

DIR25S2\100002

Bridging agriculture and environment: Southern African crop-wild-relative regional network

Valuable traits within crop wild relatives (CWR) are needed to enhance present and future food security for 130 million poor people in southern Africa. Yet CWR are poorly conserved, are threatened, barely accessible to breeders, and generate few benefits for farmers. The project will establish strategic partnerships/networks of protected areas for CWR conservation and use; design mechanisms to enhance the benefits farmers from conserving CWR; increase access to germplasm, and build gendered capacity, underpinning southern-African food security and poverty reduction.

PRIMARY APPLICANT DETAILS

Title	Dr
Name	Mohammad Ehsan
Surname	Dulloo
Tel (Work)	
Email (Work)	
Address	

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title Dr
Name Mohammad Ehsan
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Tel (Work)
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Address

GMS ORGANISATION

Type	Organisation
Name	Bioversity International
Phone (Work)	
Email	
Website	
Address	

Section 2 - Title, Dates & Budget Summary

Q3. Project title:

Bridging agriculture and environment: Southern African crop-wild-relative regional network

What was your Stage 1 reference number? e.g. DIR25S1\100123

DIR25S1\100470

Q4. Country(ies)

Which eligible country(ies) will your project be working in? Where there are more than 4 countries that your project will be working in, please add more boxes using the selection option below.

Country 1	Malawi	Country 2	Tanzania
Country 3	Zambia	Country 4	No Response

Do you require more fields?

No

Q5. Project dates

Start date:

01 April 2019

End date:

31 March 2022

Duration (e.g. 2 years, 3 months):

3 years

Q6. Budget summary

Year:	2019/20	2020/21	2021/22	Total request
Amount:	£127,656.00	£197,155.00	£152,193.00	£ 477,004.00

Q6a. Do you have proposed matched funding arrangements?

Yes

What matched funding arrangements are proposed?

Bioversity: £X to cover partial staff time, facilities and utility bills;
University of Birmingham: £X to cover for 3% staff time of Senior lecturer in genetic conservation;
The Southern African Development Community (SADC) Plant Genetic Resources Network (SPGRC): £X to cover staff time, workshop organisation and genebank facilities
Government of Malawi: £X to cover staff time, office space, vehicle servicing and other utility bills;
Government of Tanzania: £X to cover Staff time, office, utility bills, Vehicle maintenance Government of Zambia: £X to cover staff salaries, vehicle usage, office space and amenities)
Total: £X

Q6b. Proposed (confirmed and unconfirmed) co-financing as % of total project cost 29%

Section 3 - Project Summary

Q7. Summary of project

Please provide a brief summary of your project, its aims, and the key activities you plan on undertaking. Please note that if you are successful, this wording may be used by Defra in communications e.g. as a short description of the project on GOV.UK. Please write this summary for a non-technical audience.

Valuable traits within crop wild relatives (CWR) are needed to enhance present and future food security for

130 million poor people in southern Africa. Yet CWR are poorly conserved, are threatened, barely accessible to breeders, and generate few benefits for farmers. The project will establish strategic partnerships/networks of protected areas for CWR conservation and use; design mechanisms to enhance the benefits farmers from conserving CWR; increase access to germplasm, and build gendered capacity, underpinning southern-African food security and poverty reduction.

Section 4 - Lead Organisation Summary

Q8. Lead organisation summary

Has your organisation been awarded a Darwin Initiative award before (for the purposes of this question, being a partner does not count)?

Yes

If yes, please provide details of the most recent awards (up to 6 examples).

Reference No	Project Leader	Title
22017	Michael Halewood	Mutually supportive implementation of the Nagoya Protocol and Plant Treaty
23008	Alexia, Prades/ Vincent Johnson	Upgrading and broadening the new South-Pacific International Coconut Genebank
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>
<i>No Response</i>	<i>No Response</i>	<i>No Response</i>

Have you provided the requested signed audited/independently examined accounts? If you select "yes" you will be able to upload these. Note that this is not required from Government Agencies.

Yes

Section 5 - Project Partners

Q9. Project partners

Please list all the partners involved (including the Lead Organisation) 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 Letters of Support for each partner or explain why this has not been included.

N.B. There is a file upload button at the bottom of this page for the upload of a cover letter (if applicable) and all letters of support.

Lead Organisation name: Bioversity International

Website address: www.bioversityinternational.org

Details (including roles and responsibilities and capacity to engage with the project): Bioversity, as lead applicant, will be responsible for technical, administrative and financial management, based on its solid international experience in managing complex research projects. It has led several similar projects funded by Darwin Initiative, ACP/EU (SADC-CWR) and UNEP/GEF, and is currently also a major partner in the Horizon 2020 project Farmers' Pride (see question 8). Under this award, Bioversity will lead communication and monitoring planning, co-lead capacity building, facilitate establishing the SADC regional CWR network and provide technical assistance to the national partners, informed by its specific technical competencies. Bioversity's Dr Ehsan Dulloo, based in Mauritius and PI of the award, has extensive expertise in coordinating research on agrobiodiversity conservation (SADC-CWR project) and leads Bioversity's theme on integrated conservation strategies. Dr Adam Drucker (Principal Economist) will support the identification of cost-effective conservation strategies and the design of mechanisms for enhancing the benefits to farmers. Hannes Gaisberger (Spatial mapping specialist) will assist in the spatial analysis approach to identify suitable CWR in situ conservation sites. Gloria Otieno will provide expertise on application of Nagoya protocol. Lessons learned from our gender-integrative research will inform a gender-sensitive approach.

Have you included a Letter of Support from this organisation? Yes

Have you provided a cover letter to address your Stage 1 feedback? Yes

Do you have partners involved in the Project?

Yes

1. Partner Name: University of Birmingham (UoB)

Website address: <https://www.birmingham.ac.uk/>

Details (including roles and responsibilities and capacity to engage with the project):

UoB will lead the training activities and provide technical support on the conservation planning and implementation for the establishment of CWR in situ sites and network. UoB is one of the leading research-based universities in the UK and the Food Security Research Group led by Dr Nigel Maxted plays a leading role in mitigating the global food security crisis through working with leading global agencies to conserve agrobiodiversity and to promote their use by farmers and plant breeders. Over 600 students from more than 150 countries have been awarded the MSc in Conservation and Utilization of PGR, and over 250 students have been awarded PhDs in PGR conservation and plant breeding. Dr Maxted has extensive professional expertise in in situ and ex situ plant genetic conservation. He has coordinated national, European and international projects in CWR conservation and has a cumulative research income of 10.6 M€. He will coordinate the implementation of the project at UoB. Dr Joana Magos Brehm has been working on ex situ and in situ conservation, and development of conservation strategies for CWR conservation for the last 13 years. She will help facilitate the training activities and provide technical support on CWR conservation planning.

Have you included a Letter of Support from this organisation? Yes

2. Partner Name: Southern African Developing Community (SADC) Plant Genetic Resources Centre (SPGRC), Lusaka, Zambia.

Website address: <http://www.spgrc.org.zm>

Details (including roles and responsibilities and capacity to engage with the project):

SPGRC will play a key role in establishing the regional CWR network under the aegis of the SADC secretariat and organise the regional network workshop. The regional centre, based in Lusaka, Zambia is coordinating the conservation and utilization of plant genetic resources for food and agriculture in sixteen countries in southern Africa. The regional centre will provide technical support through the in situ conservation unit and to provide logistical arrangements for regional workshops for the project. Southern Africa is rich in several wild relatives of food crops that urgently require conservation intervention and their sustainable utilization being channelled to breeding activities to build resilience in the face of climate change. As a regional centre falling under the Food, Agriculture and Natural Resources Directorate of SADC, SPGRC will encourage national governments to actively participate and support the implementation of the project, especially the three countries namely Malawi, Tanzania and Zambia

Have you included a Letter of Support from this organisation? Yes

3. Partner Name: Malawi Plant Genetic Resources Centre (MPGRC), Chitedze Research Station, Lilongwe, Malawi

Website address: www.dars.mw

Details (including roles and responsibilities and capacity to engage with the project): MPGRC is a government organisation responsible for plant genetic resources conservation and use in Malawi. In the project it will set up a national coordinating committee which will facilitate the establishment of an integrated CWR conservation network together with key stakeholders. It will identify potential in situ sites for conservation of country's priority CWR and conduct habitat state assessment of potential in situ sites in order to determine the suitability of each site for genetic reserves. MPGRC will conduct threat assessments on priority CWR species using IUCN red listing definitions and establish protected areas for priority CWR and facilitate review of existing nature conservation management plans and guidelines to develop harmonized conservation management plans that cut across all key sectors. The National PGR centre will collect and conserve CWR in a seed genebank, facilitate use of the collected CWR and conduct studies on drought tolerance and/or disease resistance. The conserved genetic materials will be shared with users in line with Access and benefit Sharing national guidelines.

