



DARFW044 ref 3569 rev Mar16
Submit by 27 October 2015



Application for Darwin Fellowship programme: Round 22

Please read the Guidance Notes before completing this form. Where no word limits are given, the size of the box is a guide to the amount of information required. Information to be extracted to the database is highlighted blue.

1. Name and address of Lead Organisation (NB: Notification of results will be by email and addressed to the Project Leader listed in Section 5)

Name of Lead Organisation & Address:	Department of Zoology, University of Oxford, The Tinbergen Building, South Parks Road, Oxford, OX1 3PS
Project Leader Name:	Professor EJ Milner-Gulland
E-mail:	
Phone:	

2. Name and official address of proposed Darwin Fellow (include email and telephone details where available)

Name:	Md. Monirul Islam
Address:	Department of Fisheries, University of Dhaka, Dhaka-1000, Bangladesh
E-mail:	
Phone:	

3. Project dates, duration and total Darwin Initiative Grant requested

Proposed start date: 01/07/2016 Duration of project: 12 months End date: 30/06/2017			
Darwin funding requested	2016/17 £14550	2017/18 £4300	Total £18900

4. Summary of proposed Fellowship i.e. Outcome and expected outputs and impact

(Max 100 words)

To explore new approaches to integrating climate change into fisheries policy, linked to Darwin project 20015. This will enable the Fellow to support government and scientists in Bangladesh to design and implement climate-robust policy. He will: a) Review the current policy environment to identify gaps that contribute to vulnerability of aquatic biodiversity, particularly fisheries depended upon by poor people; b) Explore ways to engage key stakeholders and decision makers with scenarios and models to co-produce policy options to improve resilience of Bangladesh's aquatic ecosystems; c) develop his research proposal and scientific paper writing skills and strengthen his international research network.

5. Principals in the Project. Please give the details of the individuals from the Lead Organisation (and other institutions if relevant) who would be directly involved in supervising/working with the Darwin Fellow. Please provide a one page CV for each of these named individuals. You may copy and paste this table if you need to provide details of more individuals.

Details	Project Leader	Other expert	Other expert
Surname	Milner-Gulland	Mohammed	Davies
Forename(s)	E.J.	Essam Yassin	Timothy
Post held	Professor	Senior Researcher	Consultant
Institution (if different to Lead)	University of Oxford	International Institute for Environment and Development	Marine Resources Assessment Group Ltd
Department	Department of Zoology	Sustainable Markets Group	
Telephone/Skype			
Email			

6. Describe briefly the aims, activities and achievements of the Lead Organisation. (Large institutions please note this should describe your unit or department)

(max 150 words)

The Department of Zoology is at the centre of Oxford's research and teaching in whole organism biology. Research is centred on the four themes of behaviour, disease, ecology and evolution. Within the Department are several research institutes, including the Edward Grey Institute (EGI), the Wildlife Conservation Research Unit (WildCRU), the Biodiversity Institute (BIO) and the Institute for Emerging Infections. E.J. Milner-Gulland has just joined the Department as Tasso Leventis Chair in Biodiversity. Her group is the [Interdisciplinary Centre for Conservation Science](#). Her Chair is linked to the [Oxford Martin School](#), an interdisciplinary research initiative that aims to tackle global 21st Century challenges. In the 2014 government Research Excellence Framework assessment, the Department ranked top in the UK for volume of world-leading research. The Oxford Martin School has just launched a Sustainable Fisheries programme hosted in the Zoology Department, led by Professor [Alex Rogers](#).

7. Describe briefly the aims, activities and achievements of the proposed Darwin Fellow's employing organisation. (Large institutions please note this should describe your unit or department)

The Department of Fisheries, University of Dhaka, Bangladesh, was established in 1998. Its aim is to train graduates and conduct research to meet Bangladesh's fisheries-related challenges. Currently it has 18 faculty members teaching 130 undergraduate and graduate students. Its areas of interest are fisheries biology, management and environment. It has two labs and three research groups. So far from this department 250 students have passed their BSc and MSc. Four MPhil and 3 PhD students have also graduated. The Department aims to enhance its capacity both in teaching and research, in particular it aims to increase its research capacities, in order to identify and solve fisheries problems. This Fellowship would provide a platform for more international engagement and improved technical and research capacity, and hence support this aim.

