



## Darwin Initiative Final Report

To be completed with reference to the Reporting Guidance Notes for Project Leaders (<http://darwin.defra.gov.uk/resources/>) it is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

### Darwin project information

Project Reference	19-007
Project Title	Developing capacity for <i>in situ</i> conservation in Iraq
Host country(ies)	Iraq
UK Contract Holder Institution	Royal Botanic Garden Edinburgh
UK Partner Institution(s)	Nature Iraq, BirdLife International
Host Country Partner Institution(s)	Nature Iraq
Darwin Grant Value	£299,403
Start/End dates of Project	1 April 2012-31 March 2015
Project Leader Name	Anthony Miller
Project Website	<a href="http://www.iraqdarwin.org">www.iraqdarwin.org</a>
Report Author(s) and date	All partners

### 1 Project Rationale

Iraq is facing major threats to its biodiversity following years of unstable government, breakdown in traditional land management, and more recently rapid development. Almost 30 years of scientific isolation has resulted in severely limited in-country capacity to deal with these threats. At present the only non-governmental organisation in Iraq actively engaged in conservation work is Nature Iraq (NI). NI has adopted the Key Biodiversity Areas (KBA) approach for the identification of biodiversity rich regions. Since 2005 Birdlife International has been supporting this work, conducting surveys and running training courses in collaboration with NI. More recently the Centre for Middle Eastern Plants (CMEP, part of the Royal Botanic Gardens Edinburgh) has also been working with NI to develop botanical training in Iraq. These activities have involved NI staff as well as students and personnel from major Iraqi organisations with an interest in the environment, including the major Universities and Ministries in both Iraq and the Kurdish Autonomous Region (KAR).

The birds of the region are relatively well known (*Birds of the Middle East* and *Birds of Iraq* have been published) and progress in identifying KBAs based on bird data has been good with draft site descriptions published online and shortly to appear in *Key Biodiversity Areas of Iraq*. However, plants are relatively poorly known and there is a lack of appropriate identification tools. *Flora of Iraq* and *Flora Iranica*, the two floras covering the region, are almost complete. However, it has been found on recent training courses that they are linguistically and technically almost totally inaccessible to Iraqi professionals and students. Conservation work in Iraq cannot wait for the completion of these Floras or their conversion into more user-friendly formats.

To address the lack of plant data available to inform conservation planning in Iraq and to build capacity for surveying and managing biodiversity-rich areas, the project partners have together identified three overlapping and complementary areas of work.

1. Collection of botanical data to build capacity for conservation
2. Capacity building in Protected Area Management
3. Training in foundation skills in botany, ornithology and conservation

The focus of these areas of work is Peramagroon Mountain, a mountain massif in Kurdistan, which is readily accessible from Sulaimani, meets KBA criteria, and has an eco-camp established by NI which can be used as a base for field based survey, training and educational programs.



Map of Peramagroon Mountain, Kurdistan Autonomous Region, Iraq

## 2 Project Achievements

### 2.1 Outcome

The project has made significant progress in building capacity for in-situ conservation in Iraq in a number of areas: people, data availability and the development of new techniques and tools.

National Red lists are now available for Iraq's endemic plants\* and birds\*. Data on the distribution of Iraq's endemics has been used in the Ministry of Health and Environment's National Key Biodiversity Area Assessment (<http://www.natureiraq.org/draft-inventory-of-sites.html>).

Locally on Peramagroon, one of Iraq's most important KBAs, we have developed a new plant survey method and photographic profiling techniques. These have been thoroughly tested and are now awaiting publication in a peer reviewed journal along with its description as an IPA. A checklist of Peramagroon is available\*. We have developed user friendly guides to the plants\* and birds\* of the area which are an important tool in enabling the more widespread accurate identification of biodiversity.

An active and engaging environmental education programme has been operating in Peramagroon. The legacy of which has been extended by the development of a booklet – Environmental Activities for Schools: Teachers’ Toolkit for Iraq\* containing easy to use instructions and supporting notes to teachers them run activities independently. This was not one of our original outputs. A study of traditional land-use practices on Peramagroon (the first of its kind in Iraq) serves as an exemplar to raise awareness of the importance of “cultural landscapes”, the result of traditional systems developed over the last 10,000 years, have in supporting a rich and resilient biodiversity. The booklet “Peramagroon: Profile of a Kurdish Mountain”\* extends the profile of this work.

Training was achieved mainly through the online course, during workshops and a great deal by informal practical training in the field. Much of the training was delivered by NI staff. Awara Hamakhan, a talented botanist was identified on one of the field-training programmes He has now received a Darwin Fellowship and will be coming to RBGE to continue his training next year.

Verification - All outputs marked with \* are available on the project website [www.iraqdarwin.org](http://www.iraqdarwin.org).

## **2.2 Impact: achievement of positive impact on biodiversity and poverty alleviation**

**IMPACT** - Iraq is better able to assess and evaluate priority areas for conservation and monitor and manage a proposed Iraqi protected area network.

In the log frame we equate the success of this as that the tools and techniques are being applied and used 3 years after the project to survey and monitor areas across Iraq. It is too early to assess if this is the case. However, there is already evidence of the projects impact on Iraq’s ability to conserve its biodiversity with the mobilisation of previously inaccessible plant data for the national KBA assessments. This is a NI and Ministry of Health and Environment programme which is now complete and awaiting publication. Once published this will be the baseline document used for environmental planning and decision making nationally.

Peramagroon itself has been identified in Iraq’s plan for its CBD programme of work on protected areas. It is highlighted as one of 10 protected areas to be established by 2020. As a result of the project there is now in place a set of practical tools which can be used by researcher’s to further study the area and by agencies with a monitoring and protection. The forest police play an important role in this and have been engaged on training courses by the project.

Moreover, the project clearly demonstrates the big impact that can be made even working in a very small area. Peramagroon represents about 0.03% of Iraq’s land area yet as a result of our work has been shown to contain 25% of Iraq’s flora. This means that even in itself the plant data generated by the project makes an extremely significant contribution to the understanding of the whole of Iraq’s flora.

