the project were the initiatives cross-cutting the thematic programmes, namely specialised education, raising public awareness and general education, and use of traditional knowledge and practices.

- Briefly discuss how successful the project was in terms of meeting its objectives. What objectives were not or only partly achieved, and have there been significant additional accomplishments?

The project was successful in meeting its main objective – over 100 students were trained in ecological techniques and about half of these students achieved jobs in conservation, either temporary or permanent. Mongolian lecturers did not participate on the field courses, so training of this sector was limited to interactions within the university and on other courses. The field courses are now an established part of the university calendar and will continue.

The community project has been very successful with seven herder groups established and 40 trained eco-herders. In addition work has been carried out training South Gobi Protected Area Administration staff and members of the Buffer Zone council. The herder groups are now actively creating and running their own conservation projects and working towards more sustainable livelihoods.

There has been less success in producing the books on time. Both the primary school book and the ecological census techniques book are still in production and will be published in 2006. The English version of the primary school book has been completed (enclosed on CD), and is currently being translated (completion due 30 September 2006). The census techniques book has one chapter remaining to be translated, and will be published by the end of November 2006 (Mongolian draft to date enclosed on CD). During the project additional funding was raised to produce field guides to the birds of Mongolia and to the tracks and signs of Mongolian mammals. Writing of these guides is ongoing.

Additional accomplishments included running a workshop where all Mongolian mammal and fish species were assessed using IUCN Categories and Criteria. As well as producing a red book and Conservation Action Plans in English and Mongolian, over 100 Mongolian students and scientists were trained in how to apply the Categories and Criteria. Another accomplishment was running a course for environmental consultants and bank credit line professionals. This training focussed on improving the Environmental Impact Assessment process in Mongolia, and on encouraging banks to make their loan process 'greener'.

4. Scientific, Training, and Technical Assessment

- Please provide a full account of the project's research, training, and/or technical work.
- **Research** - this should include details of staff, methodology, findings and the extent to which research findings have been subject to peer review.

On all summer ecology field courses research was conducted by students and by lecturers teaching on the courses. The students completed an assessed 3 day project at the end of each field course, generally in groups of three. This research covered a variety of topics depending on the surrounding fauna and flora. Examples include: nesting behaviour of various bird species, habitat preference and abundance of small mammals, ant foraging patterns, and vegetation changes along a gradient. All student reports were appended to the field course reports.

Prof. David Houston and Dr Lluís Brotons taught the 2003 Gobi field course. In 2004 and 2005 translation of all lectures and practicals was conducted primarily by Ms. Jargal Jamsranjav. Dr. Dawn Scott and Dr. Chris Magin, Dr. David Sheppard and Dr. Barry Rosenbaum, and Dr. Rob Robinson and Dr. Nigel Barton taught the 2004 field courses, with assistance from Ms. Jargal Jamsranjav. In 2005 field courses were taught by Dr. Joanne Isaac and Dr. Paul Craze, Dr. Stephen Waite and Mr. Jon Poulter, and Dr. Mike Brooke and Ms. Stephanie Walker, with additional lectures from Dr. Sarah King and Ms. Jargal Jamsranjav and assisted by Ms. Lucy Simpson and Ms. Oyunchimeg Sharav.

Dawn Scott and a group of students on the 2004 Gobi field course conducted research into 'A comparison of the diet of two desert-living owls, the long eared owl *Asio otus* and little owl *Athene noctua* from southern Mongolia'. Pellets were collected from under trees within 3km of the study site. Prey species from 334 long eared owl pellets and 52 little owl pellets were identified from the skull and/or dentaries. Main findings were that the niches of the two owl species were separated by diet: long eared owls consumed a high proportion of small mammal species; little owls consumed more insects but had a greater niche breadth. Results of this study were published as a 'Note from the field' in volume 3(1) of the Mongolian Journal of Biological Sciences.

Joanne Isaac and a group of students conducted a study in 2005 on 'Small mammals of the Mongolian mountain steppe region near Erdensant: insights from live-trapping and bird pellet remains'. Fifty Sherman traps were set in a grid covering micro-habitats including shrub and grasses. Traps were checked every two hours during the day. Temperature was shown to affect trapping success, with small mammals being less active at temperatures over 20°C. Although sample sizes were small, there were some differences in the temporal and spatial use of habitat – pika and voles were more active during the day, yet tended to be found in different micro-habitats; hamsters were only caught at night. Results of this study were published as a 'Note from the field' in volume 3(2) of the Mongolian Journal of Biological Sciences.

Research was conducted by two National University of Mongolia students and 40 trained 'eco-herders' examining differences in several parameters between areas inside and outside Gobi Gurvansaikhan National Park during summer 2005. Argali and ibex presence was noted on vantage point surveys every 10 days, livestock of each family in the area was counted and dung along 350 10m transects was quantified. Biomass was calculated by measuring plant cover and height within random quadrats. Argali and ibex were more abundant within the national park, with greater biomass also found within the park. Livestock and dung counts showed that more livestock were found outside the park than inside, although livestock were present within the national park. In addition local communities were surveyed about their attitudes to khulan and wolves. These results were produced as Bachelor degree theses by the students and will be repeated in 2006, with eco-herders gathering data year round. Continued work will form the Masters research of the students; results will also be published in a peer-reviewed journal.

Jargal Jamsranjav conducted a Participatory Rural Appraisal (PRA) in 2004 as part of the community project funded by a Whitley Award. The aim of the PRA was to examine sources of income and direction of expenditure, as well as poverty level of the families.

In addition groups were asked to assess climatic factors and animal abundance over the last ten years and to produce a calendar showing fuel use over the year (type of fuel and how much used). Results of this study were produced in a report and will be published in a peer-reviewed journal.

The threatened status of all Mongolian mammal and fish species was assessed, along with their distribution and abundance. This project was led by Dr. Jonathan Baillie and involved all SFP staff – Sarah King, Oyunchimeg Sharav, Jargal Jamsranjav and Lucy Simpson, as well as Emma Clark and Joanne Ocock from ZSL and Munkhbat Javjansuren. During a five day workshop specialists entered information on mammal and fish species into a database and made assessments on their threat status using IUCN Categories and Criteria. Of the 128 native Mongolian mammals assessed, 17% were found to be regionally threatened, with a further 5% near threatened (NT). Two species were Critically Endangered (CE): red deer *Cervus elaphus*, and the Gobi bear *Ursus arctos gobiensis*. Sixty-four species of fish were assessed, of which 22% were threatened and 6% near threatened. Siberian sturgeon *Acipenser baeri* was the only Critically Endangered fish species. A summary of the workshop results was published in three reviewed papers in the Mongolian Journal of Biological Sciences, volume 3(2). Full results of the red list and Action Plans have been produced as books in English and Mongolian.

Training and capacity building activities – this should include information on selection criteria, content, assessment and accreditation.