8. Describe briefly the proposed Fellow's current role within their organisation and their link to a Darwin project (if applicable), including the project reference number, his/her role in that project and any ongoing involvement. If the Fellow has no link to a Darwin project please discuss their involvement in implementing the biodiversity conventions, treaties and agreements supported by the Darwin Initiative.

The Fellow is currently an Associate Professor at the Department of Fisheries. He teaches environmental and fisheries courses including General Ecology, Aquatic Pollution and Biodiversity Conservation, and Fish Population Dynamics. He has been researching environment and fisheries for the last ten years. He is a participant in the Darwin Initiative project 20015, "Economic incentives to conserve hilsa shad fish (*Tenualosa ilisha*) in Bangladesh", for which he analysed legal and institutional issues. A report has already been published from this work (<http://pubs.iied.org/15523IIED.html>). He is now developing institutional capacity to strengthen the strategy and action plan for hilsa management. Recently, he worked as part of an IUCN project, "Updating Species Red List in Bangladesh", assessing ten fish species for their threatened status. This will directly help Bangladesh meet their obligations under the CBD and CITES.

9. Provide a concept note for the Darwin Fellowship. This should include:

9a. A clear outline of the aim and objectives of the Fellowship

(Max 300 words)

The aim of the Fellowship is to build Monirul Islam's capacity to contribute to enhancing the resilience of Bangladesh's fisheries to climate change, hence enabling him to support government in implementing the CBD and Sustainable Development Goals. He will be able to train a new generation of fisheries scientists through his teaching. He will also gain valuable research skills and an enhanced international network.

He will experience an academic environment (at Oxford), an international policy NGO ([IIED](#)) and a fisheries consultancy ([MRAG](#)), giving a broad perspective on how different sectors collaborate to integrate climate change into resource management.

The objectives are:

- 1) to develop skills and knowledge in robust management of natural resources under climate change;
- 2) to review the current policy environment to identify gaps that contribute to vulnerability of hilsa fisheries and dependent communities, and potential responses;
- 3) to explore novel methods for engaging key stakeholders with scenarios and models, to support the co-production of policy options to improve resilience of hilsa fisheries and dependent communities;
- 4) to develop his paper- and proposal-writing so that he can secure research funding and submit to peer-reviewed journals; and
- 5) to network with a wide range of relevant scientists, industry and NGO actors working in the field of biodiversity conservation, fisheries and climate policy, based on his hosts' extensive networks of contacts.

These objectives will be met through: literature reviews using the university's extensive access to journals; one-to-one discussions with his hosts and colleagues; attendance at workshops and conferences; attendance at Continuing Professional Development courses; facilitating a stakeholder workshop in Bangladesh. Monirul will give seminars on his work at a range of university, NGO and government institutions, and present at least one UK-based fisheries conservation conference during his Fellowship, to build his professional recognition.

9b. The role of the Lead Organisation, and others where relevant (including contacts)

(Max 300 words)

Oxford will host Monirul, providing him with a suitable academic environment, including IT services, continuing professional development, and networking. Professor Milner-Gulland will be his mentor, and he will work closely with her research group. She will work with him to develop his proposal and paper-writing skills, build his network, and explore the latest approaches to developing robust natural resource management.

Monirul's home base will be in Oxford, travelling to his other host partners in London on a regular basis. At IIED, he will work with Essam Mohammed to explore the implications of the Sustainable Development Goals and international climate change processes for Bangladesh's fisheries. Dr Mohammed is an expert advisor on [climate change and SDG14](#) (fisheries and oceans) to the Least Developed Nations group, and Monirul will work with him on his review of policy gaps. This will be published as an IIED blog and briefing note. Monirul will also engage with IIED's natural resources, climate change and sustainable markets groups.

Tim Davies, at MRAG, has experience in [scenario planning for possible futures for fisheries](#), and will support Monirul in developing these methods. Other relevant colleagues at MRAG include [Robert Arthur](#), who works on improving fisheries management in developing countries.

