Darwin Initiative Annual Report

Important note:

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

Submission deadline 30 April 2009

Darwin Project Information

Project Ref Number	165-15-024
Project Title	Quantification and Elimination of Threats to the Caspian seal
Country(ies)	Azerbaijan, Islamic Republic of Iran, Republic of Kazakhstan, Russian Federation, Turkmenistan
UK Contract Holder Institution	Institute of Integrative & Comparative Biology, University of Leeds
Host country Partner Institution(s)	Fisheries Research and Production Centre (FRPC - Almaty, Kazakhstan); Institute for Deserts, Flora and Fauna (Ashgabat, Turkmenistan), University of Guilan, Iran, Institute of Geology (IoG), Azerbaijan Academy of Sciences (Baku, Azerbaijan); International Oceanographic Institute (IOI - Astrakhan, Russia).
Other Partner Institution(s)	Sea Mammal Research Unit (SMRU), University of St Andrews; Institute of Zoology (IoZ), Zoological Society of London
Darwin Grant Value	£260,713
Start/End dates of Project	July 1st 2006 to June 30th 2009 (with proposed no cost extension to 30th June 2010).
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	April 2007-31st March 2009
Project Leader Name	Dr Simon Goodman
Project website	www.caspianseal.org
Author(s) and main contributors, date	Dr Simon Goodman, Dr Sue Wilson, August 2010

1. Project Background

The project is based in the Caspian coastal regions of each of the 5 Caspian littoral countries (Azerbaijan, Iran, Kazakhstan, Russian Federation, and Turkmenistan). It was established in response to an urgent need to assess the conservation status of the Caspian seal (*Phoca caspica*), which has declined by more than 80% in the last 3 generations, and to identify, quantify and develop responses to the ongoing threats to the species in the context of the Caspian marine ecosystem. It also aims to enhance the scientific capacity of researchers within the Caspian region working on marine biodiversity to recognise and address all issues surrounding Caspian seal conservation. The project is working with local communities, other stakeholders such as NGOs, oil companies, national governments, and an intergovernmental UNDP programme (Caspian Environment Programme, www.caspianenvironment.org) to raise awareness about conservation issues surrounding the seal, and to help governments implement conservation policy guided by research outputs from the project.

2. Project Partnerships

This project has a large number of partners in 5 countries, with different languages, and sometimes difficult communications, and a range of administration and bureaucratic challenges. These factors have made this a sometimes difficult and time consuming project to administer and to keep the overall project co-ordinated towards its long term goals. The project is managed by the principle project leader, Dr Simon Goodman, supported part-time by Dr Susan Wilson, as a scientific co-ordinator, and Ms Lilia Dmitrieva (who acts as a Russian speaking scientific co-ordinator). The management is partitioned into 5 individual country units lead by the local scientific partner, who leads the in country teams, and are responsible for conducting much of the in-country work. Three to 6 month work plans are agreed in advance with the scientific leaders for each country for them to implement. Communications are conducted via email, Skype, and during visits to the countries for project activities. We are able to communicate with most scientific leaders on weekly to monthly time scales as appropriate.

The country units are also part of a pan-Caspian Seal Conservation Network (CSCN) which constitutes the main pool of expertise on Caspian seals within the region. We aim for this network to co-ordinate activities between countries, and to interact with local communities and with their national governments on disseminating information about Caspian seals, and working with the national governments on policy issues.

The project team has a history of collaboration with the lead scientists in each country predating the Darwin project, so the relationship with these partners was already mature. The Darwin project has lead to development of enhanced relationships with new staff members in each country and with the administrations of the partner institutions. In general the relationships have been productive and have generated good progress towards the project goals in line with the project schedule for most outputs. However, over the last two years there have been significant difficulties due to the death of the Iranian project leader in a road traffic accident in January 2008 (see below), due to project partners moving institutions, changes in administrators in institutions or government offices, and with differences in administrative culture between countries.

IR Iran:

Sadly the Iran project leader, Dr Hormoz Asadi, was killed in a road traffic accident in Iran in January 2008, while working on another project unconnected with the Darwin project. Iran is a difficult country to work in, even for local Iranian scientists, due to a complex political and administrative system. Support for projects can depend on developing good relationships with appropriate figures in the government Ministries of Fisheries and Environment, which Dr Asadi had spent a long period building up. Therefore Dr Asadi was not an easy figure to replace. In addition Dr Asadi's principle research assistant, Leili Shamiminoori, emigrated to Australia during the same period. In order to continue working with Iran we had to establish a project partner that was capable of carrying out and administering the work there, since without Dr Asadi unfortunately the University of Guilan did not have the capacity to do this. Fortunately Dr Asadi has trained a group of young scientists who had established a nature conservation NGO, Plan 4 the Land (http://www.plan4land.org/english/Default.aspx, principle contact Ms Delaram Ashayeri). By the end of 2008 the work in Iran was re-established with this new partner, with 3 researchers contributing (Delaram Ashayeri, Arash Ghoddousi, and Amir Khaleghi), but it is still hampered since the new partner does not have the same access to support from the Ministries of Fisheries and Environment available through Dr Asadi. Current progress suggests they will still be able to achieve most of the anticipated

outputs for Iran, but with smaller geographic coverage. Also we will have to pursue policy issues through the CEP rather than directly in country.

Azerbaijan:

Changes in administrative staff at the home Institute (Institute of Geology, Azerbaijan National Academy of Sciences) of the Azeri partner Dr Tariel Eybatov, created problems for Dr Eybatov in accessing project funds transferred there for almost a year in 2007-2008. These problems appeared to be of a personal political nature, and proved difficult for us to resolve. However Dr Eybatov was able to continue most activities using personal funds, and was eventually properly reimbursed. These financial issues were resolved by the end of 2008. Dr Eybatov also experienced additional problems with the Azeri Ministry of Environment in gaining permission for access to some costal sites for seal monitoring, and unfortunately we have not been able to resolve this by March 2009. Personal visits with Dr Eybatov have proved to be the most effective means of communication since his use of email remains erratic at times. He has been effective at delivering his main activity of conducting regular beach transects along the Azeri coast to monitor mortality, conducting necropsies and participating in training.