The survey techniques being developed on this project are new and represent a major step forward in botanical survey work. They have the potential to make survey and monitoring faster, more accessible and the data easier to repurpose for a variety of outputs as we have shown in the plant guide produced here. The photographic profiles taken on this project are specimen based character based records and we are looking at the incorporation of these into the traditional taxonomic process. The use of these photographic techniques is also proving to be a valuable teaching tool much more so that the collection and processing of herbarium specimens.

This combined with the availability of easy to use widely available electronic guides will hugely increase the ability of Iraq’s to survey and monitor biodiversity.

There is already evidence of these techniques being adopted in Iraq with Dr Saman Ahmad using photographic profiles within in his PhD thesis and recent publications. The technique is also being recognised more widely in the region with Iraq profiles having been used to illustrate the technique in a new checklist of Afghanistan (Vascular Plants of Afghanistan: An Augmented Checklist Siegmund-Walter Breckle, Ian Hedge, and M. Daud Rafiqpoor).

## 2.3 Outputs

### Output 1 - Botanical data for conservation collected, analysed, and available in Iraq

Substantial existing data on the distribution data of endemics and near endemic taxa had been collated, analysed and integrated into Iraq's National Key Biodiversity Area assessments (<http://www.natureiraq.org/key-biodiversity-areas.html>). Provisional IUCN Red List assessments have been completed for Iraq's 121 endemic plants\*, this is the first time a provisional list of Iraqi endemic plants has been made publically available.

Substantial new botanical data has also been generated by the project. Literature review and fieldwork indicate that 811 plant taxa are recorded from Peramagroon. Although this list must be considered provisional: the taxonomic status of 26 taxa is uncertain and 17 taxa are only known from single collections made over 150 years ago. The field surveys carried by Nature Iraq and RBG Edinburgh found a total of c.630 plants including 289 not previously recorded on the mountain. Five new (as yet undescribed) species were found: a *Sedum* (Crassulaceae) a *Pterocephalus* (Dipsacaceae), an *Orobanche* (Orobanchaceae) and two species of *Allium* (Alliaceae). Of the c.120 plants endemic to Iraq 19 (22.8%) are found on Peramagroon and five species are endemic to Peramagroon. The checklist\* is available on the project website.

### Output 2 - Capacity built for PA management

#### i/ Materials for use by resource managers

Interactive identification guides are available for birds and plants\*. The bird guide is a freely downloadable app which covers the 133 birds of Peramagroon (<https://itunes.apple.com/us/app/birds-of-Peramagroon/id992821039>). It has been downloaded 181 times on Apple and Android devices in the last 7 months (since May 2015).

"I loved it, now I know what bird I was seeing every day in my faculty, thanks for the app it's very useful.

Just one thing if possible put the Arabic and Kurdish name, if that is possible."

The plant guide is available as a web based guide which can be accessed on tablets or desktops. Once loaded onto a machine it is cached and can be used offline in the field. It includes 578 plants from Peramagroon. It has not been available long enough for any meaningful data but we have positive initial feedback from Iraqi botanists.

We have generated significant baseline field data on both dragonflies and butterflies of Peramagroon – discovering in the process four new dragon fly records for Iraq. (<http://www.natureiraq.org/news/four-new-species-of-dragonfly-for-iraq-a-major-discovery-for-the-nature-iraq-darwin-programme>). However, any id guide developed from current data is likely to have significant gaps. We considered developing a partial guide which allowed users to record additional species. However, instead we decided to take a citizen science approach which focuses on both informing and educating people about these groups as well as gathering data on the species nationally. It is the first time this has been tried in Iraq. An information leaflet has been produced which encourages people to submit images of dragonflies and butterflies [www.iraqdarwin.org/thebighunt](http://www.iraqdarwin.org/thebighunt). The education leaflet was distributed in hard copy by Nature Iraq it has also been downloaded 353 times (see website downloads in supplementary materials) since it was launched in Oct 2014 demonstrating a significant interest in these charismatic taxa. We have 56 records submitted as a result of 'the big hunt' of which had 44 images which have been uploaded to the project site (they were identifiable and in the correct taxonomic group). The numbers were perhaps unsurprisingly not huge however the major success of the project was in drawing out and identifying individuals who already had an interest in natural history and were already recording this kind of information. This kind of resource is potentially very powerful in such a data poor country as indeed it is globally.

## ii/ Develop community level awareness of conservation locally in Peramagroon

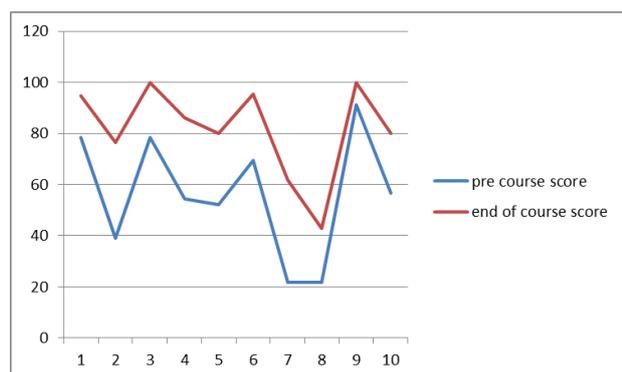
The outreach programme continues to make progress working in local schools and delivering a range of environment based activities. The programme was slowed in the final year of the project as a result of the loss of Baxan Jamal the community outreach officer and the late opening of schools after they had been used to house refugees.

We have tried to increase the impact and sustainability of this work by developing a series of the most successful activities into the Environmental Activities for Schools: Teachers' Toolkit for Iraq booklet\*. The toolkit is designed for teachers with easy to follow instructions allowing them to independently deliver these activities in schools as well as background information on biodiversity and the environment. This is additional to the original output.

### Output 3 - Iraqis trained in botany, ornithology and general conservation

The online course has been a success. It has been run three times and has been successfully completed by 88 students. The course outline available from the project website <http://iraqdarwin.org/education>. The course feedback has been consistently positive, particularly in response to the restructure at the end of the 1<sup>st</sup> year and the addition of a module on Iraq's Biodiversity with sections on birds (developed with Richard Porter, BirdLife International), mammals (developed with Hana Raza, Nature Iraq), fish (Reviewed by Prof Brian Coad, Canadian Museum of Nature) and Plants.

