Submit by Monday 3 December 2012

DARWIN INITIATIVE APPLICATION FOR GRANT FOR ROUND 19: STAGE 2

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.

ELIGIBILITY

1. Name and address of organisation (NB: Notification of results will be by post and email to the Project Leader)

Name:	**Address:**
Keith Tyrell, Director	**Pesticide Action Network UK, Development House, 56-64 Leonard Street, London EC2A 4LT**

2. Stage 1 reference and Project title

(max 10 words)

1952: Pesticide impacts on biodiversity in Ethiopia and agro-ecological solutions

(Stage 1: Building capacity to monitor pesticide impacts on biodiversity in Ethiopia)

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

Proposed start date: 1 April 2013 Duration of project: 3 years End date: 31 Mar 2016					
Darwin request	**2013/14 £**	**2014/15 £**	**2015/16 £**	**2016/17 £**	**Total £299,565**
Proposed (confirmed and unconfirmed) matched funding as percentage of total Project cost: total matching funding = 46%					

4. Define the outcome of the project. This should be a repetition of Question 24, Outcome Statement.

(max 100 words)

Improved capacity of Ethiopian scientists, farming communities, government agencies and other stakeholders to adopt an ecosystem approach to (a) identify key sites at risk from the harmful environmental effects of agrochemical use b) monitor, measure and understand such impacts close to biodiversity-rich wetlands, (c) develop and implement practical solutions based on agroecological farming and (d) align policies with biodiversity conservation goals.

Rift Valley Lake farming communities will benefit from safer, sustainable pest management, better water quality and ecosystem services. Government agencies and conservation bodies will gain skills to monitor pesticide impacts with rural communities and feed evidence into policy forums.

5. Country(ies)

Which eligible host country(ies) will your project be working in. You may copy and paste this table if you need to provide details of more than four countries.

Country 1:	**Country 2:**
ETHIOPIA	

6. Biodiversity Conventions

Which of the three conventions supported by the Darwin Initiative will your project be supporting? Note: projects supporting more than one convention will not achieve a higher scoring

Convention On Biological Diversity (CBD)	**Yes**
Convention on Migratory Species (CMS	**Yes**
Convention on International Trade in Endangered Species (CITES)	**No**

6b. Biodiversity Conventions

Please detail how your project will contribute to the objectives of the convention(s) your project is targeting. You may wish to refer to Articles or Programmes of Work here. Note: No additional significance will be ascribed for projects that report contributions to more than one convention

(Max 200 words)

Ethiopia's Rift Valley lakes and salt marshes constitute unique biodiversity and a major migratory flyway. Over 400 migratory bird species are recorded, including Great White Pelican, Greater and Lesser Flamingo, Ostrich, Imperial Eagle, Lesser Kestrel and Wattled Crane. The Critical Ecosystem Partnership Fund Conservation Outcomes Map includes both Abijatta-Shalla Lakes and Nechisar National Parks among key biodiversity areas and priority corridors for conservation. Nechisar also enjoys Endemic Bird Areas of the World designation.

This project contributes to CBD **Article 7** (monitoring activities impacting on biodiversity) and **Article 13** (promoting biodiversity) and Ethiopia's National Biodiversity Strategy and Action Plan:

- research - capacity to monitor the environment; participatory research to establish the knowledge base on biodiversity
- agricultural policy - integrate biodiversity conservation; reduce perverse incentives, introduce sustainable incentives; share information and traditional knowledge
- training – initiate programmes with NGOs; integrate biodiversity concerns into agricultural and high school curricula

It supports the CBD **Programme of Work on Agricultural Biodiversity**, applying the ecosystem approach to monitor impacts of agriculture on wider ecosystems, their goods and services; and increasing biodiversity within agro-ecosystems. It contributes to strengthened capacities, biodiversity-friendly agriculture policies, dialogue with farmers and local stakeholder and community participation.

Is any liaison proposed with the CBD/CITES/CMS focal point in the host country?

☒ **Yes** ☐ **No** **if yes, please give details:**

THE INSTITUTE FOR BIODIVERSITY CONSERVATION, THE CBD FOCAL POINT FOR ETHIOPIA HAS PROVIDED A SUPPORT LETTER AND WILL BE INFORMED AND INVOLVED IN ALL PROJECT ACTIVITIES, PARTICULARLY THE ESTABLISHMENT OF A BIODIVERSITY-AGRICULTURE POLICY FORUM.

7. Principals in project. Please identify and 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 personnel or more than one project partner.

Details	Project Leader	Project Manager	Project Partner 1 - Main
Surname	**Tyrell**	**Williamson**	**Amera**
Forename (s)	**Keith**	**Stephanie**	**Tadesse**
Post held	**Director**	**Staff Scientist**	**Director**
Institution (if different to above)	**PAN–UK**	**PAN-UK**	**PAN Ethiopia**
Department			
Telephone			
Email			

Details	Project Partner 2	Project Partner 3	
Surname	**Grant**	**Edwards**	
Forename (s)	**Ian**	**Sue**	
Post held	**Consultant**	**Director**	
Institution (if different to above)	**NR Group**	**Institute for Sustainable Development**	
Department			
Telephone			
Email			

8. Has your organisation received funding under the Darwin Initiative before? If so, please provide details of the most recent (up to 6 examples). NO

Reference No	Project Leader	Title

9a. IF YOU ANSWERED 'NO' TO QUESTION 8 please complete Question 9,

What year was your organisation established/ incorporated/ registered?	1986
What is the legal status of your organisation?	NGO Yes Government No University No Other (explain) No
Type of organisation (e.g. University, NGO, private sector, Government Department etc)	NGO – UK registered charity #327215
Have you unsuccessfully applied to the Darwin Initiative before? If yes please provide the application reference number(s)	Yes – Round 17, Ref: 1510
How is your organisation currently funded?	(Max 100 words) PAN UK is funded through a mix of grants from charitable foundations such as TRAID, and the Ecology Trust; Development Aid grants from national government aid agencies including DFID, and international organisations such as the European Commission, the FAO and the World Bank. We also receive income by providing consultancy advice on pesticide issues to major retailers keen to address pesticide issues in their supply chains, and international standards organisations like the Better Cotton Initiative and 4C coffee. Income fell in 2010 and 2011, as major projects came to an end, but has increased in 2012.
Have you provided appropriate audited/independently examined accounts?	Yes

9b. Provide detail of 3 contracts previously held by your institution that demonstrate your credibility as a research organisation and provide track record relevant to the project proposed. These contacts should have been held in the last 5 years and be of a similar size to the grant requested in your Darwin application.

Contract 1 Title	Pesticides and Poverty: Implementing Chemical Conventions for Safe and Just Development
Contract Value	€XX
Contract Duration	2004-2008
Role of institution in project	Project management and reporting; technical support and liaison with eco-toxicologists; fundraising; communications
Brief summary of the aims, objectives and outcomes of the contract.	The project aimed to assist developing countries to effectively implement Chemical Conventions and processes in order to reduce the risks arising from pesticide use, while building sustainable agricultural production. Objectives were: • Provide resources for implementing chemical conventions and processes • Build capacity to document hazards and risks • Recognise and address resource constraints • Raise awareness among government bodies, public interest groups, civil society and other key stakeholders The eco-toxicology component trained technical officers to train others in principles behind and practical methods for monitoring environmental impacts of pesticides; recording information on biodiversity and wildlife populations was key. Following training, participants carried out pilot training within Ethiopian rural communities in the field, based on the methodologies covered during the training.
Reference contact details (Name, e-mail, address, phone number).	European Commission ref EuropeAid grant Enc/2004-83378 Project Officer: Mr Mr Michel Van-den-Bossche European Commission EuropeAid Cooperation Office For the attention of AIDCO-F3 (Central Management of Thematic Budget Lines PA DEV) Office: L-41 2/94 1049 Brussels Belgium