In each host location, Monirul will give a seminar at the beginning of his Fellowship to introduce himself, and another at the end on progress made. He will visit colleagues in other institutions, to get new perspectives and broaden his network. Potential hosts include the University of Exeter (Falmouth); Zoological Society of London; Universities of Newcastle, Bangor, Plymouth, Southampton; Stockholm Resilience Centre; CEFAS. He will identify a suitable international conference to present his work, thereby gaining further exposure.

His home institution in Bangladesh will support him to facilitate a workshop exploring policy gaps and scenarios of change after 6 months.

9c. Where appropriate, how the Fellowship will contribute towards biodiversity conservation and, where relevant, poverty alleviation i.e. what the expected outcome of the Fellowship will be, with regard to the higher goals of the Darwin Initiative.

(Max 300 words)

Bangladesh is rich in biodiversity including more than 700 fish species. However, according to IUCN its biodiversity has been decreasing due to pollution, habitat degradation and climate variability and change. Migratory fish are particularly vulnerable, such as hilsa (*Tenualosa ilisha*), the single largest fishery in Bangladesh employing more than half a million people, the vast majority of whom are poor. However, its abundance is decreasing.

The Darwin fellowship will build the fellow's capacity to contribute to improving Bangladesh's response to climate change and biodiversity loss. He will be able to implement the knowledge, skills and experiences gained from the fellowship through his research, contribution to policy and teaching. The Fellowship will therefore directly help Bangladesh meet the two objectives of the CBD: "conservation of biological diversity" and "sustainable use of its components".

Monirul is already contributing towards improved hilsa management, through his participation in Darwin project 20015. However this Fellowship will represent a step change in his capacity to provide robust scientific advice, gain funding for his research, and access international support.

Halfway through the Fellowship, Monirul will return briefly to Bangladesh to facilitate a participatory workshop of experts, from a range of relevant sectors, using the new techniques learnt during his fellowship. This will develop scenarios for key fisheries under climate change and other threats, and explore potential research and policy responses to these scenarios. This will form the basis for his future research programme.

Identification of the gaps in policy that make fisheries vulnerable will help formulate policy to reduce the vulnerability. Engaging key stakeholders and decision makers to co-produce policy under this fellowship will particularly help improve resilience of hilsa fisheries. This will provide

a sustained catch and regular supply of hilsa fish which will help fishers to reduce their poverty.

- 10. Legacy.** Provide information on how the Darwin Fellow will utilise, promote and disseminate the benefits of the Fellowship on return to his/her home country. Will a strategy be developed during the Fellowship to ensure this is achieved?

(max 200 words)

During the Fellowship, a strategy will be developed to utilise, promote and disseminate the benefits of the Fellowship on return to his home country. This will include a detailed plan for the formation of a research group/lab in the Fellow's home institution, including research themes based on the gaps identified during the Fellowship. The Fellow will stay in touch with his hosts, and with other people he meets during the fellowship, in order to develop research proposals and ideas for collaborations. These will be developed and agreed during his time in the UK.

He will present his results on returning home through a report to his Department, seminars targeted at academics, practitioners and policy makers, and through individual briefings to key decision-makers. These include the Director General of the government's Fisheries Department and its hilsa conservation programme project director, as well as IUCN Bangladesh. At least two articles will be published from the Fellowship, in peer-reviewed journals and as IIED blogs and briefing papers. All outputs of the project will be clearly identified as Darwin Initiative supported products, and Monirul will highlight the Darwin Initiative's opportunities to relevant people in Bangladesh, and support them to apply for funding where appropriate.

- 11.** How will the Fellowship assist the Fellow's organisation and/or local communities and/or home country in working towards the objectives (or implementation) of the Conventions, Treaties and Agreements supported by the Darwin Initiative? Please refer to specific Articles or cross cutting themes as appropriate.

(max 200 words)

Although several departments in the Fellow's institution teach biological sciences, there is no expertise in biodiversity conservation, either for teaching or research. This Fellowship will thus enhance the institution's capacity in this area, producing a new generation of trained graduates.