An evaluation of student question answers compared to a baseline taken at the start of the course showed an increase in all questions with up to 40% improvement in knowledge and understanding across all questions asked



Mudhafar Salim, then NI's bird team leader, ran one bird and conservation course based at Peramagroon.

### 3 Project Partnerships

The project would not have been possible were it not for the strong relationship between Nature Iraq, BirdLife International and the Centre for Middle Eastern Plants (CMEP) which is based at the Royal Botanic Garden Edinburgh (RBGE). BirdLife International had been working with NI for several years to develop their KBA programme and to increase capacity at NI for this purpose. The involvement of RBGE/CMEP began when NI identified a requirement for a botanical input into the KBA programme. The birds of the region were relatively well known and progress in identifying KBAs based on bird data had been good. However, plants were relatively poorly known and there was a lack of in-country botanical skills, and more importantly, a lack of appropriate plant identification tools. BL and RBGE/CMEP had developed a good working relationship when working together on a Darwin funded programme on the Socotra Archipelago and so it was natural that CMEP should be invited to strengthen NI's botanical capacity. The partnership then developed through the identified need to address the lack of plant data available for conservation planning and the requirement to build capacity for surveying and managing biodiverse-rich areas. The three, project partners worked together in planning the Darwin programme to address these needs.

Without hesitation I think we can say that the combination of British bird and plant experts together with an enthusiastic in-country NGO proved a winning team. It was always anticipated that there would be challenges working in a post-conflict country; the programme was designed to deal with these issues and the delivery of all the outcomes is a testament to this. However, there were problems. Perhaps the most significant was the difficulty NI experienced in attracting and retaining appropriate botanical counterparts. In consequence we were unable to recruit a fulltime botanist to the project. Instead we have been working in the field with individuals from a variety of different institutions to deliver broad botanical training. Most significant is Awara Hamakhan who works at the Ministry of Higher Education. Awara was unable to join the project team full time but has accompanied us on most fieldtrips, has been involved in delivering training to the online course students and is independently carrying out fieldwork. Another issue was a loss of morale at Nature Iraq when it's major funding from the Italian Government was cut following the Italian Minister of the Environment being arrested for embezzling Iraqi aid. This had a devastating impact on NI: projects were stopped, jobs cut and salaries reduced. There has been a rapid turnover of staff at NI – this has not always been bad – it means that we have now have trained contacts in other organisations and we have been able to maintain strong links with many of these people. For instance, Shokhan Barabarsul is now working for the Botanical Foundation of Iraq. And Muhadfar Salim is now one of the leaders of the government team that is pursuing the designation of the Central Marshes as a World Heritage Site. The final problem has been the most significant. The last year of the programme has been hindered by the impossibility of visiting Iraq due to the invasion of parts of Iraq by ISIS/Daesh and the turmoil this has created. It has become hard to maintain regular contact with NI at this difficult time – they clearly have other priorities. We were also unable to get visas for our Iraqi counterparts to visit UK. We overcame this, to some extent, by increasing our skype meetings and organising a meeting in Istanbul but the lack of face to face meetings was a real hindrance to keeping the programme moving forward to our timetable. That said, the contacts we made are solid and we expect to be returning to Iraq on further programmes with NI and some of the other institutions we have collaborated with as soon as the situation improves.

### **Other partnerships and links developed by the project**

- **Botanical Foundation on Kurdistan** led by Dr Sarbagh Salih. We continue to maintain good links with the Foundation particularly through CMEPs involvement with the Sulaimani Botanic Garden SBG (Funded by the Sulaimani Governorate and the Ministry of Agriculture) Former DI Community Project Officer Shoxan Babararsul now works for the Sulaimani Governorate and is working closely with us on this project.
- **Dr Sally Chalmers at Queen Margaret University, Edinburgh.** We worked with the QMU PR Department undergraduate course in International Public Relations in 2012 and 2013. This year students have been focusing projects on Peramagroon mountain, environmental education and raising the profile of national parks.
- **RBGE MSc student Felicity Anderson.** Felicity received a distinction for her dissertation on Peramagroon Mountain. She carried out a project surveying and vegetation analysis of oak woodland on Peramagroon mountain in the Kurdish Region of Iraq, considering the effects of grazing and woodland management supervised by Dr Chris Ellis and Dr Alan Forrest
- **Scottish Careerwise.** Careerwise is a work placement scheme for Women in Science, Technology, Engineering and Maths. We had two summer work placements in 2014 funded by the scheme. One of these was to working on the identification guides for the Darwin project another to developing materials for global online teaching of the photographic techniques developed by the DI project. One of the students Joanna Ramasawmy returned to volunteer on the project for a month in 2015.

- **WADI** – A German NGO Wadi based in Sulaimani. Its work focuses on promoting human rights and supporting democratic reconstruction. We are in discussion about developing an environmental education trails at Zewe a village on Peramagroon. This will make use of much of the material and expertise gained through the project.
- **Iraq Government ministries.** Project partners have been making and maintaining contact with a number of Ministries. The Ministry of the **Environment** via the provision of staff training. The Ministry of **Education** continue to support the education activities in Peramagroon. Contact has been developed with the Ministry of **Agriculture** nursery's through work with the SBG through this we have obtained access to native tree seedlings which can be used in the outreach programme. The **Directorate of Antiquities** has become involved in activities around traditional land use. The **Forest Police** have become involved via training.
- **Professor Brian Coad**, Canadian Museum of Natural History and author of Freshwater Fishes of Iraq – has kindly provided material and images for the Fish section of the Iraq Biodiversity module of the online course. He reviewed the content.
- **David Chelmick and Jean-Pierre Boudot** , provided support with dragonfly and butterfly identifications.

## 4 Contribution to Darwin Initiative Programme Outputs

### 4.1 Project support to the Conventions (CBD, CMS and/or CITES)

Aichi Target 1 This project has significantly raised awareness about biodiversity, conservation and sustainable use through working with local schools, local communities, university students, NGOs and government staff.