Contract 2 Title	Cotton Trade – Building an environmentally friendly route to poverty reduction in Benin
Contract Value	£XX
Contract Duration	2009-2013
Role of institution in project	Project management, technical support, research co-ordination and communication
Brief summary of the aims, objectives and outcomes of the contract.	With our partner OBEPAB, we have so far trained nearly 2,000 small scale cotton farmers in the West African country of Benin in organic production techniques. This training has helped them to improve the productivity and profitability of cotton production and thereby raised their incomes. At the same time, we raised awareness about pesticide hazards and the value of environmental services through the collection of data on pesticide poisonings in communities. A key element of the project was the conduct of original research – in partnership with the Australian Cotton Research Institute ¬– into novel, and appropriate, non-chemical pest control technologies. This resulted in the development of a food spray product to increase the ratio of beneficial insects to pests in

	cotton fields. This new technology was a key factor contributing to relatively high yields achieved by the farmers trained by the project.
Reference contact details (Name, e-mail, address, phone number)	Madeleine Bates, International Development Manager, TRAID, Unit 3, Second Floor, 65 Leonard Street, London EC2A 4QS

Contract 3 Title	Cultural Biodiversity In-School project
Contract Value	$XX
Contract Duration	2011-2013
Role of institution in project	Project management, technical support, research co-ordination and communication.
Brief summary of the aims, objectives and outcomes of the contract.	Works on strengthening the local indigenous knowledge through learning from grass roots farmers, disseminating Seeds, developing nurseries, planting Indigenous trees & and working in improvement of soil fertility supporting the local inherited knowledge with scientific methods. As culture is the basis for agricultural activities in Ethiopia, celebration of different cultures have been conducts as a national cultural biodiversity celebration day.
Reference contact details (Name, e-mail, address, phone number).	The Christensen Fund info@christensenfund.org 260 Townsend Street, Suite 600, San Francisco, US

9c. Describe briefly the aims, activities and achievements of your organisation. (Large institutions please note that this should describe your unit or department)

Aims (50 words)

PAN UK has three main goals:

1. To reduce dependency on synthetic pesticides
2. To end the use of hazardous and environmentally damaging pesticides, and
3. To promote safer alternatives to pest control and support the adoption of sustainable and equitable farming systems world-wide

Activities (50 words)

In Africa, we work with partners to raise awareness of pesticide hazards and collect data on impacts; we train farmers in techniques to reduce the amounts of pesticides used while maintaining yields and improving profitability; we conduct research into alternative pest control methods; we build the capacity of civil society and regulatory authorities to implement chemical conventions.

Achievements (50 words)

PAN UK was instrumental in the establishment of the Rotterdam Convention on Prior Informed Consent; we were an early pioneer of organic cotton and demonstrated it was a viable, environmentally friendly route out of poverty; with the FAO, we established the African Stockpiles Programme which has disposed of thousands of tonnes of obsolete pesticides in Africa.

10. Please list all the partners involved (including the Lead Institution) and explain their roles and responsibilities in the project. Describe the extent of their involvement at all stages, including project development. This section should illustrate the capacity of partners to be involved in the project. Please provide written evidence of partnerships. Please copy/delete boxes for more or fewer partnerships.

Lead institution and website: **Pesticide Action Network, UK** **www.pan-uk.org**	Details (including roles and responsibilities and capacity to engage with the project): (max 200 words) PAN UK will be responsible for the overall project management, financial management, reporting, and administration. It will coordinate training in pesticide impacts, sustainable agriculture, and international conventions, and the ecosystem approach. It will ensure international links with Integrated Pest Management and Farmer Field School projects in Africa, in particular the FAO programme in West Africa, and best practice in community based monitoring approaches, based on the PAN International Community Based Pesticide Action Monitoring (CPAM) methodology. Through its organic cotton programme and as Board Member of the Better Cotton Initiative, it will create opportunities and links to international cotton supply chains and Better Cotton Initiative PAN UK will support the communications and policy development components of the project. It will link to the International Assessment of Agriculture for Science Technology and Development (IAASTD), to which scientists of PAN International contributed, linking national policy development to its recommendations as suggested by the CBD. It will also draw on its significant experience of developing and implementing national policy in line with international obligations relating to chemicals management including Stockholm and Rotterdam conventions, FAO Code of Conduct on pesticides and Strategic Approach for International Chemicals Management, as well as the CBD and CMS.

Partner Name and website where available:	Details (including roles and responsibilities and capacity to engage with the project): (max 200 words) Pesticide Action Nexus-Ethiopia (PAN-Ethiopia) will be the host country coordinator, responsible for the day to day activities, including networking and capacity building elements and long term sustainability. It will lead the farmer training and supply chain capacity, and coordinate the ecotoxicology monitoring activity. In 2007 PAN-Ethiopia conducted an eco-toxicological monitoring programme of pesticide use and impacts in the Rift Valley Lakes area, on which the proposed project aims to build. PAN-Ethiopia work closely with the local authorities, administration and experts, as well as with farmers and school communities, in the studies it made on pesticide use in the PAN-Ethiopia has worked with the Ethiopian government to address stockpiles of obsolete pesticides, prevent future accumulation and promote alternatives through a grassroots approach with farmers. In 2006/7 they implemented pesticide risk communication and an Integrated Pest Management (IPM) project with cotton farmers in the in the Arba Minch area of the Rift Valley. This project was taken up and incorporated into the regular annual program of the local agricultural office.
Have you included a Letter of Support from this institution?	**Yes/No**

Partner Name and website where available: **Natural Resources Group** **http://www.thenrgroup** **.net/index.shtml**	Details (including roles and responsibilities and capacity to engage with the project): (max 200 words) – Eco-toxicologists from the UK-based Natural Resources Group will provide technical expertise, including training of Ethiopian partners in monitoring programme design, survey planning and ongoing field and technical support throughout the project. Two ecotoxicologists (see below) will play key roles within the project, but other specialists can be called upon from within the NR Group, as needed. Prof. Ian Grant and Dr. Colin Tingle – have extensive practical experience in EIA, biodiversity assessment, pesticide impact monitoring & assessment, policy advice (national/international levels) and environmental education and training. Recent work has included pesticide risk assessment in 4 African countries and preparation of ecotoxicology course material for the University of Cape Town's postgraduate programme in Pesticide Risk Management. They delivered a Training of Trainers (ToT) in Ethiopia, Tanzania, Benin and Senegal in 2006/7. They are the editors of the publication on which the eco-toxicology monitoring ToT work is based, 'Ecological Monitoring Methods for the Assessment of Pesticide Impacts in the Tropics.' (Grant IF, Tingle CCD (eds), Natural Resources Institute, 2002). They have provided support at a distance to Ethiopian scientists in conducting a Rapid Risk Assessment of pesticides in the Rift Valley area. This project will build on the successful collaboration with Ethiopian partners begun in 2006/7.
Have you included a Letter of Support from this institution?	No – NRG is an association of independent development professionals who collaborate to undertake, and contribute expertise to, natural resources projects - individual letters of support available from Ian Grant and Colin Tingle if required

Partner Name and website where available:	Details (including roles and responsibilities and capacity to engage with the project): (max 200 words) ISD will provide support and links to relevant professionals and stakeholders, including the Ethiopian Wildlife and Natural History Society and their grass roots activities in cultural biodiversity conservation and ecological organic agriculture. They will lead in coordinating the policy forum. Since 1996 the Institute for Sustainable Development (ISD) has worked with rural communities in degraded areas of Ethiopia – including the project area – to promote Ecological Agricultural Development. ISD raises awareness of environmental issues with a focus on young people, helping them to be proactive in improving their local environment. ISD with the support of a GEF Small Grants Project has also worked with communities in Arba Minch in the Shele river catchment that drains into Lake Chamo supporting them to establish nurseries to raise seedlings of important but declining indigenous tree species: 2 of these nurseries were in the compounds of the local elementary schools. The schools and the local community members joined together in planting out and caring for the tree seedlings. At the same time, the environment club members in the Shele Mela elementary school were oriented in bird identification and learnt to recognize important wetland birds as indicators of environmental health.
Have you included a Letter of Support from this institution?	**Yes**

Partner Name and website where available:	Details (including roles and responsibilities and capacity to engage with the project): (max 200 words) Addis Ababa University Department of Zoological Sciences has a rich experience in managing large donor funded projects including SIDA, DFID, IAEA, GIZ, World Bank, and UNDP. AAUDZS (through its faculty member Dr. Emiru Seyoum as a Principal Investigator) has undertaken the Environmental Impact Assessment in and around the lake Tana sub basin focusing on invertebrates as indicators of ecosystem status (Emiru and Bekele, 2008). This project was funded by UNDP. Dr. Emiru and his colleagues have also just completed a similar study for the Ethiopian Grand Renaissance Dam (Emiru and Habte, 2011) funded by the World Bank. AAU as the largest University in Ethiopia has well established systems and experience in collaborating with national and international institutes. AAUDZS is equipped with research facilities for both basic and applied research undertakings which could be used for the proposed research project The University of Addis Ababa will provide technical support and links to laboratories and supervision of students. The students will study the impacts of pesticides on ecosystems towards their M.Sc research project in the project areas. This will serve as a basis to build capacity in undertaking systematic and scientific research on multi-faceted impacts of pesticide on biodiversity.