This will increase Bangladesh's capacity to design, implement and monitor biodiversity-related conventions such as the CBD. As the new SDGs come into force, there is a particular need to develop policy in-country to meet the targets set, particularly under SDG14 (fisheries and oceans), but also 12 (sustainable production and consumption) and 13 (climate change).

As a direct consequence of activities during the Fellowship, gaps in policy that make fisheries such as hilsa vulnerable will be identified. These can then be addressed in new research programmes and in policy reforms. Because of the strong links to government in the Darwin project, Monirul will be well placed to influence these reforms. New approaches to engaging the key stakeholders and decision makers to co-produce policy will particularly help improve resilience of hilsa fisheries in the short run, and the new approaches and methods developed during the Fellowship will be widely applicable to other situations.

- 12.** What collaboration has there been with the Darwin Fellow to date in developing the proposal, and what collaboration is planned for the duration of the Fellowship? Where relevant, describe any consultation or collaboration by the proposed Fellow within his/her own country.

(max 200 words)

The Fellow and the Lead Host have been in contact for about a year. E.J. Milner-Gulland has worked with Essam Yassin Mohammed as Research Advisor on Darwin project 20015. Specifically, they are co-supervising a PhD student (Annabelle Bladon) who is working with Monirul Islam on reforming the compensation scheme for the hilsa fishery, and developing sustainable financing mechanisms for the future. Therefore although Monirul Islam and EJMG have not worked together directly, they are colleagues on this Darwin project.

Monirul has already consulted with the relevant stakeholders in Bangladesh to lay the groundwork for implementation of his findings, within the framework of Darwin project 20015. The Department of Fisheries, Government of Bangladesh is the regulatory implementation authority for the fisheries sector. Monirul has consulted with its Director General and the project director of the hilsa fish conservation programme, who have confirmed their interest in participating in, and implementing the outcomes of, this Fellowship's activities. He has also had positive responses from scientists at the Bangladesh Fisheries Research Institute, which is responsible for demand-led fisheries-related research for the Government. The country representative of IUCN in Bangladesh has confirmed his interest in helping Monirul in his research and using his findings.

13. Where will the Darwin Fellow be based? Please be specific with organisational details and dates (where more than one location).

(max 200 words)

Dr Islam will be based at the Department of Zoology, University of Oxford for the duration of the fellowship (1st July 2016 to 30 June 2017). His trips to the other hosts will be one-day visits where possible, for cost-effectiveness and flexibility. Where necessary, when visiting more distant locations, he will stay overnight (e.g. at Falmouth, Lowestoft).

In the middle of the Fellowship, Dr Islam will return to Bangladesh for a short trip (2-3 weeks, in December 2016) to conduct the workshop on identifying policy gaps and research and implementation needs. This will form the basis of his research proposal development and paper-writing in the second part of the Fellowship, and will be conducted using the new methods learnt during the first part of the Fellowship. The workshop will be conducted at the Fellow's home institution, with their logistical and administrative support. This means that he can organise it remotely from Oxford.

14. Provide a programme of work, including key milestones, through the duration of the Fellowship

Activity	Duration	2016/17									2017/2018					
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
Training plan formulation																
Networking	12															
Relevant training and continued professional development to develop skills (e.g. scenario analysis, modelling)	3															
Review the current policy environment related to biodiversity, sustainable fishery management and climate change	3															
Finalise writing policy brief (for IIED)	2															
Stakeholder interviews and workshop	1															
Analysing interview and workshop data	2															
Presenting results at a conference	1															
Further CPD (focussed on grant-writing and scientific writing)	1															
Finalise writing and submit articles to journal	2															

15. Costs. Using UK Government Financial Years ie April 2016 – March 2017 etc), please set out your budget for the Fellowship

