



Application to Scottish Government
Climate Justice Innovation Fund Grants Programme
Project Grant 2017 – 2020

Applicant Organisation Name Tearfund Scotland
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use only	Application ref:
	Project ref:

Declaration

I apply on behalf of the organisation Tearfund Scotland for a grant as proposed in this application in respect of expenditure to be incurred over the proposed funding period on the activities described within the application form and supporting documentation.

I certify that, to the best of my knowledge and belief, the statements made by me in this application are true and the information provided is correct.

This form should be signed by an individual authorised by the applicant organisation to submit applications and sign contracts on their behalf.

Signature [Redacted]	Print Name [Redacted]
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Position Head of Programmes Scotland	Date 3rd August 2017
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Main Contact person during application assessment process:	
Name:	[Redacted]
Email:	[Redacted]
Phone:	[Redacted]

CHECKLIST

Your Application consisting of:

- Part 1 - the Application Form (this document plus the Excel budget spreadsheet)

Additional documents

Essential – Your application will be ineligible without these

- The applicant organisation's most recent accounts, either audited or independently examined **Please note:** a project cannot be funded if no audited/independently verified accounts are available.
- A letter of support from your lead partner in-country, confirming the partnership and including their

perspective on the research, consultation and project planning process.

Relevant - The following documents should be sent if they exist

- A copy of any MOU or contract with the partner organisation
- A copy of your Equal Opportunities/Diversity policy - a hyperlink is acceptable.
- Further details of budget.

Optional – These documents should be sent if they are of help to you in setting out your case

- Project planning models (such as Weavers Triangle) *The use of this tool is strongly recommended.***
Tearfund Scotland are providing a Logical Framework for this project, setting out Outcomes and Outputs, which was used to design and plan the project and along with the Activities Log will be used for monitoring and evaluation against targets for the Outcomes.
- Scottish-based Project Manager's CV**
- In-country Project Manager's CV**
- Evaluation framework/outcomes grid**
Tearfund Scotland are providing a Logical Framework for this project, setting out Outcomes and Outputs, which was used to design and plan the project and along with the Activities Log will be used for monitoring and evaluation against targets for the Outcomes.

All completed signed applications should be submitted by email to international@ltsbfoundationforscotland.org.uk or hard copy to arrive no later than **12.00 noon on Monday 7th August 2017.**

Emails should show the applicant organisation's name as the subject of your email.

Only those documents (not the whole application) which are not available electronically need to be sent in hard copy and must be received by 2.00 pm on 11th August 2017.

Please send to:

Lloyds TSB Foundation for Scotland
International Development Small Grants Programme
Riverside House
502 Gorgie Road
Edinburgh EH11 3AF

These deadlines are absolute and all documentation required must be submitted on time.

Project Summary

Please provide a summary of the project, describing how it came about, what it aims to achieve, what will be done to achieve this aim, and who will do this. You should also outline how the project will support Climate Justice Innovation Fund objectives, and how the project is expected to innovate. **Max 500 words.**

Food insecurity is one of the worst effects of climate change for the vulnerable communities in Rumphu district in Malawi. A household that can achieve lasting food security has increased resilience against the effects of climate change. The overall aim of this project is to improve household food security by increasing food production.

Fall Armyworms are a devastating new pest that were first reported in Africa in January 2016. They have caused 45% to 100% crop loss in Malawi ([UN FAO Report 2017](#)) and are a worldwide concern for causing food insecurity.

In 2016, observations were made during a Tearfund SOLDEV food security project in Mhuju in Rumphu district that raised the suggestion that the climate-smart agriculture techniques of Conservation Agriculture (farming techniques that Tearfund's partners are training local farmers in) may reduce the impact of fall armyworm in maize crops.

The project was teaching farmers Conservation Agriculture techniques and local fertilizer production and utilisation. During this period the area was critically infested with fall armyworms, which destroyed maize crops and significantly reduced the harvest of the crop in the fields of non-participant farmers who did not practice Conservation Agriculture. This was in comparison to the neighbouring fields of the participant farmers (i.e. those practicing Conservation Agriculture) which were not affected by the fall armyworms and could harvest their crops to sell and eat.

This experience led to the design of this research project. The research project will be implemented by Tearfund partner SOLDEV and lead by Tearfund in Malawi. The project will work with 300 vulnerable farmers in Rumphu districts and through community participatory research and field testing, evidence will be gathered to test the hypothesis that climate smart Conservation Agriculture (CA) techniques (mulching, zero tillage, crop rotation and intercropping) and locally made fertiliser can limit the negative impact of fall armyworm infestations. To test this hypothesis, the project will teach 300 farmers the skills and knowledge to practice CA techniques. As well as potentially protecting farmers against Fall Armyworm, CA techniques can help farmers to increase food production and improve environmental sustainability. Both factors contribute towards improving overall food security.

This approach to pest control is highly innovative as the solution is not based on chemicals. It makes it accessible and affordable to households in poverty. It is environmentally sustainable and climate smart. Malawi currently has no answer to the emergent and devastating problem of fall armyworms and Government research stations are conducting research into the effects of different chemical solutions. The approach of this project using CA techniques is new and accessible and does no harm.

The project will also work with research and agricultural experts in the Government's northern research station and also from the University of Livingstonia. At the same time working with the Ministry of Agriculture and Water Development to inform policy for national impact.

This project directly addresses the effects of climate change as climate change has created the conditions for Fall Armyworm to thrive: "Drought followed by lots of rain is perfect for armyworms," (Professor Wilson, [The Guardian, 2017](#)), exactly the kind of weather conditions that are becoming the Malawian norm. To maintain food security in the face of climate change farmers need to increase food production and reduce fall armyworm infestations.

This project is innovative in the way that it seeks to deal with the threat from Fall Armyworms and it is important to investigate this potential breakthrough and research it further for the national benefit of all Malawian farmers. If the hypothesis is true that Conservation Agricultural techniques protect against Fall armyworm, then it will be a significant step in helping farmers build resilience against the effects of these pests and the impacts of climate change.

Section A: APPLICANT INFORMATION

1. Name and details of applicant organisation:

Name of Organisation: Tearfund Scotland

Address of Organisation:	Challenge House 29 Canal Street Glasgow
Postcode:	G4 0AD
Telephone:	REDACTED
Main Email:	
Website:	http://www.tearfund.org/en-sc/
2. Is your organisation a registered charity?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Charity No: SC037624
3. What is the status of your organisation?	<input type="checkbox"/> Company limited by guarantee <input checked="" type="checkbox"/> SCIO <input type="checkbox"/> Other (specify):
4. When was your organisation formally constituted?	1968
5. Which organisations are you a member of/ affiliated to?	<input checked="" type="checkbox"/> NIDOS (Network of International Development Organisations in Scotland) <input checked="" type="checkbox"/> SMP (Scotland Malawi Partnership) <input checked="" type="checkbox"/> Other <i>Please state</i> - Malawi Scotland Partnership
6. Is your organisation diaspora led?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Comments:
7. Please provide details of the number of people based in your organisation in Scotland.	8 Full time 4 Part time Up to 250 Volunteers/interns
8. What are the general activities of your organisation? Max 150 words	
<p>Tearfund works tirelessly to help communities around the world escape the worst effects of poverty and disaster, believing that the people facing these troubles also have the best idea as to how they can overcome them. Tearfund works alongside local churches and locally-based organisations to help realise these plans for a better future.</p> <p>Tearfund is a Christian relief and development agency committed to working where the need is greatest, responding to crises and bringing restoration to those living in poverty. We do this by responding to disasters and developing communities – working sustainably and holistically with local churches and communities to reduce poverty and build</p>	

resilience. We also work to change policies – changing unjust policies and practices to deliver justice for poor communities.

Teafund's core competencies encompass: mobilising the church to help the poor, spearheading national advocacy campaigns, food security, livelihoods, water, sanitation and hygiene (WASH) disaster response and resilience.

9. Describe how the organisation is governed/managed; include the make-up of your Board, their skills and experience, how often they meet, and how decisions are made. **Max 200 words.**

The Board meets quarterly as a board and in sub committees. The Executive team provides information, and decisions are made through robust discussions.

REDACTED – Board CHAIR since 2008. Also chairman of other organisations in the UK and Canada.

REDACTED - TREASURER. Finance professional with over 35 years' experience.

REDACTED - Qualified chartered accountant, served 23 years at BT.

REDACTED – Chairman, International Committee, also trustee of other charities in the UK.

REDACTED - Experience in the Third sectors. Interest includes ending violence against women.

REDACTED - founder 'Project Scotland', which won the Ernst and Young Scottish Social Entrepreneur Award.

REDACTED – has a heart in making the church relevant and accessible in today's culture.

REDACTED - managing partner, Stephens Scown Llp. Member Tearfund Audit, Risk and Finance Committee.

REDACTED – well published editor and writer. Passionate about prayer. Helped churches in Guildford, Scotland and the Gulf to run prayer.

REDACTED – Author, speaker, and visionary leader. Graduate of Trinity College, Dublin, Church of Ireland Bishop since 1997.

REDACTED – 20 years with DFID. Overseas experience in Kenya, Nepal, Mozambique and South Sudan.