Have you included a Letter of Support from this organisation? Yes

4. Partner Name: National Plant Genetic Resources Centre (NPGRC), Tropical Pesticides Research Institute (TPRI), Arusha, Tanzania

Website address: *No Response*

Details (including roles and responsibilities and capacity to engage with the project):

The NPGRC, Tanzania has the national mandate for conserving PGRFA and facilitating their availability and accessibility to users for research and development thereby contributing to improved agricultural productivity, production, food security and nutrition. The NPGRC holds a collection of seed samples of various crops including CWRs in its seed bank and field gene banks (6125 accessions) as well as collaborating with farmers to manage community seed banks and field genebanks in the country. The centre has a team of scientists with extensive experience in PGR conservation. The NPGRC will make use of its long-standing experience in coordinating plant conservation activities in Tanzania such as the Millennium Seed Bank project which brought together partners from different conservation organizations in the country. NPGRC, Tanzania will form a national coordinating committee and bring together key target stakeholders. They will identify priority conservation sites, establish genetic reserves for the in situ conservation of CWR, develop management plans, collect and conserve CWR in genebanks and promote use of conserved materials in line with germplasm access and benefit-sharing (ABS) protocols.

Have you included a Letter of Support from this organisation? Yes
 No

5. Partner Name: Zambia Agricultural Research Institute (ZARI), Lusaka, Zambia

Website address: www.zari.gov.zm

Details (including roles and responsibilities and capacity to engage with the project):

ZARI, through the NPGRC, has a national mandate for conserving PGRFA and facilitating their availability and accessibility to users for research and development thereby contributing to improved agricultural productivity, production, food security and nutrition. ZARI hosts the National Genebank holding an important collection of seed samples of various crops and several linked CWRs. ZARI will draw on its experience arising from its involvement in the SADC-CWR project funded by ACP-EU and coordinated by Biodiversity. Through this project, ZARI developed an exemplar national Strategic Action Plan for the conservation and use of CWR in the face of climate change, targeting identified hotspot national sites for priority CWR taxa. ZARI will form a national coordinating committee and bring together key target stakeholders. They will identify priority conservation sites, establish new in situ conservation sites, develop management plans, collect and conserve CWR in genebanks and promote the use of conserved materials in line with ABS protocols.

Have you included a Letter of Support from this organisation? Yes

6. Partner Name: *No Response*

Website address: *No Response*

Details (including roles and responsibilities and capacity to engage with the project): *No Response*

Have you included a Letter of Support from this organisation? Yes No

If you require more space to enter details regarding Partners involved in the Project, please use the text field below.

We have provided letters of support from all the partners listed above. In addition we are also providing letters of support from the International Institute of Tropical agriculture , a member of the CGIAR and Crop Trust. These two organisations are not partners, but are important stakeholders for linking to breeders, in order to enhance the use of crop wild relative diversity.

Please provide a cover letter responding to feedback received at Stage 1 if applicable and a combined PDF of all letters of support.

 **Final partner support letters**

 03/12/2018

 12:12:50

 pdf 2.99 MB

 **Letter to address comments from Expert committee FINAL**

 29/11/2018

 15:51:32

 docx 22.7 KB

Section 6 - Project Staff

Q10. Key project personnel

Please identify the core staff on this project, their role and what % of their time they will be working on the project.

Please provide 1 page CVs for these staff, or a 1 page job description or Terms of Reference for roles yet to be filled. Please include more rows where necessary. These should match the names and roles in the budget spreadsheet.

Name (First name, Surname)	Role	% time on project	CV attached below?
Mohammad Ehsan Dulloo	Project Leader	20	Checked
Adam Drucker	Principal Scientist – cost-effective conservation strategy identification and farmer benefit sharing mechanism design	13	Checked

Nigel Maxted	Senior lecturer- CWR in situ and networking expertise	6	Checked
Joana Brehm-Magos	Facilitate training activities and provide technical support on CWR conservation planning	20	Checked

Do you require more fields?

Yes

Name (First name, Surname)	Role	% time on project	CV attached below?
Justify Shava	SPGRC head, key role in establishing the regional CWR network under the aegis of the SADC secretariat and organise the regional network workshop	5	Checked
William Christo Hamisy	Project focal point and contact person in Tanzania. Will coordinate project activities in Tanzania	15	Checked
Godfrey Mwila	Project focal point and contact person in Tanzania. Will coordinate project activities in Zambia	10	Checked
Nolipher Mponya	Project focal point and contact person in Tanzania. Will coordinate project activities in Malawi	15	Checked

Please provide 1 page CVs (or job description if yet to be recruited) for the Project staff listed above. Ensure the file is named clearly, consistent with the named individual and role above.

 **CVs_merged**

 29/11/2018

 17:16:23

 pdf 4.55 MB

Have you attached all Project staff CVs?

Yes

Section 7 - Problem Statement & Conventions

Q11. Problem the project is trying to address

Please describe the problem your project is trying to address in terms of biodiversity and its relationship with poverty. For example, what are the drivers of loss of biodiversity that the project will attempt to address? Why are they relevant, for whom? How did you identify these problems?

CWR are wild plant species related to crops offering trait diversity for crop improvement. Globally CWR annually contribute >US\$120 billion to crop improvement(1-references attached) that sustains food production and mitigates climate change impact, enhancing long-term food/nutrition security and poverty alleviation. CWR trait diversity are increasingly used in breeding programmes especially for novel cultivar development(2,3) but breeders are limited by access to them as CWR are poorly represented in genebanks(4) and inadequate ABS policies. CWR are rarely used by farmers, but evidence exists that local farmers play a vital role in maintaining the interaction between CWR and their domesticates(5). Yet farmers are neither recognised nor rewarded for the public-good conservation service they provide and have no incentives to continue to maintain them.

CWR face similar threats to wild biodiversity from climate change, habitat degradation, invasive species, overexploitation, and pollution(6,7,8). In a recent SADC-CWR project funded by ACP/EU(9) these drivers were also recognised by the partner countries when developing their National Strategic Action Plans. Loss of their genetic diversity, and especially useful climate-change adaptive traits will impact capacity for breeders to find long-term solutions to mitigate impact to climate change and ensuring long term food security.

CWR species are often neglected due to inadequate appreciation and knowledge of their agricultural/nutritional value by policy-makers and wild habitat (including non-protected areas) managers. The SADC-CWR project showed that limited coordination between agriculture and environment stakeholders and lack of regional network with an enabling governance structure, resulting in poor representation of >1,900 reported priority CWR species in genebanks and little in situ conservation actions. There is little capacity among national-level scientists to effectively conserve/use CWR due to lack of tools to assess CWR distribution, identify potential novel traits for breeding, and design mechanisms to ensure that farmers can benefit more directly from CWR.

If necessary, please provide supporting documentation e.g. maps, diagrams etc., using the File Upload below:

 **REFERENCE LIST**

 29/11/2018

 17:18:18

 docx 13.53 KB

Q12. Biodiversity Conventions, Treaties and Agreements

Q12a. Your project must support the objectives of one or more of the agreements listed below. Please indicate which agreement(s) will be supported and describe which objectives your project will address and how. Note: projects supporting more than one will not achieve a higher score.

- Convention on Biological Diversity (CBD)
- Nagoya Protocol on Access and Benefit Sharing (ABS)
- International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

Q12b. Biodiversity Conventions

Please detail how your project will contribute to the objectives of the agreement(s) your project is targeting. You should refer to Articles or Programmes of work here. Note: No additional significance will

be ascribed for projects that report contributions to more than one agreement.