Have you included a Letter of Support from this institution?	**Yes**

We have also included letters of support from organisations in Ethiopia that are interested in collaborating with this project and have expressed interest in taking part in project activities and integrating relevant findings into their programmes. – Institute for Biological Diversity; Environmental Protection Authority.

11. Have you provided CVs for the senior team including the Project Leader	**Yes**

TECHNICAL EXCELLENCE

12. Problem the project is trying to address

Please describe the problem your project is trying to address. For example, what biodiversity and development challenges will the project address? Why are they relevant, for whom? How did you identify these problems?

(Max 200 words)

Diversity and abundance of Rift Valley migratory birds are declining, particularly wetland species. National experts implicated excessive pesticide use in nearby cotton and vegetable farming, aerial spraying of quelea birds and effluent from caustic soda and pesticide formulation factories (where POPs are still produced, amongst others). Data on pesticide volumes entering aquatic systems is lacking, leading to National Parks and the Ethiopian Wildlife & Natural History Society prioritising ecosystem assessment of contamination and bird declines. However, they lack capacity to conduct monitoring adequate to establish a link.

National policies on food security and agricultural exports have increased reliance on agrochemicals, but without adequate measures to avoid side-effects on human and environmental health. Farmers and policymakers are unaware of the economic costs from pesticide harm (e.g. disruption to pollinators and biological pest control);few Rift Valley stakeholders understand how agro-ecological farming methods which conserve biodiversity can reduce poverty by improving farm income and supporting ecosystem services; local communities remain unheard in conservation and agricultural policy forums; many cotton smallholders are in debt as poor yields fail to cover their high production costs; and an ecosystem approach to tackling these related issues and highlighting potential ways forward (e.g. TEEB approaches) is weak

13. Methodology

Describe the methods and approach you will use to achieve your intended outcomes and impact. Provide information on how you will undertake the work (materials and methods) and how you will manage the work (roles and responsibilities, project management tools etc).

(Max 500 words – repeat from Stage 1 with changes highlighted)

Capacity building

The project will provide UK-based 'training of trainers' on international conventions, pesticides, eco-toxicology, and the ecosystem services approach linked to 'research' and 'community awareness raising' elements below. In-country support from international experts will help guide local teams in the design, implementation, analysis and reporting of an ecotoxicological field study in Ethiopia.

Farmer Field Schools (FFS) in sustainable agricultural practices, namely Integrated Pest Management (IPM), are a well-established participatory approach based on practical application of the ecosystem approach to agriculture. The training will be based on curricula from the Ethiopian government and the FAO West Africa Niger & Senegal River Basin IPP & Pollution Management project, using an ecosystem services approach to highlight impacts of

agricultural practices on ecosystem processes in agro- and neighbouring ecosystems.

Simple field skills will also be transferred to local communities via Elementary and High School environment clubs and selected farmers, drawing on traditional sources of knowledge as recommended by the ecosystem approach and the IAASTD.

Research

This comprises a desk study of possible pesticide sources of contamination in the Rift Valley lakes selected for their unique biodiversity value combined with relatively intensive chemical use in the area. This will lead to field survey work employing designs and recognized monitoring techniques that can effectively identify pesticide impacts on populations of specific biota in a designated habitat. Monitoring will focus on ecosystem elements at contamination risk that link to populations of key migratory birds and their aquatic food chains. The *Ecological Monitoring of Pesticide Impacts in the Tropics* publication and NR Group expert support will guide the research. National, accredited laboratories at the Department of Zoology of Addis Ababa University and the Ministry of Agriculture will analyse pesticide residues in water, sediments, and biota, screening for commonly used products e.g. endosulfan (cotton), fenithrothion and fenthion (*Quelea-quelea*).

The "*Involve-all*" methodology will enable local communities to participate in data collection and assessment of pesticide use, contamination and ecological effects, adapting PAN International and FAO/GEF monitoring tools for accounting for pesticide use in the communities, impacts on ecosystem services (water availability, key species in the ecosystem, particularly honey bees); and for community-based action-oriented analysis and planning, for the future of the lake and surrounding ecosystems.

Communications and awareness raising

As well as documenting traditional and community knowledge, the involve-all methodology will simultaneously raise awareness among pesticide users and those exposed to pesticides about the hazards and alternatives available. The project will promote measures to avoid and mitigate pesticide pollution, including:

- *Local*: Workshops to disseminate results to local populations, via the media, farmers, schools, local groups (tour operators, commercial farms), and local policy decision makers. Links between chemical pollution and livelihoods through biodiversity and ecosystem services will be emphasized, building awareness and project support.
- *National*: A biodiversity stakeholder group called for in Ethiopia's 4th Country Report to the CBD will share project results and recommendations to inform policy
- *International*: Through the Darwin website, PAN UK, NR Group and others, with articles in peer reviewed journals and conferences

14. Outcome

Detail what the expected outcomes of this work will be. The outcome should identify what will change and who will benefit. The outcome should refer to how the project will contribute to reducing poverty while contributing to sustainable development and management of biodiversity and its products. A summary statement of this outcome should be provided in question 4 and 24.

(Max 250 words)

Ethiopian scientists will gain hands-on experience of ecotoxicological monitoring of aquatic ecosystems and the food chains which link to migratory bird species, supporting effective implementation of CMS and CBD. Involving local stakeholders in monitoring will enhance their understanding of the dangers posed by chemical use around wetlands and motivate them to undertake safer practices. Through the ecosystems approach, beneficiaries will appreciate the value of biodiversity in their contexts.

Trained cotton farmers will have enhanced opportunities to use agro-ecological methods, helping reduce agrochemical contamination of the Rift Valley wetlands and its biota. This can reduce pesticide exposure of farmers, workers, their families and livestock, delivering health and economic benefits and improving ecological services. Cutting agrochemical inputs can

reduce costs and improve farmers' incomes, and link with more supportive certified supply chains, while improving whole-farm productivity.

Land managers and policy makers' awareness of the links between agroecological practices and improved biodiversity management and human welfare will be raised. More decision makers will be aware that agro-ecological approaches are advantageous environmentally and economically, so improving the potential to advocate farming policy and programme changes which support, biodiversity and ecosystem services. Community groups will link to a more active role in implementing national environmental policies and ensuring these address local needs. Community-based findings feeding into the NBASG and other policy forums will help partners to challenge misconceptions about the role of pesticides in food security and build the case for policy changes and stakeholder actions to support agro-ecological strategies in Ethiopia and beyond.

15a. Is this a new initiative or a development of existing work (funded through any source)? Please give details (Max 200 words):

The project further develops previous EC-funded work which included a major component on ecological monitoring of pesticide impacts in the tropics. The 2004-2008 project "Pesticides & Poverty – Implementing the chemical conventions for safe and just development", (€1.4m) built capacity for implementation of chemical conventions (Stockholm, Rotterdam, FAO Code of Conduct) and MEAs, including the CBD.

In Ethiopia, 17 participants from government, academia and civil society were trained on ecotoxicological monitoring for pesticide impacts. The two week Training of Trainers course included field work on sampling aquatic systems for pesticide residue analysis and measuring aquatic invertebrates and other environmental parameters. PAN UK and NR Group then supported trainees to multiply the training and conduct a Rapid Risk Assessment of pesticide use in the Rift Valley, focusing on 2, 4-D and DDT which were found to be commonly used by smallholders.