Field courses were run between 2003 and 2005 for 127 Mongolian undergraduates of the National University of Mongolia. A further 40 students will attend field courses in 2006. Students were selected based on their academic performance and level of English. The courses lasted for three weeks and covered various aspects of ecology, with desert field courses focussing on desert ecology and census techniques, taiga courses covering research design and data analysis, and the steppe course teaching about behavioural ecology concepts. All courses included classes teaching about statistics and how to design and implement research projects. This was then put to the test during the final week when students conducted their own project. Students were assessed on the quality of a presentation to other members of the course and local people, and on the quality of the written report of their project. SFP staff on the courses assessed the students, and they were assessed by NUM lecturers during a seminar in the fall semester. The field courses were accredited by the NUM.

Ecological training was given to rangers of Khovsgol National Park and Khan Khentii and South Gobi Special Protected Areas who attended the undergraduate field courses. South Gobi Protected Area rangers attended the field course in 2004, but in 2005 were later given additional, more specific, training about simple ecological concepts and ways to protect the biodiversity of the south Gobi. Similar training was given to other Protected Area staff and to members of the South Gobi Buffer Zone Council.

Various courses were conducted for members of herder groups created for the community project. A felt crafts and dairy product training was organised. These courses taught how to create additional products from resources available to the groups. The courses were intended to diversify income of the herders - felt crafts could be given as gifts or sold to tourists, and dairy products can be consumed during Tsagaan Sar (Mongolian new year) or also given as gifts to other families. Mobile forums were conducted – taking simple ecological information to the herder groups. These forums taught about ecological principals, evolution, and deserts on a global scale, as well as how rare some Gobi species were.

Ecology teacher training was conducted in 2004 for all teachers in Omnogovi aimag.

Over 100 Mongolian students and scientists were trained in use of the IUCN Categories and Criteria. Over 70 Mongolian and international scientists were invited to the Mongolian Biodiversity Databank workshop. All were trained over one day in how to use the Categories and Criteria and the implications of their assessment.

A two-week training course was organised for environmental consultants. All registered environmental consultants, members of the Ministry of Nature and Environment and conservation NGOs were invited. Fifty people attended on one or more days, with 42 people passing all assignments (written exam, debate and presentation) and so given a certificate. Two British consultants and three local specialists taught the course, with additional lectures given by local guest speakers. The course focussed on how the EIA process can be improved within Mongolia by giving examples of best practice from around the world, followed by a discussion among participants. Subjects covered included EIA Procedures – Screening, Scoping, Baseline studies, Alternatives, Mitigation and Monitoring, Cumulative Effects Assessment, Strategic Environmental Assessment, Environmental risk, Water application in EIA and Ecological Impact Assessment. There were also site visits to a power station, tannery and waste water processing plant. All course materials were given to participants on a CD. This can form the basis of future courses. In addition a document of recommendations for improving EIA in Mongolia, which arose out of discussions was produced and given to the Mongolian Ministry of Nature and Environment (MNE) and the Mongolian Association of Impact Assessors (AIA).

A one-week course was organised for bank credit line professionals, with additional mentoring of banks conducted after the course. All banks were invited, plus members of the professional inspectorate, MNE and conservation NGOs. Forty people attended the training, with 33 people taking all assignments (presentation, written and multiple choice exam); a further seventy people were trained during the mentoring. Training was conducted by a British consultant resident in Mongolia, and assisted by two local specialists and relevant guest speakers. The focus of the course was to expose banks to environmental problems in Mongolia, how these could be alleviated by preferential loans to greener companies, and implementing green guidelines within the bank policies. The course covered main topics of environmental concern such as tanneries, placer gold mining and atmospheric emissions, introduction to the basics of EIA, environmental auditing and compliance, introduction to the stance of international donors and foreign investors with an emphasis on BAT, use of 'model' environmental guidelines for donor-driven credit lines via local banks, plus additional material on GEF, Carbon Trading, Equator Principles etc. All course materials, plus a great deal of additional information, were compiled on to a 'Green Bank CD' which was widely distributed.

Work was conducted with students at the NUM to develop the capacity of the conservation club. Students were assisted in seeking funding for their activities and given help in organising conferences, trips, and environmental activities.

To help build capacity of Mongolian scientists we produced the Mongolian Journal of Biological Sciences. This journal publishes peer-reviewed articles of scientific research carried out in Mongolia. It therefore provides a platform for Mongolian researchers to show their work, and provides an avenue by which foreign researchers can publish their results for a Mongolian audience.

5. Project Impacts

- What evidence is there that project achievements have led to the accomplishment of the project purpose? Has achievement of objectives/outputs resulted in other, unexpected impacts?

Four students went on to do a masters degree in the conservation field, with at least two students preparing to start a masters in 2006. Fifty-seven students achieved permanent or temporary jobs. Each of these students has put the skills learnt on the field course to use to further their careers and to conduct ecological research in Mongolia. They have been equipped with analytical skills that would otherwise not have been fostered.

The Conservation Club has been very successful at running events aimed at conservation within Mongolia and the empowerment of young people towards this end. With surprisingly little financial support and guidance they have run several large conferences and gained a lot of publicity.

Members of the community project have created their own projects and are actively working to conserve local wildlife by placing signs around protected areas, informing protected area staff about poachers and avoiding direct competition with wildlife at water sources by locating their camp a short distance away. Each of these activities was initiated by the people themselves as a direct result of what they learnt during the mobile forums and community meetings.

By conducting the Mongolian Biodiversity Databank workshop we were able to gather together specialists on Mongolian mammal and fish species who volunteered their information about these species. We were therefore able to form updated taxonomic lists and gain baseline data about these species. An output of this project also resulted in the first ever book containing pictures and distribution maps of all Mongolian mammal species.

- To what extent has the project achieved its purpose, i.e. how has it helped the host country to meet its obligations under the Biodiversity Convention (CBD), or what indication is there that it is likely to do so in the future? Information should be provided on plans, actions or policies by the host institution and government resulting directly from the project that building on new skills and research findings.

This project has worked towards the CBD by helping build capacity of young biologists and improving the awareness of other sectors such as environmental consultants and bank credit line professionals. Environmental consultants are now in a position to advocate change in the EIA laws, making them more in line with the rest of the world. It has assisted with the strengthening of the protected area system by working with the people living in these areas, training rangers and increasing capacity of protected area administrations and buffer zone councils. The community project has also enabled greater sustainable resource use by local people. Research is ongoing at NUM into the fauna and flora of Mongolia and baseline data on mammal and fish species distribution and abundance was collated. Collaboration with international institutions and NGOs help maintain the effectiveness of research surveys and additional training given by this project and the increased awareness it has initiated also add to the effectiveness.