Russian Federation: Communications and interaction with the Russian partners continues to be good over the reporting period, and they have participated in and facilitated the project mostly as expected.

Kazakhstan: In mid-2007 the Kazakh government restructured the way funding was allocated to government scientific institutes, effectively abolishing them, and turning them in to for profit research centres. As a result of this upheaval, our principle scientific partner, Dr Mirgaliy Baimukanov, had to move from the Fisheries Research and Production Centre (FRPC) to establish a new research institute, the Institute of Hydrobiology and Ecology (IHE). The Darwin project moved with Dr Baimukanov, and progress on most activities in Kazakhstan was slow until this process was completed in early 2008. Since then the relationship with Dr Baimukanov has been very strong, and progress has been made for most activities. In addition Dr Baimukanov has been instrumental in building strong links between the project and the Kazakh Ministries of Agriculture (Fisheries dept), and Environment (Biodiversity dept). The project in Kazakhstan now has the strongest direct government support out of all the project countries. As detailed in the previous report Dr Baimukanov has been an effective lobbyist, pushing for Kazkahstan to support zero hunting quotas for Caspian seals.

Turkmenistan: Turkmenistan had the lowest starting capacity of all the Caspian countries to carry out the project scientific activities and communications were initially poor. Communications did improve with assistance from Ms Dmitrieva, but continued to fall below expectations. Large efforts were expended via email, and during meetings on field trips, and at workshops in 2007-9, to get the Turkmen partner Dr Pavel Erokhin work at the expected level in terms of rigour and consistency of research. Unfortunately these efforts did not lead to a significant improvement, and so by early 2009 we decided to shift most of the responsibility for the project, and project assets to the staff of the Hazar Reserve National Park, based in Turkmenbashi, on the Caspian coast. The reserve includes many important sites for seals, so in principle the reserve should be well placed to support the project activities. However, they also have a low starting capacity, and are not well resourced. By the end of the project we will be able to gain basic information on the status of seals there, but progress will be less strong than in other countries. However, enthusiasm for ultimate aim of the project remains strong in the staff and with government contacts.

Other Partners

Caspian Environment Programme (CEP) www.caspianenvironment.org: The CEP is a UNDP funded pan-Caspian body which is developing international environmental treaties and policy for management of the Caspian ecosystem, and has a mandate from each of the Caspian countries. The CEP invited the Darwin project management team to advise on seal conservation issues in 2004, and supports the project logistically, financially and by providing a conduit for research outcomes and policy advice from the project direct to ministerial levels in each country. The CEP has continued to support the project, and push the Caspian governments for implementation of the official seal conservation plan, which was ratified by each country and published March 2007, within the framework of the Tehran Convention (Framework Convention for the Protection of the Marine Environment of the Caspian Sea - www.tehranconvention.org).

Agip KCO: Agip KCO is an international oil company involved in the development of the northern Caspian oil field. It has previously provided logistical and financial support in 2006, and 2007 for aerial population surveys. In 2008 it provided £158,000 for aerial population surveys and assessment of industrial shipping on breeding seals. At the end of 2008, it agreed support for a 3 year programme (2009-2012), for aerial surveys, satellite telemetry studies, and shipping impact assessments, with financial support of >£950,000 over 3 years. This will be a tremendous contribution to generating data on Caspian seal

ecology which is beyond the scope of this project. The first parts of this (aerial surveys) were underway by January 2009.

Institute of Zoology, Zoological Society of London, Sea Mammal Research Unit, University of St Andrews, Swedish Museum of Natural History, Stockholm (SNHM): Due to the various in country delays described above, the roles of these partners in training has been less than anticipated, however they maintain links with project and continue to deliver inputs into scientific issues and training where possible.

Other collaborations: We have contacts with the WWF Caucasus Office in Baku, WWF Russia in Moscow, with the Marine Mammal Council of the Russian Academy of Sciences and with IUCN. These have all been involved in lobbying of the Russian government to take action on the conservation of Caspian seals in Russia. The Institute of Virology and Microbiology (IVM) in Almaty, Kazakhstan now work closely with us on the seal health aspects of the project.

UK lead Institution: The project leader has experienced problems in submitting reports due to high workload burdens arising from large teaching responsibilities at home and managing 3 fieldwork intensive projects (2 concurrent Darwin projects, plus Agip KCO projects in the Caspian).

CBD commitments: The main contact point for CBD issues is through the Caspian Environment Programme, which is incorporating policy outcomes derived from this project into goals for biodiversity sustainability/protection to be implemented through the proposed Tehran Convention on environmental governance of the Caspian Sea.

3. Project progress

3.1 Progress in carrying out project activities

The overarching project outputs from the logframe are: 1) Regional Seal Centre Network with trained staff and research infrastructure; 2) Estimates of population size, movement & habitat usage, health status, diet, genetic structure, & climate change response model; 3) Seal Conservation Action and Management Plan & reduced by-catch mortality; 4) Educational events & materials; 5) Media representation. The following activities contributed towards these outputs:

Capacity building and training

Between April 2007 and March 2009 the capacity building and training activities (provision of equipment and project staff training), needed to achieve the output 1 proceeded mostly to schedule and were mostly successful (with exception of Turkemenistan, see above). The provision of the main physical resources was completed in the first year, and most remaining activities consisted of training via the listed workshops or 'on the job' during field work. Feedback and experience gained with the partners in the first stages of the project indicated that the greatest value was placed on the practical aspects of training, so the initially planned academic content of the training programmes was scaled back, although most of the topics are still covered at a more basic level. Training has now focused development of practical skills needed to achieve the research and monitoring outputs. Two Kazakh scientists from the Institute of Virology and Microbiology (IVM) in Almaty (Dr Aidyn Kydyrmanov, Dr Kobey Karamendin), visited the UK for 3 weeks in November 2008 for training in pathology, virology and genetics at the University Of Leeds, Institute of Zoology, Institute of Animal Health, Perbright, and the Agri-Food and Biosciences Institute, Belfast.