PAN UK and PAN Ethiopia have a long track record in researching pesticide impacts and economic costs, training farmers in agro-ecological methods and promoting sustainable cotton supply chains. PAN Ethiopia was commissioned by the Ministry of Agriculture to evaluate a FAO-funded cotton IPM programme in this area in 2008 and recently contributed to a training workshop for extension agents.

15b. Are you aware of any other individuals/organisations/ projects carrying out or applying for funding for similar work? ☐ Yes ☒ No

If yes, please give details explaining similarities and differences, and explaining how your work will be additional to this work and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits:

The project was initiated due to the lack of research linking agriculture with environmental, and particularly biodiversity, impacts in Ethiopia. As far as we are aware, no other monitoring of pesticide releases and impacts is done by any organisation in the country.

FAO in collaboration with Jimma Agricultural Research Centre are running a joint research project on the conservation of pollinators in wild forests in South Western Ethiopia. Our project will add value to this activity by additionally offering farmers alternative agricultural practices and supporting them in adoption, as well as providing an outlet for the kinds of data and knowledge gained by research project to try and change practices. We will cooperate with this and other similar research project in the framework of the Agriculture and Biodiversity Stakeholder Forum to be established in this project.

The Ethiopian Wildlife and Natural History Society monitor populations of migratory birds in the region, and we will cooperate closely with them to extend their work and incorporate their findings to the ecotox research. EWNHS also run the Ethiopian Sustainable Tourism Alliance (ESTA) at the Central Rift Valley area with a process of engaging the local community to generate income by tourism activities and selling their cultural produces as a means of establishing community based biodiversity conservation and minimizing dependency on extraction of natural resources in relation to biodiversity. We hope to organise exchanges

between these project beneficiaries with IPM and organic farmers in the Southern Rift Valley (our project site) to build momentum and nurture a local movement toward sustainable economic activities that support rather than disrupt ecosystem services for local populations to benefit from.

15c. Are you applying for funding relating to the proposed project from other sources? ☒ Yes ☐ No

If yes, please give brief details including when you expect to hear the result. Please ensure you include the figures requested in the spreadsheet as Unconfirmed funding.

CMS – Small grants, expect to hear result summer 2013

GEF Chemicals Focal Area Small Grants – will apply in 2013

JJ Charitable Trust – expect to hear in February 2013

16. Value for money

Please describe why you consider your application to be good value for money including justification of why the measures you will adopt will secure value for money?

(Max 250 words)

By building on previous work in three relevant areas:

Community presence

PAN Ethiopia and ISD have been active in the region for many years, with well-established networks and shared understanding with local communities. At policy level, PAN Ethiopia have excellent links with the Ministry of Agriculture, who fully support the need for more community training on the negative impacts of pesticides. High school 'Environment Clubs' set up by the partners constitute a hugely valuable resource for monitoring, awareness-raising and spurring local actions.

Ecotox monitoring

Project partners have collaborated productively on eco-tox monitoring of pesticide impacts in Africa since 2005. The previous EC-funded project successfully trained 17 local scientists and educators and supported them to apply the training in practical field work. They form a network of committed individuals with the basic knowledge, skills and institutional support, plus key technical material available in print and online. The project collaboration with ToT graduates provides a value-added basis on which additional support from the NR Group eco-toxicologists can productively build.

Agroecology and biodiversity resources

As well as TRAID's significant matching funding for agroecology training, the project will benefit from farmer training resources already developed by the Ethiopian Ministry of Agriculture for cotton, and from FFS community water monitoring and pollution management tools developed by the recent West African FAO/GEF project. Through PAN UK's close relation with FAO, materials and lessons from the West African experience will be adapted for the Ethiopian context, with a new focus on ecotoxicology in relation to migratory birds and on the economic value of biodiversity.

17. Ethics

Outline your approach to meeting the Darwin Initiative's key principles for research ethics as outlined in the guidance notes.

(Max 300 words)

The project enjoys a high level of support and direction from the Ethiopian partners, including the Institute for Biodiversity Conservation, Environmental Protection Authority, and Ministry of Agriculture, as well as the civil society partners and the communities they have been working with in the past. The Farmer Field School and 'involve-all' methodologies will ensure that local people and partners continue to direct the project, and the project M&E arrangements will

include a 360^0 review with input from all project beneficiaries.

The participatory ecotoxicology and ecosystem services research and monitoring will involve communities and farmers in monitoring pesticide use and water or wildlife indicators. This participatory approach will facilitate a two way exchange of information, ensuring that traditional knowledge is recognised and integrated into project findings and international reports.

The previous ToT established the basic principles of independent, scientific, and objective research, as well as sessions on the measures to ensure the personal protection of all staff during field and lab work. Close collaboration with environmental, agricultural, health, research and biodiversity government institutions will allow the project to proactively address all legal and ethical obligations of Ethiopia as well as of the UK.

PATHWAY TO IMPACT

18. Legacy

Please describe what you expect will change as a result of this project with regards to biodiversity conservation/sustainable use and poverty alleviation. For example, what will be the long term benefits (particularly for biodiversity and poor people) of the project in the host country or region and have you identified any potential problems to achieving these benefits?

(Max 300 words)

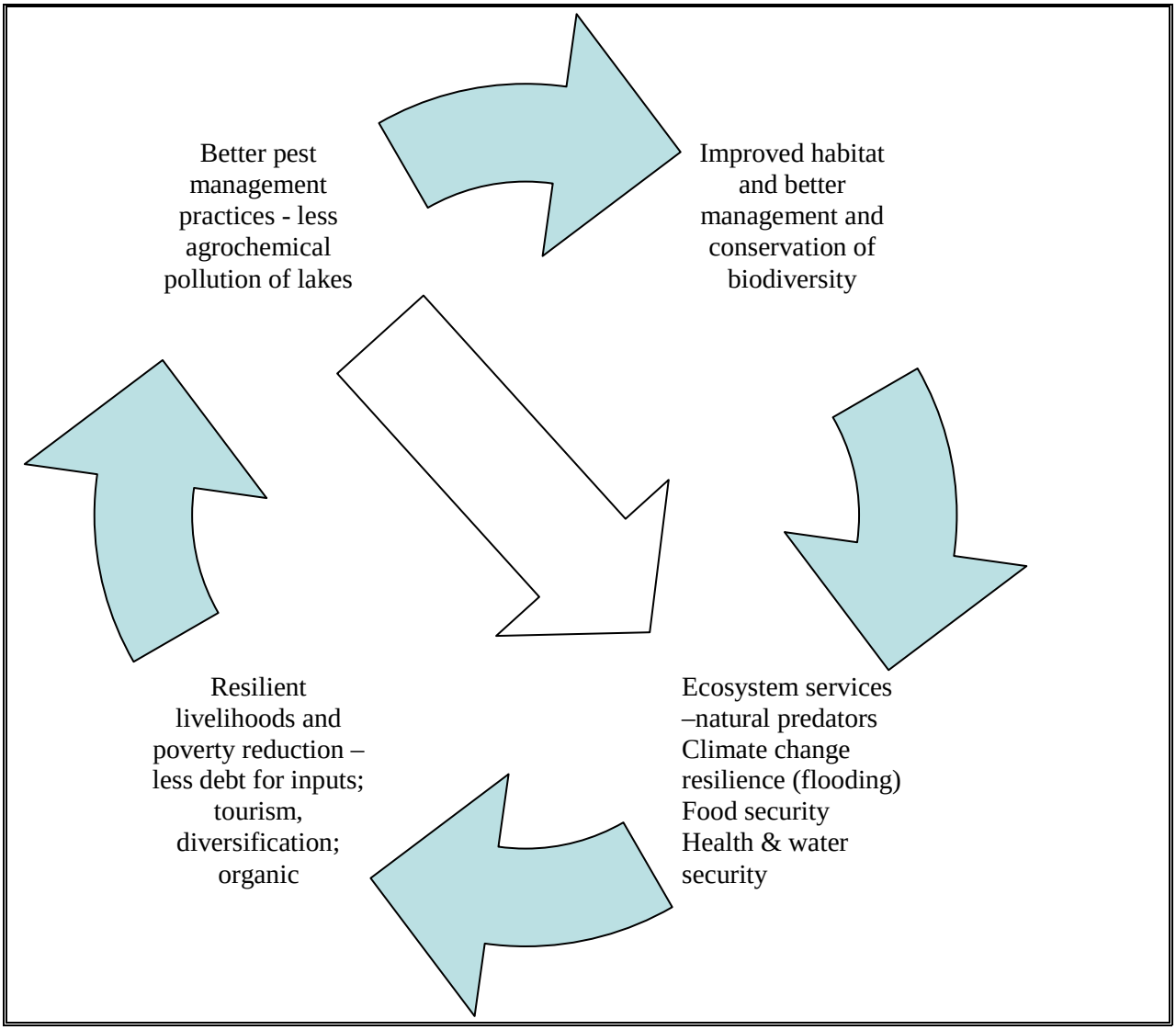
Reducing reliance on pesticides is a win-win situation with both poverty and biodiversity benefits, but entrenched practices can be difficult to shift. A major barrier to achieving this change in approach is constraints in access to a price premium, and the fragmented nature of many IPM initiatives. The project will develop locally tailored practical experiences in agro-ecological farming methods that help protect biodiversity and maintain or enhance ecosystem services. Trained and certified farmers will act as pioneers who will drive the process forward in the region.