	Unit cost	No of months		Total	Total
		2016/17	2017/18	2016/17	2017/18
Fellow's Subsistence contribution					
Arrival allowance	£200	NA	NA	£200	
UK (outside London)	£1,000 pcm	9	3	£9000	£3000
Lead organisation's costs					
UK	£300 pcm	9	3	£2700	£900
Total Fellow and Host costs				11900	3900
Travel costs to Fellowship location (up to £2,000)					
Return airfare	Details: Dhaka-LHR flight			£700	
Travel to/from airports	Details: Train/taxi			£100	£100
Visas, insurance, medical cover etc	Details: Visa costs + insurance			£450	£150
Additional travel costs (up to £500 local travel OR £1,500 for international travel)					
Purpose of additional travel	Details: 1) Return to Bangladesh for workshop 2) Visiting other UK host institutions				
Airfares/train fares	Details: 1) LHR-Dhaka return 2) Travel costs to other hosts and UK institutions			£700 £300	£200
Travel to/from airports/stations	Details: 1) Taxis/train, Dhaka/LHR			£100	
Subsistence costs (inc number of days and rates)*	Details: Subsistence costs for workshop attendees, 3 days, 10 people, £10/day			£300	
Visas etc	Details:				
Total travel costs				2650	450
Fees and training costs					
Academic fees	Details:				
English language training costs**	Details:				
Total fees					
TOTAL REQUEST FROM DARWIN				£14550	£4350

*for advice on rates please call the Darwin Application Unit 0131 440 5181

**these costs are ringfenced and should be surrendered if not used.

16. Other sources of funding: provide details and amounts

The home institution will provide the logistical support, catering and rooms for the workshop in Bangladesh. Host institutions will provide office space and time costs of project partners.

FCO notification

Please check the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise details of the Darwin Fellowship and the resultant work in the UK or the Darwin Fellow's home country.


Certification

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

I enclose CVs for project principals and letters of support as requested in the Guidance Notes. Our most recent audited accounts and annual report are also enclosed/can be found at (*delete as appropriate*):

Name (block capitals)	Professor E.J. Milner-Gulland
Position in the organisation	Tasso Leventis Professor in Biodiversity

Signed



Date:

14th October 2015

If this section is incomplete the entire application will be rejected. You must provide a real (not typed) signature. You may include a pdf of the signature page for security reasons if you wish. Please write PDF in the signature section above if you do so.

Fellowship application - checklist for submission

	Check
Have you provided actual start and end dates for the Fellowship?	x
Have you provided your budget based on UK government financial years ie 1 April – 31 March?	x
Have you checked that your budget is complete, correctly adds up and that you have included the correct final total on the top page of the application?	x
Has your application been signed by a suitably authorised individual? (clear electronic or scanned signatures are acceptable. Please do not type your name)	x
Have you included a 1 page CV for the proposed Fellow and the experts listed in Section 5?	x
Have you provided the relevant letters of support?	x
Have you read the Guidance Notes?	x
Have you checked the Darwin website immediately prior to submission to ensure there are no late updates?	x

Once you have answered Yes to the questions above, please submit the application, not later than 2359h GMT at the end of **27 October 2015** to Darwin-Applications@LTSI.co.uk using the name of the proposed Fellow as the subject of your email. If you are e-mailing supporting documentation separately please include in the subject line an indication of the number of e-mails you are sending (eg whether the e-mail is 1 of 2, 2 of 3 etc).

DATA PROTECTION ACT 1998: Applicants for grant funding must agree to any disclosure or exchange of information supplied on the application form (including the content of a declaration or undertaking) which the Department considers necessary for the administration, evaluation, monitoring and publicising of Darwin Plus. Application form data will also be held by contractors dealing with Darwin Plus monitoring and evaluation. It is the responsibility of applicants to ensure that personal data can be supplied to the Department for the uses described in this paragraph. A completed application form will be taken as an agreement by the applicant and the grant/award recipient also to the following:- putting certain details (i.e. name, contact details and location of project work) on the Darwin Initiative and Defra/FCO/DFID websites (details relating to financial awards will not be put on the websites if requested in writing by the grant/award recipient); using personal data for the Darwin Initiative postal circulation list; and sending data to Governor's Offices outside the UK, including posts outside the European Economic Area. Confidential information relating to the project or its results and any personal data may be released on request, including under the Environmental Information Regulations, the code of Practice on Access to Government Information and the Freedom of Information Act 2000.