The initial project proposal the aim was to have at least 5 undergraduate students, and 1 masters student from each country undertaking research projects during the course of the project. However, in all countries it has not been possible to find students with the right background, who have sufficiently stable personal circumstances to achieve this. Three masters students from Russia have participated but have only been able to do so for short periods of fieldwork, or for specific workshops. However, 1 UK Masters student was able to complete a Masters thesis on Caspian seal population genetics, and separate funding from Agip KCO was secured for the Russian project co-ordinator, Lilia Dmitrieva to begin a PhD project on Caspian seal responses to climate change at the University Of Leeds in July 2009, using project data. In August 2008 and August 2009, the international staff conducted a 2 day seminar work on seal biology and ecology as part of a summer school for approximately 50 undergraduate students organised by our Russian partner, the International Oceanographic Institute, in Aktau, Kazkahstan.

These activities fulfil most of the anticipated aims for Output 1, years 2 and 3 reporting periods.

Research and population monitoring

Project partners in Iran restarted monitoring of seal mortality along the Iranian coast for assessment of by-catch rates in the Iranian fishery (through interviews and beach transescts). Project partners from IHE and IVM in Kazakhstan continued monitoring and necropsy work in Kazakhstan, participated in the investigation of strandings incidents of Caspian seals 2007-2009 on the Kazakh coast, and participated in aerial surveys. The project partner in Azerbaijan continued monitoring of mortality on the Azeri coast, but was not able to carry out any monitoring or diet assessment of live seals since live seals have disappeared from the accessible areas. The project partner in Turkmenistan carried out surveys of haul out sites during the breeding and moulting periods but the quality of the work fell below the expected standard in terms of detail and rigour, despite providing further support.

Aerial surveys were carried out over the winter ice-field in Kazakhstan in February 2008 and 2009, to assess pup production and seal distribution on the ice. The survey was carried out together with our IHE partners, with financial and logistical support from Agip KCO. This generated an estimate of annual pup production for 2008 of 7000, and 15,000 in 2009. These figures suggest and overall fluctuating but declining trend in pup production, which is of great concern. Ice conditions have been good since 2007, which suggests that variation is likely to be linked to ecosystem effects such a food availability, which may be reduced due to impacts from overfishing and invasive species.

The population genetics assessment of population structure using microsatellites was completed in August 2008, and shows the population is a single panmictic unit, and therefore does not need to be managed as separate stocks. Diet assessment is ongoing from opportunistic collection of faeces for otolith assessment. Preliminary results show diet is more varied than suggested in old Russian literature, and that commercial fish species occur less frequently than in the past. Satellite telemetry work began in November 2008 with financial support from Agip KCO, and will continue through 2012 with tagging of up to 60 animals. The full interpretation of the telemetry results will not be available until then, but it should provide a solid understanding of habitat use/requirements for the species. Similarly health assessment is also on going based on opportunistic necropsies and samples from live seals caught for telemetry. So far no major disease issues have been identified, but preliminary results have been obtained to suggest that CDV may be circulating asymptomatically in juvenile animals, and without triggering mass mortalities. Work on responses of seals to climate change was an ambitious component of the original proposal, requiring substantial researcher input. This will now be incorporated in to the PhD project of Lilia Dmitrieva and will be completed in 2012.

These activities fulfil most of the anticipated aims for Output 2, years 2 and 3 reporting periods.

Education & policy

The new Iranian team continue the work begun by Hormoz Asadi holding workshops with fishing co-operatives along the Iranian Caspian coast to raise awareness of seal conservation issues and to educate fishermen in strategies for reducing/avoiding seal bycatch. They continue to be well received by the fishing communities and they are using the methods taught to reduce seal mortality, and reporting mortality to the project when it occurs.

The Russian team produced a general information leaflet in English and Russian describing project activities for stakeholders and the general public in August 2008. A children's colouring book highlighting Caspian seal conservation issues is planned for 2009-10.

Through 2007-2009 the project team worked with CEP representatives and country partners to prepare documentation to submit to the Caspian Commission on Aquatic Bioresources (CAB – an inter-government quango responsible for setting all quotas on Caspian bioresources), providing a case for zero hunting quotas for Caspian seals.

In 2008 the project team worked with the IUCN pinniped specialist group to update the Red Book submission for Caspian seals (based on project research outcomes. As a result of this the status of Caspian seals was changed to Vulnerable to the higher threat category of Endangered. http://www.iucnredlist.org/apps/redlist/details/41669/0/full

Together these fulfil the year 2-3 aims for outputs 3 and 4.

Dissemination of results

The original English DVD has been translated in Russian. Extension of content for the first training DVD produced in 2006-7 (to include new material based on project outcomes) has continued along with the

proposed TV documentary. However, the full production costs were reliant on external funding from Agip KCO, which is not expected to be fully in place until 2010. Therefore completion of the final training DVDs and the TV documentary is now expected in late 2010.

The project website (http://www.caspianseal.org) was completed during late 2007, and now acts a dissemination route for project outputs and general information.

Presentation of project results were made at the international Marine Mammals of the Holarctic conference in Odessa (October 2008), and at meetings of the Caspian Environment Programme. The project has received press/media coverage in Azerbaijan, Iran, Kazakhstan and Turkmenistan, on several occasions during 2007-2009, and internationally, particularly following the announcement of the change in IUCN Red Book status, see annex 6.

A manuscript detailing the pup production of Caspian seals based on the 2005 and 2006 aerial surveys was published by the journal Ambio in September 2008.

Together these fulfil most of the anticipated aims for years 2-3 under output 5.