The project will establish commercial linkages between sustainability initiatives and retailers which will provide long-term economic case for the continued use, and expansion of, techniques that reduce pesticide use.

Local communities will have experience and confidence in monitoring pesticide use and contamination levels. They will gain a deeper understanding of the value of ecosystem services to their communities, and be empowered to take an active role in planning for the environment and in creating a force for sustainable use of biodiversity.

Ethiopian individuals and institutions will gain experience of environmental monitoring of pesticide impacts, and understand how chemicals can affect ecosystem processes to the detriment of particular ecosystem services. Whilst definitively associating particular pesticide use with specific impacts on species may take longer and require more rigorous monitoring, the project aims to develop technical capacity and document costs and methodologies to enable local partners to continue sensitive ecosystem monitoring and protection.

The project will offer the opportunity to change mindsets of policy- and decision makers about whether dependency on pesticides is essential for achieving food security. By involving both the ministries of agriculture and environment, the project will be able to make explicit the link between biodiversity conservation and agricultural productivity and demonstrate the benefits of policy support for sustainable agriculture.



19. Pathway to poverty alleviation

Please describe how your project will benefit poor people living in low-income countries. Projects are required to show how positive impact on poverty alleviation will be generated from your project in low-income countries. All projects funded under the Darwin Initiative in Round 19 must be compliant with the Overseas Development Assistance criteria as set out by the OECD. The outcomes of your research must at the very least provide insight into issues of importance in achieving poverty alleviation.

(Max 300 words)

Chemical pesticides account for up to 60% of farmer expenditure, yet they are often overused and pest resistance has undermined their effectiveness. Permanent long-term reduction in the use of the most toxic chemicals reduces the pesticide "treadmill" – whereby natural pest control is compromised and farmers become increasingly dependent on chemicals. The project will train farmers in well-tested techniques that will reduce their reliance on pesticides thereby saving them money. It will also cut the costs to health and productivity of pesticide exposure. UNEP recently estimated that the costs of injury (lost work days, outpatient medical treatment, and inpatient hospitalization) from pesticide poisonings, in sub-Saharan Africa were around USD $4.4 billion in 2005 – more than total ODA for basic healthcare.

Cotton farmers who adopt sustainable methods are able to secure higher prices for their crop. The estimated 500 farmers who will convert to organic during this project could sell their cotton at a 20% premium. The remaining 1,500 farmers who adopt IPM will be supported in applying for Better Cotton Initiative certification, which offers greater access to northern retailer supply chains. PAN UK has already been in discussions with German retailer Tchibo about buying Better Cotton from the region. The project will build capacity in farmer organisations in

negotiating with supply chains, helping them achieve better prices for the nearly 8,000 cotton producing households in the area.

Improvements in monitoring and management of the wetland, lake and agro-ecosystems will eventually result in restoration of provision of ecosystem services. The poorest people rely disproportionately on these services, from pest control and pollination, to irrigation and flood protection. By quantifying and documenting community reliance on these services, the project will contribute to raised awareness and behaviour change for ecosystem conservation, which will lead to increased community resilience to shocks and disasters, also an important element of poverty alleviation.

20. Exit strategy

State whether or not the project will reach a stable and sustainable end point. If the project is not discrete, but is part of a progressive approach, give details of the exit strategy and show how relevant activities will be continued to secure the benefits from the project. Where individuals receive advanced training, for example, what will happen should that individual leave?

(Max 200 words)

The project is part of a progressive approach led by PAN Ethiopia and ISD who have already been working in the region with farmers for many years.

Long term adoption of sustainable agricultural practices, and permanent reductions in pesticide use, begin with adoption of better practices by trained farmers, which should occur within the lifetime of this project as trained farmers benefit from the win-win of increases in yields, income and environmental and health benefits. Longer term factors - institutionalization of IPM training (e.g. within government extension services), and policies that recognize the real costs and benefits of pesticide use – will be kick-started through the Stakeholder Forum and continued by ISD and PAN Ethiopia. Access to price premiums through PAN UK's programmes and commercial partnerships on organic and IPM cotton is also a long term factor.

The capacity developed for ecological monitoring of pesticides will be spread among different government, NGO and academic organizations, reducing the risk of individuals leaving, and use local laboratory and technical capacity. Guidelines on ecotox monitoring using the ecosystem approach will help spread the practices, while the application to FFS will help demonstrate its value for practical and policy changes to support conservation of biodiversity.

HIGHLY DESIRABLE

21. Raising awareness of the potential worth of biodiversity

If your project contains an element of communications, knowledge sharing and/or dissemination please provide a description of your intended audience, how you intend to engage them, what the expected products/materials there will be and what you expect to achieve as a result. For example, are you expecting to directly influence policy in your host country or is your project a community advocacy project to support better management of biodiversity?

(Max 300 words)

Communicating the worth of biodiversity to local, national and international stakeholders is a major project element. A systematic, results-based communication strategy will be developed early in the project, linking to the M&E plan, and drawing on our considerable experience and existing resources in this area.

The important intended audiences are:

- *Local populations*: Continuing many years of community links by ISD and PAN Ethiopia, the project will engage communities through an 'involve-all' methodology targeting influential individuals (local leaders, wildlife rangers, monks) and School Environment Clubs to ensure that indigenous and community knowledge and

perceptions guide the project; and generate pressure for sound agricultural practices and conservation of biodiversity. The channels are events, print materials, school curriculum materials, and community based monitoring tools.

- *Smallholder and plantation farmers*: Through open days, field visits and farmer organisations, the project will promote IPM and sustainable agriculture to non-trained farmers in the area, seeking to increase interest and demand for long term training provision.
- *Local industrial facilities and plantation owners*: Through local media, official letters, and face to face presentations of monitoring results, the project will seek to persuade owners to reduce pollution through adoption of more sustainable, clean technologies.
- *Policy and decision makers from agriculture and environment*: Through the National Biodiversity & Agriculture Stakeholder Group, the national media, and results papers, the project will seek to improve the policy environment for sustainable agriculture and biodiversity conservation. Through excellent PAN Ethiopia links with the Ministry of Agriculture extension service, the project will promote biodiversity messages for agricultural advice to farmers.
- *International biodiversity / agriculture stakeholders*: through journal papers, briefings, brochures, websites, presentations to international meetings and technical guidelines, the project will share lessons on conserving agricultural biodiversity and reducing pesticide impacts on other ecosystems in the wider African context.

22. Importance of subject focus for this project

If your project is working on an area of biodiversity or biodiversity-development linkages that has had limited attention (both in the Darwin Initiative portfolio and in conservation in general) please give details.

(Max 250 words)

This project works on agricultural biodiversity and the linkage between agricultural practices and ecosystem services – both the agro- and wider ecosystems. The 2008 review of the CBD PoW on Agricultural Biodiversity noted limited attention, citing the low level of parties conducting ecological services assessments (10% for soil biodiversity; 29% for pest management).