For more details click [here](#).

http://www.tearfund.org/en-SC/about_us/whos_who/meet_the_board/

10. Financial Information

Please summarise the last two year's audited/examined accounts below:

For the financial year to:

31st March 2016

31st March 2015

Income & Expenditure Account

Total income

£72,162,000

£61,862,00

Total expenditure

£68,083,000

£63,938,000

Balance Sheet

Unrestricted/general reserves

£6,731,000

£5,848,000

Cash in bank / on hand

£11,911,000

£7,355,000

11. Is there anything you would like to explain about these figures?

No

12. How are equal opportunities/diversity promoted within your organisation? If you have one, please provide a copy (or web link) of your Equal Opportunities/Diversity Policy. **Max: 150 words**

At the heart of our equal opportunities policy is a commitment to create and sustain a working environment in which everyone has an equal opportunity to fulfil their potential irrespective of gender, marital status, sexual orientation, disability, race, ethnic origin, nationality, age and part-time status.

Tearfund embraces diversity in the workplace, recognising that this brings a diversity of skills and experience enhancing its capacity for creativity and innovation, which in turn furthers its mission.

Tearfund is committed to treating all staff with dignity and respect and will not treat staff unfavourably on the basis of their gender, marital status, sexual orientation, disability, race, ethnic origin, nationality, age and part-time status.

13. Scottish Project Manager details: this is the person who would be responsible for overseeing the project grant management and reporting if the grant was secured

Name:	REDACTED
Organisation: (if different from Q1):	
Position in organisation:	Head of Programmes Scotland
Address (if different from Q1):	As per Q1
Telephone:	REDACTED
E-mail:	REDACTED

Section B: PARTNER ORGANISATION(S) INFORMATION

14. Name and details of partner organisation: (please copy and paste this section again or add as separate sheets if you have more than one partner organisation, with the lead partner appearing first)

Tearfund Malawi Office will lead and coordinate the project being delivered primarily by local partner SOLDEV

Name of Organisation: SOLDEV	
Address of Organisation:	Church of Central African Presbyterian Synod Of Livingstonia
ZIP/Postcode:	
Country	Malawi
Telephone:	(265) 1339304 or (265) 1312265
Email:	Synodev@sdpn.org.mw
Website:	
Type of organisation (e.g. NGO, community organisation etc.)	Charity

15. Is the organisation formally registered in country of operation?	Yes <input checked="" type="checkbox"/> / No <input type="checkbox"/> Registration No: C010/1992
16. Describe how the organisation is governed/managed; Include the make-up of the management committee/board, their skills and experience, how often they meet, and how decisions are made. Max 200 words.	
<p>SOLDEV is governed by a board of directors that are appointed by the Church General Assembly. They serve a four-year term and to a maximum of two terms. It is a 10-member board (3 women, one of them is the Vice Chairperson). The members' skills/experience range from administration, finance, agriculture, health and theology. The board meet every quarter to review the progress of the organisation. The Board has 3 sub committees (finance, human resources and fundraising). The sub committees deal with specific matters relating to their committees which are then reported to the full board for discussion. The Executive Director for SOLDEV serves as the secretary of the Board. The Executive Director in liaison with the Board Chairperson are responsible for coming up with the Board agenda which leads to a discussion culminating into various decisions to guide the organisation.</p> <p>At organizational level, management comprises of the executive director, the head of programmes, the head of finance and administration and the monitoring and evaluation Officer. Management deals with the day to day operations of the organization. Issues that are beyond the management mandate are referred to the Board.</p>	
17. Please give some background on the organisation including its size, how many staff/ volunteers, how long it has existed and brief details of projects run. Max 300 words.	
<p>SOLDEV is one of the 13 arms of development belonging to Church of Central African Presbyterian (CCAP), Synod of Livingstonia that was established in 1993 and is mandated to implement community based programs within its catchment area to improve quality of life of the most vulnerable people. SOLDEV mainly focus on water, sanitation and hygiene, food and nutrition security and economic empowerment, environment and climate change adaptation and humanitarian responses in times of disaster. To fully fulfil its mandate, SOLDEV mainstream gender, HIV/AIDs, disability inclusiveness, climate change, environmental management and disaster risk reduction. The existing projects are mainly implemented in hard to reach, resource constrained areas in Chitipa, Karonga, Rumphu, Mzimba and Nkhosakota districts. SOLDEV realigns its work to ensure it contributes to the Malawi Government policies in various thematic areas which are linked to global policy frameworks like sustainable development goals for sustenance of the initiatives beyond the life of the project. Project strategies are aligned to the Malawi Growth and Development Strategy which is an overarching policy guiding operations of the country as it feeds into the Global Sustainable Development Goals.</p> <p>SOLDEV has 24 members of staff (7 females & 17 males) and 2 volunteers. SOLDEV project team is highly qualified and fully experienced in their areas of expertise (almost all are university graduates with not less than 3 years' experience)</p>	
18. Please describe your partnership with this organisation, including details on: how long the partnership has existed, how it first started, and how it has developed. Give a brief description of the joint work you have done together. Max 300 words.	
<p>Tearfund has been in partnership with SOLDEV since 2003. This support has included funding in humanitarian response and disaster risk reduction, food security and water and sanitation projects for the past 14 years. Amongst projects funded and implemented in this partnership are; a 5-year, multi-country consortium programme, funded through DFID/CHF totalling £1.4 million. The project was implemented from 2006 to 2011, and it successfully</p>	

improved food security and enhanced communities' capacity to engage in disaster preparedness and risk reduction in the face of climate change. Community advocacy was also a key component of the programme. SOLDEV also participated in a Scottish funded Water and Climate Justice project (£450,000) that ran from 2013 to 2015. Most recently, SOLDEV was supported by Tearfund to implement a Flood response project (£30,000) and a Cash Transfer project (£24,000) both in Karonga district.

SOLDEV has also benefitted from a lot of capacity building initiatives (technical & financial related) from Tearfund.

19. Do you have a Memorandum of Understanding (MOU) or contract with this partner?	Yes - signed <input checked="" type="checkbox"/> Yes - draft <input type="checkbox"/> No <input type="checkbox"/> If 'Yes' please submit it with your application
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20. How are equal opportunities/diversity promoted within this organisation?
Maximum word limit: **150 words.**

SOLDEV has included an equal opportunities policy in their terms and conditions of employment for the organization. Based on their equal opportunities policy SOLDEV is committed to ensuring that all job applicants and employees receive fair treatment and are valued regardless of sex, disability, race, age, marital status, religion, colour, ethnic or national origin, HIV/AIDS status or any other characteristic. SOLDEV is also committed to ensuring that no one is disadvantaged by unjustifiable conditions or requirements. SOLDEV embraces diversity in the workplace, recognising that this brings diverse viewpoints to bear on issues and challenges.

21. Partner's Project Manager details: this is the person who will be responsible for overseeing the project management and reporting in-country. If you have more than one partner organisation, complete the lead partner's details only.

As the Lead Organisation, the Tearfund Malawi office will employ the Project Manager and will be responsible for overseeing the project management and reporting in-country.

Manager's Name:	REDACTED
Name of Organisation: (if different from Q14):	Tearfund Malawi
Position in organisation:	Country Representative
Address (if different from Q14):	CHAM Secretariat Offices (opposite Red Cross Offices) Plot Number 13/14, Private Bag B351 Capital City, Lilongwe 3, Malawi
Telephone:	REDACTED
E-mail:	REDACTED

Section C: PROJECT INFORMATION

22. Project Title to be used in all future correspondence.

Mhuju Fall Armyworm Research Project

23. Please tick which Main country/area your project will be in

<input checked="" type="checkbox"/> Malawi <input type="checkbox"/> Rwanda <input type="checkbox"/> Zambia
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24. If the project will work in additional countries/area which are these?

N/A <input type="checkbox"/> Malawi <input type="checkbox"/> Rwanda <input type="checkbox"/> Zambia
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25. If the project will work in additional countries/area, please explain the rationale for this. **Max 200 words.**

Not applicable

26. Please tick which thematic area(s) your project aims to address.

<input checked="" type="checkbox"/> Food security <input type="checkbox"/> Water <input type="checkbox"/> Energy
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27. Describe the problem you are trying to solve or situation you are trying to address including which communities your project is going to work with. Tell us if you will be targeting any specific excluded groups (for example those with disabilities, the homeless, or those affected by conflict/violence). **Max 500 words.**