School children were introduced to the concept not only of biodiversity and conservation, but to the enjoyment of their immediate environment – to which they responded very positively along with their teachers. The teachers toolkit provides a long term resource to continue this engagement in following years and generations. The project has a website dedicated to promoting the project goals, and the project was featured on Kurdish television.

A major problem in Iraq is that as people move to the towns and children increasingly grow up in an urban environment the essential link between an understanding and a respect for the environment is being broken. The study of traditional land-use practices on Peramagroon (the first of its kind in Iraq) serves as an exemplar to raise awareness of the importance of “cultural landscapes”, the result of traditional systems developed over the last 10,000 years, have in supporting a rich and resilient biodiversity. The booklet “Peramagroon: Profile of a Kurdish Mountain” aims to address the challenge of reconnecting people with their environment.

The online course at Sulaimani University was the first of its kind in Iraq and exceeded its targets in the number of students attending, leading the way for similar courses to be made more widely available. Students participated from the University of Sulaimani (Agriculture and Science Faculties) KBF (Kurdistan Botanical Foundation), IOCN (Iraq Organization for Conservation of Nature).

Two innovative projects, (both new for the wider Middle Eastern region) were aimed at raising awareness of biodiversity at a national level. The butterfly and dragonfly programme, a citizen science project aimed at raising awareness of these groups in Iraq, has enthusiastically received photos sent for identification from all over Iraq and the bird identification App for the 130 bird species of Peramagroon mountain is likely to be used as a model for other sites in the Middle East to encourage an interest by local people.

Aichi Target 11 A first step in protecting areas for biodiversity and ecosystem services is to establish a nation-wide protected area network. Towards this aim the Darwin team was involved in training staff from Nature Iraq in the skills necessary to carry out the Key Biodiversity Assessments. These KBAs will form the basis of a protected area network in Iraq. Richard Porter and Tony Miller were on the KBA review panel. Peramagroon Mountain is included in the Iraq list of Key Biodiversity Areas and is on the priority list for establishment as a National Park.

Aichi Target 12 The conservation status of Iraq's endemic plants was previously unknown. Draft IUCN Red List Assessments have been completed with Iraqi colleagues for all Iraq's 121 endemic plant species. The data gathered as part of this exercise was fed into the Key Biodiversity Area programme and was an important element in recognising Important Plant Areas in Iraq (Verification: list on project website). This will allow Iraqi and Kurdish authorities to further prioritise areas for biodiversity conservation, and to further develop monitoring programmes for endemic plants. Formal conservation assessments are a pre-requisite to identifying which plant species are threatened – as such this represents a major step forward for Iraq.

Aichi Target 18 The traditional land use practices on Peramagroon Mountain have been detailed, and discussions about their sustainability and effects on biodiversity implemented in local communities. It is the first such study undertaken in Iraq and it is hoped that it will act as a spur for the inclusion of local stakeholder engagement and public awareness in management plans for protected areas throughout Iraq.

Aichi Target 19 This project has collected a significant amount of information about the plants of Peramagroon Mountain, with the number of species recorded increased from c.400 to over 800. Plant species have been recorded photographically in detail, and this information used to produce an identification app for the area. This is a major step forward, making plant identification tools available and accessible for a country low in capacity to use technical documents written in inappropriate languages. A similar application has been produced for the birds of Peramagroon, and a simple citizen science campaign started to engage people and collate information on the distribution of butterflies and dragonflies across Iraq.

## **4.2 Project support to poverty alleviation**

During the second year of the project partners collaborated with the NGO WADI to develop a proposal to create an outdoor environmental education centre at Zewe village on Peramagroon. This village and its picnic site is a very popular place of visitors. If successful this would be a direct spin off from the Darwin project and would make use of many of the materials created by it. An objective of the project is to model ways of sustainable community led livelihood generation within a proposed national park. This project is currently on hold as a result of the security situation but can be reinvigorated as soon as possible.

### **4.2.1 Programme indicators**

N/A

## **4.3 Transfer of knowledge**

Did the project result in any formal qualifications?

- i. How many people achieved formal qualifications?
- ii. Were they from developing countries or developed countries?
- iii. What gender were they?

No formal qualifications were achieved in this programme of work. However, it was the intention that a significant number of staff and students at universities, NGOs and government departments should increase their awareness and knowledge of biodiversity, its conservation and sustainable use. The online course, although not a formal qualification, was certificated and was completed by 88 people, (20 female, 68 male). Further, these included participants from universities and NGO's ensuring that biodiversity knowledge has been increased across the breadth of environmental organisations in Kurdistan.

## **4.4 Capacity building**

- i. Did any staff from developing country partners see an increase in their status nationally, regionally or internationally? For example, have they been invited to participate in any national expert committees, expert panels, have they had a promotion at work?

ii. What gender were they?

Training in field identification and surveying skills has increased capacity at NI and other governmental and non-governmental organisations to undertake activities to support the implementation of both CBD (articles 7, 8, 12 and 13) and GSPC (targets 1, 2, 5 and 13). Underpinning scientific data and tools to identify biodiversity components have been the main contribution to Iraq's ability to achieve CBD articles and Aichi targets. Specifically the project has fed directly into Iraq's GSPC targets 2 (An assessment of the conservation status of all known plant species, as far as possible, to guide conservation action) and 5 (At least 75 per cent of the most important areas for plant diversity of each ecological region protected with effective management in place for conserving plants and their genetic diversity.). The capacity of teachers in local schools to deliver environmental education and biodiversity activities has been enhanced, with materials provided and translated for ongoing use.

#### **4.5 Sustainability and Legacy**

The series of tools produced by the project will provide a sustainable output which can be used for in-situ conservation beyond the lifetime of the project. The increased capacity in biodiversity students and professionals will enable these to be used effectively. The breadth of people trained by the project means that there is a good knowledge of the project and its goals and its goals, outcomes and outputs in many organisations in Iraq.

Two activities are likely to have a regional significance and are expected to impact on biodiversity studies across the region beyond the lifetime of the project: (1) The innovative plant identification app developed and field-tested during the programme is the first of its type to enable all the plants from an area to be identified by non-specialists. There are plans for it to be expanded to cover all the plants across the Middle East (2) The photographic methods of surveying and vouchering developed during the programme will have wider application across the region.