The project will contribute to conventions as follows:

CBD: by explicitly addressing its three objectives for conservation and sustainable use of biodiversity, and access and benefit sharing of genetic resources arising from their use (see Nagoya protocol below). The project will:

- develop regional scientists' capacities on in situ conservation planning and sustainable use.
- develop regional/national strategies to conserve and use CWR and create a network of CWR in situ conservation sites to complement and strengthen the existing SADC regional network of ex situ conservation collections.
- study how CWR will be sustainably utilised in breeding programme and by farmers.
- contribute to implementing the UN-CBD Strategic Plan for Biodiversity 2011-2020 (Aichi Target 3 and 13), CBD programme of work on agrobiodiversity and CBD Global Strategy for Plant Conservation (GSPC) 2011-2020 (Target 9) in SADC region. Both Aichi target 13 and the GSPC target 9 call for the development of strategies, maintenance and conservation of genetic diversity of CWR to minimise genetic erosion.

Nagoya Protocol (NP): Article 5- Fair and Equitable Benefit-Sharing, Article 6 Access to Genetic Resources, and Article 7 Access to Traditional Knowledge Associated with Genetic Resources. The project will:

- organise regional workshop to discuss these articles as they apply to accessing in situ conserved materials and equitably sharing benefits from their use at SADC level. The network will facilitate access and use to/of genetic materials and traditional knowledge by raising awareness among farmers and breeders concerning NP standards regarding prior informed consent and mutually agreed terms with local communities; it will share existing model-community protocols to inform their collective consideration when approached by access-seekers.

ITPGRFA: The project will:

- promote in situ conservation and use of CWR, addressing the Treaty's Articles 5 (PGRFA conservation, exploration, collection, characterisation, evaluation and documentation), 6 (sustainable use of PGR) and 7 (national commitments and international cooperation).
- explore options for governments to encourage farmers, forest dwellers, and other rural people to make their CWR materials available through the multilateral system of access and benefit sharing (Part IV of the ITPGRFA), as per Article 11.3 which states that contracting parties will take measures to encourage natural and legal persons to include PGRFA in the multilateral system.

In addition, the project will also address the FAO Second Global Plan of Action (GPA) which recognises the key contributions that CWR provide in ensuring food and nutrition security. The project will contribute to promoting its priority activity 4 on "Promotion of in situ conservation and management of crop wild relatives and wild food plants;

SADC strategic plan: In contributing to the Priority Intervention Areas of Poverty eradication; Science and Technology; Environment and Sustainable Development and Sustainable Food Security, SADC is guided by the Regional Indicative Strategic Development Plan which provides a framework for achieving economic growth and integration in the region. There are other poverty eradication programs like the Poverty and Development Programme that targets the Sustainable Development Goals. The framework is aligning to country poverty reduction strategies to the regional interventions.

Q12c. Is any liaison proposed with the CBS/ABS/ITPGRFA/CITES/CMS/Ramsar focal point in the host country?

Yes

Please give details:

National CBD, ABS and IT focal points will be convened to discuss regional and country CWR networks governance structure and functioning of these networks. Network establishment will help fulfil Nagoya

Protocol and Aichi targets, including Articles 5 (Conservation and exploration of PGRFA), 6 (sustainable use of PGR) and 7 (national commitments and international cooperation) of the ITPGRFA. This DI application builds on a similar targeted European initiative (H2020 Farmer's Pride) that is already engaging directly with the CBD, ITPGRFA and UN FAO Global Plan of Action for PGRFA and a similar model will be followed in the SADC region.

Q12d. Global Goals for Sustainable Development (SDGs)

Please detail how your project will contribute to the Global Goals for Sustainable Development (SDGs)

In 2015, 17 Sustainable Development Goals (SDG) with 169 targets were adopted as part of the UN 2030 agenda, and governments are expected to integrate these goals in their national planning framework. The project aims to address the sustainability of food security and reduce hunger in southern Africa and hence will contribute to achieving SDG 2 - Zero hunger and food security. It specifically contributes to achieving SDG2 target 2.5 " By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species" by developing conservation strategies and policy interventions for the safeguarding and improving the accessibility and use of genetic diversity of CWR both ex situ and in situ. The project activities will indirectly support achieving other goals that support biodiversity and ecosystem management (e.g. Goal 15, Life on Land Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss, Goal 13 on climate action). The project will tackle the in situ conservation of CWR and as such help to protect and restore landscapes, and reverse land degradation and minimise biodiversity loss. Promoting the conservation of CWR also enables adapting to climate change and providing adaptive genes for combating impact of climate change on food production. The project also contributes to poverty eradication (Goal 1) in the longer term as the genetic resources from CWR helps in sustaining food security and thus people's livelihoods.

Section 8 - Method, Change Expected, Gender & Exit Strategy

Q13. Methodology

Describe the methods and approach you will use to achieve your intended Outcome 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.).

This may be a repeat from Stage 1, but you should update or refine as necessary.

1. The project will leverage and strengthen the existing SADC regional network on PGRFA (SPGRC) to establish an SADC regional CWR network, composed of in situ sites, ex situ genebanks and stakeholders' platform. SPGRC will host a regional workshop to facilitate stakeholder discussions and agreements on network governance functionality, structure, management and post-project financing. The result will be a Policy White Paper presented to a meeting of SADC Ministers responsible for Agriculture and Food Security and eventually to SADC Council of Ministers for final approval for policy implementation. (led by SPGRC/Bioversity/UOB)
2. The three exemplar countries (Malawi, Tanzania and Zambia) will develop a National multi-stakeholder committee on CWR for developing and implementing in situ conservation and use strategies as part of the regional SADC CWR network. Using a conservation-planning toolkit, participative methods, and Weitzman-type prioritisation analysis the countries will prioritize taxa for active conservation. Malawi and Tanzania will develop NSAPs for integrated conservation (in- and ex situ) and use of CWR diversity. Wild CWR populations will be studied in depth for establishing genetic reserves. (National partners)
3. Gap filling germplasm collecting from identified in situ sites/populations will secure CWR diversity, strengthen ex situ conservation facilities at national levels, and back up CWR accessions in regional and

- international genebanks. Germplasm collecting will be subject to applicable national laws, including access and benefit sharing laws implementing the ITPGRFA and Nagoya Protocol. (National Partners)
4. To enhance use of CWR for breeding, we will first undertake a feasibility study, including a SWOT analysis on CWRs potential use in breeding programmes. Using predictive characterisation tools, CWR populations containing desirable traits will be identified. The Project will engage with breeders (National and CGIAR and Crop Trust) for exchange and sharing of germplasm and pre-bred materials from CGIAR centres in novel cultivar or local landrace improvement, and improved material made available to SADC farmers. (National partners/Bioversity)
 5. Assessment of mechanisms for enhancing farmer benefits derived from CWR conservation. This will involve a desk review, expert consultation and pilot-testing/modelling to identify and assess a range of potential mechanisms (direct farmer support, enhanced direct use, improved access CWR-derived materials, and establishment of a potential benefit-sharing fund). Criteria for assessing mechanisms will include: magnitude, time-scale, implementation costs, and long-term funding. (National Partners/Bioversity)
 6. Key approaches to capacity building will include SADC capacity development needs assessment; inter-region technology transfer; training workshop and a mentoring programme. (UOB/Bioversity)
 7. Communications and monitoring plans will be developed at regional and country levels to ensure that results of the project are disseminated to target audiences through SPGRC and national websites, presentations at strategic meetings. (Bioversity/SPGRC/National Partners)

A Steering Committee including key regional and international stakeholders from the SADC secretariat, SANBI, SACAU, ITPGRFA/FAO, CGIAR, and Crop Trust will be set-up. Bioversity/SPGRC will convene start-up and annual meetings to review deliverables and milestones. Project progress will be evaluated through annual partner meetings and will respond to any reviews carried out by the Darwin Initiative. Risk assessment, contingency planning and dissemination activities will be carried out.

Q14. Change expected

Detail the expected changes this work will deliver. You should identify what will change and who will benefit a) in the short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended).

Please describe the changes for biodiversity and for people in developing countries, and how they are linked. When talking about people, please remember to give details of who will benefit and the number of beneficiaries expected. The number of communities is insufficient detail – number of households should be the largest unit used. If possible, indicate the number of women who will be impacted.