<p>In 2016, Food Agriculture Organisation and World Bank indicated that Malawi has persistently suffered from low food production the past three growing seasons triggered by climate induced shocks La Nina or El Nino. This was again highlighted in the Malawi vulnerability Assessment Committee (MVAC) report (July 2016) that estimated 6.5 million people to be in need of humanitarian assistance. Within the same period the International Monetary Fund report mentioned that 40% of the Malawi population was at risk of food insecurity caused by extreme weather impacts. The World Food Program further noted that the food insecurity trend had battered the country for the past five growing seasons leaving nearly half of the population vulnerable and requested US\$395 million to address the food challenge in 2016. They concluded that the damage if left unchecked would cost the economy more since people's livelihood had sunk beyond the survival threshold.</p> <p>Food insecurity as a result of low food production, one of the worst effects of climate change, is the main problem this project will be working to address. The project will be working with vulnerable households within the communities in Mhuju in Rumphu district where the food security problem had affected over 32000 people leading into serious food distress (MVAC 2016 report). The underlying causes of the food insecurity problem were the effects of dry spells/floods, land degradation, undiversified production and most recently fall armyworm infestation.</p> <p>Official Mhuju agricultural production report for March 2016 estimated an average production of 930 kilogram/hectare - significantly below the potential of 5 metric tonnes/hectare. This meant that households found themselves with an extended hunger season from 3 to 7 months. This had a devastating impact on women and children, especially girls, as they sacrificed school time or economic activities to hunt for food. Crop yields were also affected by declining soil fertility, mainly accelerated by poor management practices and deforestation due to population pressure.</p> <p>The assessment carried out by SOLDEV in March 2016 in Mhuju area revealed that over 80% of farmers could not produce enough food to cover the year without the use of chemical fertilizer or any soil amendment technique. The</p>
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high cost of farm inputs, such as chemical fertilizer, and use of primitive farm techniques have further eroded the 'tired' land, making production expensive and unsustainable. Crop yields have also been eroded by the maize monoculture. Maize farming requires effective rainfall and improved farming skills to cope with the changing climate. Since government has aligned all its key agricultural policies around maize, there has been little diversification to cushion the economy from maize collapse therefore local farmers have lost the investment spirit as farming is no longer profitable. The other cause of low crop yields was pest infestation more especially the fall armyworm (FAW) which caused between 75% to 100% yield loss (SOLDEV project monitoring reports). Post-harvest survey carried out in June 2017 by SOLDEV showed that all Conservation agriculture fields with 100% mulch cover were not infested by FAW unlike the non-conservation agriculture plots which mostly did not yield anything.

The project will work with 300 vulnerable farmers to establish the relationship between Conservation Agriculture and FAW infestation. It will particularly target small-holder farmers, food insecure households, female headed households, the elderly and youth to allow them to acquire new knowledge and skills in sustainable production to build resilience to food insecurity and avert future hunger.

28. Explain how many people your project is planning to work with each year.

The project will reach out to 300 smallholder farmers often affected by hunger induced by climatic effects.

29. Describe in one sentence the overall aim of this project.
NB: for successful projects this may be used for publicity purposes.

The project will aim to support the Rumphu farming community to increase food production and reduced fall armyworm infestations by increasing their understanding of how the innovative use of conservation agriculture techniques and locally made fertilizer can specifically reduce the impact of fall armyworm infestation in maize.

30. Project period (maximum 36 months). Projects must be complete by 31 October 2020.

Will the project start in November 2017? Yes No

If no, what is the planned start date: 1st November 2017

Planned end date: (must not be after 31 October 2020): 31st July 2020

Therefore, total length: 2 years 9 months (33 months in total). The project is split over 4 financial years.

31. Purpose of this application

- New project start up
- Feasibility (Field Testing)
- Innovations on their path to scale

32. What needs analysis have your partner(s) and your organisation done to decide what the priorities and activities should be for this project? Tell us about consultation with community groups, civil society organisations, and meetings with local government agencies. How were disadvantaged /excluded people able to put forward their needs? Tell us about other research/ statistical data. **Max 600 words.**

SOLDEV carried out a Rapid Assessment to validate key development challenges in the area from a combination of desk review of District Development plans and direct observation in the field during MVAC humanitarian response operation of 2015/16 and 2016/17 growing seasons. The assessment was informed by desk review Rumphu District Contingency Plan which noted a dramatic rise of weather induced vulnerabilities. The exercise involved District Council officials, community leaders, agricultural extension workers, other NGO partners operating in the area and members of

development committees in the target locality. They were asked to identify the core problems of the area and their underlying causes. The field meetings took place at Mhuju EPA, targeting Mhuju and Chinyolo Area Development Committees (ADC) with 54 people in attendance (31 male and 23 female). A review of area and village Action Plans was made to confirm and understand the problems in the eyes of the potential target group. By consensus, participants agreed that the major persistent problem in the area was climate induced hunger, under-developed irrigation to offer extended production season, limited access to agricultural produce markets triggered by bad roads and poor infrastructure, inadequate health and education facilities and alarming environmental degradation.

Further analysis using the community ranking and scoring tool singled out chronic food insecurity as the most important problem. Other partners were addressing the component on water supply, hygiene (Feed the children) and health (LISAP focussing on child nutrition and HIV/AIDs affected households) with support from USAID and Save the Children.

A ten member women only focus group discussion carried out at Nkhumano Village Development Committee (VDC) testified that food insecurity had worsened from the 2013/14 cropping season. Every member also admitted that tree cover has significantly been eroded as a result of tobacco farming - evident by the bare hills surrounding the area. Mhuju local agricultural office production statistics indicated a downward trend in yield from 2.4mt/ha in 2013/14 to 0.9mt/ha in 2015/16 season. In this regard the community prioritized production strategies that would increase food production including restoring the poor conditions of their field by improving soil fertility.

SOLDEV and Tearfund have been working with the communities over the past year to address these issues, in particular the problem of food insecurity, and the new observations related to FAW have been in the most recent 2016/2017 farming seasons. Being within the communities means that the needs assessment is an ongoing part of the work and up to date needs and changes are reported through regular community meetings and District reports.

In the 2016/2017 season, the Mhuju area has been ravaged by the devastating attack of fall army worms leaving farmers with 75% to 100% yield losses. During a monitoring visit that was carried out by Tearfund in June 2017, community members said that finding a solution to this pest was a priority and was needed to address the challenge of food security. Based on observations made by the community, farmers believed that Conservation Agriculture techniques seemed to restrain the attack of the fall armyworm and confirming this through the proposed research would be a breakthrough to these farmers. Farmers cited that fall armyworm was resistant to chemical control and this made farmers whose fields were attacked to be handicapped.

In response to the declining productive capacity, the Mhuju research project has been designed to increase understanding on how innovative Conservation Agriculture techniques can reduce the impact of FAW infestation, in order to increase local food production.

33. Tell us how the project fits into the development priorities of local government agencies. **Max 250 words.**

SDG2 (to end hunger, achieve food security and improved nutrition and promote sustainable agriculture) is a priority of the Malawian national and local government and this project contributes towards this goal. The overall Project Impact is to contribute towards food security by increasing food production and this will be measured by the reduced number of hungry months that households manage without external support.

The Malawi Government, in recognition of the emerging development challenge of persistent food insecurity, has instituted the National Agriculture Policy 2016, Irrigation Policy (2016), Food insecurity response plan (2016), Climate change policy (2016), Food and Nutrition Policy (2006), National Gender policy (2011) and Malawi Growth and Development Strategy (2011-2016) to counteract the short and medium term issues in order to improve the well-being of the most at risk populations. This project will work in direct collaboration with the Ministry of Agriculture, Irrigation and Water Development to ensure the research findings inform Policy (Project Outcome 1 and Outcome 3).

The Rumphi District Agricultural Development Office has prioritised food security as a priority by teaching farmers farming technologies that help farmers to produce more food in farming conditions that are affected by climate change. Therefore, the Rumphi District Agriculture Development Office is encouraging its collaborating partners to take on board the above policies such as the National Conservation Agriculture Guidelines (NATCF 2017) to ensure that farmers in the area are food secure. Through Output 2, this project will give participants improved knowledge and skills in climate smart farming techniques, in line with Rumphi District Agricultural Office teaching priorities. The Rumphi District Council has provided a letter of endorsement for this project.

34. Who else is working in this area, and what are they doing? How will your project work with them to ensure they are complimentary and to avoid duplication? **Max 400 words.**

SOLDEV conducted a stakeholder analysis to understand the 4Ws (Who, where, When and What) of partners working in the area.

At programming level, the initiative will mainly interact with the Ministry of Agriculture Irrigation and Water Development through the district and local agriculture office. They will provide technical advice, capacity building and oversight on key research protocols. At community level the project will network with the Area stakeholder panels (ASHP) where agriculture focussed partners share ideas, plans and lessons in order to harmonize implementation approaches and map areas of need. Working with the ASHP will ensure the project can target the correct area and avoid duplication. This function is performed by District Agriculture Extension Coordinating Committee (DAECC) and District Executive Committee (DEC) at district level to ensure value for money besides creating a critical mass of complementary players.

The other NGOs operating in the area are as follows:

- LISAP-focus on nutritional education targeting children within the first 1000 days of growth to reduce stuntedness;
- Feed the Children-focus on water sanitation and hygiene (WASH) to stop open defecation so that people are free from preventable water and sanitation related diseases costing the Malawi government a lot of resources;
- CADECOM-focus on promotion of drought tolerant crop varieties (sweet potatoes and cassava) to fight effects of climate change.

In terms of intervention areas, the DEC has already combined partners working on different thematic areas to complement each other's effort and joint planning is done at ASHP level to effectively manage time and community extension service.

The set up at community level demands that implementing partners share action plans and progress reports to the Area Development Committee (ADC) chaired by the Traditional authority which forms the local governance machinery as guided by the decentralization policy which put people at the centre of their own development. The project will strictly adhere to the arrangement to ensure research findings are owned by the local community for effective learning.

Such platforms will also serve as points of mobilization and publicising of the tested technologies. Active involvement of the local governance staff will be critical in follow up and onsite support on issues requiring local solutions since the research will be participatory in nature. The project has made a deliberate effort to share worst and best results on a quarterly basis to the local community to appreciate progress.

35. Please confirm that a letter of support written by your lead partner organisation is included which describes your partner organisation's perspective on the research, consultation and project planning process.