The government has produced few plans to meet its obligations under the CBD. There has been recent turmoil in the government resulting in many staff changes in the MNE. There continue to be problems of corruption and few trained biologists working in the ministry. Although there have been some amendments to conservation laws it is hard to see any direct action by the government towards protection of the natural resources of the country. Almost all of these activities continue to be run and funded by national and international NGOs.

- Please complete the table in Appendix I to show the contribution made by different components of the project to the measures for biodiversity conservation defined in the CBD Articles.

- If there were training or capacity building elements to the project, to what extent has this improved local capacity to further biodiversity work in the host country and what is the evidence for this? Where possible, please provide information on what each student / trainee is now doing (or what they expect to be doing in the longer term).

Students: Of the nearly 200 students trained, 57 went on to get jobs or further academic qualifications in the biological field. Some of these jobs were summer placements with international scientific expeditions or projects, but 11 students have gone on to do a graduate degree in ecology. These students have been equipped with modern ecological techniques and knowledge of data analysis. The fact that these students have been hired shows how employers value these skills, and the fact that the students sought these positions shows how they have been motivated to continue in this field.

Scientists: Over 70 scientists were trained in IUCN Categories and Criteria, and others have been informed about conservation and ecological concepts through attending Biobeers, and general contact with SFP activities. The Mongolian Biodiversity Databank workshop highlighted the lack of knowledge on some species, and the fact that even relatively well studied species had some aspects of their ecology that was not known. By training these scientists in application of the IUCN Categories and Criteria they can make sure to fill these gaps in knowledge and so work towards better conservation of the species. These scientists continue to work for their organisations, such as NUM and the Academy of Sciences, as well as NGOs such as WCS and WWF. It is still early in the process to show direct impact of the training, but the enthusiasm and motivation engendered is a positive step.

Consultants and bank credit line professionals: Training of these sectors can help reduce the environmental impact of development in Mongolia through education in current issues affecting biodiversity and how these can be ameliorated.

School teachers, herders and protected area workers: Most of those taught about ecology in the south Gobi remain there, continuing to pass on the information to others around them. By training some herders as ecological monitors it has motivated them to take more steps towards the conservation of their local wildlife, working to prevent poaching and mitigate competition.

- Discuss the impact of the project in terms of collaboration to date between UK and local partner. What impact has the project made on local collaboration such as improved links between Governmental and civil society groups?

UK lecturers have provided an invaluable input to the field courses, sharing their expertise with Mongolian students. The Mongolian Biodiversity Databank project would not have been possible without the collaboration between ZSL and NUM. ZSL were able to locate the funds and gain support of international scientists, while NUM provided an institutional framework and local expertise. In addition the Mongolian Biodiversity Databank itself will remain at NUM. There are very few British environmental projects running in Mongolia, so this project helped increase the profile of NUM internationally by bringing in foreign specialists, but also helped increase the presence of the UK in Mongolia.

Collaboration between the government and EIA and bank sectors were critical for the environmental consultants and bank credit line professionals training courses. Success of this course was dependant on professional bodies from the sectors having increased communication with government officials. This was achieved through instigating meetings and fostering a Mongolian Association of Impact Assessors.

- In terms of social impact, who has benefited from the project? Has the project had (or is likely to result in) an unexpected positive or negative impact on individuals or local communities? What are the indicators for this and how were they measured?

Students and members of the community groups in the south Gobi have been the main people to benefit from the project. Both have gained from the capacity building elements of the project and are now more able to go further in their careers or to diversify their income respectively. The project has had an unexpectedly positive impact on the community around Nomgon soum in the south Gobi – we initially only expected to establish three community groups but there was such a response from the local people that seven were established. These people have benefited from training in dairy and felt crafts and through being mobilised to work together to fix wells and build corrals. Indicators of success include students attending several field courses and going on to get jobs in the conservation field, and for herders success is shown by their creating conservation projects and reducing poaching in the area.

6. Project Outputs

- Quantify all project outputs in the table in Appendix II using the coding and format of the Darwin Initiative Standard Output Measures.
- Explain differences in actual outputs against those in the agreed schedule, i.e. what outputs were not achieved or only partly achieved? Were additional outputs achieved? Give details in the table in Appendix II.
- Provide full details in Appendix III of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Details will be recorded on the Darwin Monitoring Website database.
- How has information relating to project outputs and outcomes been disseminated, and who was/is the target audience? Will this continue or develop after project completion and, if so, who will be responsible and bear the cost of further information dissemination?

The Mongolian Journal of Biological Sciences was disseminated through the NUM and Biobeers networking events, as well as by word of mouth and advertisement on international listserves. The target audience was conservationists and scientists working in Mongolia, or those interested in this. We achieved a list of 28 annual subscribers, including exchanges with five organisations, and 122 issues have been sold. Prof. Bayartogtokh of NUM has been co-editor since the journal began, and will now assume a greater role. Responsibility and financial commitments for the publication of this journal has now been assumed by NUM.

The picture guide to Gobi fauna and flora was given to all eco-herders and rangers in the south Gobi and used as a guide for the students. Copies will continue to be disseminated as part of the community project.

Reports and other information about the project was disseminated on the website, either directly or as downloadable pdfs. Field course reports and reports from the community project were intended for use by the university and other organisations as a template of how the training was conducted and what was achieved.

7. Project Expenditure

- Tabulate grant expenditure using the categories in the original application/schedule.

	2003/2004	2004/2005	2005/2006

- Highlight agreed changes to the budget.
- Explain any variation in expenditure where this is +/- 10% of the budget.

All changes to the budget and movement between budget lines had prior agreement from the Darwin Initiative. In year 1 an underspend in capital items was used to offset the higher than expected salary costs, as extra Mongolian staff were needed. In year 3 the previous underspend in rent and salaries was used to offset travel costs, which were higher than expected due to increases in airfares. Printing costs were not used in previous years, so were added to this year. An overall underspend has been used to help the project over the following three months.

8. Project Operation and Partnerships

- How many local partners worked on project activities and how does this differ from initial plans for partnerships? Who were the main partners and the most active partners, and what is their role in biodiversity issues? How were partners involved in project planning and implementation? Were plans modified significantly in response to local consultation?

The main project partner was the National University of Mongolia, as initially planned. Of lecturers at this institution Prof. Samiya (Vice-president), Prof. Bayartogtokh (Head of Zoology Department), Prof. Tsogobadrakh (Dean of Biology Faculty), Dr. Gombobaatar and Mr. Batsaikhan have been particularly active. These individuals are all active in research on various aspects of biodiversity within Mongolia, particularly mammal and bird research. Samiya is also present on many panels and advisory committees and is an eminent figure in the conservation field of Mongolia. These people were consulted in the planning stages of the project and helped shape the idea of the proposal. Each of those named is a member of the steering committee and so has been consulted during implementation of the project and consulted for advice when necessary.