Through the link with cotton farmers and marketing of 'premium' cotton, the project addresses socioeconomic factors that hinder adoption of methods that conserve agricultural biodiversity. Establishment of a stakeholder forum will improve the policy environment for sustainable agricultural practices. Both these areas were also assessed by the same review as gaps.

Other CoP recommendations addressed by the project include: use of the ecosystem approach, both at the ground and policy level; inter-sectoral cooperation, synergy and coordination at the national level, in particular between agriculture and environment sectors; and the capacity of stakeholders for a better understanding of the importance and sustainable use of agricultural biodiversity in different sectors. Ethiopia's 4th CBD Report notes that while Wildlife and Forestry policies now address biodiversity concerns, this has not yet been achieved for agricultural policies.

The Darwin Initiative project database lists includes a mere five projects under the Production System area 'Agriculture' (none in East Africa); and only nine under Threats to Biodiversity that address pollution. While previous projects have addressed pesticides we believe this is the first one to explicitly monitor pesticide impacts on ecosystems.

23. Leverage

a) Secured

Provide details of all funding successfully levered (and identified in the Budget) towards the costs of the project, including any income from other public bodies, private sponsorship, donations, trusts, fees or trading activity.

Confirmed:

We have secured £XX from TRAID for a three year project starting in 2013 to tackle pesticide problems in the cotton sector in the project area, specifically to raise awareness of pesticide hazards; promote low input farming techniques; and enhance biodiversity around cotton fields. This funding will largely cover the project component on FFS and IPM.

b) Unsecured

Provide details of any matched funding where an application has been submitted, or that you intend applying for during the course of the project. This could include matched funding from the private sector, charitable organisations or other public sector schemes.

Date applied for	Donor organisation	Amount	Comments
August 2012	**JJ Charitable Trust**	**£XX**	A proposal has been submitted to the JJ Trust to support technology transfer and skills sharing from the existing PAN UK project in Benin (also funded by JJ Trust) – including research with the Australian Cotton Research Institute to adapt the successful Benin food spray to the Ethiopian cultural and environmental conditions. Other elements of the proposal include communications and advocacy support from PAN UK to partners to publicise the techniques to other national and regional actors.
March 2013	**Small Grants, CMS**	**£XX**	A grant will be sought to address a priority policy or activity need identified in year 1. This could be through enhanced advocacy using data generated through ecotox monitoring or development of action plans to targest specific threats or species

Q2 2013	**GEF Small Grants Programme – Chemicals focal area**	**£XX**	Community monitoring and awareness raising on the newly added POP Endosulfan in cotton production in the Ethiopian Rift Valley

PROJECT MONITORING AND EVALUATION

MEASURING IMPACT

24. LOGICAL FRAMEWORK

Darwin projects will be required to report against their progress towards their expected outputs and outcomes if funded. This section sets out the expected outputs and outcomes of your project, how you expect to measure progress against these and how we can verify this. Further detail is provided in Annex x of the guidance notes which you are encouraged to refer to. The information provided here will be transposed into a logframe should your project be successful in gaining funding from the Darwin Initiative. The use of the logframe is sometimes described in terms of the Logical Framework Approach, which is about applying clear, logical thought when seeking to tackle the complex and ever-changing challenges of poverty and need. In other words, it is about sensible planning.

Impact

The Impact is not intended to be achieved solely by the project. This is a higher-level situation that the project will contribute towards achieving. All Darwin projects are expected to contribute to poverty alleviation and sustainable use of biodiversity and its products.

(Max 100 words)

The project will contribute to the effective implementation by Ethiopia of the Conventions on Biological Diversity and the Conservation of Migratory Species. It will help reduce adverse impacts of pesticides on populations of key migratory bird species that transit the Ethiopian Rift Valley, protect aquatic ecosystems and improve ecological quality of water resources and foster active community participation in reducing environmental pollution.

It will promote the wider adoption of profitable, agro-ecological farming practices that reduce reliance on expensive agrochemical inputs and conserve agro-biodiversity and ecological services, thereby improving the livelihoods, food security and health of rural communities in the Ethiopian Rift Valley.

Outcome

There can only be one Outcome for the project. The Outcome should identify what will change, and who will benefit. The Outcome should refer to how the project will contribute to reducing poverty and contribute to the sustainable use/conservation of biodiversity and its products. This should be a summary statement derived from the answer given to question 14.

(Max 100 words)

Improved capacity of Ethiopian scientists, farming communities, government agencies and other stakeholders to adopt an ecosystem approach to (a) identify key sites at risk from the harmful environmental effects of agrochemical use b) monitor, measure and understand such impacts close to biodiversity-rich wetlands, (c) develop and implement practical solutions based on agroecological farming and (d) align policies with biodiversity conservation goals.

Rift Valley Lake farming communities will benefit from safer, sustainable pest management, better water quality and ecosystem services. Government agencies and conservation bodies will gain skills to monitor pesticide impacts with rural communities and feed evidence into policy forums.

Measuring outcomes - indicators

Provide detail of what you will measure to assess your progress towards achieving this outcome. You should also be able to state what the change you expect to achieve as a result of this project i.e. the difference between the existing state and the expected end state. You may require multiple indicators to measure the outcome – if you have more than 3 indicators please just insert a row(s).

Indicator 1	Capacity strengthened in Ethiopia in use of an ecosystem approach to pesticide impact monitoring in the field, with data collected on key species in aquatic food chains
Indicator 2	Farmers trained in IPM and organic methods are implementing by year 3 more sustainable pest management using less pesticide, while maintaining crop yields and earning better net returns.
Indicator 3	Enhanced understanding at farmer and national levels of the value of biodiversity and the indirect costs of pesticide effects on wildlife and ecosystem services helps ensure that agroecological farming strategies become mainstreamed into national policies on agriculture and environment.

Verifying outcomes

Identify the source material the Darwin Initiative (and you) can use to verify the indicators provided. These are generally recorded details such as publications, surveys, project notes, reports, tapes, videos etc.

Indicator 1	Ecotox curriculum and training reports; survey data, monitoring data and chemical analysis reports; stakeholder assessment notes.
Indicator 2	Programme data and farmers' feedback on training success, changes achieved in pest management methods, reductions in pesticide use, yields, production costs and income
Indicator 3	Quantitative and qualitative data from training, workshops, discussion and policy forums on changes in awareness of pesticide effects on biodiversity, changes in stakeholder perceptions on the role of pesticides and their costs and benefits.

Outcome risks and important assumptions

You will need to define the important assumptions, which are critical to the realisation of the *outcome and impact* of the project. It is important at this stage to ensure that these assumptions can be monitored since if these assumptions change, it may prevent you from achieving your expected outcome. If there are more than 3 assumptions please insert a row(s).

Assumption 1	Physical and political conditions permit effective monitoring in Rift Valley.
Assumption 2	Physical and political conditions permit effective training in Rift Valley. Farmers motivated to take part and alternative pest management methods are effective.
Assumption 3	Government agencies, conservation bodies, Rift Valley communities and others are committed to the project and make active use of the findings.

Outputs

Outputs are the specific, direct deliverables of the project. These will provide the conditions necessary to achieve the Outcome. The logic of the chain from Output to Outcome therefore needs to be clear. If you have more than 3 outputs insert a row(s). It is advised to have less than 6 outputs since this level of detail can be provided at the activity level.

Output 1	National capacity built in ecotoxicological monitoring, with a focus on pesticide use in the Ethiopian Rift Valley, enabling assessment of pesticide contamination and impact on wildlife and food chains of which migratory birds are part
Output 2	Baseline understanding compiled of current biodiversity, pesticide use patterns and effects on key species in aquatic ecosystems, to enable changes in status to be evaluated later
Output 3	Increased uptake of agro-ecological farming methods by trained farmers in cotton-growing project sites (smallholder + plantations)
Output 4	Enhanced awareness by rural communities, government agencies and other stakeholders of the adverse effects of pesticide use on Rift Valley aquatic ecosystems and farming livelihoods and of the measures needed to address these
Output 5	National Biodiversity & Agriculture Stakeholder Group established to provide supportive policy environment for sound agricultural practices that conserve biodiversity
Output 6	Project training methods, monitoring results and lessons emerging are made available to relevant stakeholders elsewhere in Ethiopia and beyond

Measuring outputs

Provide detail of what you will measure to assess your progress towards achieving these outputs. You should also be able to state what the change you expect to achieve as a result of this project i.e. the difference between the existing state and the expected end state. You may require multiple indicators to measure each output – if you have more than 3 indicators please just insert a row(s).