Yes

Please note: the application will not be eligible without this.

36. How does this project fit with global development policy and the achievement of Sustainable Development Goals? **Max: 250 words.**

SDG2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
SDG13: Take urgent action to combat climate change and its effects.

This project supports achievement of SDG 2&13 in the following ways:

The key challenges affecting Mhaju area in the past four growing seasons have been chronic food insecurity which has left over 19,000 people in dire food stress (MVAC 2016). The root causes of food insecurity were dry spells/floods which has been exacerbated by the climate change, soil degradation caused by poor farming practices, undiversified production due to lack of knowledge and most recently fall armyworm pest infestation. In response, this project is contributing to both SDG2 and SDG13 by teaching farmers Conservation Agriculture (CA) and local fertilizer production techniques which help farmers to grow crops in situations when they receive less rainfall.

In addition, the challenge of fall armyworm which appeared in the area is affecting the achievement of SDG2 as the fall armyworm was destroying crop production from 45% to 100% crop damage. By employing CA and local fertilizer production to investigate if they have an effect in reducing fall armyworm, the project will help in achieving food security and improved nutrition which is being jeopardised by the fall armyworm (FAW) attack.

If farmers are to retain their productive capacity, we need to introduce innovative measures to effect lasting change on the local farming systems. In response to the declining productive capacity, the Mhaju research project has been designed to increase understanding on how innovative CA techniques can reduce the impact of FAW infestation and weather extremes in order to increase local food production. A community that can achieve lasting food security has increased resilience against effects of climate change, contributing to SDG13. The results of the study will inform the Malawi Government agriculture policy on how it can deal with FAW invasion using simple ecologically adaptive climate smart production techniques, also contributing to SDG13.

37. How does this project support Scottish Government Climate Justice policy? ¹ **Max 250 words**

This project supports Scottish Government Climate Justice policy by delivering a project that:

- *Addresses the needs of climate vulnerable people, recognising the disproportionate effect the impact of climate change can have on the poor, women and children in developing countries.* - the needs assessment identified the most vulnerable communities most affected by food insecurity as an effect of climate change and the project is designed to engage the most vulnerable of those communities.
- *Empowers the poor and vulnerable in decisions and access to resources* - This project will empower poor farmers by teaching them conservation agriculture and local fertilizer production so that they are able to take control and make their own decisions to increase their household food production.
- *Benefits the environment, alleviates poverty and improves equality through increasing climate change resilience for vulnerable groups.* - by tackling environmental degradation and restoring soil moisture and fertility through CA techniques that contribute to improved crops and thus increased household food production to reduce hunger and poverty. The innovative approach of using CA techniques for pest control is environmentally sustainable.
- *Takes a rights-based approach to promote human rights and the strengthening of civil society.* - to tackle food insecurity in this project the participating farmers are empowered with knowledge and skills for sustainable agriculture and also participate in the research to have ownership of the findings. The capacity of the duty bearers, in this project Government, is enhanced by improved national knowledge banks around the proven CA working techniques on FAW control, to inform Government policy and enable them to make informed decisions for national agriculture guidelines. The project brings both together in project meetings.
- *Supports transparency, participation, and access to information* - the project is designed with a wide variety of regular review meetings and dissemination meetings at local regional and national level to share information

¹ <http://www.gov.scot/Topics/International/int-dev/climatejustice>

and findings with many stakeholders. Participation of farmers, community leaders and government agencies is integral, especially the participatory research to be implemented and monitored by the farmers together with technical experts.

38. What changes and improvements in people's lives (outcomes) will the project achieve during its lifetime? Up to 3 outcomes is sufficient. **Max 150 words.**

Outcome 1:

Through community participatory research and testing, evidence is collected to support the hypothesis that climate smart Conservation Agriculture techniques (mulching, zero tillage, crop rotation and intercropping) and Locally Made Fertiliser can limit the negative impact of Fall Armyworm infestations.

The findings that show a positive effect will be applied and to reduce the number of farmers that experience Fall Armyworm damage in their fields, thus saving crops and providing food for vulnerable families.

Outcome 2:

300 farmers empowered to effectively use climate smart Conservation Agriculture skills and understand how they relate to Fall Armyworm control.

The difference to their lives will be measured by farmers having more enriched soil and more control over their food production levels.

Outcome 3:

Improved national knowledge banks around the proven Conservation Agriculture working techniques on Fall Armyworm control to inform the policy of Ministry of Agriculture, Irrigation and Water Development (MOAIWD) and beyond.

This could impact the lives of farmers in Malawi who would benefit from the knowledge (positive or negative) gained from the research being integrated into national guidelines. This will be measured by the number of communities applying skills derived from the evidence provided by the research and the number and nature of key decisions made by farmers, stakeholders and government as a result of exposure to the research findings.

39. WORKPLAN

What activities will your project carry out each year to achieve the Outcomes given in Q38? Which organisation will do these? What numbers of people will be involved in the activity?

Outcome 1:

Through community participatory research and testing, evidence is collected to support the hypothesis that climate smart Conservation Agriculture techniques (mulching, zero tillage, crop rotation and intercropping) and locally made fertiliser can limit the negative impact of Fall Armyworm infestations.

This Outcome will come about as a result of the following Outputs.

Output 1.1: Stakeholder consultations completed and research conducted

Output 1.2: Active project evidence database established

Output 1.3: Farmers' capacity in local information management and exchange is enhanced

These are in the logframe as Output 1: Increased capacity in management of research information and contact with key stakeholders to promote knowledge exchange and storage, based on research findings.

These Outputs will be achieved by the following activities:

Activities in year 1	Who will action	Target numbers

1.1 Facilitate farmer identification and mobilization	Project Coordinator/Project Officer and Government Extension Staff	300 farmers
1.2 Establish project database and develop research tools to ensure evidence based tracking of farmers	Research Associates/M&E Officer/M&E Assistant	Database capturing 300 target farmers
1.3 Facilitate identification, training of 30 research assistants and enumeration	Project Coordinator/Research Associates/M&E Officer/M&E Assistant	30 lead farmers
1.4 Facilitate training of farmers on set up of field trials based on treatment, plot size and sample size	Research Associates/M&E Officer/Project Coordinator/ Government Extension Staff	300 farmers
1.5 Facilitate training of 40 lead farmers/session in field data collection and monitoring key stages of FAW life cycle	M&E Officer/ Research Associates/ Project Coordinator	40 lead farmers
1.6 Conduct review meetings with field level data collectors and technical teams at district level	M&E Officer/ Research Associates/ Project Coordinator	30 Lead farmers and 20 technical officers at District level
1.7 Facilitate mapping and launch of research with district stakeholders and community members	Executive Director/M&E Officer/ Research Associates/ Project Coordinator	50 DEC members, 20 DA ECC members and 20 ADC/ASHP members
Activities in year 2	Who will action	Target numbers
1.3 Continued training of 30 research assistants and enumeration	Project Coordinator/Research Associates/M&E Officer/M&E Assistant	30 lead farmers
1.4 Setting up of field trials based on treatment, plot size and sample size	Research Associates/M&E Officer/Project Coordinator/ Government Extension Staff	300 farmers
1.5 Monitoring of 40 lead farmers/session in field data collection and monitoring key stages of FAW life cycle	M&E Officer/ Research Associates/ Project Coordinator	40 lead farmers
1.6 Conduct review meetings with field level data collectors and technical teams at district level	M&E Officer/ Research Associates/ Project Coordinator	30 Lead farmers and 20 technical officers at District level
Activities in year 3	Who will action	Target numbers
1.3 Continued training of 30 research assistants	Project Coordinator/Research	30 lead farmers

and enumeration	Associates/M&E Officer/M&E Assistant	
1.4 Setting up of field trials based on treatment, plot size and sample size	Research Associates/M&E Officer/ Project Coordinator/ Government Extension Staff	300 farmers
1.5 Continued training of 40 lead farmers/session in field data collection and monitoring key stages of FAW life cycle	M&E M&E Officer/ Research Associates/ Project Coordinator	40 lead farmers
1.6 Conduct review meetings with field level data collectors and technical teams at district level	M&E Officer/ Research Associates/ Project Coordinator	30 Lead farmers and 20 technical officers at District level

Outcome 2:

300 farmers empowered to be effectively using climate smart Conservation Agriculture skills and understanding how they relate to Fall Armyworm control.

This Outcome will come about as a result of the following Output.