We worked in collaboration with Development Steppes, a local NGO, on the environmental consultant and bank training; they helped administer the grant from the Open Society Foundation. This NGO is an organisation committed to improving the effectiveness of NGOs and small and medium sized enterprises in Mongolia.

- During the project lifetime, what collaboration existed with similar projects (Darwin or other) elsewhere in the host country? Was there consultation with the host country Biodiversity Strategy (BS) Office?

No other Darwin projects are currently running in Mongolia.

A collaborative agreement has been signed between the Zoological Society of London (ZSL) and the Wildlife Conservation Society (WCS). Regular meetings occurred between the project leader (representing ZSL) and the WCS Mongolia country director, Dr. Peter Zahler, subsequently Dr. Amanda Fine. In particular we collaborate when running Biobeers, a monthly networking event for people interested in conservation in Mongolia. The funding for this is provided by WCS, with SFP organising the lectures and providing the equipment.

Ties have been made with WWF when using their staff as guest speakers on training courses and when discussing collaboration on future projects.

SFP has helped the local Association of Environmental Impact Assessment consultants become more established and to have a higher code of ethics. Further collaboration with this association is likely, training them on the impact of industry on Mongolian biodiversity.

Meetings were held with Ms. Oyundar, the Mongolian representative of CBD to discuss project progress and future activities. In addition, meetings were held with Mr. Banzragch, Head of Sustainable Development. The Steppe Forward Programme and its activities are well known by other representatives of the Ministry of Nature and Environment.

- How many international partners participated in project activities? Provide names of main international partners.

The main international partner was the Zoological Society of London. This organisation administered the Darwin Initiative funding and provided some of the personnel to run the Mongolian Biodiversity Databank project. In addition lecturers from 13 universities or conservation organisations taught on the field courses, contributing their time as volunteers. When first starting, the community project was assisted by the Initiative for People Centred Conservation (IPECON), part of the New Zealand Nature Institute (NZNI).

- To your knowledge, have the local partnerships been active after the end of the Darwin Project and what is the level of their participation with the local biodiversity strategy process and other local Government activities? Is more community participation needed and is there a role for the private sector?

The Steppe Forward Programme continues to have a good relationship with and to receive support from NUM. Lecturers from the university are advisors on many projects and so therefore ultimately advise the government on biodiversity strategy.

One of the strongest aspects of this project has been the community project. There are several community group projects in Mongolia working towards range management and sustainable livelihoods, but only the project developed by SFP focuses on conservation and using local people as wildlife monitors. Community participation in wildlife conservation is vital for the future of Mongolian biodiversity. Over half the population of Mongolia still lives a nomadic lifestyle and so are in

direct contact with nature. It is these people who are in a position to have the greatest impact on the wildlife, whether positive or negative.

There are nearly 4,000 NGOs in Mongolia, less than 20% of which are involved in conservation. There is room for the private sector to conduct research and work towards conservation of biodiversity, but rather than individual projects, efforts would be better put towards collaboration.

9. Monitoring and Evaluation, Lesson learning

- Please explain your strategy for monitoring and evaluation (M&E) and give an outline of results. How does this **demonstrate** the value of the project? E.g. what baseline information was collected (e.g. scientific, social, economic), milestones in the project design, and indicators to identify your achievements (at purpose and goal level).

Regular steering committee meetings were held. These monitored field course structure and content and evaluated the success of courses each year. In addition the steering committee members monitored other activities of the project and provided suggestions for improvement and direction. Field courses were evaluated by questionnaires filled out by students and foreign lecturers. Results of these questionnaires were discussed with the steering committee and included in the field course report, then applied in the subsequent year as much as possible. Additionally each group of students had to produce a report on their project work and present this to the entire group. These projects and presentations were evaluated by project staff, and also by university lecturers during seminars the following semester. Success of the field courses was demonstrated by increasing student applications and attendance and the support shown by the university in terms of time and finances. Ultimate aims of the field courses – to provide students with skills to help further them in a career in the conservation field – were shown by students attaining jobs with field research teams and graduate programmes.

Other courses run (ecology teacher training, training of environmental consultants and bank loan officials, training of specialists in applying IUCN Categories and Criteria) were also evaluated by feedback forms after the course. These forms will enable future courses to be even better tailored for the participants. The forms also showed the value of the courses, either as the participants had not previously received training, or by their desire for future courses.

Success of the community project has been demonstrated by its expansion, and continuation funding from the Whitley Fund for Nature to Jargal Jamsranjav. Community groups formed remain active and more groups are being formed. Eco-herders continue to gather data and enthusiasm for wildlife conservation has been generated in the area. The groups have initiated activities, such as tree planting and litter picking and appear to be actively protecting animals against poachers.

Subscriptions and individual purchases of the journal continue to increase, as well as the number of submissions. This shows the value of the journal among the Mongolian scientific community. The university will now cover the costs of the journal, demonstrating their value of the publication.

The conservation club continues to expand their membership and have put on activities almost every month despite annual change in leadership. This shows that the motivation comes from the club membership, and not just personalities running the club.

- What were the main problems and what steps were taken to overcome them?

One of the main problems was incorporation of Mongolian lecturers in field courses. One part of this problem was Mongolian organisation – simply getting lecturers to commit – in 2005 lecturers had agreed to teach on each of the courses, but then backed out at the last minute. Probably the main reason lecturers did not teach on our courses was due to lack of compensation and time. Payment was offered for lecturers in 2006, but there was still little interest. Most lecturers are required to teach on the university compulsory course; the rest of the summer is then the only time available for them to conduct their own field research, or to make more money than we are able to offer by working for other international research projects.

Finding suitable staff for the project was a continuous problem. It was very hard to find Mongolians who had sufficient English, experience and biological training – illustrative of the problems this project set out to address. In addition it was hard to find people willing or able to translate the outputs. Mongolians with sufficient technical language to translate the books are generally already employed in full time jobs with little time to take on extra work, especially at the rates we were able to pay. During production of the Ecological Census Techniques book several people promised their time, but then did not complete the work. To overcome this problem in other instances payment was offered and a contract made for the work.

Producing the journal exactly on a 6 monthly basis proved difficult. Although submissions are made, they frequently require a lot more work to be done before they are of a publishable standard, thus slowing the process considerably. It is also difficult to receive sufficient numbers of manuscripts in the proposed time frame. There was a substantial delay in production of Volume 3 Issue 1, due to changeover in project leadership, but Issue 2 was produced 6 months later by chasing of authors and reviewers. Manuscripts for the next issue are currently under review or are being re-written by the authors.

It remains a problem to work with the government. Although meetings with MNE were generally receptive and congenial there was rarely a motivation for change, as few staff have biological training and there has been a recent instability and subsequent turnover in personnel.

- During the project period, has there been an internal or external evaluation of the work or are there any plans for this?