Output 1	
Indicator 1	Core group of staff from at least 3 different government agencies and NGOs trained and enabled to conduct robust monitoring programme and assess the results.
Indicator 2	Effective multi-stakeholder steering group established to provide oversight to monitoring activities

Output 2	
Indicator 1	Baseline data collected in Years 1-2 on: aquatic food chains and biodiversity in Rift Valley wetlands; pesticide use in surrounding farmland and contamination levels in lakes and wetlands; cotton production costs, yields, returns and pest management methods
Indicator 2	Results and quality of data generated on pesticide impacts on ecosystem processes

Output 3	
Indicator 1	Number of smallholder farmers and plantation managers and farmworkers trained in IPM/ organic methods
Indicator 2	Data on pesticide use; yields; income/profit of trained versus untrained farmers
Indicator 3	Number of farmers adopting at least some alternative pest control techniques

Output 4	
Indicator 1	Number of local community members (men, women, school groups) attending project events (workshops, field days, etc) and involved in monitoring
Indicator 2	Local level recommendations and action plans developed after monitoring results are discussed
Indicator 3	Changes in attitude and practices of stakeholders to reduce pollution from pesticide use
Indicator 4	Community representatives collaborating with government agencies to address specific pesticide contamination problems

Output 5	
Indicator 1	NBASG set up with at least 7 organisations represented covering relevant Ministries, conservation bodies, farmer associations and community groups
Indicator 2	NBASG advocates for agroecological farming as part of national policies on agriculture, biodiversity conservation
Indicator 3	NBASG deliberations include ecotox monitoring results, the external costs of pesticide harm and the role of pesticides in food security

Output 6	
Indicator 1	Ethiopian partners disseminate findings, action plans and policy recommendations through their networks
Indicator 2	Project lessons and guidance on community participation in ecosystem approaches disseminated via relevant meetings of CBD, CMS, PIC, POPS and other chemical conventions.
Indicator 3	Project findings, methodology and lessons disseminated to global research, conservation, donor and NGO audiences.

Verifying outputs

Identify the source material the Darwin Initiative (and you) can use to verify the indicators provided. These are generally recorded details such as publications, surveys, project notes, reports, tapes, videos etc.

Indicator 1.1	UK training report
Indicator 1.2	Notes from meetings and outputs of Ethiopian Ecotox steering group

Indicator 2.1	Baseline reports on biodiversity and pesticide use
Indicator 2.2	Papers accepted for peer reviewed journals
Indicator 3.1	Training records (photos, participant lists)
Indicator 3.2	Community monitoring survey data; farmer association records
Indicator 3.3	Organic/ IPM producers registered in area; community/farmer surveys; partner reports
Indicator 4.1	Project event reports and participant lists; completed survey forms
Indicator 4.2	Project event reports; action plans agreed
Indicator 4.3	Community monitoring survey data; partner reports and photos; media coverage (local newspapers or publications)
Indicator 4.4	Reports of local meetings; national stakeholder group meetings; partner reports
Indicator 5.1	NBASG meeting minutes and participant lists
Indicator 5.2	NBASG recommendations for agriculture and biodiversity policies
Indicator 5.3	NGASG meeting notes; contracted work (reports etc)
Indicator 6.1	Partner emails, publications, activity reports
Indicator 6.2	Project publications, guidance, photos of convention participation
Indicator 6.3	Project publications, peer reviewed journal articles, partner websites

Output risks and important assumptions

You will need to define the important assumptions, which are critical to the realisation of the achievement of your outputs. It is important at this stage to ensure that these assumptions can be monitored since if these assumptions change, it may prevent you from achieving your expected outcome. If there are more than 3 assumptions please insert a row(s).

Assumption 1	Physical and political access to project sites for monitoring
Assumption 2	Farmers choose to take part in agro-ecological farming training and see benefit in adopting strategies.
Assumption 3	Appropriate government agency takes the lead in convening NBASG and stakeholders motivated to participate

Activities

Define the tasks to be undertaken by the research team to produce the outputs. Activities should be designed in a way that their completion should be sufficient and indicators should not be necessary. Any risks and assumptions should also be taken into account during project design.

Output 1	
Activity 1.1	Prepare and run training session in UK for core Ethiopian participants Ecotox ToT course on design principles for field monitoring under an ecosystem approach.
Activity 1.2	Set up and train monitoring group in Ethiopia
Activity 1.3	Design monitoring programme for sampling by trained stakeholders and by communities

Activity 1.4	Train local participants in community-based monitoring principles and reporting, using FFS methodology.

Output 2	
Activity 2.1	Agree baseline survey method/tools for pesticide use and cotton production, then conduct surveys with smallholders and large farms
Activity 2.2	Agree baseline survey methods/tools for biodiversity related data, then collect/compile data, in collaboration with conservation NGOs involved
Activity 2.3	Trained staff and community groups carry out repeated ecotox monitoring sessions
Activity 2.4	Analyse pesticide residues in samples and estimate contamination levels in Rift Valley ecosystems.
Activity 2.5	Summarise results into suitable formats for discussion with different stakeholders.
Activity 2.6	Assess key findings with steering group, project collaborators, UK experts, and farmers and community groups involved in monitoring.

Output 3	
Activity 3.1	Incorporate simple elements of biodiversity awareness-raising and ecotox monitoring and into FFS training curriculum so that FFS farmer groups better appreciate the value of beneficial insects and other biodiversity and can later monitor their progress in reducing pesticide contamination.
Activity 3.2	Conduct FFS training sessions in x sites with y smallholder farmers on agro-ecological methods to improve pest and crop management (including curriculum elements from activity 4.1)
Activity 3.3	Conduct FFS training sessions on agro-ecological and biodiversity principles and IPM methods for 2 large cotton farms, including farm managers and workers.
Activity 3.4	Link trained smallholder groups with organic supply chains.
Activity3.5	Link large cotton farms with BCI supply chains.
Activity 3.6	Compile data with smallholder groups and large farms on changes in practices, yields and income.

Output 4	
Activity 4.1	Conduct 2 workshops (one at local and one at national level) to disseminate findings from ecosystem monitoring
Activity 4.2	Run one awareness-raising meeting for local stakeholders whose activities may impact on the wetland ecosystem (tour operators, industrial plants, commercial farms) on water contamination effects on aquatic ecosystems, the economic costs of harm and measures to reduce contamination.
Activity 4.3	Run two agro-ecotourism field days for policymakers and other stakeholders to visit trained farmers using organic methods.
Activity 4.4	Produce leaflets, posters and briefings in local language to raise awareness of the economic value of biodiversity and the economic costs of adverse pesticide effects.

Output 5	
Activity 5.1	Help relevant government agency to set up National Biodiversity & Agriculture Stakeholder Group (NBASG) with representation from relevant stakeholders, including community and farmer groups.
Activity 5.2	Help conduct at least 5 sessions using methodology to enable full participation by community representatives and identifying a coherent work plan. Ensure recommendations from ecotox monitoring and awareness-raising events feed into NABSG and other policy forums.
Activity 5.3	Build support and access funding for implementation of Action Plans based on monitoring programme results and community-level recommendations.
Activity 5.4	Liaise with NBASG members and others to assess positive changes made towards better alignment of agriculture and biodiversity policies.
Output 6	
Activity 6.1	Share results and lessons within Ethiopia through the end of project workshop and via the networks of partners and collaborators and local and national media.
Activity 6.2	Present findings in appropriate international forums, including CBD, CMS, PIC and POPs Conventions and other MEAS and chemicals-related initiatives (through partners' existing participation in these forums).
Activity 6.3	Disseminate findings more widely to research, conservation, donor and NGO audiences. Submit at least two peer-reviewed papers and at least three articles in conservation and development international magazines and web media, as well as briefings on partner websites.