Output 2.1 Improved knowledge and skills in climate smart farming techniques

This Output will be achieved by the following activities:

Activities in year 1	Who will action	Target numbers
2.1 Conduct three days training of lead farmers in mulching, zero tillage and LMF	Project Coordinator/Project Officer/Government Extension Staff	30 lead farmers
2.2 Conduct five-days practical training in mulching, zero tillage and local fertilizer	Project Coordinator/Project Officer/Government Extension Staff	300 farmers
2.3 Facilitate procurement and distribution of inputs (maize seed, rain gauge, thermometers & worm traps)	SOLDEV Internal Procurement Committee	300 farmers
2.4 Conduct learning tours to similar FAW research activities in Bvumbwe, Mkondezi, Chitedze and Chitala research stations to appreciate other integrated Pest management	Research Associates/Project Coordinator/M&E team	30 people
Activities in year 2	Who will action	Target numbers
2.1 Conduct a refresher three days training of lead farmers in mulching, zero tillage	Project Coordinator/Project Officer/Government Extension Staff	30 lead farmers

and LMF		
2.3 Procure and distribute of inputs (maize seed, rain gauge, thermometers & worm traps)	SOLDEV Internal Procurement Committee	300 farmers
2.4 Conduct learning tours to similar FAW research activities in Bvumbwe, Mkondezi, Chitedze and Chitala research stations to appreciate other	Research Associates/Project Coordinator/M&E team	30 people
Activities in year 3	Who will action	Target numbers
2.2 Conduct five-days practical review training to appreciate farmers knowledge on mulching, zero tillage and local fertilizer	Project Coordinator/Project Officer/Government Extension Staff	300 farmers
2.4 Conduct learning tours to appreciate other areas of FAW research (chemical control) activities in Bvumbwe, Mkondezi, Chitedze and Chitala research stations to appreciate other integrated Pest management measures	Research Associates/Project Coordinator/M&E team	30 people

Outcome 3:

Improved national knowledge banks around the proven Conservation Agriculture working techniques on Fall Armyworm control to inform the policy of Ministry of Agriculture, Irrigation and Water Development (MOAIWD) and beyond.

This Outcome will come about as a result of the following Output.

Output 3.1 Research findings disseminated with the Ministry of agriculture through Mzuzu Agricultural Division (MZADD) to ensure that the research findings are included in the new agriculture conservation guidelines.

This Output will be achieved by the following activities:

Activities in year 1	Who will action	Target numbers
3.1 Conduct field days to promote technology display to local (DEC, DA ECC, DSHP, ADC) and external stakeholders	Project Coordinator/Government Extension staff/lead Farmers/Media	300 farmers
3.2 Conduct documentaries and media events to publicise performance of crops at different stages of growth	Project Coordinator/District Information Office/Media houses	Sample from 50 best male and female farmers

3.3 Conduct technical coordination meetings at district and regional level	Research Associates/Monitoring & Evaluation Officer/SOLDEV Director/DAECC/Lunyan gwa research station officer	20 DAECC members
3.4 Dissemination meetings and workshops of research findings to key stakeholders (DEC, DAECC, MZADD, National Research Platform under MOAIWD) and farmers	Research Associates/Monitoring & Evaluation Officer/SOLDEV Director/DAECC/Lunyan gwa research station officer/Media	5 sessions per annum targeting over 50 people
Activities in year 2	Who will action	Target numbers
3.1 Conduct field days to promote technology display to local (DEC, DAECC, DSHP, ADC) and external stakeholders	Project Coordinator/Government Extension staff/lead Farmers/Media	300 farmers
3.2 Conduct documentaries and media events to publicise performance of crops at different stages of growth	Project Coordinator/District Information Office/Media houses	Sample from 50 best male and female farmers
3.3 Conduct technical coordination meetings at district and regional level	Research Associates/Monitoring & Evaluation Officer/SOLDEV	20 DAECC members
3.4 Dissemination meetings and workshops of research findings to key stakeholders (DEC, DAECC, MZADD, National Research Platform under MOAIWD) and farmers	Research Associates/Monitoring & Evaluation Officer/SOLDEV Director/DAECC/Lunyan gwa research station officer/Media	5 sessions per annum targeting over 50 people
Activities in year 3	Who will action	Target numbers
3.1 Conduct field days to promote technology display to local (DEC, DAECC, DSHP, ADC) and external stakeholders	Project Coordinator/Government Extension staff/lead Farmers/Media	300 farmers
3.2 Conduct documentaries and media events to publicise performance of crops at different stages of growth	Project Coordinator/District Information Office/Media houses	Sample from 50 best male and female farmers

3.3 Conduct technical coordination meetings at district and regional level	Research Associates/Monitoring & Evaluation Officer/SOLDEV Director/DAECC/Lunyan gwa research station officer	20 DAECC members
3.4 Dissemination meetings and workshops of research findings to key stakeholders (DEC, DAECC, MZADD, National Research Platform under MOAIWD) and farmers	Research Associates/Monitoring & Evaluation Officer/SOLDEV Director/DAECC/Lunyan gwa research station officer/Media	5 sessions per annum targeting over 50 people
Activities in year 4	Who will action	Target numbers
3.1 Conduct field days to promote technology display to local (DEC, DAECC, DSHP, ADC) and external stakeholders (Other NGO partners in the district) with 100 people per session	Project Coordinator/Government Extension staff/lead Farmers/Media	300 farmers
3.2 Conduct documentaries and media events to publicise performance of crops at different stages of growth	Project Coordinator/District Information Office/Media houses	Sample from 50 best male and female farmers
3.3 Conduct technical coordination meetings at district and regional level	Research Associates/Monitoring & Evaluation Officer/SOLDEV Director/DAECC/Lunyan gwa research station officer	20 DAECC members
3.4 Dissemination meetings and workshops of research findings to key stakeholders (DEC, DAECC, MZADD, National Research Platform under MOAIWD) and farmers	Research Associates/Monitoring & Evaluation Officer/SOLDEV Director/DAECC/Lunyan gwa research station officer/Media	1 session targeting over 50 people
40. Taking the outcomes and activities framework in the workplan, describe the project in more detail, to include what will be done, with whom, how many, when, where, what resources will be needed, role of staff posts and partners in delivering and managing the project. Max 500 words.		

WHAT WILL BE DONE - PROJECT IMPLEMENTATION CYCLE OF THE RESEARCH COMPONENT

As outlined in Q27 and Q32, the project has been designed to improve food security by teaching farmers Conservation Agriculture and local fertiliser production techniques to improve their resilience climate change and to investigate if these techniques also improve resilience to armyworm infestations. The results of the research will be shared with a wide group of stakeholders and will seek to influence national policy.

The project will be implemented from November 2017 to July 2020 (although Tearfund have committed to fund some preparatory work from Aug-Oct 2017 to ensure we do not miss the larvae stage of the armyworm that is already in the soil.) The project will train farmers in Conservation Agriculture and local fertilizer making. Farmers will be trained on how to lay out field trials where research will be conducted in the next 3 farming seasons. Enumerators will be trained to work with the farmers to collect data in all the set-up field trials. This will be repeated in all the 3 years and the trends will be compiled. Throughout the project cycle, dissemination will be done to share the results of the project to the communities and to the nation for learning.

WITH WHOM - LOCATION AND TARGET GROUP

The project will be implemented in 18 villages in Mhujira EPA under TA Mwachenga (Rumphi District). 300 farmers will be targeted and must be willing to apportion not less than 0.1ha plot per treatment for the exercise. The target group will mainly comprise of vulnerable small holder agriculture households who fail to produce enough to meet their annual cereal needs. SOLDEV and UNILIA will use a farmer-centered research approach to empower communities.

RESOURCES, ROLE of STAFF POSTS & PARTNERS, RESOURCES

The project will be implemented by SOLDEV. The University of Livingstonia (UNILIA) will be a consultant to the project, engaged for their expertise in research. The identification of the study area and participants in the study will be done by both partners.

The role of mobilizing farmers, key stakeholder solicitation and sensitization, capacity building in climate smart technologies, field follow ups, networking with field level partners, purchase and distribution of farm inputs will be done by SOLDEV.

UNILIA will concentrate on the research component advising on qualification and criteria of selecting study participants, research problem analysis, designing and testing the research tools, training research assistants, field trials and observations, supervising data collection and analysis and report writing.

Dissemination of the research findings will be done collaboratively between SOLDEV, UNILIA and Tearfund.

The research station under the Ministry of Agriculture Irrigation and Water Development (MOAIWD) will be responsible for technical advice and accreditation of the field experiments in line with recommended research protocols. Adherence to Malawi Government guidelines will allow the technology to be released after a three-year experimentation cycle.

At SOLDEV the project will be managed by a project coordinator who will be supported by the monitoring and evaluation officer, finance manager plus field officers. They will work with UNILIA university, government research station and farmers to implement this research. The project coordinator will provide leadership to the field team on technical project issues, provide harmonised working strategies based on local context, ensure up to date technical skill support to participating community and field team, support field planning and reviews, train farmer groups in climate smart techniques in collaboration with govern extension staff, oversee budget management at district and field level, Coordinate and communicate with district stakeholders.

At Tearfund the project will managed by Tearfund project coordinator and the Tearfund Malawi Project Manager, who will support SOLDEV to ensure that the project is implemented as designed while taking monitoring information to make adjustments where necessary. Specifically, they will provide technical support on project management, monitor progress of project activities and use of finances to ensure compliance for local and donor requirements, lead in project dissemination and learning meetings, provide regular updates on project progress to Tearfund Scotland and support report writing.

At Tearfund Scotland, the project will be supported by the project officer who will ensure that all compliance and learning are implemented and that results are shared with International Development actors in Scotland and the UK.

As well as all the activities above, funds will be used to train project staff on the research including data collection, train farmers on Conservation Agriculture and local fertilizer production, train farmers on their role in the research, train enumerators on research and data collection, project monitoring and procurement of seeds and instruments (e.g. rain

gauges, thermometers & worm traps).

41. What are the strengths, resources and existing activities in the community that the project will build on? **Max 200 words.**

Tearfund and SOLDEV have been working in the area for the past year investing much time and effort in building the capacity of local farmers in self-help initiatives for economic empowerment. Through these capacity building initiatives, farmers are being supported to discover their potential to initiate their own development using locally available resources to which they have responded so well. Farmers managed to mobilise themselves into self-help groups where they save money and give loans to each other for small scale businesses.