Project counterparts were evaluated by the project leader, and outputs were assessed by ZSL when the project leader's contract was renewed.

- What are the key lessons to be drawn from the experience of this project? We would welcome your comments on any broader lessons for Darwin Initiative as a programme or practical lessons that could be valuable to other projects, as we would like to present this information on a website page.

One of the key lessons learned was that it is not productive to spoon feed those involved in the project. When activities were suggested to the conservation club and actively put in place by the project team they had less success than when the club came up with their own ideas and these were then implemented with only light handed support. This was also shown during the community project – when it was made possible for the community groups to come up with their own ideas and suggestions this had greater impact than when they were told what to do, or simply given money. This shows that investment by local people in time has to at least equal that by the project for it to be ultimately effective.

Involvement of the university in as many activities as possible was very important for this project. We relied heavily on their support and goodwill, so there was a strong need to return this. We found that it helped outputs to be accomplished if people could be paid, rather than expecting already overworked lecturers to volunteer their time.

10. Actions taken in response to annual report reviews (if applicable)

- Have you responded to issues raised in the reviews of your annual reports? Have you discussed the reviews with your collaborators? Briefly summarise what actions have been taken over the lifetime of the project as a result of recommendations from previous reviews (if applicable).

The main recommendations in the first annual report were to do with the community project. Most of these comments were addressed by Jargal Jamsranjav receiving a Whitley Award, which allowed this work to be conducted to full advantage – ensuring the goodwill and investment of local communities in the project through conducting Participatory Rural Appraisal at the outset and then conducting regular meetings.

Another issue that was mentioned was the difficulty of physically receiving donated money from the university. This is more to do with the university budgetary system than with a reluctance to hand over the money, and has been addressed by project staff learning the system and how to make things move most efficiently. A problem throughout the project has been involvement of Mongolian lecturers on the field courses. Efforts made to address this have been discussed elsewhere in this report.

Student examinations were suggested by the reviewer. Formal examinations did not take place as it would have taken precious time from student projects, which were judged by project staff and the university to be adequate evaluation of what the students had learned on the course. Students were able to receive credits from the university for attending the courses and were marked on their project presentations and reports by university and project staff.

A query about monitoring and evaluation was raised in the first annual report. Every effort was made to continuously assess success, and this was reflected by a comment in the final annual report.

11. Darwin Identity

- What effort has the project made to publicise the Darwin Initiative, e.g. where did the project use the Darwin Initiative logo, promote Darwin funding opportunities or projects? Was there evidence that Darwin Fellows or Darwin Scholars/Students used these titles?

The Darwin Initiative logo was used on all publications and outputs from the project and was displayed prominently on letterheads, each of the project vehicles and on the door of the project office. Darwin funding opportunities were advertised on the MongolBioweb – a project run newsgroup. The Darwin Initiative was acknowledged in seminars, publicity materials, and all publications. The Darwin logo and details of the initiative was also provided on the project website, with links to the appropriate DEFRA pages.

- What is the understanding of Darwin Identity in the host country? Who, within the host country, is likely to be familiar with the Darwin Initiative and what evidence is there to show that people are aware of this project and the aims of the Darwin Initiative?

This project is only the second Darwin project to take place in Mongolia, therefore the Darwin Initiative has had relatively little exposure. Through use of the logo and the name throughout the project activities all those who have had contact with us are aware of the Initiative. In addition the government and international NGOs present in Mongolia are familiar with the Darwin Initiative. Evidence of wider awareness of the project is shown by frequent emails from people who visited the website or who heard about our activities through the MongolBioweb.

- Considering the project in the context of biodiversity conservation in the host country, did it form part of a larger programme or was it recognised as a distinct project with a clear identity?

The Steppe Forward Programme was recognised as a distinct project with a clear identity. Through collaboration with the university, involvement on many different projects, and running of Biobeers and the MongolBioweb we are well known in the conservation community.

12. Leverage

- During the lifetime of the project, what additional funds were attracted to biodiversity work associated with the project, including additional investment by partners?

Community project - Whitley Fund for Nature provided £30,000 to Jargal Jamsranjav for the community project, plus an additional £30,000 for continuation funding to November 2007.

Mongolian Biodiversity Databank – \$80,000 from the World Bank

Environmental training for consultants and bank credit line professionals - \$50,000

Field guide to the birds of Mongolia - \$18,000 from the World Bank, \$5,000 from Denver Zoological Society and \$9,000 from ZSL, plus free use of plates and publishing in English by A&C Black publishers.

Field guide to the tracks and signs of Mongolian mammals - \$15,000 from the World Bank, \$5,000 from ZSL.

Primary School Book – 4,703,000T (about £2,000) from the British Embassy, Mongolia.

NUM provided about \$1,375 each year to assist with field course expenses. They also provided in-kind support including office space, equipment and vehicle storage and internet access.

- What efforts were made by UK project staff to strengthen the capacity of partners to secure further funds for similar work in the host country and were attempts made to capture funds from international donors?

Full assistance was given to Jargal Jamsranjav in completing her successful Whitley Award application. Further applications are currently in process for work with Ivanhoe mining company and for a UNEP GEF. In each of these applications every effort was made to get the support and involvement of the university.

13. Sustainability and Legacy

- What project achievements are most likely to endure? What will happen to project staff and resources after the project ends? Are partners likely to keep in touch?

The Mongolian Journal of Biological Sciences is likely to endure as it has such support from the university, especially the co-editor Bayartogtokh. The MongolBioweb and Biobeers are relatively easy to sustain so will continue with the assistance of WCS. The community project goes from strength to strength and efforts are being made to make it sustainable beyond the project. As community funds are being established, and the people have realised the benefits of working as a group continuation is likely.

The field courses will continue as they are now considered part of the university calendar. The university suggested combining the SFP courses with the university compulsory courses. This is a possibility to be attempted in 2007, but without lecturers being fully aware of what is accomplished on SFP field courses the differences in expectations from foreign and local lecturers may make this less satisfactory in practice. Efforts were made to include foreign students on the 2006 field courses, with little response (one student confirmed). In 2007 further effort should be made for foreign students to join, thereby covering the costs of the course, and the Trust for Mutual Understanding can be approached to cover lecturer flight costs. A detailed protocol describing how the courses have been run and what is needed has been written for the university.

The project is seeking additional funds (UNEP GEF) to continue, although the focus of the project will change slightly. Equipment bought or donated to be left with the university is already being regularly used by university staff, and access to the equipment will continue until it is officially handed over. The process of having the vehicles registered under Bayartogtokh's name is already underway. Putting the vehicles under the name of a trusted lecturer, rather than NUM as a whole, allows some control to be retained over use of the vehicles.

- Have the project's conclusions and outputs been widely applied? How could legacy have been improved?

By focussing on training the projects outputs will continue as trained personnel will be able to share and apply their knowledge. Published outputs will remain in circulation, and future print runs are possible.