The online course in particular brought modern concepts in conservation to a wide audience and by using nationally-based case-studies made it locally relevant. There are plans for the University of Sulaimani to continue the course.

If the teacher toolkit is adopted more widely in Iraq (this will depend on how it is received by the Ministry of Education -meetings planned for the final year of the programme at the Ministry could not take place because of the security situation) it is likely to endure and possibly spur the inclusion of more environmental activities and education into the school curriculum.

The Bird id app will continue to be updated with new sightings.

Former staff from NI are now employed in a range of posts. For instance, two former NI staff / consultants now work at the Kurdistan Botanical Foundation: Shokhan Babarasul, Communication Officer and Dr Saman Ahmad is Programme Director.

Muhadfar Salim, NI bird team leader, is now one of the leaders of the government team that is pursuing the designation of the Central Marshes as a World Heritage Site.

Awara Hamakhan who accompanied us on many field trips, has been involved in delivering training to the online course students and is independently carrying out fieldwork now works at the Ministry of Higher Education. Awara is coming (visa permitting) to RBGE next year under a Darwin Fellowship to continue his training.

The project is part of a long-term commitment by both UK organisations to both Iraq and the region. This has been built on by the project and continues for example through the mentoring of young Iraqi Ornithologists by Richard Porter.

## **5 Lessons learned**

Management structure was based upon regular contact and discussion, and followed the half-yearly reporting structure for Darwin Projects. The project was planned through several years of discussion with key staff in Iraq, and the fundamental understanding of what was to be achieved was excellent. High staff turnover rates, which could not be predicted, meant that by the end of the project the level of understanding was strategically less than at the outset. Coupled with increasing security issues, and the advent of ISIS/Daesh, this reduced communication (particularly valuable face-to-face contact) and direct involvement particularly in the final year. In hindsight, a stricter timeframe and management structure may have been more effective, although difficult to implement with staff turnover. Resources were sufficient.

### **5.1 Monitoring and evaluation**

Despite the major political upheaval in Iraq during the life of the project there were no major changes in project design.

The M&E system was designed to enable regular contact via email, skype and in-country visits. In the first 18 months of the project, this worked well, with targets met and reporting efficient and timely. This became more challenging as key staff left in Iraq, and the security situation worsened. Each project component was constantly evaluated, most often by non-project staff at project institutes (for example schools material assessed by RBGE education staff, online course content assessed internally prior to release to students, plant and bird identification tool trialled on various small user groups – all informal evaluations).

In response to a reviewers comment in the 1<sup>st</sup> annual report we implemented improvement to the M&E of the online course. Using the course pre-test as a baseline and re-asking the questions in course exams or in the feedback at the end of the course. Unfortunately the end of the second year of the course coincided with the invasion of ISIS and associated difficulties for students. We were therefore unable to get a large enough sample for sensible comparison. This was however repeated in the 3<sup>rd</sup> year of the course and the results showed an increase (up to 40% improvement) in knowledge and understanding across all questions asked (see XXX).

There hasn't just been an internal evaluation of the project but this is planned by all the partners. A lessons learned and document will be produced as a result we are also due to write up document that highlights research opportunities identified by the project and next steps to take to build on the project successes. It is hoped that travel restrictions might change and it might be possible for some of these to take place face-to-face during the "Water Resources & Biodiversity in the Fertile Crescent" conference at the American University of Iraq, Sulaimani (AUIS) in 2016.

### **5.2 Actions taken in response to annual report reviews**

All issues raised in the annual reports have been addressed in the subsequent half year or annual reports. Actions such as improving the evaluation of the online course have been extremely helpful.

All reviews have been shared and discussed with the project team.

Outstanding issues raised in the last annual review are discussed below:

#### **Loss of NI staff**

"The Report discusses the issue of loss of staff at NI, and the difficulty of recruiting a full time botanist; this matter is being addressed by increasing training opportunities for conservation professionals in ministries and universities, for example through the successful online course. It would be helpful to revise the measurable indicators to accommodate this revised strategy."

We felt that in the end we were able to deliver all of the project outputs despite the staffing issues and therefore didn't feel it necessary to change the indicators.

## Workshops

“There is some confusion over workshops; the IPA workshop, a milestone for Year 1 was replaced by a series of skype calls, which were deemed to be effective. The number of workshops planned differs in Table 1 between the two Annual Reports. Table 1 (Annex 3) indicates that four workshops/seminars/conferences were undertaken in Year 2, but it is not clear in the main body of the Report to which events the table is referring.”

The number cited in table 1 refers to the number of conferences etc where members of the Darwin Team have presented findings of the Darwin project. For example – the 8<sup>th</sup> Plant Life of South West Asia Conference (July 2013) where Tony Miller gave a talk entitled ‘Rethinking how we work in the field – increasing relevance and impact’. We did not include internal project working workshops under this indicator. There is variation in the numbers reflect changing conference opportunities.

## 6 Darwin identity

The Darwin logo has been used on all material produced by the project. It is recognised as a distinct project at Nature Iraq but provides support to other programmes such as the KBA assessment. There is an understanding of the project and its Darwin identity across a number of governmental, non-governmental organisations and institutes across Iraq.