3.2 Progress towards Project Outputs

Regional Seal Centre Network with trained staff and research infrastructure

The structure of the seal centre network is in place, with the staff in post, equipped and continuing their project activities. The partners in each country are in touch, and are often consulted by the CEP and national government departments on seal conservation policy issues. The training is a multiyear activity, and the training activities for project staff are proceeding as planned. At this stage this output could be considered completed, with the exception of Turkmenistan which continues to need a great deal of support. A training workshop specifically for Turkmenistan is planned for September 2009. As detailed in section 3.1 long-term training for local students has proved difficult to implement.

Estimates of population size, movement & habitat usage, health status, diet, genetic structure, & climate change response model

Further aerial population surveys were completed in February 2008, and 2009. Local population monitoring, and surveys of health and diet are continuing as planned. Health and diet studies require collection of material through the term of the project, but material is being collected at a rate which should deliver informative results by the end of the project. The otolith guide development was being led by Dr Baimukanov, but the disruption caused by Dr Baimukanov changing institutions mean a full publication quality guide will not be completed until 2011 with additional support from Agip KCO funds. However, a preliminary working guide which allows identification of most otoliths occurring in seal faeces to at least family level has been produced, which is sufficient to assess conservation implications of diet. The genetics component was completed in August 2008. Completion of the climate change impact model proved infeasible within the timeframe of the current project due to scope of the work required, but this will be completed by 2012 by Lilia Dmitrieva as part of her PhD project. The late completion of this is not critical to the conservation measures which can be expected to be implemented during the lifetime of the project.

The activities that have been completed or which are currently underway indicate most of this output will be delivered as planned. The growing acceptance of these results by the regional and international scientific community is measurable indicator of how this is translating in to conservation impacts (e.g. progress on action plan, IUCN status, publication of papers).

Seal Conservation Action and Management Plan & reduced by-catch mortality

A draft Caspian Seal Conservation Action and Management Plan (SCAMP) was prepared by the Darwin project in September 2006, and then edited and adopted by the Caspian Environment Programme (as Caspian Seal Conservation Action Plan (CSCAP) – submitted with previous report). The Fourth Draft (March 01, 2007) was officially agreed by the Caspian governments in March 2007. Implementation of the action plan will be incorporated in to commitments of the Tehran Convention treaty between the states.

The process of beginning implementation of the plan by the governments will be supported by a second phase of the Caspian Environment Programme (CASPECO), beginning in the 2nd half of 2009. The first step is the definition and establishment of special protected areas for Caspian seals. Official consultation for this will begin in autumn 2009, and the Darwin project team has been asked to draft the consultation terms of reference and to act as advisors for the process.

Reduction of by-catch is an ambitious multiyear activity but there has progress towards this through the community work in Iran (see 3.1 above). An expedition to Dagestan, Russia will take place in September 2009 in order to quantify by-catch in the north-Caspian through interviews with fishing communities there.

The acceptance of the plan and initiation of the process for its implementation is a measurable indicator of the success and completion of the output. However implementation of the action plan by the governments is a much a political process as a conservation activity, and full implementation will continue beyond the lifetime of the current project. While the project is helping to develop the capacity to implement the plan, and provide the scientific background, it doesn't itself have the legal mandate or the resources to implement the plan.

Educational events & materials

This output is generally progressing in line with expectations for this stage of the project, in terms of the number of and type of activities completed (see 3.1/3.3).

Media representation

This output is generally progressing in line with expectations for this stage of the project, in terms of the number of and type of activities completed (see 3.1/3.3).

3.3 Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Year 1 Total 2006-7	Year 2 Total 2007-8	Year 3 Total 2008-9	Year 4 Total 2009-10	Year 5 Total 2010-11	Total to date	Number planned for this reporting period	Total planned from application
Established codes									
2	People attaining Masters (UK Masters by Research)		1				1	0	0
4A	Undergraduate training - Projects/ workshops	2	0	0			2	0	25
4B	Weeks	4	0	0			4	0	21
4C	MSc training - Workshops & fieldwork	1	1	2			4	4	5
4D	Weeks	1	3	4			8	4	Up to 108
5	Research assistants in Kz, Ir, Az, Tk	8	8	8			8	8	10
6A	Attendees at workshops & other training	8	3	2			13	5	Up to 30
6B	Weeks	24	10	11			45	39	Up to 90 people weeks
7	Training/	6	0	1			7	1	7

	Education Materials								
8	Weeks in country by project UK staff	6	15	18			39	40	60
9	Species plans (SCAMP)	1	0	0			1	0	1
10	Field guides & Manuals	0	0	0			0	0	2
11A	Papers published	0	0	3			3	3	2
11B	Papers submitted	1	0	0			-	-	-
12A	Computer databases established	0	0	0			0	0	2
14A	Dissemination workshops/ seminars/ conferences organised	1	1	1			3	2	3
14B	Dissemination workshops/ seminars/ conferences attended	2	3	6			11	2	6
15A/B/C/ D	Press releases	5	0	1			6	1	6
16A/B/C	Newsletters (via website)	0	1	1			2	2	3
17A	Caspian seal conservation network	1	0	0			1	0	1
18A/B/C/ D	TV programmes/featu res	2	0	0			2	1	4
19A/B/C/ D	Radio features/interview s	0	0	0			0	1	4
20	Value of physical assets	£10k	0	£2546			0	0	£12546
23	Value of resources raised from other sources	$24k	£158k	£950k					~ £1.1 million
New - Project specific measures	Weeks spent in country by other European project collaborators delivering training	14	8	10					

In Table 2, provide full details of all publications and material produced over the last year that can be publicly accessed, eg title, name of publisher, contact details, cost. Mark (*) all publications and other material that you have included with this report.