Legacy of the project could have been improved by including Mongolian lecturers in the field courses. They would then have gained experience in not only how to run the courses, but also on the subjects taught and how they were taught by the foreign lecturers.

- Are additional funds being sought to continue aspects of the project (funds from where and for which aspects)?

Additional funds are being sought from a UNEP GEF medium sized grant. This project would expand the community work and eco-herder work in the south Gobi, while using these experiences to work with communities in saiga habitat in western Mongolia. Communities will also assist with detailed ecological work of the saiga, and khulan in the south Gobi. Funds will be allocated to continue working with the university to train students and lecturers.

14. Value for money

- Considering the costs and benefits of the project, how do you rate the project in terms of value for money and what evidence do you have to support these conclusions?

The project had good value for money as salary and running costs in Mongolia are cheap on a European scale. This meant that much more could be accomplished from the available budget than if this project had taken place in the west. The project was able to accomplish a lot and support a variety of projects while ending with an underspend.

Appendix I: Project Contribution to Articles under the Convention on Biological Diversity (CBD)

Please complete the table below to show the extent of project contribution to the different measures for biodiversity conservation defined in the CBD Articles. This will enable us to tie Darwin projects more directly into CBD areas and to see if the underlying objective of the Darwin Initiative has been met. We have focused on CBD Articles that are most relevant to biodiversity conservation initiatives by small projects in developing countries. However, certain Articles have been omitted where they apply across the board. Where there is overlap between measures described by two different Articles, allocate the % to the most appropriate one.

Project Contribution to Articles under the Convention on Biological Diversity		
Article No./Title	Project %	Article Description
6. General Measures for Conservation & Sustainable Use	0	Develop national strategies that integrate conservation and sustainable use.
7. Identification and Monitoring	5	Identify and monitor components of biological diversity, particularly those requiring urgent conservation; identify processes and activities that have adverse effects; maintain and organise relevant data.
8. In-situ Conservation	15	Establish systems of protected areas with guidelines for selection and management; regulate biological resources, promote protection of habitats; manage areas adjacent to protected areas; restore degraded ecosystems and recovery of threatened species; control risks associated with organisms modified by biotechnology; control spread of alien species; ensure compatibility between sustainable use of resources and their conservation; protect traditional lifestyles and knowledge on biological resources.
9. Ex-situ Conservation	0	Adopt ex-situ measures to conserve and research components of biological diversity, preferably in country of origin; facilitate recovery of threatened species; regulate and manage collection of biological resources.
10. Sustainable Use of Components of Biological Diversity	5	Integrate conservation and sustainable use in national decisions; protect sustainable customary uses; support local populations to implement remedial actions; encourage co-operation between governments and the private sector.
11. Incentive Measures	10	Establish economically and socially sound incentives to conserve and promote sustainable use of biological diversity.

12. Research and Training	40	Establish programmes for scientific and technical education in identification, conservation and sustainable use of biodiversity components; promote research contributing to the conservation and sustainable use of biological diversity, particularly in developing countries (in accordance with SBSTTA recommendations).
13. Public Education and Awareness	15	Promote understanding of the importance of measures to conserve biological diversity and propagate these measures through the media; cooperate with other states and organisations in developing awareness programmes.
14. Impact Assessment and Minimizing Adverse Impacts	5	Introduce EIAs of appropriate projects and allow public participation; take into account environmental consequences of policies; exchange information on impacts beyond State boundaries and work to reduce hazards; promote emergency responses to hazards; examine mechanisms for re-dress of international damage.
15. Access to Genetic Resources	0	Whilst governments control access to their genetic resources they should also facilitate access of environmentally sound uses on mutually agreed terms; scientific research based on a country's genetic resources should ensure sharing in a fair and equitable way of results and benefits.
16. Access to and Transfer of Technology	0	Countries shall ensure access to technologies relevant to conservation and sustainable use of biodiversity under fair and most favourable terms to the source countries (subject to patents and intellectual property rights) and ensure the private sector facilitates such assess and joint development of technologies.
17. Exchange of Information	5	Countries shall facilitate information exchange and repatriation including technical scientific and socio-economic research, information on training and surveying programmes and local knowledge
19. Bio-safety Protocol	0	Countries shall take legislative, administrative or policy measures to provide for the effective participation in biotechnological research activities and to ensure all practicable measures to promote and advance priority access on a fair and equitable basis, especially where they provide the genetic resources for such research.
Total %	100%	Check % = total 100

15. Appendix II Outputs

Please quantify and briefly describe all project outputs using the coding and format of the Darwin Initiative Standard Output Measures.

Code	Total to date (reduce box)	Detail (←expand box)
Training Outputs		
4a	127 undergraduate students receiving training on field courses, 40 through conservation club activities	225 students in proposal – 25 students per course was too many for facilities available. Students were not taught about CV writing and job application skills due to PL illness and subsequent lack of time in other years.
4b	Number of training weeks provided to undergraduate students: 21 weeks during field courses, about 5 weeks during each year in other training	
4c	Number of postgraduate students receiving training (not 1-3 above): 1 on field course 2004	
4d	Number of training weeks for postgraduate students: 3 weeks	
5	2 project staff, 5 academic staff receiving other forms of long-term (>1yr) training not leading to formal qualification(i.e not categories 1-4 above)	Lecturers did not attend field courses, so were not able to train as planned. Informal guidance was given to academic staff. Mongolian project staff were trained in project management and organisation.
6a	67 rangers on field courses and training courses, 17 school teachers in ecology receiving other forms of short-term education/training (i.e not categories 1-5 above)	Trained more rangers than in proposal, but most on separate courses for South Gobi Protected Area Administration.
6b	Number of training weeks not leading to formal qualification: 17 weeks	
7	Number of types of training materials produced for use by host country(s): 4 CDs of training materials from courses 1 text book (in progress) 3 field guides (2 in progress)	'Maral's Adventures' is still in production. English version is complete (attached) but is pending translation (due Oct 06). Compilation of conservation and funding directories (attached) are ongoing. Conservation club did not direct their activities towards schools so did not produce posters.
Research Outputs		

Code	Total to date (reduce box)	Detail (←expand box)
8	Number of weeks spent by UK project staff on project work in host country(s): 177 weeks (K. Oddie: 34 weeks, N. Barton: 52 weeks, S. King: 52 weeks, field course lecturers x 13: 39 weeks total)	Number of weeks spent on the project exceeded proposal.
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (s): 1 book of Conservation Action Plans covering all threatened species	Additional to proposal
10	Number of formal documents produced to assist work related to species identification, classification and recording: Photo guide to Gobi fauna and flora	Field guide to birds of Mongolia and mammal tracks and signs in progress. Ecological field techniques book still in progress (attached) – one chapter remaining to be translated (due end Nov 06).
11a	Number of papers published or accepted for publication in peer reviewed journals: 7 (including 5 in press)	Published papers covered data collected on field courses, Mongolian Biodiversity Databank and other work. No papers have yet been published on the Gobi community surveys, but are in prep.
11b	Number of papers published or accepted for publication elsewhere	A chapter in an edited book on Desert Rangeland Conservation will be co-authored by the project leader (in prep.).
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country: 2 (Mongolian Biodiversity Databank and Eco-herder results)	Database of eco-herder data maintained as in proposal. A directory of job listings was not established, but this information is posted on MongolBioweb newsgroups and is available through its archives.