By establishing strategic partnerships, the project will foster improved working collaboration among stakeholders within the environment and agriculture sectors (breeders, agronomists, natural resource managers, farmers, genebank managers and policy-makers) at regional and national levels. This will help conserve and unlock novel genetic diversity contained within CWR populations, make them available and accessible for crop improvement in addressing farmers' and breeders' needs, thereby benefiting them and consumers region-wide. This can only happen if:

- both male and female farmers' needs are understood;
- CWR diversity is adequately safeguarded and used through proper management and conservation work at field level and in genebanks,
- breeders have facilitated access to the germplasm, supported by policies that encourage conservation, use and exchange of germplasm and related know-how, and the equitable sharing of benefits derived from their use.

Collaboration will be scaled out across the SADC region through the established SADC regional CWR network, benefitting 130 million poor people in the region.

Training in network development, technology transfer for at least 21 gender-balanced stakeholders in the SADC region will allow longer-term capacity building to improve technical skills of national stakeholders in

the conservation and use of CWR across the SADC region.

The project will generate new scientific knowledge and information about priority CWR occurrence, status and threats in Malawi and Tanzania, to develop NSAPs for improved CWR conservation and use. During the project, at least 9 CWR genetic reserves of priority CWR will be created to initiate the regional network, and other SADC countries will be motivated to establish genetic reserves within their territory to join the SADC-CWR regional network in the longer term. The diversity of CWR from the 9 sites will be backed up in genebanks, allowing countries to conserve at least 70% of CWR diversity, and help the governments to meet their targets for the major conventions and agreements.

At the end of the project, the availability and accessibility of material from priority CWR in the countries will have improved, as samples are identified, collected and conserved in ex situ genebanks and policy interventions implemented. Crop breeders involved in pre-breeding will have more access to CWR germplasm with the trait diversity required to address key challenges including climate change (e.g. resistance to new pest and diseases, adaptive traits to abiotic stresses). In the longer-term breeders will be able to integrate adaptive traits/resistance genes into elite materials to produce climate-smart varieties for uptake by low income farmers, thereby boosting crop performance and poverty reduction and benefiting around 130 million women and men. The project will actively promote the use of CWR germplasm by breeders and by engaging with them within the project and through the regional network established under the project in longer term.

The project will strengthen mechanisms for rewarding farmers for their provision of a public good conservation service, farmer access to existing improved crop varieties bred with CWR, and use of native CWR diversity in future crop improvement that will generate national benefits and enhanced regional food security and prosperity.

Q15. Gender

All applicants must consider whether and how their project will contribute to reducing inequality between persons of different gender. Explain how your project will collect gender disaggregated data and what impact your project will have in promoting gender equality.

An explicit (and implicit) gender focus will balance gender elements within project activities in workshops and meetings attendance, prioritisation activities, policy and gender involvement, field surveys, awareness raising and other events. It is known that women play a complementary role to men in in situ conservation of crop diversity, including CWR (where they are directly used for food), through utilizing them to improve household nutrition and health. In the region, it is women who predominantly search for food from the wild and are knowledgeable about which CWR are used for food. The project will take account of gender differentiation by encouraging equal representation of women and men at key events. In addition, diverse partner organizations, like national agricultural research institutes (NARIs) and non-governmental organizations (NGOs), as well as local and indigenous communities and their organizations, which have a proven gender agenda will be critical to the regional and national networks ensuring gender equality. Local women farmers will be targeted in the field activities. For example, during the farmer benefit mechanism assessment activity, specific attention will be given to mechanism design and the potential impact on women farmers. The issue of gender will also be explicitly cited in communication plan to highlight the importance of gender equality. In this respect specific policy briefs on conservation of CWR and the roles of men and women will be articulated in a participatory manner by men and women stakeholders. Moreover, the project will engage with both men and women farmers in promoting the conservation and use of CWR. Furthermore gender will be a key issue to be discussed in the establishment and governance of the regional network and access and benefit sharing of in situ genetic resources.

Q16. 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?

As an exit strategy, the existing SADC Plant Genetic Resources Centre (SPGRC) which itself was created by a Scandinavian funded project and now funded by SADC members through the SADC secretariat, will support the SADC regional CWR in situ network. SPGRC currently focuses mostly on ex situ conservation, requiring strengthening of complementary in situ network to secure the full diversity within the region. It will establish a strategic partnership network within countries that will oversee and link to the regional network. This will provide a framework for a lasting collaboration between conservers and users of genetic resources at both national and regional, making accessible germplasm for breeding climate-smart varieties. Farmers in the priority in situ sites will play a lasting role in CWR in situ conservation to ensure long-term sustainability of their conservation to benefit the global public good. Further, the regional network will provide complementary links to other regional CWR in situ conservation initiatives in other regions, the Crop Trust pre-breeding programme and through the FAO Commission on genetic resources for food and agriculture. The Benefit Sharing Fund calls of the ITPGRFA will be sought for follow-on work.

Please provide supporting documentation e.g. maps, diagrams etc., using the File Upload below:

No Response

Section 9 - Existing works, Ethics & Safeguarding

Q17a. Harmonisation

Is this a new initiative or a development of existing work (funded through any source)?

Development of existing work

Please give details:

The proposed project builds on the earlier ACP-EU funded SADC-CWR project and will involve technology transferred from an on-going EU-H2020 Farmer's Pride project, which aimed to establish a multi-actor network of sites and stakeholders for CWR conservation and use in Europe. The SADC-CWR project enhanced scientific capacities in the SADC on conservation planning and predictive characterisation and developed National Strategic Action Plans for CWR conservation in Mauritius, South Africa and Zambia. It also undertook a regional assessment of CWR within the SADC and identified 1900 priority CWR and key conservation sites for their in situ conservation.

The current project will build on this work to develop a regional network with a governing structure for in situ management of these already identified sites, in complementary with ex situ conservation and facilitating greater breeder access to CWR trait diversity and engaging with farmers as the ultimate beneficiaries. The present SADC CWR Network project will benefit from the lessons learnt and experiences being gained in the Farmer's Pride project and will form the first components in the global network for in situ conservation as recommended by the FAO Commission on Genetic Resources for Food and Agriculture and FAO International Treaty for PGRFA

Q17b. Are you aware of any other individuals/organisations/projects carrying out or applying for funding for similar work?

Yes

If yes, please give details explaining similarities and differences. Explain 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.

A similar proposal is currently being implemented in Europe, the Farmer's Pride project led by UOB and Bioversity. Lessons learnt and experiences gained in the European context will be applied in the SADC context through technology transferred to the proposed SADC CWR Network project. These two CWR Networks will form the first components in the global network for in situ conservation discussed at the FAO Commission on Genetic Resources for Food and Agriculture and FAO International Treaty for PGRFA meetings. The project will link to the pre-breeding project of The Crop Trust in providing CWR diversity for breeding climate-smart varieties.

Q18. Ethics

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

Work enshrines Darwin Initiative's key principles for research ethics, promoting equitable benefits-sharing within target countries, and providing strong leadership from a multi-national, multi-stakeholder project steering committee (SC), that ensures adherence to existing ethical standards. The project complies with CGIAR Guiding Principles for Management of intellectual assets especially to article 3 (farmers' rights). Partner support letters demonstrate strong leadership and participation.

In striving to protect indigenous knowledge, and locally-sourced germplasm, Bioversity has pioneered mutual recognition of traditional and scientific knowledge, respecting knowledge-stewards' rights and the ownership of local populations and landraces. The project will promote awareness of indigenous peoples' and local communities' rights, regarding prior informed consent (PIC) for engaging in research activities and providing germplasm and related information subject to the CBD, Nagoya Protocol and ITPGRFA.

Project stakeholders will understand project goals, roles, rights to participate (or not), and how project outputs will be shared (only under acceptable conditions). Work will develop capacity and mechanisms to support access seekers' compliance with ethical standards for PIC and mutual agreement of terms. The SC will ensure contribution to both ITPGRFA and the Nagoya Protocol objectives, where their terms and conditions are approached in a mutually supportive manner when developing workable actions. Nagoya Protocol's requirements for access to germplasm and traditional knowledge will receive particular attention. The project will ensure participation will be equitably balanced (gender, public/private sector participation, civil society), and manage any conflict of interests arising among participants. During field work, it will work closely with national authorities and local communities to secure PIC for field work and collecting missions. Bioversity's Dr Michael Halewood and Gloria Otieno, are specialists in access and benefit sharing law, and in working with national governments and communities on projects involving exchanges of genetic resources and related information subject to international and national policy frameworks.