Table 2 Publications

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
Journal paper*	T. Harkonen, M. Jüssi, M. Baimukanov, A. Bignert, L. Dmitrieva, Y. Kasimbekov, M. Verevkin, S. Wilson & S. J. Goodman. Pup production and breeding distribution of the Caspian seal *Phoca caspica* in relation to human impacts. AMBIO, 37, 356-361	Springer, Netherlands	S.J. Goodman (Springer have just acquired Ambio, and back issues of the journal not currently available from their website).	
Red Book listing*	Härkönen, T. 2008. Pusa caspica. In: IUCN 2010. IUCN Red List of Threatened Species	IUCN	http://www.iucnredlist.org/apps/redlist/details/41669/0/full	
Conference paper*	Pup production in the Caspian seal, Phoca caspica, 2005–2008 T Härkönen, M Baimukanov, A Bignert, L Dmitrieva, I Jüssi, M Jüssi, Y Kasimbekov, M Verevkin, S Wilson, S Goodman (2008) Marine Mammals of the Holarctic, Collection of Scientific Papers, Fifth International Conference, Odessa, Ukraine, October 14-18, 2008. p218-220. ISBN: 978-966-190-025-6	Marine Mammal Council , Russian National Academy of Sciences	S.J. Goodman	
Conference paper*	Response of mothers and pups of the Caspian seal, Phoca caspica, to the passage of icebreaker traffic (2008).	Marine Mammal Council , Russian National Academy of Sciences	S.J. Goodman	

	Sue Wilson, Y Kasimbekov, N Ismailov and S Goodman. Marine Mammals of the Holarctic, Collection of Scientific Papers, Fifth International Conference, Odessa, Ukraine, October 14-18, 2008. p593-595. ISBN: 978-966-190-025-6			
Report to CEP and Agip KCO*	Caspian seal survey 2007, Final Report, June, 2008. Caspian International Seal Survey	-	www.caspianenvironment.org S.J. Goodman	
DVD	The Caspian Seal (Russian version)	Byword Productions	S.J. Goodman	

3.4 Progress towards the project purpose and outcomes

Purpose To strengthen the ability of researchers and managers in the region to identify, monitor and manage present and future threats to the Caspian seal

The project has created communication links between all the project partners forming a network or regional scientists working on seal conservation, run series of training workshops and provided materials for guidance, including manuals for field monitoring and post-mortem examination and sampling. Communications between the partners and the project leaders help guide work and resolve technical problems. The project has also provided the equipment and other basic infrastructure required to support the work. Together with participation in the research activities this is increasing local scientific capacity to monitor, assess, develop responses to threats. Thus the project is increasing the capacity of the regional researchers to undertake the research and ability to communicate across the region required to achieve this outcome.

Purpose To halt seal population decline by reducing anthropogenic sourced mortality

Prior to this project, the perception in the region was that there were approximately 400,000 Caspian seals, an annual pup production of 40-60,000 pups, population recovery from CDV outbreaks and therefore no reason not to continue commercial and scientific hunting. The results from our series of aerial surveys of pup production (falling from 21,000 in 2005 to as low as 6,000 pups in 2007) and the change in IUCN status to Endangered is impacting on the regional authorities and general public. The general perception now is that substantial cause for concern about Caspian seals, as evidenced by the media coverage the topic receives in the region.

The only Caspian state still actively supporting seal hunting is the Russian Federation, and to our knowledge there were no commercial seal hunts by Russia in 2009 (but this was most likely due to economic viability). However, although in practice hunting appears to have ceased at this time, the political influence exerted by Russia means that quotas have still not officially been set to zero, but remain at 18,000, shared among the states (with Russia the only nation that would use its quota of 8000). It is hopeful that in the next 2 years the other 4 countries will be able to exert sufficient pressure to officially end hunting through the CAB. The future implementation of protected areas through CASPECO should also contribute significantly to reducing mortality.

Workshops with fishermen's groups in Iran have had an effect on preventing the killing of seals caught in nets, and the attitude of fishermen towards seals is undergoing a radical change on account of this work.

However, Iran probably accounts for a relatively small proportion of overall by-catch in the Caspian (100s versus many 1000s per year elsewhere), with most this taking place in illegal sturgeon fisheries in the north Caspian. Dealing with the latter at a political level requires accurate quantification of the scale of the problem which will be done later in 2009. After that, the illegal nature, and profitability of the sturgeon fisheries mean that it is an issue that has to be tackled by the governments through the Tehran Convention, and is beyond the scope of this Darwin project, although we can demonstrate the importance of tackling the problem for policy makers. The solutions will be complex requiring development of alternative livelihoods across a large part of the Russian Caspian coast, and provision of effective law enforcement. The community approach used in Iran can't work in quite the same way elsewhere, since seals generally drown in sturgeon nets while the fishermen are not present.

Purpose To build capacity for the long-term implementation of science-based conservation and management policies in the Caspian that promote biodiversity and its sustainable use.

There is still a long way to go both in having the capacity within the region to carry out the scientific research required to guide conservation policies, and to establish a culture of using peer reviewed science and other objective criteria for setting conservation policy and managing biodiversity in a sustainable way, rather than using anecdote or short term financial interests.

However, the partners in the project, and the governmental bodies they report to are already seeing the successes from the seal project, and in some countries are using the results to argue for a shift in previous policy (e.g. in Kazakhstan). Our belief is that the training we will provide will leave a scientific cultural legacy that will spread into broader areas of biodiversity management in the Caspian region. A key challenge is to gradually effect a change in the *modus operandi* of the Caspian Bioresources Commission. This Commission meets privately annually to allocate fisheries (e.g. for sturgeon) and seal hunting quotas throughout the region. It has historically been dominated by the Russian delegation and continues to be so. Seal hunting quotas (and most fishing quotas) continue to be allocated without the basis for them being made available. The official annual quota is seals is still 18,000 seals, approximately three times the pup production in 2007 and 2008, and is clearly unsustainable. However by already changing the attitudes of countries such as Kazakhstan we are confident that this important regional biodiversity management group will accept the need for fully transparent policy setting based on peer reviewed science. The Caspian Environment Programme is also pursuing similar objectives.

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

The successes in the acceptance of the conservation action plan and plans for its implementation by the Caspian countries within the framework of a legal environmental treaty (the Tehran convention), the scientific recognition of project results leading to the change in IUCN classification, and the success with the local community work on fishing by-catch in Iran, suggest that ultimately the project does have the potential to contribute to a halt in the current decline of the Caspian seal and begin a recovery. However this will be a long term process extending years beyond the lifetime of this project that has to be carried by the Caspian countries. If this can be achieved then wider improvements the Caspian ecosystem should follow since the seal is key flagship and indicator species.