Dissemination Outputs		
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work: 3 (South Gobi SPA workshop, environmental consultant training and green bank credit line training)	
14b	Number of conferences/seminars/workshops attended at which findings from Darwin project work will be presented/ disseminated.: 17	Not specified in proposal.

15a	Number of national press releases or publicity articles in host country(s): 4 articles	7 were planned in the proposal.
15b	Number of local press releases or publicity articles in host country(s): 2 articles	Not specified in proposal.
15c	Number of national press releases or publicity articles in UK: 1 article	4 planned in proposal
15d	Number of local press releases or publicity articles in UK: 1 article	4 planned in proposal
16a	Number of issues of newsletters produced in the host country(s): 2 educational posters 1 newsletter	Planned for conservation club to produce 7 newsletters. They only produced one, but made it in colour and to cover a variety of topics.
16b	Estimated circulation of each newsletter in the host country(s): 150 copies	Exceeded proposal
17a	Number of dissemination networks established: 1 – MongolBioweb newsgroup	As in proposal.
18a	Number of national TV programmes/features in host country(s): 3 interviews	Not specified in proposal.
19a	Number of national radio interviews/features in host country(s): 1	3 planned in proposal
19b	Number of national radio interviews/features in the UK: 2 – BBC Scotland and Radio Five Live	1 planned in proposal
19d	Number of local radio interviews/features in the UK: 1 – local BBC	2 planned in proposal
Physical Outputs		
20	Estimated value (£s) of physical assets handed over to host country(s): £30,000	As in proposal
21	Number of permanent educational/training/research facilities or organisation established: Protocol for running field courses	As in proposal

23	<p>Value of additional resources raised for project: £108,695 total</p> <p>£400 (in kind) – first aid kits from DFID/FCO</p> <p>£3000 (in kind) – equipment from previous DI project in Mongolia</p> <p>£12,000 from NUM for field courses</p> <p>£670 (in kind) – environmental DVDs from Roots & Shoots</p> <p>£4,000 – electrical and office equipment from UK Company, + £1,300 freight costs from British Embassy, Mongolia</p> <p>~£8,260 towards salaries and overheads from Mongolian Biodiversity Databank project (World Bank)</p> <p>~£11,245 towards salaries, flights and equipment from EIA/bank training (World Bank)</p> <p>~£560 from journal sales and subscriptions</p> <p>~£3,200 from producing mammal field guide (World Bank)</p> <p>~£2,060 from producing bird guide (World Bank)</p> <p>~£2,000 towards Primary School Book from British Embassy Mongolia</p> <p>£30,000 Whitley Award + £30,000 continuation funding</p>	Exceeded that stated in proposal.
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16. Appendix III: Publications

Provide full details of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details, cost. Details will be recorded on the Darwin Monitoring Website Publications Database that is currently being compiled.

Mark (*) all publications and other material that you have included with this report

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (e.g. contact address, website)	Cost £
Journal*	Journal of Biological Sciences, Vols. 1(1) to 3(2)	National University of Mongolia publication, ADMON publishers, Ulaanbaatar	Steppe Forward Programme Biology Faculty National University Mongolia PO Box 46/377 Ulaanbaatar 210646 Mongolia www.steppeforward.com	22.75 per issue (back copy)
Book*	Photoguide to Fauna and Flora of the Gobi, Kh. Terbish & D. Suran (Editor: J. Jargal), 2005	ADMON publishers, Ulaanbaatar	Steppe Forward Programme Biology Faculty National University Mongolia PO Box 46/377 Ulaanbaatar 210646 Mongolia www.steppeforward.com	Free
Book*	Summary Conservation Action Plans for Mongolian Mammals. Regional Red List Series Vol. 2. Clark, E.L., Munkhbat, J., Dulamtseren, S., Baillie, J.E.M., Batsaikhan, N., King, S.R.B., Samiya, R. and Stubbe, M. (compilers and editors), 2006.	Zoological Society of London publication, ADMON publishers, Ulaanbaatar	https://library.zsl.org	Free

Book*	Mongolian Red List of Mammals. Regional Red List Series Vol. 1. Clark, E.L., Munkhbat, J., Dulamtseren, S., Baillie, J.E.M., Batsaikhan, N., Samiya, R. and Stubbe, M. (compilers and editors), 2006.	Zoological Society of London publication, ADMON publishers, Ulaanbaatar	https://library.zsl.org	Free
Newsletter*	Vidnii Ertonts (Our World)		Ecology & Erdem Club Biology Faculty National University Mongolia PO Box 46/377 Ulaanbaatar 210646 Mongolia	

17. Appendix IV: Darwin Contacts

To assist us with future evaluation work and feedback on your report, please provide contact details below.

Project Title	Steppe Forward Programme: Training Conservationists for Mongolia's Future
Ref. No.	162/12/029
UK Leader Details	
Name	Sarah King
Role within Darwin Project	Project leader
Address	Conservation Programmes, Zoological Society of London, Regent's Park London, NW1 4RY
Phone	
Fax	
Email	
Other UK Contact (if relevant)	
Name	
Role within Darwin Project	
Address	
Phone	
Fax	
Email	
Partner 1	
Name	B. Bayartogtokh
Organisation	National University of Mongolia
Role within Darwin Project	Main project partner
Address	Biology Faculty, National University of Mongolia, PO Box 46/377 Ulaanbaatar 210646 Mongolia
Fax	
Email	
Partner 2 (if relevant)	
Name	
Organisation	
Role within Darwin Project	
Address	
Fax	
Email	

18. Appendix V: Logical framework

Project summary and measurable indicators from original proposal. Progress and achievements and comments address work done during project.