Some self-help groups have already been learning about Conservation Agriculture and there is a local appetite and motivation to meet to learn about conservation agriculture and locally made fertilizer. In addition, the area has Lead Farmers, trained by another project, who support fellow farmers through local extension providing enough space for in depth understanding of local farming systems. Therefore, this research project has found a strong foundation to build on by further systematically organizing local farmers to be involved in action research to enhance local learning, mentoring and coaching. The participatory research will improve local farmers understanding on proven climate smart best practices through on-going observations and field testing.

The community is motivated to find out about pest control as they have witnessed devastation of crops and know about the fields that were not affected. Households who participate in the research will offer their land and time to farm as prescribed by the research protocols and collect and record data. The community want the project to happen so they can benefit from the findings and not be affected by fall armyworms in the future. This motivation will lead them to contribute from their own households.

42. How will you make sure that the most disadvantaged people in the community/target group will be involved in and benefit from this project? **Max 200 words.**

The main approach of the project will be participatory research where local farmers and community members will be actively involved in the planning, design and field observations to enable them to properly understand and appreciate best farming practices. The most vulnerable groups (women, girls, boys and peasant farmers) at local level will be part of the FAW research and will be actively involved in finding solutions to their crop production problems.

Sampling will be used to target 300 farmers for the study. The project will strike a balance between male and female participants. Smallholder farm households heavily affected by hunger during the past five growing seasons will form the target group. These will be 300 smallholder families living and farming in Mhujua area who primarily depend on subsistence farming for their livelihood.

Individual farmers will be selected through conservation agriculture (CA) introductory meetings at village development level. From those who express interest the criteria for program participation will depend on participants' commitment to the following;

1. Establishment of a plot not less than 39m by 16m

2. Regular participation in CA and research related trainings
3. Willing to participate for 3 years in the research following research protocols
4. Willing to share best practices with fellow farmers/peers
5. Willing to keep detailed records of all farming activities on a 3-year cycle

It is possible that some of the most disadvantaged people in the community may not be best suited as data collectors. Tearfund quality standards on targeting will be followed and in some cases it is fair and reasonable to deliberately target a section of the people as a way of bringing change and ensuring achievement.

The project is being implemented in the same area as another SOLDEV food security project where all vulnerable and disadvantaged people have equal access to learn CA without needing to be part of the research element but still benefitting.

43. How can you demonstrate your and your partner's capacity to deliver this project? What past experience do you have? What are the skills and experience of the project managers? How will the responsibilities for management and co-ordination be split, and how often will contact be? **Max 300 words.**

Tearfund has an annual income of £60m pa and routinely manages projects in excess of £500k. As a regular recipient of Institutional funding, Tearfund has systems and processes in place to support staff in managing grants.

Tearfund Malawi has been implementing food security and livelihoods projects since 2004 and climate justice projects since 2013. At country level the Project Manager has overseen the implementation of several Institutionally funded projects ranging from £400k to £1.4 million. The project manager has overseen the successful delivery of 2 Scottish Government Climate Justice projects and associated extension projects. The Malawi Project Manager is supported by a Projects Officer, Project Coordinator, and Finance Manager who are very experienced in grants management. In addition to the practical experience of managing these projects, the staff are well qualified up to master's degree level in agriculture, marketing and other relevant sector expertise. Tearfund staff in Malawi have an average of 15 years experience working in the development sector.

The local implementing Partner, SOLDEV has a core team of experienced staff in program and financial management. Between 2013 to 2015, SOLDEV implemented a Scottish Government funded Climate Justice project in Karonga District. In addition, SOLDEV has implemented several conservation agriculture projects in some districts in Northern Malawi including Rumphu.

The Scotland Project Manager has effectively managed international development grants from the Scottish Government over the past 5yrs, ranging from £400k to £1.3m in value, as evidenced by the Scottish Government interim and end of year reports. She has overseen the implementation of 2 Climate Justice projects in Malawi (c£500k each). She will be supported by a Project Officer and staff in support functions such as finance and logistics.

Day to day project management is the responsibility of Tearfund Malawi staff, who will lead and coordinate project implementation with the local partner. Tearfund staff in Scotland and Malawi are in daily email contact and have monthly scheduled skype calls for project monitoring and reporting. Tearfund Scotland staff make regular visits to Malawi for field project site monitoring and working in-person alongside Malawi staff.

44. Assuming success in the innovation aspect of the project, how will you build long term sustainability into the plans for this project, to make sure that the benefits will last in the long term and be sustainable when this funding comes to an end – what is your exit strategy? **Max 300 words.**

Long term sustainability is built into the project in the following ways:

Farmer to farmer extension approach

Through onsite mentoring and periodic review meetings, lead farmers will be trained to transfer their skills to fellow farmers at local level. There will be increased exchange of ideas and experiences at community level with one lead farmer being responsible for 10 farmers within their village. By the end of the project farmers will learn effective ways of restoring their soils through CA and learning cost effective ways of tackling the challenge of fall armyworms and will have the skills to continue replicating this to others.

Knowledge based approach

The main input the project will provide is knowledge. If the farmers experience increased resilience to climatic shocks and improved farm yields, they are likely to continue to use their knowledge of CA techniques beyond the lifetime of the project.

Women and Youth Empowerment

The project will deliberately engage women and youth to fully participate in project activities design, implementation and monitoring. This empowerment process will ensure that initiated project activities are sustained by instilling ownership. By engaging the youth, the project will ensure that these vital skills are passed on to another generation.

Alignment to local governance machinery

The research project will work with local governance structures, which will remain after the project. Planning, designing, field observations, data capturing and follow ups will be done with the local community and local government. This intensive engagement approach instils ownership in the project at local government and community level.

Currently the Ministry of Agriculture Irrigation and Water Development (MOAIWD) is looking at ways of promoting Conservation Agriculture and these findings will be an incentive to the farmers to adopt conservation agriculture.

National Government Policy

The close involvement of the Government Research Station and Government experts from the beginning of the project is part of building in the sustainability as they will have knowledge and a sense of ownership post-project when it has the potential to be taken to scale.

The project is designed so that findings can be released and begin to inform policy within the timeframe of the funded project. Outcome 3 aims to disseminate research findings to the Ministry of Agriculture in Malawi to ensure they are included in the new agriculture conservation guidelines. This will impact the lives of all farmers in Malawi on a national scale and be part of Policy for as long as it is effective and relevant.

The exit strategy includes various dissemination techniques to support this outcome including:

- field days to promote technology display to local (DEC, DAECC, DSHP, ADC) and external stakeholders;
- Conducting technical coordination meetings at district and regional level;
- Dissemination meetings and workshops of research findings to key stakeholders (DEC, DAECC, MZADD, National Research Platform under MOAIWD) and farmers on a quarterly and annual basis.
- The making of documentaries and media events to promote and publicise the findings and performance of crops at different growth stages

These will all increase the profile of the research and will contribute to the national knowledge banks of the subject of fall armyworms and maintain the engagement of the Ministry.

45. Tell us about any plans to scale up and/or replicate the project. **Max 200 words.**

At District Level the participating farmers will be encouraged to take ownership of the results and be encouraged to participate in wider information sharing and publicity. They will disseminate the findings to fellow farmers within Malawi for possible replication or scale up. The research associates will be able to publish the research findings paper for both

national and global sharing to interested stakeholders. The Mzuzu Agricultural Development Division of The Ministry of Agriculture will have been involved throughout (Output 3.1) and will play a part in feeding the research results through to national level.

At National level, the activities leading to Outcome 3 have been designed and planned to incorporate the results into national guidelines. New technologies in Malawi require 3 years of testing before they can be released and the project is designed to ensure this. Once part of national guidelines all farmers in Malawi can benefit.

On a Continental level, Tearfund plans to disseminate the research findings to all active country programmes within East and Southern Africa (ESA). There is potential for replication of the research in Rwanda and other interested countries if funding can be found, to compare results in different environments and soils. Conservation farming is a key component of all of Tearfund's ESA country strategies and this innovative approach of pest control using CA techniques can form part of Tearfund's upcoming high-profile regional campaign across these countries.

This collaborative campaign, the regional expression of the global "Renew our World" campaign, promotes sustainable agriculture to combat endemic hunger and tackle climate change. Two key campaign actions are 1) Agricultural education in sustainable farming techniques for agricultural support officers and local farmers; and 2) Research and Development around crops and agricultural techniques. Tearfund is partnering across Africa with, amongst others, the regional food forums of the Council of Anglican Provinces in Africa. This provides huge reach to producers and consumers through women's groups; youth groups and inter-religious partners across the region.

The findings of this project will be promoted and shared widely through the campaign network across Africa to reach the key audiences of farmers and Governments, to reduce devastating infestations of fall armyworms and improve food security in an affordable and sustainable way.

46. What might go wrong during the project? (i.e. what are the risks?) What will you do to try and minimise these or deal with them if they occur? (Add rows as required).