Q19. Safeguarding

(see Guidance Note 3.8)

Projects funded through the Darwin Initiative must fully protect vulnerable people all of the time, wherever they work. In order to provide assurance of this, we would like projects to ensure they have the appropriate safeguarding policies in place. Please tick the box to confirm you have relevant policies in place and that these can be available on request.

Checked

Section 10 - Biodiversity & Project Information

Q20. 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 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?

The project will develop a gender-inclusive communication strategy with three main objectives to:

(a) influence the governments in the SADC region to appropriately resource the SADC secretariat to provide the governance structure to underpin the establishment of a regional CWR network in the region. This will be the main emphasis of output 1 of the project. SPGRC will play a key role in facilitating the discussions with the SADC secretariat and member states through the existing PGRFA network. Policy briefs will be prepared to:

- raise a gendered awareness of CWRs' value and the necessity for and benefits of establishing a regional network, and
- share with key policy makers in the environment and agriculture ministries of the 16 SADC member states.

The award will also target country focal points for CBD, ABS, Nagoya protocol and ITPGRFA and their policy makers, responsible for access to and benefit sharing arising from using genetic resources in target countries. They will be invited to join the project's national collaborative stakeholder platform.

(b) raise awareness of the holders and users of genetic resources (farmers, protected area managers, genebank managers, breeders, and agriculturists) to better appreciate and harness wider trait diversity present in CWR and benefits that farmers will derive from CWRs. In particular, greater awareness of the role that women play in the conservation of plant diversity will be highlighted.

(c) disseminate project results with the scientific and policymaker communities beyond the region, with the hopes of inspiring and informing similar efforts in other countries and regions. The project dissemination activities will be supported by a website and may also include fact sheets, infographics, newsletters, press releases, as well as publications in leading open access scientific and specialist journals, and participation in international conferences, seminars, training courses and social media.

Q21. Capacity building

If your project will support capacity building at institutional or individual levels, please provide details of what form this will take and how this capacity will be secured for the future.

To achieve the goal of establishing a SADC-CWR Network that is self-sustaining, regional stakeholders must take the lead and increasing gendered staff capacity is crucial. This will be achieved through three workshops, for key professional stakeholders (agrobiodiversity and biodiversity conservationists, farmers representatives, protected area managers, plant breeders and policy makers), gendered-balanced and building on existing regional and national partnerships. Each workshop will involve discussion of aspects of network development, as well as technology transfer and policy-related issues addressing in situ population management, role of farming communities, ABS, and the design and assessment of mechanisms to enhance the benefits they receive from CWR conservation and use

A priori it is impossible to define the exact content of each workshop and topics will evolve to meet network establishment and participants' demands. This will be elaborated at the first project meeting. The training workshop is likely to include topics relating to :

Management of networks including review interests and needs stakeholder and their roles, network operation including population nomination, stakeholder incentives and how to access diversity, governance and related policy to governance options, as well as identifying the policies relevant to establishment and long-term operation, including sustainable funding. The training workshop will also cover CWR evaluation, conservation planning, national strategic action plans, in situ population management design, management and monitoring, ex situ backup and the linkages between SADC CWR Network, national networks and CWR utilisation.

Further specific mentoring of staff, research assistants/students in the region (where available) will be undertaken through close collaboration with the Bioversity and UoB and nominees for specific topic in each participating country

Q22. Access to project information

Please describe the project’s open access plan and detail any specific funds you are seeking from the Darwin to fund this.

The project will adopt an open access approach to its project results to the extent possible so as to benefit a wider community. The project will generate data on priority CWR, ecogeographic data on CWR from the partner countries, distribution maps for priority CWR, genebank documentation data on CWR, data on in situ CWR management, and monitoring data. It will also produce scientific publications, protocols on access and benefit sharing, policy briefs, and other communication publications. SPGRC website and newsletter will be used to publicize the project information. A data management strategy will be developed for the project at the outset of the project to define how each of these project products will be made accessible and shared and under what conditions. Bioversity is part of the CGIAR, which has an open access policy and all its project must be compliant with this policy. Data sharing agreements will be made with country partners to ensure compliance to open access policy. Bioversity will use Dataverse (coordinated by Harvard University and MIT), a free open-source application for sharing, citing, reusing and archiving research data. A specific account for the project will be created on Dataverse to hold and make the project data and publications accessible while ensuring that the ownership of the data are protected by creative common licences. Further technical information arising from the studies undertaken in the project will be aimed to be published in open access journals, for which GBP5,000 has been budgeted aside for 2-3 publications.

Section 11 - Logical Framework

Q23. Logical Framework

Darwin projects will be required to report against their progress towards their expected Outputs and Outcome if funded. This section sets out the expected Outputs and Outcome of your project, how you expect to measure progress against these and how we can verify this.

Impact:

Increased adaptive capacity and reduce socio-economic vulnerability to enhance food security of 130 million people in southern Africa through improved conservation and use of CWR in breeding.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
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Outcome:

SADC CWR network of in situ sites/populations, ex situ genebanks and stakeholders (farmers, environmentalists, breeders and policy makers) are increasing CWR conservation by 70% and use it for crop improvement

0.1 SADC Council of Ministers by 2022 issue an edict establishing the SADC regional CWR network among SADC member states.
0.2 Trends in number of CWR genetic reserves established and nominated by countries to be part of the SADC-CWR network, measured annually and reported to the Council of Ministers
0.3 Trends in the number of CWR conserved in National plant genetic resources centres and regional SADC genebank, measured annually and reported to the Council of Ministers
0.4 Trends in the number of CWR distributed to users, measured annually and reported to the Council of Ministers

0.1 SADC Council of Ministers edict launched at SADC Summit.
0.2 (a) Minutes of the Council of Minister meetings; (b) government gazettes of SADC member states
0.3 (a) Minutes of the Council of Minister meetings; (b) SADC Genebank documentation system (SDIS)
0.4 (a) Minutes of the Council of Minister meetings;(b) Genebank records

Willingness of the SADC member states to commit to establishment of regional CWR network as a contribution to the global efforts in biodiversity conservation and access to genetic materials as called forth by the Convention on Biological Diversity and Nagoya protocol.
No logistical barriers to the smooth operation/ implementation and communications between countries and stakeholders involved in SADC CWR network

Output 1:

SADC CWR in situ network established as part of existing SADC plant genetic resource network

1.1 A Draft document on the governance structure, functions and funding mechanism prepared and circulate to all SADC state members for inputs by end of year 1
1.2 Draft document on harmonisation of the access and benefit sharing of in situ genetic resources within the CWR network prepared by Month 24.
1.3 An ABS workshop for in situ genetic materials attended by National focal points of ITPGRFA, Nagoya protocol and CDB of 16 member countries held by Month 24
1.4 Draft SADC regional CWR network Policy White paper on governance structure, function and funding mechanism including ABS of in situ genetic materials as well as a draft edict paper prepared by Month 30 of the project
1.5 A validation network foundation workshop for endorsement of SADC regional CWR network Policy White paper on SADC CWR in situ network governance functionality, structure, management and post-project financing and draft edict paper held by Month 30 of the project.
1.6 Finalised SADC regional CWR network Policy White paper and Draft Edict paper

1.1 Draft Report on governance structure, function and funding mechanism published on Data repository of the project DATAVERSE.
1.2 Draft Report on harmonisation of the access and benefit sharing of in situ genetic resources within the CWR network, published on Data repository of the project DATAVERSE
1.3 . Workshop reports with participant lists disaggregated by gender and countries, published on Data repository of the project DATAVERSE
1.4 Draft SADC regional CWR network Policy White paper, published on Data repository of the project DATAVERSE
1.5 Workshop reports with participant lists disaggregated by gender and countries, published on Data repository of the project DATAVERSE
1.6 Finalised SADC regional CWR network Policy White paper and Draft Edict paper, tabled at the SADC Council of Ministers

Representatives of countries attending the regional workshop have the credentials to discuss and negotiate the draft protocol on the establishment of the SADC CWR network.