## 7 Finance and administration

### 7.1 Project expenditure

Project spend (indicative) since last annual report	2014/15 Grant (£)	2014/15 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			+9.2	Increased to salary inflation in Iraq
Consultancy costs			+12.2	Increased to cover some botanical review work by Saman Amhad
Overhead Costs			0.0	
Travel and subsistence			-57.1	Reduced as a result of travel restrictions
Operating Costs			-17.2	Reduced as a result of impact of restrictions on training courses and workshops
Capital items (see below)			0.0	
Others (see below)			-5.1	
<b>TOTAL</b>				

<b>Staff employed (Provide name and position)</b>	<b>Cost to Darwin (£)</b>
Richard Porter – Bird expert	
Anthony Miller – PI and plant expert	
Sophie Neale – Project manager and plant expertise	
Sabina Knees – Plant expertise	
Lorna Mackinnon – plant expertise	
Amr Al-Faham – Iraq Project Manager	
Bwar Khalid – Land management officer // Project manager	
Baxan Jamal – Education Outreach	
Saman Ahmad – Online course co-ordinator	
Awara Hamakhan - Botanist	
<b>TOTAL (must match Staff Costs total in Section 6)</b>	

<b>Capital items – description</b>	<b>Capital items – cost (£)</b>
N/A	
<b>TOTAL</b>	

<b>Other items – description</b>	<b>Other items – cost (£)</b>
Bank Charges	
Costs associated with obtaining UK visas	
Design and printing of outreach materials	
Nature Iraq Foreign payment charge	
visa turkey re Darwin Iraq programme	
Birds of the Middle East ebook	
Butterflies of Iraq and Iran	
Software for plant profiling	
Tablet	
Darwin website addition	
Excess baggage	
Printing	
<b>TOTAL (Must match Others total in Section 6)</b>	

## 7.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
Botanics Foundation	
Bloomsbury	
RBGE matched funding	
NI matched funding	
<b>TOTAL</b>	

Source of funding for additional work after project lifetime	Total (£)
<b>TOTAL</b>	

## 7.3 Value for Money

The project has seen the development of significant outputs with long term impact for the country and the region. Moreover, contrary to common misconceptions, fieldwork is actually economical and cost efficient (Balmford and Gaston 1999) and will over time reduce the dependency on historical museum data. Andrew Balmford, A & Kevin J. Gaston, K.J. (1999) Why biodiversity surveys are good value, *Nature* 398, 204-205. The statistics used in the paper were partly based on a previous Darwin program carried out on Socotra by Miller and Porter. We therefore consider it to be good value for money.

## Annex 1 Project's logframe, including indicators, means of verification and assumptions.

**Note: Insert your full logframe. If your logframe was changed since your Stage 2 application and was approved by a Change Request the newest approved version should be inserted here, otherwise insert the Stage 2 logframe.**

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Goal:</b> Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.			
<b>Sub-Goal:</b> Iraq is better able to assess and evaluate priority areas for conservation and monitor and manage a proposed Iraqi protected area network.	3 years after the project the tools and techniques developed here are being applied to survey and monitor areas across Iraq.	NI reports and publications	
<b>Purpose:</b> Building capacity for in-situ conservation in Iraq	Plant data available to inform conservation planning nationally and specific tools and methods modelled locally for exemplar IPA(s)  Partners capacity for plant and bird conservation increased through training and extensive joint working.  Extensive training in foundation skills (plants, birds and conservation) delivered to individuals from a range of Iraqi institutions.  Outreach and environmental education programme developed in communities local to Peramagroon.	IPA reports, scientific papers and information available on project website  NI staff delivering training and supporting trainees on e-learning course. Internal reports  Course reports  Outreach materials and program reports	Funding continues for Nature Iraq's KBA programme.  Security situation in Iraq is maintained  Those trained under the DI project go on to be engaged in conservation in Iraq.  Good uptake of training courses.  Willingness of communities to engage.
<b>Outputs</b> (add or delete rows as necessary)  1. Botanical data for conservation collected, analysed, and available in Iraq	Provisional Iraqi IPAs identified  Provisional red list assessments for Iraq's endemic plants  Identification tools developed and IPA survey and assessment complete for at least one IPA.	Report and scientific papers on Iraq's IPAs  Red listing completed and available  Identification tools available electronically and in hard copy  Reports and scientific papers on IPA survey	Access to areas of interest for survey work maintained.



**Activities** (details in workplan)

Project website launched

Annual meeting of project partners

1.1 Provisional identification of Iraqi IPAs

1.2 Provisional red listing of Iraqi endemic and near endemic plants

1.3 Plant based data for Peramagroon IPA generated

2.1 Development and testing of interactive electronic tools

2.2 Development of manual of traditional land management practices near Peramagroon

2.3. Preliminary Red List Iraq's birds

2.4. Development of community level awareness through outreach in schools programme

3.1 Development of training courses and e-learning modules

3.2 Annual training course in Iraq & delivery of ongoing learning and assessment

4.1 Other activities: Project website launched and periodically updated

4.2 Other activities: Kick off meeting and annual steering group meeting

## Annex 2 Report of progress and achievements against final project logframe for the life of the project

Note: For projects that commenced after 2012 the terminology used for the logframe was changed to reflect DFID's terminology.

Project summary	Measurable Indicators	Progress and Achievements in the last Financial Year 2014-15	Actions required/planned for next period
<p><b>Goal/Impact:</b></p> <p>Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p> <p><b>Sub-Goal:</b></p> <p>Iraq is better able to assess and evaluate priority areas for conservation and monitor and manage a proposed Iraqi protected area network.</p>			Do not fill not applicable
<p><b>Purpose/Outcome</b> Building capacity for in-situ conservation in Iraq</p>	<p>Plant data available to inform conservation planning nationally and specific tools and methods modelled locally for exemplar IPA(s)</p> <p>Partners capacity for plant and bird conservation increased through training and extensive joint working.</p> <p>Extensive training in foundation skills (plants, birds and conservation) delivered to individuals from a range of Iraqi institutions.</p> <p>Outreach and environmental education programme developed in communities local to Peramagroon.</p>	<p>Significant data generated or mobilised. Nationally, Red list of endemics and distribution data for endemics. Locally new survey techniques developed and tested for Peramagroon. Checklist and identification guide produced.</p> <p>Extensive joint working continues to be achieved in organisation and fieldwork. Wider collaborations also developed through former staff and associates.</p> <p>88 students from Universities and biodiversity organisations completed the online course in Biodiversity and Conservation.</p> <p>Programme maintained and Teachers toolkit of activities produced.</p>	Do not fill not applicable