Risks	Likelihood of happening (Low, Medium or High)	How will you minimise the risk? (ensuring as a minimum no negative impact to the community)	Recovery plan if problem occurs
Climatic Project activities interrupted by natural disaster and extreme weather conditions.	Low	Ongoing preparedness and mitigation work (part of other projects in same area) to continue, including early warning systems, contingency planning, risk assessments. Early warning systems lead to preparation for response. Contingency plans kept up to date.	Close coordination with response programming. SOLDEV has a lot of experience in disaster response and will consult with Tearfund and the Scottish Government on reviewing targets and agreed diversion of funds if necessary for appropriate response. Additional funds sought for a response in the area to quicken relief and recovery and return to a development context as soon as possible.
FAW outbreak getting out of control due to persistent climate effects that favour army worm boom.	Medium	Close coordination with other research institutions to acquire information on integrated pest	Explore the use of natural enemies or more effective insecticides once the research findings are

		management strategies. Institute worm traps for early warning to ensure timely intervention.	released by other like - minded research institutions.
No infestations of FAW during any one year of the project	Low/Medium	Close monitoring of soil content and searching for FAW in larvae stage Keep informed of nationwide locations of reported outbreaks	Consider other locations in the northern region of Malawi for new plots in subsequent years
Political Civil instability due to upcoming tripartite elections in 2019	Low	Close monitoring of situation for timely action if needed. Development of contingency plans with partners and in consultation with The Scottish Government	Follow policy and plans for the case of civil unrest.
Social and economic Financial challenges such as forex shortage and high cost of essential commodities due to change of national financial policies for example the Zero Aid Budget	Low	The project budget allows for yearly inflation and realistic estimations on costs, as well as for exchange rate variations. Regular monthly and quarterly financial reviews will take place to ensure early warning of the impact of financial changes.	In the event of this being an issue, the budget and expenditure plan would be reviewed alongside the activity plan and the impact assessed. Discussion would be had with the Scottish Government and plans would be revised as appropriate.
Movement of key government staff (providers in agricultural extension services and community development) to other stations during project implementation period	Low	Sensitise the local key government departments on the importance of consistency of staff involvement in the project Ensure records of work progress are kept up to date and are stored in an accessible place to others on the same work team. Ensure that key government staff are available during training sessions so they understand the research activities for continuity purposes.	Request a handover period to new staff from staff that are moving
Farmers not willing to apply CA techniques to their fields.	Low	Engage community leaders from the start of the project for them to	Engage a new number of farmers for new training if funding can be found.

		<p>advocate for community involvement</p> <p>Sensitise farmers ahead of trainings and offer evidence and learning visits to other successful CA fields</p>	
Low levels of engagement by women	Low	<p>Ensure sensitisation meetings and trainings are accessible for women to attend,</p> <p>Have women advocates to engage others.</p> <p>Sensitise men on the importance of women involvement.</p> <p>Review numbers of women involved on a regular basis and take action if needed.</p>	Discuss with all relevant stakeholders how to engage more women if number of uptake is found to be low during regular reviews. Act on suggestions.
UNILIA do not complete delivery of their contract	Low	<p>Open discussion and negotiation at the start to ensure an MOU that works for all parties and is realistic.</p> <p>Have regular reports and copies of data given to Tearfund at agreed regular intervals throughout the project not just at the end.</p> <p>Ensure payments are scheduled at fair intervals and are dependent on agreed targets being met.</p>	<p>Depending on the stage in the project seek a new research collaborator and seek additional funding if needed to continue.</p> <p>Recover data provided to date.</p>

47. How will this project build the capacity of the applicant and partner organisations in the field of climate justice? Max 500 words

The capacity of both SOLDEV and Tearfund will be advanced due to the nature of the research based project providing learning of new and innovative aspects in the field of climate justice.

Specific climate justice knowledge and capacity:

- 1) More in depth understanding of the nature and impacts of specific climate smart technologies, including CA techniques and locally made fertiliser.
- 2) Advances will have been made in empowering the poor in decisions and access to resources through engaging vulnerable farmers in the participatory research. They will be the owners of the findings and will have access to knowledge and skills to tackle the effects of climate change and take action on pest control to regain control of their household food production. Both Tearfund and SOLDEV will learn a huge amount from this process.

- 3) Valuable insights will have been gained on proven soil enrichment technologies that can be replicated. The research will generate information that will be used to inform the Ministry of Agriculture, Irrigation and Water Development in effective management of FAW which come as a result of climatic effects, lots of rains followed by dry spells. Local farmers, project and government extension staff will gain valuable insights on proven soil enrichment technologies that can be replicated in other areas of Malawi. When these technologies are applied the capacity for tackling the effects of climate change will be significantly enhanced as a basis for other climate justice developments by Tearfund and the Partner and the wider reach of stakeholders mentioned.
- 4) Increased understanding of the behaviour of fall armyworms in relation to CA techniques. The research project is experimental in nature implying that if the treatments prove to be successful, both the farming community and implementing partner will learn of the best practices on effective management of FAW using local discovery methods. As such, the project plan to institute robust data collection and management mechanisms to be able to offer electronic and onsite visible evidence on proven technologies.
- 5) Tearfund Scotland will learn more and become ever more aware and understanding of the issues in Malawi and work to continue to build two-way working, appreciation and trust between Scotland and Malawi.
- 6) Tearfund Malawi and SOLDEV staff will have increased knowledge and confidence to be reference points for information sharing and dissemination within the field of climate justice in Malawi

Capacity built to benefit future climate justice work:

- 7) Increased skills and experience of Partner staff in conducting qualitative and quantitative research methodologies, in particular participatory research at community level. This will assist in quality management of current and future climate focussed projects.
- 8) Increased knowledge, skills and higher engagement of farmers in the Partner's geographic area of operation as a basis for future projects and/or as advocates for change locally and nationally if opportunities are provided.
- 9) Relationships of the Partner and Tearfund with the government Ministries relevant to climate justice will be enhanced and improved mutual understanding will be beneficial for future collaboration and advocacy. Similarly, with the University and Research Station.
- 10) Through networking and collaborative working in this project Tearfund and SOLDEV will have developed an active network of like-minded stakeholders which can continue to be used and built upon.

48. What is the role of the Scottish organisation in this project? What is the added value that the Scottish organisation brings beyond the funding? **Max 200 words**

Scottish expertise will be utilised in 3 main areas as follows: high-level project management; co-ordination of technical advice within Tearfund and; learning dissemination within Scotland.

The Tearfund Scotland Project Staff will:

- Provide high level project management support to the team in Malawi
- Co-ordinate any technical advice required from within Tearfund (e.g. on M&E and sector specific knowledge) by acting as a portal of international Tearfund expertise accessible by the Malawi team
- Provide 'surge' support where appropriate e.g. in supporting a start-up workshop 'in country or remotely' to help train partner staff on Tearfund quality standards and to help set up the M&E systems.
- Manage the contractual relationship with the Scottish Government;
- Provide guidance to the project in terms of what is/ is not allowed by the donor;
- Submit regular reports and work with the Scottish Government on any issues that affect the project and provide updates as required;
- Document project learning and case studies for dissemination within Scotland

This will be embedded at a contextual level to support the country office to implement the project effectively.

Section D:**MONITORING, EVALUATION AND LEARNING (MEL)**

This section should detail your monitoring and evaluation plans in relation to the outcomes and activities described earlier.

49. What monitoring information will you gather about the activities? Please describe how you will know whether your outcomes are achieved, and whether your innovation is successful? What evaluation activities will you carry out? What tools and indicators will be used? **Max 600 words.**

Monitoring will be end user focussed: using data to track progress and reporting the same to the donor, providing feedback to farmers and technical people and incorporating learning. To achieve this, the project will develop a common monitoring framework that will include stakeholders (target communities and government and NGOs) and facilitate learning. The framework will include data collection tools, methodologies and data bank to monitor progress.

Measurements of progress against outcome, outputs and activities

The logframe used to design the process will also be used as a monitoring tool. Activity progress will be monitored on monthly basis, outputs on quarterly basis and the outcome on annual basis. Monthly activity monitoring will be done by partner implementing staff using a project checklist of different activities. At the end of the month partner staff with project management committee will conduct meetings to discuss success and challenges and agree on the way forward. Each quarter, monthly reports will be consolidated and used to review progress against outputs as stipulated in the quarterly action plan. It will be submitted to Tearfund for review and follow up during quarterly monitoring visits. Each quarter the project will hold project peer review meetings to monitor project progress against targets. During the coordination meetings community project visits will be done to review project progress and get recommendations for improvement. In addition, meetings with district stakeholders will be conducted to assess progress towards outputs and outcomes, main challenges to implementation and key changes to improve project implementation and monitoring. In addition to regular accumulated data, the project will collect periodic data such as yield assessments in conservation farming and quantity of local fertilizer applied.