SADC Council of Ministers willing to support establishment of SADC CWR in situ network.

submitted to the SADC
Council of Ministers by
Month 36 of project

Output 2:

Enhanced in situ CWR conservation in SADC region with emphasis on Malawi, Tanzania, and Zambia

2.1 A National participative multi-stakeholder committee on CWR established to oversee development of national and regional strategies for CWR conservation and use, by project month 4 and holds bi-annual meetings over the project period.

2.2 National checklists and inventories of CWR in Malawi and Tanzania published and made available on project website within the first 6 months of the project. (Already available for Zambia under previous ACP-EU SADC-CWR project).

2.3 Conservation planning of CWR in situ sites/population in Malawi and Tanzania completed with distribution maps and priority sites for reserve establishment by Month 24.

2.4 Two National CWR Conservation Strategic Action Plans covering in situ sites, ex situ genebanks and stakeholder priorities endorsed by respective governments of Malawi and Tanzania by Month 36.

2.5 Regional Strategy for the establishment of SADC-CWR network prepared and published on project website by Month 18

2.6 Ground-truthing of selected sites to assess CWR presence in GIS

2.1 Minutes of National participative multi-stakeholder committee on CWR, published on Data repository of the project DATAVERSE

2.2 National CWR checklist and inventory for uploaded on project web site., published on Data repository of the project DATAVERSE

2.3 (a) Distribution map(s) showing CWR hotspots areas. (b) project progress reports, published on Data repository of the project DATAVERSE

2.4 National Strategic Action Plan; published on Data repository of the project DATAVERSE

2.5 Regional Strategic Action Plan, published on Data repository of the project DATAVERSE

2.6 (a) Map(s) of potential network CWR in situ genetic reserves and community managed in situ sites / populations in SADC region (c) SADC CWR in situ network conservation planning scientific peer review paper submitted to journals {Peer review publication} published on Data repository of the project DATAVERSE

2.7 Letters of nominations from Governments of SADC members states; Publication on project web site of 14 protected areas and 7 newly established sites,

Different stakeholders especially agriculture, forestry and environment are willing to work in a collaborative way. Community support for in situ conservation management of CWR in their neighbourhoods. Full support from policy makers are provided.

predicted sites and site climate viability assessment of initial identified potential CWR in situ sites by Month 30

2.7 Nomination of at least existing 9 protected areas and 3 newly established, less formal sites associated with farming communities for network membership (3 protected areas and 1 less formal sites in each of Malawi, Tanzania and Zambia, plus additional sites from other SADC countries by Month 30

2.8 Revision of management plans for 9 protected areas / genetic reserves and writing of management agreements for 3 newly established, less formal sites by Month 36

2.8 Management Plans amended or written, published on Data repository of the project DATAVERSE

Output 3:

Enhanced SADC ex situ
CWR conservation

3.1 A new cold room facility established at the Regional SADC genebank for ex situ conservation of CWR established by end of the Month 24

3.2 Representative CWR ex situ gaps filling of 450 populations identified in National CWR Conservation Strategies and Action Plans and Regional Assessment of CWR across SADC region in active collections of national and regional genebanks, in two collecting missions held in Month 24 and 36.

3.3 Safety backup of SADC regional CWR network CWR in situ sites/populations 'black box' stored in national and regional genebanks, and appropriate CGIAR centres, by Month 36.

3.4 Trends in the number of accessions of CWR conserved in ex situ collection monitored annually. annually in Month 12, 24 and 36

3.5 Trends in the number of accessions of CWR distributed to end users annually, annually in Month 12, 24 and 36

3.1 Genebank facility Cold room at SPGRC Regional Genebank

3.2 (a) Collecting mission reports published on project web site; (b) Genebank documentation system at NPGRCs and SADC Information and Documentation system (SDIS) records additional collections, all published on Data repository of the project DATAVERSE

3.3 (a) country report to FAO Monitoring of implementation Global plan of action for PGRFA; (b) National, regional and international genebank information systems

3.4 (a) National genebank information systems, (b) SADC Documentation Information System.

3.5 (a) National genebank information systems, (b) SADC Documentation Information System

Genebanks willing to hold safety backup of CWR in situ populations

Output 4:

Enhanced SADC CWR use in crop improvement

4.1 SWOT analysis report on the potential use of CWR in breeding programmes at the national and SADC regional level submitted by the Month 12

4.2 Data on farmer trait priorities for crop improvement of 4 major priority SADC crops produced and published on project website by Month 24.

4.3 Maps of SADC region showing populations of CWR with priority traits produced, made available to SADC and CGIAR breeders and published on project website by Month 24

4.4 Number of accessions of CWR being used by national and international breeding institutions in pre-breeding programmes reported by Month 24 and 26.

4.5 Quantity of seeds of novel cultivar and improved local landrace material improved with CWR made available to SADC farmers by end of Month 36.

4.1 SWOT analysis report, published on Data repository of the project DATAVERSE

4.2 Farmers trait priorities, published on Data repository of the project DATAVERSE

4.3 Maps published on Data repository of the project DATAVERSE

4.4 Genebank documentation Information system

4.5 Genebank documentation Information system

Users are aware of Nagoya Protocol and ABS policy process and make application for germplasm use.

CGIAR able to supply pre-bred CWR trait lines to SADC breeders and farmers for crops of interest.

SADC breeders and farmers willing to work with pre-bred CWR trait lines to generate climate smart material for SADC farmers

Output 5:

Enhanced farmers benefits from CWR conservation and use

5.1 A set of mechanisms for enhancing farmers' benefits from the conservation and use of CWR defined, together with assessment criteria, by end of Month 9 of the project;
 5.2 A Tool Kit "How To" manual for informing mechanism design and assessment developed and published by end of Month 18;
 5.3 Two field surveys conducted involving at least 10 communities in Malawi and Tanzania to document and/or model the benefits that farmers derive or could derive from CWR conservation by end of Month 34.

5.1 Report on mechanisms for enhancing farmers' benefits from the conservation and use of CWR, published on Data repository of the project DATAVERSE
 5.2 Methodology publications, published on Data repository of the project DATAVERSE
 5.3 (a) Travel reports; b) "How To" manual; c) briefs and (d) conference paper or journal articles, published on Data repository of the project DATAVERSE

Farmers willing to participate in CWR conservation and use activities
 Appropriate existing CWR derived materials can be identified and access provided to farmers
 Security concerns/civil strife does not impede farmer field visits in project sites

Do you require more Output fields?

It is advised to have less than 6 Outputs since this level of detail can be provided at the Activity level.

Yes

Project summary

Measurable Indicators

Means of verification

Important Assumptions

Output 6: Output 6: Enhanced Capacity of SADC CWR stakeholder in conservation and use of CWR	6.1 Needs assessment report on the trainings for capacity of SADC key stakeholders for the implementation of the regional network for in situ conservation of CWR and use finalised by the end of Month 6. 6.2 A training workshop provide CWR conservation and use for at least 15 SADC CWR network stakeholders. Held back to back with network foundation workshop by the end of Month 24. 6.3 Two research staff per participating country receive one to one mentoring technical support by peers in UoB and Bioversity on the conservation and use of CWR during lifetime of the project. 6.3 Conference on PGR conservation and use held at the end of the project (Month 35)	6.1 Needs Assessment report, published on Data repository of the project DATAVERSE 6.2 Training workshop reports with participant lists disaggregated by gender and countries, published on Data repository of the project DATAVERSE 6.3 (a) Travel reports (b) Progress project report (c) 3 peered reviewed publications in open access journals. 6.4 Conference report, published on Data repository of the project DATAVERSE	Willingness among protected areas managers and local communities to engage in the in situ conservation of CWR species; capacities for wild population management of CWR in partner countries are lacking. There is sufficient interest among young male and female research scientists in the partner countries to embark on research activities within the scope of this of this project.
Output 7: No Response	No Response	No Response	No Response
Output 8: No Response	No Response	No Response	No Response

Activities (each Activity is numbered according to the Output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

The word count for each individual activity should be no more than 25 words.