4. Monitoring, evaluation and lessons

Ultimately the progress and success of the project at the outcome and goal level during the lifetime of the project, is monitored and evaluated through the acceptance and implementation of the conservation action plan by the Caspian governments. Training feeds in to effective research outputs, and research outputs provide the evidence for action demanded by the policy makers. There has already been notable progress, in the generation of the conservation action plan, the success of which is indicated by it's acceptance in the region, and the changes in policy which are starting to develop (e.g. all nations except Russia support zero hunting quotas). Outputs for this project mostly have physical indicators such as documents or other materials which can be assessed quantitatively. Activities are monitored and evaluated by comparing them against agreed 3-6 month work plans with partners.

Several lessons have emerged during the course of this reporting period. Firstly the research outputs are beginning to reveal the true scale problems facing Caspian seals, and show that the solutions have to take place at the level of the whole Caspian ecosystem. The political and social resources, to bring truly effective change are much greater than thought at the time of the proposal, and can only be provided by the governments of the countries over many years. While the project can provide scientific direction, it

has to become part of the general political process of instituting environmental governance for the Caspian that will come through the Tehran Convention.

Secondly the size and complexity of a project which involves working in 5 countries simultaneously, brought many administrative and management challenges requiring more time from the project leader to deal with, than originally anticipated. All of the countries/partner institutions experienced some difficulties associated administration and management, and some did not really have the capacity to carry out project activities or administration in the ways required. In retrospect while the intention to work across the whole Caspian was important, since Caspian seals are a trans-boundary species, having the knowledge available now suggests implementation would have been smoother if activities had been focused in a fewer countries. However, this is balanced against the fact that it is less likely that the most important impacts, such as the conservation action plan, may have had less universal acceptance. Finally some of the research activities originally proposed, such as assessment of climate change impacts and otolith guide, have proved too ambitious to accomplish within the lifetime of the project given the institution difficulties with partners, and we have secured alternate funding to complete them after the Darwin project finishes (although this will not affect the conservation outputs from the project).

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

Queries requiring a response from review of annual report from year 1

1) *Could activities identified in the SCAMP be incorporated into the project in Year 2-3, or are these already in line with project activities?*

Implementation of the conservation action plan is primarily intended to be conducted by the governments of the Caspian states in the framework of the Tehran Convention and Caspian Environment Programme, since the project partners do not have the legal mandate to this, and the resources required are beyond the project. However the project will provide the scientific knowledge and capacity to guide the implementation in the future.

2) *Could the project consider extending activities that directly reduce human-associated threats to Caspian Seals, as these will have the greatest direct impact on the population? It is not clear in the report how threat identification is being carried out and how mitigation measures will then be adopted within the project lifetime. Improved management of these threats is a key component of the project purpose, yet currently a small part of the project implementation and activities. Could successes in Iran be replicated across the range states as part of the project?*

The reviewer provides an important comment here. We are trying to limit hunting by supporting project partners in pushing their states to adopt a zero hunting quota. We also plan to quantify by-catch in illegal sturgeon fisheries in the northern Caspian (see section 3.4), which will provide the data needed for further lobbying of policy makers. However, most of the bycatch outside Iran occurs in these illegal fisheries, which means the methods used in Iran will probably not be appropriate. The scale and political complexity of sturgeon poaching is beyond the scope and mandate of this project to deal with, and is something that has to be tackled by the Caspian governments by social initiatives to provide alternate incomes, and provision of national resources for proper law enforcement. However, we believe the science done by the project will provide the justification for states to pursue this should they have the political will to do so.

3) *Would it be worth considering promoting learning between range states in Russian rather than English if this is a common language to all states?*

We try to do this where possible by providing appropriate translation. However in order to access international scientific content (e.g. journals etc), it is important for the Russian speaking project partners to gain proficiency in English.

6. Other comments on progress not covered elsewhere

All points have been covered in the main body.

7. Sustainability

The project continues to have a high profile within the region at governmental level, and among government agencies responsible for management of the seal population through our involvement with the CEP, partners, and direct approaches to the government institutions involved. This evidenced by the acceptance of the conservation action plan, and plans for implementation at the government level through the new CASPECO programme.

The change in IUCN classification in 2008 generated substantial media coverage about Caspian seals in the region, and seals continue to have a high profile in discussions about the Caspian environment in the regional media.

The current exit strategy is that implementation and resourcing of the action plan will be achieved through the national governments, with the framework of the Tehran Convention, with scientific guidance from the project partners. This should mean that the project partners will receive some funding from governmental initiatives which are made available to support the plan, although the governments have yet to allocate funds at this time. In the medium term, through to 2012, Agip KCO will continue to provide financial support for research activities including aerial surveys and satellite telemetry.

8. Dissemination

Project scientific outputs and other materials are being made available from the project website and from the CEP website. Educational and general information for a non-specialist audience are also available from the project website. These websites will persist beyond the end of the project, as this is web based the costs are minimal. The DVD entitled 'The Caspian Seal' has so far been distributed (in English and Russian) at all meetings attended by the project (e.g. to delegates at Caspian Environment Programme meetings), and to key stakeholders such as oil companies and NGOs. The country partners have updated relevant government departments directly, or via the CEP. The paper on annual pup production 2005/06 was published by Ambio in September 2008, and at least 4 other papers are expected to arise from the project by 2011.