<p><b>Output 1.</b> Botanical data for conservation collected, analysed, and available in Iraq</p>	<p>Provisional Iraqi IPAs identified</p> <p>Provisional red list assessments for Iraq's endemic plants</p> <p>Identification tools developed and IPA survey and assessment complete for at least one IPA.</p>	<p>National IPA's identified as part of Ministry of Environment and NI's KBA programme. Historical data on endemic plants incorporated by Darwin project into the results of the 10 year field programme. The report due to be published 2016.</p> <p>Provisional Red List assessments completed and available for Iraq's endemic plants.</p> <p>Assessment and Identification guide for Peramagroon complete (assessment contained in the KBA report, this will be expanded on in a peer reviewed publication).</p>
<p>Activity 1.1 Provisional identification of Iraqi IPAs</p>		<p>Historic data and expert review incorporated into Iraq's national KBA assessments.</p>
<p>Activity 1.2. Provisional red listing of Iraqi endemic and near endemic plants (NB incorporation of near endemics here was a mistake, is not included in output)</p>		<p>Completed and online</p>
<p>Activity 1.3 Plant based data for Peramagroon IPA generated</p>		<p>Full survey baseline data generated. Detailed paper in prep.</p>
<p><b>Output 2.</b> 2. Capacity built for PA management</p> <p>i/ Materials for use by resource managers</p> <p>ii/ Develop community level awareness of conservation locally in Peramagroon</p>	<p>Interactive identification guides to Peramagroon developed for birds, plants and selected other taxonomic groups</p> <p>Manual of traditional land management practices</p> <p>Preliminary red list of Iraq's Birds</p> <p>Outreach programme developed, active and using materials produced by the project.</p>	<p>The bird identification app for 133 birds of Peramagroon and plant identification guide for 578 plants both available online.</p> <p>The land use manual 'Peramagroon: Profile of a Kurdish Mountain' is available from the project website. A Kurdish hard copy version is also available.</p> <p>The IUCN Bird Red list is now completed.</p> <p>The team have continued to run the schools outreach programme. A series of activities have been developed into a teachers toolkit for use in schools. This is available for download from the project website and is being translated and distributed to schools in the Peramagroon area.</p>
<p>Activity 2.1. Development and testing of interactive electronic tools</p>		<p>Complete</p>
<p>Activity 2.2. Development of manual of traditional land management practices near Peramagroon</p>		<p>Complete</p>
<p>Activity 2.3. Preliminary Red List Iraq's birds</p>		<p>Complete</p>
<p>Activity 2.4. Development of community level awareness through outreach in</p>		<p>Complete</p>

schools programme		
<b>Output 3.</b> Iraqis trained in botany, ornithology and general conservation	<p>e-learning modules developed and operational for foundation skills in botany, ornithology and conservation</p> <ul style="list-style-type: none"> <li>• 30 Iraqis complete foundation skills course in botany</li> <li>• 30 Iraqis complete foundation skills course in ornithology</li> <li>• 30 Iraqis complete foundation skills course in conservation</li> </ul> <p>15 Iraqis complete advanced courses and practical field training in birds, botany and conservation Y2 and Y3</p> <p>NI staff co-supporting training</p>	<p>The course was run for a third time in the final year of the project. In total 88 students received training in Biodiversity and Conservation.</p> <p>68 people completed advanced practical training courses Limited field training was carried out in the 3<sup>rd</sup> year of the project due to the security situation.</p> <p>NI staff engaged in forum discussions and live chat with the students of the online course. Training courses were delivered independently by some NI staff e.g. the bird training course. Other more junior project members helped support other training courses.</p>
Activity 3.1 Development of training courses and e-learning modules		Complete
Activity 3.2 Annual training course in Iraq & delivery of ongoing learning and assessment		

## Annex 3 Standard Measures

Code	Description	Total	Nationality	Gender	Theme	Language	Comments
<b>Training Measures</b>							
1a	Number of people to submit PhD thesis	-	-	-	-	-	
1b	Number of PhD qualifications obtained	-	-	-	-	-	
2	Number of Masters qualifications obtained	-	-	-	-		
3	Number of other qualifications obtained	-	-	-	-		
4a	Number of undergraduate students receiving training	66	Iraqi	17 female, 49 male		English	These were undergraduates enrolled on the online course.
4b	Number of training weeks provided to undergraduate students	62					
4c	Number of postgraduate students receiving training (not 1-3 above)	-	-	-	-	-	
4d	Number of training weeks for postgraduate students	-	-	-	-	-	
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification(e.g., not categories 1-4 above)	-	-	-	-	-	
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	101	Iraqi	Not fully recorded.		English	22 - Non-undergraduates participating in online courses. 68 advanced practical & field courses. 9- Informal field

Code	Description	Total	Nationality	Gender	Theme	Language	Comments
							training 2- UK based training
6b	Number of training weeks not leading to formal qualification		-	-	-	-	
7	Number of types of training materials produced for use by host country(s) (describe training materials)	2	-	-	-	English and Kurdish	Online course for students and biodiversity professionals. Teachers' toolkit for use in schools.

Research Measures		Total	Nationality	Gender	Theme	Language	Comments
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (ies)						Participatory process?
10	Number of formal documents produced to assist work related to species identification, classification and recording.						
11a	Number of papers published or accepted for publication in peer reviewed journals	-	-	-	-	-	None currently – but eventually 3-4.
11b	Number of papers published or accepted for publication elsewhere	3	Mixed	Mixed	-	-	Plant and Bird Red lists, Peramagroon checklist.
12a	Number of computer-based databases established	1	-	-	-	-	Plant

	(containing species/generic information) and handed over to host country						database for Peramagroon
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country	2	-	-	-	-	Butterfly and Dragonfly records for Iraq
13a	Number of species reference collections established and handed over to host country(s)	1	-	-	-	-	Plant image collection for Peramagroon
13b	Number of species reference collections enhanced and handed over to host country(s)	2	-	-	-	-	Butterfly and Dragonfly image based reference collections.