<i>Project summary</i>	<i>Measurable Indicators</i>	<i>Progress and Achievements</i>	<i>Comments</i>
<p>Goal: 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"> • 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 			
<p>Purpose To build capacity for Mongolians to create their own conservation programmes by providing them with tools necessary to design and monitor conservation initiatives, assess wildlife populations and design ecological studies</p>	<p>Mongolian undergrads and rangers independently develop ecology projects and use data to successfully design and implement conservation measures. 2 projects per year refereed by international scientists developed</p>	<p>The university conservation club, formed of undergraduates, independently developed projects, although none were refereed. 57 students went on to get jobs in the conservation field, where they could also implement conservation measures.</p>	<p>Education is still not to a sufficient standard for undergrads and rangers to analyse data and implement referee standard conservation projects independently. However this may be feasible in future as trained students progress through the university.</p>
	<p>Baseline data on species and habitats collected</p>	<p>Data were collected during the field courses, including samples brought back for the museum at the university. Herders in Gobi Gurvan Saikhan National Park are also gathering monitoring data. The Mongolian Biodiversity Databank workshop enabled baseline data on Mongolian mammal and fish species to be collated into a database.</p>	

	Effective community schemes and implementation of measures for sustainable resource use. 2 community conservation projects per year initiated	Eco-herder project initiated – gathered data in summer 2005 and ongoing in 2006. Tree planting project in Nomgon soum initiated. Cohesive community groups still functioning.	Enthusiasm from local people will allow this project to continue. Further funding being sought to expand this.
Outputs			
NUM staff, students and National Park rangers able to design, implement and monitor conservation programmes in Mongolia	Approximately 5 NUM staff, 80 students and 15 park rangers trained annually in ecological monitoring techniques and their application	No NUM staff were trained in ecological monitoring techniques, but 6 were trained in IUCN Categories and Criteria. 127 students and 67 rangers were trained in ecological techniques.	Time was a limiting factor for inclusion of NUM lecturers on field courses – despite a financial incentive in 2006 it still proved difficult to get staff to confirm attendance.
Establishment of regular and ongoing field course programme in ecology for undergrads and rangers	Participation in field course development by NUM and National Park staff steering committee	South Gobi SPA request SFP staff to teach rangers additionally to planned events. Teaching of administration staff to give lectures. NUM staff participated in deciding topics on field courses during steering committee meetings. Field courses an established part of the university calendar.	
Community awareness of ecology and conservation needs	Community meetings before and after field courses	Community meetings were not held before and after field courses, but the communities were involved and attended the presentations and slide show at the end of the courses.	Community awareness of ecology conservation and needs was fostered through discussions during field courses, and through mobile forums as part of the community project.
NUM students and rangers are able to train local herders as para-ecologists collecting biodiversity data	Data collected by community groups	Two students worked with eco-herders in summer 2005 collecting biodiversity data. Further notebooks for collecting data were given to 5	This project is being expanded from Gobi Gurvansaikhan National Park to Little Gobi A Special Protected Area. Six students have been

		other families. Data collection is ongoing.	trained for data collection in 2006 and are training herders.
Gobi communities able to set up and run own conservation/alternative income initiatives	200 questionnaires collected on community needs data analysed by rangers. 4 yearly meeting weeks with Gobi communities resulting in 1 local conservation project annually.	PRA was conducted among seven herder groups in the Little Gobi B area. Five meetings with the groups took place. Conservation projects such as tree planting, fencing a spring, and moving to avoid conflict with wildlife were undertaken. Community fund established.	
NUM students able to source funding and successfully apply for conservation project grants	Undergrads successfully obtain funding or placements for biology projects, particularly in Mongolian National Parks	57 students who had attended field courses achieved jobs in the conservation sector in 2005. We established a database of excellent students, advertise the database and continue to encourage students.	In addition a list of funding sources and conservation organisations working in Mongolia is posted on our website.
NUM students able to initiate and run own conservation projects, particularly with schools in the capital	1 conservation project run and 3 conservation newsletters produced annually by students	1 newsletter produced. Sourced funding and ran conservation projects or events monthly.	
Primary school environmental story and exercise book produced and distributed	Publishers (Admon), publication date (Mar 2004) and distributors (Min of Ed) established. 800 copies produced/distributed	English version completed. Awaiting translation.	Will be published Oct 06
Ecology field techniques core text produced	Publishers (Admon), publication date (Mar 2005) established, distribution within MNU. 500 copies produced/distributed	One chapter remaining to be translated.	Will be published Nov 06
Scientific journal for biology in Mongolia published	2 peer-reviewed issues of Mongolian Journal of Biological	6 peer-reviewed issues of the Mongolian Journal of Biological	

	Sciences produced annually	Sciences produced.	
e-newsletter providing communication forum for all biology/environment/conservation bodies in Mongolia	60 notices annually distributed to over 100 already established subscribers (govt, NGO, institutes, individuals)	236 messages posted, 218 members joined.	
Publications and presentations	6 peer-reviewed scientific articles; 2 radio and 2 newspaper articles per year; 1 annual presentation and report in Mongolia; 2 articles in popular magazines and 2 public presentations annually	2 peer reviewed articles published, 5 in press, 3 radio interviews, 5 newspaper articles. Presentations made at local and International conferences and workshops.	

19. Appendix VI: List of published materials and other materials enclosed with this report

Published materials:

- Mongolian Journal of Biological Sciences, Issues 1(1), 1(2), 2(1), 2(2), 3(1), 3(2).
- Photoguide to Fauna and Flora of the Gobi. Kh. Terbish & D. Suran (Editor: J. Jargal). 2005.
- Summary Conservation Action Plans for Mongolian Mammals. Regional Red List Series Vol. 2. Clark, E.L., Munkhbat, J., Dulamtseren, S., Baillie, J.E.M., Batsaikhan, N., King, S.R.B., Samiya, R. and Stubbe, M. (compilers and editors). 2006.
- Mongolian Red List of Mammals. Regional Red List Series Vol. 1. Clark, E.L., Munkhbat, J., Dulamtseren, S., Baillie, J.E.M., Batsaikhan, N., Samiya, R. and Stubbe, M. (compilers and editors). 2006.
- Conservation (Ecology and Erdem) Club newsletter - Vidnii Ertonts (Our World)

Unpublished reports:

- Gobi 03 Ecology Field Course Report. 2003. K. Oddie.
- 2004 Field Course Report. 2004. N. Barton *et al.*
- 2005 Field Course Report. 2005. S. King *et al.*
- Ecology Teacher Training Workshop. 2003. J. Jargal.
- The Assessment Report Using Participatory Rural Appraisal in Little Gobi Strictly Protected Area. 2004. J. Jargal.
- Sustainable Natural Resource Use and Livelihood Improvement in Mongolian Gobi Desert – Dalanzadgad and Nomgon soum, Omnogobi aimag. 2004. J. Jargal.
- Sustainable Natural Resource Use and Livelihood Improvement in Mongolian Gobi – Participatory Rural Appraisal on value of wildlife among south Gobi herder groups. 2005. J. Jargal.
- Park Ranger Training Workshop. 2006. J. Jargal.

CDs:

- Refresher Training for Environmental Consultants.
- Green Bank CD.
- Eco-herder results database.
- English draft of Primary School Book.
- Mongolian translation completed to date of Ecological Census Techniques book.
- List of funding opportunities.
- List of conservation organisations active in Mongolia.