Activity details

Activity Number

Activity 1- ESTABLISHMENT OF REGIONAL SADC CWR NETWORK

Activity Details

- 1.1 Preparation of documents on the governance structure, functions and funding mechanism. (Led by UOB/BIOVERSITY/SPGRC)
- 1.2 Preparation of guidelines to harmonise the access and benefit sharing of in situ genetic resources within the CWR network. (led by BIOVERSITY/SPGRC)
- 1.3 Hold Access and benefit Sharing (ABS) workshop with representative set of National focal points to Nagoya protocols, ITPGRFA and CBD of the SADC region to discuss harmonisation of Access and benefit sharing of in situ conserved materials. (led by SPGRC/Bioversity)
- 1.4 Preparation of network policy white paper and Ministerial edict for the establishment of regional CWR network in the SADC region for endorsement /ratification by SADC Member states. (led by BIOVERSITY/UOB)
- 1.5 Hold validation network foundation for endorsement of network policy white paper and ministerial edict by SADC stakeholders. (led by SPGRC/ BIOVERSITY).
- 1.6 Finalisation of the SADC regional CWR network Policy white paper and draft Edict paper and submission to SADC Council of Ministers for approval

Activity details

Activity Number

Activity 2 ENHANCED SADC IN SITU CWR CONSERVATION MALAWI, TANZANIA AND ZAMBIA

Activity Details

- 2.1 Establish a National participative multi-stakeholder committee on CWR to serve as the collaborative stakeholder platform in each country (led by NATIONAL PARTNERS)
- 2.2 Undertake conservation planning for CWR Conservation in Malawi and Tanzania (led by NATIONAL PARTNERS with technical support from UOB/BIOVERSITY)
- 2.3 Prepare National Strategic Action Plans for CWR Conservation in Malawi and Tanzania (led by NATIONAL PARTNERS with technical support from UOB/BIOVERSITY)
- 2.4 In depth studies validating priority conservation sites of CWR population for inclusion in the SADC Regional CWR network. (led by NATIONAL PARTNERS with technical support from UOB/BIOVERSITY)
- 2.5 Preparation of a Regional Strategic Action Plan for CWR Conservation for the SADC region based on the previous regional CWR assessment made in SADC-CWR project. (Led by UOB/BIOVERSITY)
- 2.6 Revision of management plans of selected protected areas sites and writing of management agreements for 7 newly established, less formal sites to be part of the regional SADC in situ. (led by NATIONAL PARTNERS with technical support from UOB/BIOVERSITY)

Activity details

Activity Number

Activity 3 – Enhanced SADC EX SITU CWR CONSERVATION

Activity Details

- 3.1 Strengthen the ex situ conservation facilities and personnel at the SPGRC regional genebank in Lusaka to receive CWR samples for conservation. (led by BIOVERSITY/SPGRC)
- 3.2 Gap filling collecting of CWR genetic resources and local knowledge from in situ sites and their conservation in national and regional genebanks. (led by NATIONAL PARTNERS/SPGRC)

- 3.3 Back up of germplasm for safety duplication in regional and international genebanks (led by NATIONAL PARTNERS/SPGRC)
- 3.4 Enrich SADC Documentation Information System (SDIS) to provide information on CWR such as passport data, identified traits and other useful information that facilitates use of CWR genetic resources (led by SPGRC/NATIONAL PARTNERS)
- 3.5 Distribution of CWR accessions to breeders at national regional and international breeding centres (led by NATIONAL PARTNERS/SPGRC)

Activity details

Activity Number

Activity 4: Enhanced SADC CWR use in crop improvement

Activity Details

- 4.1 Feasibility study on the potential use of CWR in breeding programmes at the national and SADC regional level (SWOT analysis) (led by UOB/Bioversity/ National partners)
- 4.2 Establishment of functional procedures on the potential use of CWR in breeding programmes at the national and SADC regional level. (led by SPGRC/BIOVERSITY)
- 4.3 Predictive characterisation study on the potential use of CWR in breeding programmes at the national and SADC regional level (led by UOB/BIOVERSITY)
- 4.4 Engage and establish links with national and international breeders for specific crops for facilitating the exchange and distribution of CWR accessions and pre-bred material arising from the use of CWR to national programmes and novel varieties provided to farmers. (led by NATIONAL PARTNERS AND BIODIVERSITY).

Activity details

Activity Number

Activity 5 – Enhanced farmers benefits from CWR conservation and use

Activity Details

- 5.1 Desk review and expert consultation to identify potential range of mechanisms for enhancing farmer benefits, such as: i) direct farmer support for public good conservation and monitoring service provision, ii) enhanced direct use of CWR, iii) improved access to a) existing and b) future CWR-derived materials, and iv) the establishment of a potential benefit-sharing fund related to any future materials developed from SADC CWR).
- 5.2 A Tool Kit/"How To" manual for informing farmer benefit mechanism design and assessment developed. Assessment criteria to inter alia consider: a) magnitude, b) level (national/regional/international) and c) time-scale over which potential benefits may be generated for farmers (differentiated by gender), d) implementation costs and e) long-term funding source potential
- 5.3 Pilot testing and/or modelling of mechanisms for CWR-derived farmers' benefits in 2 sites in partner countries.

Activity details

Activity Number

Activity 6 - Capacity building

Activity Details

- 6.1 Carry out a needs assessment at the first kick off meeting of the project to define training needs (led by UoB)
- 6.2 Hold a training workshop to strengthen capacity for the implementation of the regional network (led by UOB/BIOVERSITY)
- 6.3 Run a mentorship programme for reinforcing capacity building efforts for effective conservation and use of CWR in SADC region (led by UOB /BIOVERSITY)
- 6.4 Supervise research assistants and students working hands-on the project UOB/ BIOVERSITY
- 6.5 Organise and hold end of project conference on conservation and use of PGRFA in year 3 UOB/Bioversity/SPGRC

Activity details

Activity Number

Activity 7 - Management and Coordination

Activity Details

- 7.1 Coordinate and manage all aspects of project implementation (led by Bioversity)
- 7.2 Establish project Steering Committee – composed of representatives of the partners and representatives of SADC secretariat and ITPGRFA, Global Crop Diversity Trust, FAO commission, and CIRAD.
- 7.3 Organise and hold kick-off meeting with partners and hold first steering committee (led by SPGRC/BIOVERSITY)
- 7.4 Prepare a communications plan for dissemination of the project to targeted stakeholders (led by Bioversity and SPGRC)
- 7.5 Prepare a data management strategy for the project at the outset of the project to ensure access and sharing of project outputs under agreed terms. BIOVERSITY
- 7.6 Prepare policy briefs on the conservation and use of CWR (led by SPGRC and Bioversity)
- 7.7 Hold regular on-line meetings with project partners for coordinating the project activities (led by Bioversity)
- 7.8 Monitor project progress by holding annual partner and steering committee meetings involving all the partners (led by Bioversity)
- 7.9 Ensure gender integration in all the project activities where feasible (led by Bioversity)

Section 12 - Implementation Timetable

Q24. Provide a project implementation timetable that shows the key milestones in project activities

Please complete the Excel spreadsheet linked below to describe the intended workplan for your project.

Implementation Timetable Template

Please add columns to reflect the length of your project.

For each activity (add/remove rows as appropriate) indicate the number of months it will last, and fill/shade only the quarters in which an activity will be carried out. The workplan can span multiple pages if necessary.

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Section 13 - Monitoring and Evaluation

Q25. Monitoring and evaluation (M&E) plan

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 project's M&E.

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. M&E 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. Additionally, please indicate an approximate budget and level of effort (person days) to be spent on M&E (see "Finance for Darwin and IWT Guidance").