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	-	-	-	-	-	
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	7	-	-	-	-	

Physical Measures		Total	Comments
20	Estimated value (£s) of physical assets handed over to host country(s)	c. £6000	Mainly fieldwork kit, cameras and binoculars
21	Number of permanent educational, training, research facilities or organisation established	-	
22	Number of permanent field plots established	-	Please describe

<b>Financial Measures</b>		<b>Total</b>	<b>Nationality</b>	<b>Gender</b>	<b>Theme</b>	<b>Language</b>	<b>Comments</b>
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work	<b>£194,359</b>					

## Annex 4 Aichi Targets

	Aichi Target	Tick if applicable to your project
1	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	Yes
2	Biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	
3	Incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	
4	Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	
5	The rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	
6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	
7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	
8	Pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	
9	Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	
10	The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	
11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	Yes
12	The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	Yes
13	The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	

14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	
15	Ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	
16	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	
17	Each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	
18	The traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	Yes
19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	Yes
20	The mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	

## Annex 5 Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. contact address, website)
Report	IUCN Red List Birds of Iraq, 2012	UK	UK	Male		<a href="http://iraqdarwin.org/biodiversity/">http://iraqdarwin.org/biodiversity/</a>
Paper	Annotated Checklist of Iraqi Birds parts I & II	Iraqi	Iraqi	Male		<a href="http://iraqdarwin.org/biodiversity/">http://iraqdarwin.org/biodiversity/</a>
Online Identification guide	Plants of Peramagroon	-	-	-	-	<a href="http://iraqdarwin.org/biodiversity/">http://iraqdarwin.org/biodiversity/</a>
Education Leaflet	Butterflies & Dragonflies of Iraq	UK / Iraq	CMEP / NI	F/M	-	<a href="http://iraqdarwin.org/biodiversity/">http://iraqdarwin.org/biodiversity/</a> Or hard copy from Nature Iraq
Booklet	Environmental Activities for Schools – Teachers' Toolkit for Iraq.	Mixed				<a href="http://iraqdarwin.org/education/">http://iraqdarwin.org/education/</a> Or hard copy from Nature Iraq
Booklet	Peramagroon: Profile of a Kurdish Mountain	Iraqi	Iraqi	Male / Female		<a href="http://iraqdarwin.org/biodiversity/">http://iraqdarwin.org/biodiversity/</a> Or hard copy from Nature Iraq
Report	IUCN Red List	UK	UK			<a href="http://iraqdarwin.org/biodiversity/">http://iraqdarwin.org/biodiversity/</a>

	Plants, 2015					
Report	Checklist of the vascular Plants of Peramagroon	UK	UK	Male		<a href="http://iraqdarwin.org/biodiversity/">http://iraqdarwin.org/biodiversity/</a>
Newspaper Article	Darwin came back to protect Peramagroon	Iraq	Iraq	Male	Kurdistani Nwe 15/03/2015	
Newspaper Article	How Butterflies are harbingers of hope in war torn Iraq	UK	UK	Male	The Independent on	<a href="http://www.independent.co.uk/voices/commentators/how-butterflies-are-harbingers-of-hope-in-war-torn-iraq-10061698.html">http://www.independent.co.uk/voices/commentators/how-butterflies-are-harbingers-of-hope-in-war-torn-iraq-10061698.html</a>
Online article	Dragons, rare goats, owls and night owls, Richard Porter, 2013	UK	UK	Male		<a href="http://britishbirds.co.uk/news-and-comment/dragons-rare-goats-owls-and-night-owls">http://britishbirds.co.uk/news-and-comment/dragons-rare-goats-owls-and-night-owls</a>  <a href="http://www.cmep.org.uk/dragons-rare-goats-owls-and-night-owls/">http://www.cmep.org.uk/dragons-rare-goats-owls-and-night-owls/</a>
Online article	Updates from the Darwin Project, Nature Iraq, 2014	Iraq	Iraq	Mixed		<a href="http://www.natureiraq.org/1/post/2014/03/updates-from-the-darwin-project1.html">http://www.natureiraq.org/1/post/2014/03/updates-from-the-darwin-project1.html</a>
Online article	A Message from Syria	UK		Male		<a href="http://bloomsburywildlife.com/2015/09/09/a-message-from-syria/">http://bloomsburywildlife.com/2015/09/09/a-message-from-syria/</a>
Online article	The big butterfly and Dragonfly Hunt	Iraq	Iraq	Male	NI Website	<a href="http://www.natureiraq.org/news/the-big-butterfly-and-dragonfly-hunt">http://www.natureiraq.org/news/the-big-butterfly-and-dragonfly-hunt</a>
Online article	Four new species of Dragonfly in Iraq – A Major	UK	UK	Male	NI Website	<a href="http://www.natureiraq.org/news/four-new-species-of-dragonfly-for-iraq-a-major-discovery-for-the-nature-iraq-darwin-programme">http://www.natureiraq.org/news/four-new-species-of-dragonfly-for-iraq-a-major-discovery-for-the-nature-iraq-darwin-programme</a>

	Discovery from the Darwin Project					
Online article	Bird Boxes Iraqi-Style	UK	UK	-	British Birds website	<a href="http://britishbirds.co.uk/article/bird-boxes-iraqi-style/">http://britishbirds.co.uk/article/bird-boxes-iraqi-style/</a>
Online article	Joint Iraqi and UK team set to work on major new conservation initiative in Iraq	UK	UK	-	BirdLife International Website	<a href="http://www.birdlife.org/middle-east/news/joint-iraqi-and-uk-team-set-work-major-new-conservation-initiative-iraq">http://www.birdlife.org/middle-east/news/joint-iraqi-and-uk-team-set-work-major-new-conservation-initiative-iraq</a>

## Annex 6 Darwin Contacts

Ref No	19-007
Project Title	Developing capacity for <i>in situ</i> conservation in Iraq
<b>UK Leader Details</b>	
Name	Anthony Miller
Role within Darwin Project	PI
Address	RBGE
Phone	
Fax	
Email	
<b>Other UK Contact (if relevant)</b>	
Name	Sophie Neale
Role within Darwin Project	Project Manager
Address	
Phone	
Fax	
Email	
<b>Partner 1</b>	
Name	Azzam Alwash
Organisation	Nature Iraq
Role within Darwin Project	
Address	
Fax	
Email	
<b>Partner 2 (if relevant)</b>	
Name	Richard Porter
Organisation	BirdLife International
Role within Darwin Project	Birds and project support
Address	
Fax	
Email	