Research Tools and Indicators

The project is already a research project therefore formal evaluation procedures are in-built and will be carried out by the research associates within their project time. The project will mainly utilise quarterly reviews targeting both farmers and technical experts to evaluate level of performance. The project will develop onsite research tools to assist in collecting data on key stages of maize and FAW growth together with field husbandry practices. Focus group discussions for qualitative information, case studies and household/farm surveys will be used to collect vital farm statistics to assess impact of applied technologies. Data will be collected on the following indicators at defined points of the results chain as specified above;

Impact and outcome level

- 1) Length of hungry months that households manage without external support - at baseline households only have 5 months' stock of food which the project will increase to 9 months by Year 3 all assumptions holding equal.
- 2) Number of farmers that experience FAW damage - at baseline 300 farmers experienced FAW infestation and the project will reduce this to 50 farmers by Year 3 all factors being equal.
- 3) Number of farmers adhering to research protocols as guided by MOAIWD (3 plots-Treated, non-treated and Control) to ensure generation of credible information-at baseline zero farmer adhered but by end of Year 3 250 farmers will be expected to comply.
- 4) Percent of farmers applying CA skills and Locally made fertilizer to standard-no farmer applied the skills to standard at baseline but the project expects to see 85% of farmers complying by Year 3.
- 5) Unit area under mulch cover and local fertilizer per household-zero acres at baseline and average of one acre by Year 3.
- 6) Number of farmers applying the skills derived from evidence provided by the research- zero at baseline and 250 farmers by end of Year 3.
- 7) Number and nature of key decisions made by different stakeholders - zero decisions at baseline and two decisions (technology release and replication by other farmers) at end of Year 3.

50. How will you use and disseminate the learning from this project both successes and failures, to shape future work? **Max 400 words.**

SOLDEV will share the learning from the project through various avenues. At community level, there shall be quarterly community project reviews with beneficiaries and local partners (ADC, VDC, community leaders, local councillors, members of parliament and other community members) of action plans for each target area. Sharing and discussing the lessons learnt from reviews amongst these stakeholders helps to develop sustainability.

At district level, project outcomes will be shared with the Rumphu District Executive Committee (DEC) and the District Agriculture Extension Coordination Committee (DAECC). The former is a grouping of all heads of government offices and Non-Governmental Organizations at district level while the latter is a coordination body for all agricultural related activities at district level. The project shall also promote cross learning among development partners working in Rumphu district through information sharing during District Stakeholder Panel (DSHP) meetings which will include site project visits.

At national level, SOLDEV will share with experts through the Directorate of Agricultural Research Studies of the Ministry of Agriculture and Water Development. Again, there will be national stakeholder meetings with other Civil Society Organisation (CSO) and government department officials to share lessons learnt and best practices for possible replication in other parts of Malawi.

Tearfund in Malawi will seek to use forums such as the Malawi Scotland Partnership meetings to network with other NGO's and organisations involved in similar projects and to share learning with a wider audience within Malawi. Tearfund will also keep the GOM Food security cluster updated on the project and will include them in relevant dissemination meetings.

The project will produce case studies and newsletters and documentaries to share specific learning from the project and share with community members, government ministries and NGOs at district executive meetings (DEC). The purpose of this is to share the learning to wider public to enable replication and change of policy at local and national level.

The project will promote exchange visits between partners to learn from each other and share best practice every quarter. This will help ensure the project is implemented uniformly.

Within Scotland and the UK, the results will be shared with other Tearfund projects through existing internal learning channels and will be shared with other development actors using relevant network opportunities, including SMP and NIDOS events. Tearfund Scotland is taking part in the Scotland Malawi Partnership meetings on Agriculture and Food Security and will use this forum to share learnings and research findings to benefit other Scottish based stakeholders in the same field, especially smaller organisations, making proven technologies equally accessible to all who can benefit, disseminate further and put the knowledge into practice.

51. Please use the table below to give an overview of the monitoring, evaluation and learning plans

Role	What will be done, when and who will do it?	Which organisation
Monitoring of project progress	<p>SOLDEV will work closely with Tearfund project coordinator/ M&E advisor who will provide assistance with developing indicator tracking systems, databases, and software for data analysis. Tearfund will ensure that the M&E system provided by the project is applied well by its partners to ensure optimal functioning of the M&E systems. Below are some specific activities to be undertaken by Tearfund to support the partners:</p> <ol style="list-style-type: none"> 1. Coordinate M&E training sessions for its partner M&E staff and project coordinators 2. Provision of technical assistance on gathering and 	SOLDEV and Tearfund

	<p>analysing M&E information</p> <ol style="list-style-type: none"> 3. Compile and analyse all data from all implementing partners for the preparation of quarterly and annual reporting to Scottish government 4. Coordinate the organization of research information to capture real time evidence. <p>SOLDEV will provide monthly programme reports and finance reports to Tearfund and Tearfund staff will conduct monitoring visits to the project field sites and finance offices on a quarterly basis.</p>	
<p>Evaluation of the project</p>	<p>Being a research project, a large part of the project is self-evaluating (Outcomes 1 and 2) as in the course of the project UNULIA and Lungyangwa researchers will be evaluating the project on monthly basis in respect to the research questions being studied. However, the Lunyangwa Research station of the Ministry of Agriculture will also provide support to the farmers in their field trials to ensure that they are following all the recommended farming practices such as preparing land on time, planting on time, producing local fertilizer following a correct formula and apply it on time and weeding on time as recommended by both UNILIA and Lunyangwa researching experts.</p> <p>Outcome 3 will be evaluated by Tearfund Malawi staff based on meetings and results with MOAIWD against indicators in the logframe and Tearfund Scotland staff will also monitor progress via monthly skype calls and visits to Malawi.</p> <p>Regular review meetings are planned with data collectors and technical teams for peer evaluation at district level and the technical coordination meetings at national level will also play a part in the evaluation process. Key times for final evaluations will be after February 2020 for armyworm infestation levels and after the harvest in July 2020.</p>	<p>SOLDEV in collaboration with research associates</p>
<p>Learning from this project to improve future projects</p>	<p>The lessons learnt and /best practices will be of great importance to inform other players controlling or researching FAW. The project will share reports on the conservation agriculture, local fertiliser making and application and their observations on how these may reduce the negative effects of fall armyworm based on the various variables which will be tested. The learning report will provide information on FAW impact at various crop stages. This will contribute to Outcome 3: Improved national knowledge banks around the proven CA working techniques on FAW control.</p> <p>The project will make deliberate efforts to encourage peer learning and sharing using lead farmers as local champions to transfer knowledge to their peers. Lead farmers will conduct field follow ups and provide monthly feedback at village level for local learning. This will improve the monitoring and evaluation knowledge of the local community in the process assist in identifying what technologies works or not.</p> <p>Tearfund will internally share project learnings via Tearfund's regional in-country offices in Southern and Eastern Africa and</p>	<p>SOLDEV, TearFund, Scottish Government</p>

	more widely through the organisation via internal magazines, learning journals and online peer learning forums.	
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Section E: PROJECT BUDGET

Applicants are requested to complete the Excel budget spreadsheet with details of the project budget. The section below is for the additional information that is required to support your budget as presented.

52. Total funds requested from Scottish Government:

Year 1: Nov 2017 – Mar 2018 (5 months)	£ 31,297
Year 2: Apr 2018 – Mar 2019	£ 35,210
Year 3: Apr 2019 – Mar 2020	£ 33,417
Year 4: Apr 2020 – Oct 2020 (7 months)	£ 0

GRAND TOTAL £ 99,924

53. Please provide justification for any capital expenditure over £250 in your budget. An explanation of what constitutes capital expenditure has been provided in the guidance notes.

The partner requires a LCD projector to use for all co-ordination and dissemination meetings as these are an important part of the project. Currently SOLDEV does not have a projector since the breaking down of the one bought 3 years ago.

54. Please detail in the table below the international airfares in your budget; detail who the airfares are for, the dates, duration and reasons for travel. This applies to visits both to and from country. Please insert more rows if necessary.

Airfare (as detailed in budget)	Person travelling	To/From	Dates	Planned duration of visit	Purpose of visit
£800	Scotland Prog Officer	UK-Malawi	Tbc – year 1	7 days	to support the successful set up of the project
£880	Scotland Prog Officer	UK-Malawi	Tbc – year 3	7 days	to monitor progress and results and support dissemination activities

55. Please tell us about any matched funding sources for this project.

Matched Funding Source and Status		Matched Funding Amount				
Funding source	Are these funds secured?	2017/18	2018/19	2019/20	2020/21	Total

	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	£ 6,387	£ 5,136	£ 5,402	£ 9,820	£ 26,744
	Yes <input type="checkbox"/> No <input type="checkbox"/>	£	£	£	£	£
TOTAL MATCHED FUNDING		£ 6,387	£ 5,136	£ 5,402	£ 9,820	£ 26,744

56a. Will there be any other non-financial support for this project, i.e. in-kind contributions?

Yes

No

56b. If yes, please give details of what these might be.

There are many indirect costs incurred by Tearfund in delivering a project on behalf of Scottish Government, including head office costs such as audit, finance and logistics. Results from an independent audit conducted by the US government calculated Tearfund's indirect costs to be 14.18% for April 2014 onwards. Under Scottish Government guidelines, these costs cannot be charged to the project therefore Tearfund is contributing this support as a benefit in kind.² In addition, Tearfund and SOLDEV will be providing their own vehicles for use in the project.

All completed applications should be submitted by email to: international@tsbfoundationforscotland.org.uk to arrive no later than **12.00 noon on Monday 7th August 2017.**

Lloyds TSB Foundation for Scotland
Riverside House, 502 Gorgie Road, Edinburgh EH11 3AF
Registered in Scotland Number SC096068
Scottish Charity Number SC009481
international@tsbfoundationforscotland.org.uk

May 2017

² The NICRA is calculated by Tearfund periodically based on the audited financial statements of Tearfund UK. The NICRA calculated is then audited by US AID. As such, the rate differs overtime depending on the level of 'indirect costs' recorded in Tearfund's UK financial statements.