The measurable indicators in the logframe will serve as a basis for monitoring and evaluation of progress made in the project. Monitoring will be done through the Steering Committee (SC) established in the project which is composed of members who are independent from the project and represent a mix of different sectors from agriculture, environment, protected area and social sectors. The project will invite 6 key stakeholders from within and outside SADC region to join the steering committee and will include representatives of the SADC secretariat, SANBI, SACAU, a CGIAR centre based in Africa (IITA), ITPGRFA/FAO and the Global Crop Trust Diversity Trust. These organisations are considered as key boundary partners that the project aims to influence and will help sustain the project after its lifetime. The specific tasks of the SC will be to:

- provide overall guidance on the implementation of the project;
- review and monitor overall progress of the project with a special focus on delays, problems and bottlenecks faced by the project;
- advise on any adjustments needed to the project work plan or timeline to meet its objectives;
- discuss and make recommendations on other issues that its members consider to be of importance to the project;
- help in creating awareness of the project externally and identify and suggest opportunities for linking with other projects and scaling up of the project in Africa and beyond;
- monitor the continued coherence between the project and sector development particular with regard to food security and poverty reduction

The SC will be established at the start of the project and will meet three times during the period of the

project back-to-back with annual project meetings. At each SC meeting the project leader will report on the progress. The project management will respond to the recommendations of the SC and adapt its activities to ensure it does not deviate from its objectives. The project leader will take the responsibility internally to oversee monitoring project progress. He will organise monthly project coordination virtual meetings with all project partners to monitor and coordinate the activities. This will help avert any risks and problems that may arise in the project and/or find solutions to address any problems that may arise. In addition to the SC and project leader meetings, staff from Bioversity and UoB will provide technical support to the project activities and help monitor the project at the same time. The mentoring programme under output 6 will also provide a framework for monitoring the performance of young research scientist in the project and gauge the progress of the project in developing capacity in the region in implementing in situ conservation of CWR. The project will also develop a communication strategy, which by reporting on the results of the project, will provide a mechanism for monitoring and evaluation. The project leader will devote 50% time to M&E activities and the travel and subsistence of SC members will amount to GBP42948, together representing 6.42% of the total project budget.

Total project budget for M&E (this may include Staff and Travel and Subsistence Costs)

Number of days planned for M&E	22
Percentage of total project budget set aside for M&E	6

Section 14 - Funding and Budget

Q26. Budget

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

Darwin and IWT Budget Template

Please refer to the Finance for Darwin/IWT Guidance for more information.

NB: Please state all costs by financial year (1 April to 31 March) and in GBP. The Darwin Initiative cannot agree any increase in grants once awarded.

Please upload your completed Darwin Budget Form Excel spreadsheet using the field below.

 **Budget St2 SADC CWR Clean version-FINAL**

 29/11/2018

 19:08:05

 xlsx 64.51 KB

Q27. 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.

The total budget is GBP 674,559 of which 71% (477,003) is requested from Darwin funds. This represents a slight increase of 3.7% of the sum requested from Stage1, due to variations on actual expected costs and inclusion of activities for engaging with farmers as recommended by the expert committee. The core budget for lead organisation consists of staff cost, travel and subsistence cost and two laptops. Overhead cost includes overheads, facilities, utilities, a mandatory CGIAR consortium fees and audit cost. Research support services cost cover communication and data management cost and enhancing farmers benefit activities.

The travel cost covers the participation of Bioversity staff to annual meetings, workshops and providing assistance to partner countries. In addition it covers the cost of participation of non-partner participants to ABS, network foundation and training workshops and cover travel cost for members of the steering committee (M&E). To save costs the number of meetings and workshops have been kept to a minimum and two of the annual project meetings and the steering committee meetings (in year 2 and 3) will be held back to back.

Partner organisations' budgets include international and national-level travel for their own participation of project annual meetings and workshops, and to bring together key stakeholders to national network meetings. Field operation costs are essential for ground-truthing of the diversity of CWR and for engaging with farmers and protected area manager for reserve establishment. Most of country partners will require computers and small equipment for collection of CWR diversity and consumables. A major capital item will be the purchase of cold room facility for conserving/storing CWR accessions at the SADC Regional Genebank. This is fully justified, as it is currently operating at full capacity and will benefit the entire SADC community in securing the CWR diversity for breeders and farmer use.

Q28. Capital items

If you plan to purchase capital items with Darwin funding, please indicate what you anticipate will happen to the items following project end.

The project will purchase laptop and desktop computers for lead organisation and for the partners. A Global Positioning Systems (GPS) will be purchased for national partners Malawi and Tanzania for documenting sites of collections in the project. SPGRC will procure a new cold room facility under the project for preservation of the CWR. This is justified as the SPGRC genebank is operating at full capacity and require additional storage place. All the equipment purchased under the project will remain under the custody of their respective institutions and continue to be used for sustaining activities related to management and conservation CWR under the aegis of the regional network for in situ and ex situ conservation of CWR.

Q29. Match funding (co-financing)

Are you proposing co-financing?

Yes

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, as well as any your own organisation(s) will be committing.

Donor Organisation	Amount	Currency code	Comments
---------------------------	---------------	----------------------	-----------------

Bioversity International	GBP	to cover partial staff time, facilities and utility bills
University of Birmingham	GBP	to cover for 3% staff time of Senior lecturer in genetic conservation
SPGRC	GBP	to cover staff time, workshop organisation and genebank facilities
Country Partners	GBP	staff time, office space, vehicle servicing and other utility bills

Unsecured

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

Date applied for	Donor Organisation	Amount	Currency code	Comments
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response
No Response	No Response	No Response	No Response	No Response

Do you require more fields?

No

Q30. Financial Risk Management

Explain how you have considered the risks and threats that may be relevant to the success of this project, including the risks of fraud or bribery.

The project does not present any greater risks or threats compared to any other projects. DFID country profiles report that Malawi, Tanzania and Zambia are relatively stable and is an asset. Bioversity has worked in these countries, SPGRC and UoB before and has a well-established relationship with them. All the institutions has good financial management systems in place with annual and external audits and controls, which makes fraud and bribery unlikely.

Another financial risk management is the financial reporting by partners. Bioversity will sign letter of agreements with partners for the transfer of funds that are strictly essential for project activities under

their control. Bioversity will meet the cost of some expenditure directly wherever possible to minimise the reporting requirement of partners. Partners will be obligated to submit financial and technical reports to ensure that funds are used according to the agreed work plan of the project and that outputs are delivered on time.

There is likelihood that exchange rates may fluctuate during the project and thus influence the amount of resources available for project implementation as a result. Bioversity will apply its own policies in managing exchange rates fluctuation.

Section 15 - FCO Notifications

Q31. FCO Notifications

Please put an X in 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.

Unchecked

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

Yes (no written advice)

Section 16 - Certification

Q32. Certification

On behalf of the

Company

of

Bioversity International

I apply for a grant of

£477,003.00

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 applicant institution to submit applications and sign contracts on their behalf.)

- **I have uploaded CVs for project principals and letters of support.**
- **I have uploaded our most recent signed audited/independently verified accounts and annual report.**

Checked

Name	Mohammad Ehsan Dulloo
Position in the organisation	Team leader, Integrated Conservation strategies
Signature (please upload e-signature)	 E signature  30/11/2018  10:50:16  png 13.84 KB
Date	03 December 2018

Section 17 - Submission Checklist

Stage 2 Application - Checklist for submission

	Check
Have you read the Guidance (including Guidance for Applicants and Finance for Darwin and IWT Guidance)	Checked
Have you read, and can you meet, the current Terms and Conditions for this fund?	Checked
Have you provided actual start and end dates for your project?	Checked
Have you provided your budget based on UK government financial years i.e. 1 April – 31 March and in GBP?	Checked
Have you checked that your budget is complete and correctly adds up?	Checked
Has your application been signed by a suitably authorised individual?	Checked
Have you uploaded a 1 page CV for all the Project Staff on this project, including the Project Leader?	Checked
Have you uploaded a letter of support from the main partner(s) organisations?	Checked
Have you included a cover letter from the lead organisation, outlining how any feedback received at Stage 1 has been addressed?	Checked
Have you been in contact with the FCO in the project country/ies and have you included any evidence of this?	Checked
Have you uploaded a signed copy of the last 2 years annual report and accounts for the lead organisation?	Checked
Have you checked the Darwin website to ensure there are no late updates?	Checked

We would like to keep in touch! Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.

Checked

Data protection and use of personal data

Information supplied in this application form, including personal data, will be used by Defra as set out in the latest copy of the Privacy Notice for Darwin, Darwin Plus and the Illegal Wildlife Trade Challenge Fund available **here**. This Privacy Notice must be provided to all individuals whose personal data is supplied in the application form. Some information, but not personal data, may be used when publicising the Darwin Initiative including project details (usually title, lead organization, location, and total grant value) on the GOV.UK and other websites.

Information relating to the project or its results may also be released on request, including under the 2004 Environmental Information Regulations and the Freedom of Information Act 2000. However, Defra will not permit any unwarranted breach of confidentiality nor will we act in contravention of our obligations under the General Data Protection Regulation (Regulation (EU) 2016/679).