9. Project Expenditure

Table 3 Project expenditure <u>during the reporting period</u> (Defra Financial Year 1 April 2007 to 31 March 2008)

Item	**Budget** (please indicate which document you refer to if other than your project application or annual grant offer letter)	Expenditure	Variance
Rent, rates, heating, overheads etc			
Office costs (eg postage, telephone, stationery)			
Travel and subsistence			
Printing			
Conferences, seminars, etc			
Capital items/equipment (specify)			
Others (specify) Fieldwork costs and consumables			
Salaries (S Wilson, L Dmitrieva, 8x research			

assistants, and 3x scientific leaders).			
TOTAL			

The University of Leeds was awarded £158,000 from Agip KCO which provided additional funds for travel and subsistence, reducing the reliance on Darwin for this budget stream for international travel associated with fieldwork, training, and conferences etc. Additionally due to the problems experienced by the project partners, there were fewer than expected participants in workshops from outside the main project group. The under-spent funds were allocated to support additional fieldwork and consumables costs.

Project expenditure during the reporting period (Defra Financial Year 1 April 2008 to 31 March 2009)

Item	**Budget** (please indicate which document you refer to if other than your project application or annual grant offer letter)	Expenditure	Variance
Rent, rates, heating, overheads etc			
Office costs (eg postage, telephone, stationery)			
Travel and subsistence			
Printing			
Conferences, seminars, etc			
Capital items/equipment (specify) Landrover for Iran (£2000), laptop computer.			
Others (specify) Fieldwork costs and consumables			
Salaries (S Wilson, L Dmitrieva, 8x research assistants, and 3x scientific leaders).			
TOTAL			

Funding from Agip KCO again meant that a surplus was available from travel and subsistence. Surpluses from budget lines were used to support spending on conferences, seminars and workshops, and to purchase vehicle for use in Iran (since Dr Asadi's was no longer available due to his death), and additional laptop.

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

Annex 1 Report of progress and achievements against Logical Framework for Financial Years: 2007/8 & 2008/09

Project summary	Measurable Indicators	Progress and Achievements April 2007 - March 2009	Actions required/planned for next period
Goal: *To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve* *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*		The inception of the CASPECO project through by CEP is the means by which the conservation action plan will be implemented, and project will help guide this process. Scientific outputs lead to the change of IUCN classification to Endangered, which will act as a catalyst and impetus for action by the region. The change in attitude on by-catch in Iran has been maintained. Together these suggest that in the long term the project is has the potential to contribute to a halt in the current decline of the Caspian seal and begin a recovery. If this can be achieved then wider improvements in the Caspian ecosystem should follow since the seal is key flagship and indicator species.	*(do not fill not applicable)*
Purpose To strengthen the ability of researchers and managers in the region to identify,	New knowledge on the status of Caspian seals, plus the nature, and prevalence of threats faced by the	The seal conservation network and training continue, increasing capacity to identify, monitor and manage threats to the seal. The research programmes are	Capacity building and training: workshops continue. Research and population monitoring: Population surveys, diet analysis,

monitor and manage present and future threats to the Caspian seal; to halt seal population decline by reducing anthropogenic sourced mortality; to build capacity for the longterm implementation of science-based conservation and management polices in the Caspian that promote biodiversity and its sustainable use.	population. Reclassification of Caspian seals to Endangered status by IUCN. All countries except Russia supporting zero hunting quotas, increased willingness by national governments to support seal conservation. Increased awareness of environmental issues and changes in practice to reduce seal mortality in local communities.	generating the new knowledge required to inform policy (e.g. aerial surveys February 2008,9; completion of population genetics assessment). Paper on pup production published in Ambio, and papers presented at Marine Mammals of Holartctic conference. Darwin project team asked to act as advisors on implementation of action through CASPECO by CEP. Media coverage in each country is raising the profile of the seal, and community work in Iran is maintaining changed attitudes and practices to avoid by-catch in fishing communities.	health surveys, telemetry studies Education & policy: Continue to work with local organisations, schools and communities to develop educational materials and solutions to reduce by-catch; further promote implementation of SCAMP at governmental levels Dissemination of results: annual reports, website updates, media engaged, conference presentations
Output 1. Regional Seal Centre Network with trained staff and research infrastructure.	Network of trained and equipped staff in collaborating centres across the region.	The structure of the seal centre network is in place, with the staff in post, equipped and running their project activities. The project partners in each country are in touch with each other forming the pan-Caspian network of regional scientists working seal conservation. The training is a multiyear activity, but the proposed training activities were mostly completed as planned.	
Activity 1.1 Establishment of regional seal conservation network		See above for current progress. Next year continue to make sure the research groups maintain contact, participate in workshops, enhance communication and dissemination through use of the project website.	
Activity 1.2 Training workshops		Training was held in February and November, 2008 & 2009, approximately 2 weeks each covering practical aspects of aerial survey methodology, seal ecology, behaviour, pathology, health & diet analysis, satellite telemetry). Continue to run training in the final year.	
Output 2. Estimates of population size,	Findings endorsed by local &	An aerial population surveys were completed in February 2008 and 9,	

movement & habitat usage, health status, diet, genetic structure, & climate change response model.	international scientific & conservation communities.	complementing those undertaken in 2000-7. Local population monitoring, and surveys of health and diet are continue, and satellite telemetry began in November 2008, scheduled to end in 2012. The population genetics study was completed. The endorsement of the current research results by the regional and international scientific community (e.g. papers, IUCN) is measurable indicator of how this is translating in to conservation impacts.
Activity 2.1. Aerial surveys February 2008 and 2009		Aerial population survey undertaken in February 2008 and 2009. Continue with survey in February 2010.
Activity 2.2. Local monitoring of populations		Monitoring occurring in Iran, Kazakhstan, Azerbaijan, Turkmenistan, continue to end of programme.
Output 3. Seal Conservation Action and Management Plan; reduced by-catch mortality	Plan formally accepted in March 2007.	CEP initiated their CASPECO project, which will begin the process of implementing plan. The Darwin project was invited to act as advisors to this process and produce terms of reference for development of pan-Caspian special protected areas for seals. Reduction of by-catch is multiyear activity but there has been significant progress towards this through the community work in Iran. Work to quantify by-catch in the North Caspian is scheduled for autumn 2009. The engagement of the regional authorities and local communities in the project is a measurable indicator of the success of this output, and the progress to date is a strong indication that the output will be delivered as planned by the end of the project.
Activity 3.1. Implementation of conservation action & management plan via CEP		See above for progress. Continue to lobby regional authorities about uptake and implementation of plan.
Activity 3.2. Work with Iranian fishing communities to change fishing practices		The work with fishermens' groups in Iran has continued, reducing killing of seals caught in nets, and the changed attitude of fishermen towards seals has been maintained. Continue work to end of programme as planned.