25. Provide a project implementation timetable that shows the key milestones in project activities. Complete the following table as appropriate to describe the intended workplan for your project.

	Activity	No of Months	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1														
1.1	Run training session in UK for core Ethiopian participants	0.5												
1.2	Set up and train monitoring group in Ethiopia	1												
1.3	Design monitoring programme for Rift Valley sampling	1												
1.4	Train local participants in community-based monitoring	1												
Output 2														
2.1	Conduct baseline survey on pesticide use and cotton production	1.5												
2.2	Conduct baseline and impact surveys on biodiversity components	1.5												
2.3	Conduct ecotox monitoring sessions	1.5												
2.4	Analyse pesticide residues	0.75												
2.5 &2.6	Summarise results and assess with groups involved	1.75												
Output 3														
3.1	Incorporate biodiversity and ecotox monitoring into FFS curriculum	0.5												
3.2	Conduct FFS training sessions with smallholder farmers	7												
3.3	Conduct FFS training sessions with large farms	3												
3.4	Link trained smallholders with organic supply chains	3												
3.5	Link trained large farms with BCI supply chains	1.5												
3.6	Compile data with trained farmers on changes in practice	2												
Output 4														
4.1	Conduct workshops to disseminate findings from ecosystem monitoring	1.75												
4.2	Run awareness-raising meeting for stakeholders using wetland ecosystems	0.5												
4.3	Run two agro-ecotourism field days	0.5												

Output 5														
5.1	Set up National Biodiversity & Agriculture Stakeholder Group	0.25												
5.2	Help run at least 5 NBASG sessions	1.5												
5.3	Build support for implementing Action Plans	1												
5.4	Assess positive changes in agriculture & biodiversity policies	0.5												
Output 6														
6.1	Share results and lessons within Ethiopia	0.75												
6.2	Present findings in appropriate international forums (ad-hoc)	0.5												
6.3	Disseminate findings to research, conservation, donor and NGO audiences globally.	1.0												

26. Project based monitoring and evaluation

Describe, referring to the Indicators above, how the progress of the project will be monitored and evaluated, making reference to who is responsible for the projects monitoring and evaluation. Darwin Initiative projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. Monitoring and evaluation is expected to be built into the project and not an 'add' on. It is as important to measure for negative impacts as it is for positive impact.

(Max 500 words)

During project inception and UK training, the project will access expertise to develop a results-based M&E strategy and working paper detailing the specific sources and data needed for each indicator, and suggesting mechanisms for this data to be integrated into participatory methodologies to be adopted by the project. An internal mid-term evaluation and final project evaluation will be conducted by an appropriate individual not involved in project implementation, to assess project impact.

Participants in all project events will evaluate them in terms of immediate response, behaviour change, and impact of new behaviour or practice on the problem that is intended to be addressed by the activity or event.

The participatory, community based monitoring and Farmer Field School methodologies both include a substantial element of reflection and feedback on the project as well as generation of data on pesticide use, community awareness of impacts, adoption of sustainable agriculture practices and their impact on poverty levels, and biodiversity impacts of pesticides. Results from the community based monitoring are all major indicators to be tracked by the project, so the project will ensure that beneficiaries are not only involved but to a large extent responsible for providing the data on project impact and effectiveness.

As project leader, PAN UK will establish a regular monthly email update on the project progress by all partners, and a more detailed biannual review (prior to submission of Darwin reports) including a review of all indicators and update of the progress against each one. These will be held in person as far as possible (linked to project activities) or by skype/email.

Papers containing project results will be submitted to peer-reviewed international journals, enabling progress in building capacity to be monitored. All papers and policy statements will be reviewed by all project partners and other relevant organisations in Ethiopia before being finalised.

University of Addis Ababa will supervise MSc and PhD students who will contribute to project results.

FUNDING AND BUDGET

Please complete the separate Excel spreadsheet which provides the Budget for this application. Some of the questions earlier and below refer to the information in this spreadsheet.

NB: Please state all costs by financial year (1 April to 31 March) and in GBP. **Budgets submitted in other currencies will not be accepted.** Use current prices – and include anticipated inflation, as appropriate, up to 3% per annum. The Darwin Initiative cannot agree any increase in grants once awarded.

27. Value for Money

Please explain how you worked out your budget and how you will provide value for money through managing a cost effective and efficient project. You should also discuss any significant assumptions you have made when working out your budget.

(max 300 words)

The budget has been developed on the basis of submissions by all partners relating to their predicted expenses.

The ecotoxicology monitoring will be provided through consultancy arrangements at the international (NR Group) as well as local Ethiopian level. This provides a necessary flexibility to

engage experts to address specific technical needs as they arise (e.g. birds, invertebrates, plants, etc), since the monitoring strategy will be iteratively refined based on initial baseline project findings. In Ethiopia, value for money is ensured since all the individuals likely to be contracted are the participants of the earlier 2007 Training of Trainers on ecotoxicology, thus a basic capacity for this work already exists.

The community based monitoring activity will be provided by local communities who have worked with Ethiopian partners PAN-Ethiopia and ISD and in some cases, have participated in similar pesticide monitoring. These costs are covered as field transport and subsistence costs, as well as initial and feedback events in the communities.

The budget for the NBASG is included as a conference with some additional scope for specific consultancy-based activities that may be required such as legislation review or specific data gathering to support evidence-based decision making.

Matching funding has been sought from the JJ Trust to support skills and experience sharing with PAN UK's organic cotton project in Benin and to promote agro-ecological techniques to key stakeholders involved in farmers support eg FAO and BCI. These activities will be curtailed if funding is not forthcoming, but the core activities will be unaffected.

A small grant from CMS will be sought in year 2 and will be informed by findings and consultations with key stakeholders in year 1. Funding for Community based monitoring activities – especially around endosulfan use – will be sought from the GEF Chemicals small grants programme.

FCO NOTIFICATIONS

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 the project's success in the Darwin competition in the host country. ☐

Please indicate whether you have contacted the local UK embassy or High Commission directly to discuss security issues (see Guidance Notes) and attach details of any advice you have received from them.

Yes (no written advice) ☐ **Yes, advice attached** ☐ **No** ☒

No FCO restriction or warning on the project areas in Ethiopia.

CERTIFICATION 2013/14

On behalf of the trustees/company* of

(*delete as appropriate)

I apply for a grant of £ in respect of **all expenditure** to be incurred during the lifetime of this project based on the activities and dates specified in the above application.

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. (*This form should be signed by an individual authorised by the lead institution to submit applications and sign contracts on their behalf.)*

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

Name (block capitals)	KEITH TYRELL
Position in the organisation	DIRECTOR

Signed	Keith Tyrell.	**Date:**	3rd December 2012

Stage 2 Application - Checklist for submission

	Check
Have you provided **actual start and end dates** for your project?	y
Have you provided your **budget based on UK government financial years** i.e. 1 April – 31 March and in GBP?	y
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?	y
Has your application been **signed by a suitably authorised individual**? (clear electronic or scanned signatures are acceptable in the email)	**y**
Have you included a **1 page CV for all the Principals** identified at Question 7?	y
Have you included a **letter of support from the main partner(s) organisations** identified at Question 10?	y
Have you **checked with the FCO** in the project country/ies and have you included any evidence of this?	y
Have you included a **copy of the last 2 years annual report and accounts** for the lead organisation? An electronic link to a website is acceptable.	y
Have you **read the Guidance Notes**?	y
Have you **checked the Darwin website** immediately prior to submission to ensure there are no late updates?	**y**

Once you have answered the questions above, please submit the application, not later than midnight GMT on Monday 3 December 2012 to Darwin-Applications@ltsi.co.uk using the application number (from your Stage 1 feedback letter) and the first few words of the project title **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). You are not required to send a hard copy.

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 the Darwin Initiative. Application form data will also be held by contractors dealing with Darwin Initiative 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 (ie name, contact details and location of project work) on the Darwin Initiative and Defra 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 Foreign and Commonwealth Office posts outside the United Kingdom, 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.