Output 4. Educational events & materials	Participation of local communities in events, material distributed.	This output is generally progressing in line with expectations for this stage of the project, in terms of the number of and type of activities completed, e.g. workshop materials, DVD, etc. Level of participation in educational activities suggests this is successful.
Activity 4.1. Educational events with local communities to highlight seal conservation		In addition to the work with fishermen in Iran, the project contributed two 2 day teaching seminars/workshops as part of a summer school for approximately 50 undergraduates organised by the our Russian partner, International Oceanographic Institute. The events took place in Aktau, Kazakhstan, and covered seal biology, conservation, genetics, contaminants, and the outcomes from the Darwin project. Continue activities as planned until end of programme.
Activity 4.2. Production of educational materials for use by the region		DVD of short films about the Caspian seal completed in 2007 was translated in to Russian and distributed; website maintained (www.caspianseal.org); educational presentations and project materials available from website.
Output 5. Media representation	Project featured in local and international media.	This output is generally progressing in line with expectations for this stage of the project, in terms of the number of and type of activities completed. Indicator appropriate.
Activity 5.1. Project featured in press		Project featured in press articles in Iran, Azerbaijan, Kazakhstan, Russia and Turkmenistan, and Caspian seals featured prominently in international press coverage of the publication of the 2008 IUCN redlist (see Annex 6 for a list of links to a representative set of articles).
Activity 5.2. Project featured in broadcast media		Project partners did not report any coverage in broadcast media for this period, but more coverage is anticipated when outputs mature at the end of the project.

Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
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 the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilisation of genetic resources			
Purpose To strengthen the ability of researchers and managers in the region to identify, monitor and manage present and future threats to the Caspian seal; to halt seal population decline by reducing anthropogenic sourced mortality; to build capacity for the longterm implementation of science-based conservation and management polices in the Caspian that promote biodiversity and its sustainable use.	New knowledge on the status of Caspian seals, plus the nature, and prevalence of threats faced by the population. A Seal Conservation Action and Management Plan (SCAMP) endorsed by the Caspian Environment Programme and 2003 Framework Convention; potential reclassification by IUCN. Increased awareness of environmental issues and changes in practice to reduce seal mortality in local communities.	Project and workshop reports involving partner organisations, publications in peer-reviewed journals. SCAMP document and correspondence. Documentary films, website, professional and community educational materials, reports of educational and public relation programmes, success of students trained in programme, uptake of policy recommendations by local stakeholders. Monitoring shows seal mortality reduced due to uptake of practices to eliminate by-catch.	Researchers trained in the project and government ministries all use project findings and conservation action plan to continue to minimise the effects of threats to the seals and help to restore its population according to the 2003 Framework Convention. Continued funding made available, most probably via the Caspian Environment Programme with continuing matched contributions from oil companies and partner organisations
Outputs Regional Seal Centre Network with trained staff and research infrastructure. Estimates of population size, movement & habitat usage, health status, diet, genetic structure, & climate change response model. Seal Conservation Action and Management Plan; reduced by-catch mortality Educational events & materials.	Network of trained and equipped staff in collaborating centres across the region. Findings endorsed by local & international scientific & conservation communities. Plan peer reviewed, presented at international meeting and to local stakeholders. Participation of local communities in events, material distributed. Project featured in	Annual and field reports, peer reviewed papers, continued output of data to support SCAMP. Publication of results in peer reviewed international scientific journals. SCAMP published and distributed, copies sent to Darwin Initiative, meeting proceedings. Educational materials, posters, leaflets, press releases & reports on changes to level of seal mortality. Articles and recordings.	Researcher network and laboratories in the 5 littoral states continue to collaborate to fulfil SCAMP. Research & monitoring programme generates the information required for the SCAMP. Researchers continue to follow project protocols, make data available and produce work to international standards. Links to media & educational institutions strengthened through project.

Media representation	local and international media.		
Activities Capacity building and training Research and population monitoring Education & policy Dissemination of results	Activity milestones (summary of project implementation timetable) *Yr1:* Equip research centres, workshops (seal ecology, population biology, pathology, health & diet analysis); *Yr2:* workshops (as yr1 plus telemetry methods), students begin projects; *Yr3:* Workshops (as yr2 plus, climate change, contaminant monitoring), students complete projects. *Yr1:* Population surveys, diet analysis, health surveys; *Yr2:* As yr1 plus telemetry studies and genetic population structure analysis; *Yr3:* As yr 2, scientific papers and management plan written. *Yr1:* Work with local organisations, schools and communities to develop educational materials and solutions to reduce by-catch; *Yr2* & *Yr 3*, continue to run programmes. *In each year:* annual reports, website updates, media engaged; *Yrs 2* and *3*: presentation of results; *Yr3*: Action plan distributed, papers submitted.		Assumptions Required relationships with partner institutions in place. These are already well established. Research methods are appropriate for the Caspian. The proposed methods are well established for related species (ringed seals). Local communities participate. Successful engagement of stakeholders**.**

Annex 3 New contact details for project partners

Plan4Land – Project partner, Iran

Director - Hamed Moshiri

N.20/1 Fayzeyeh St., Bahonar St

Tehran

Islamic Republic of Iran

http://www.plan4land.org/english/Default.aspx

Institute of Hydrobiology and Ecology – Project Partner, Kazakhstan

Director – Dr Mirgaliy Baimukanov

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Hazar Reserve, Turkmenbashi, Turkmenistan – Project implementation Turkmenistan

Svetlana zakaryaeva (Lead research assistant)

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