

***Project Title:** Vulnerability and Adaptation to Climate Change: *Integrating New Evidence into Climate Smart Policies and Practices in Semi-arid Regions*

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***By:** Mr Nicholas Hamer and Professor Sheona Shackleton

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1. The research problem

Project aims and objectives

The overall objective, or purpose of the research support Project, was to allow the recipient to cover the costs of preparation of the CARIIA full research proposal on *Vulnerability and Adaptation to Climate Change: Integrating New Evidence into Climate Smart Policies and Practices in Semi-arid Regions* (as per grant agreement)

2. Project implementation and management

2.1. Stakeholder Engagement Activities

2.1.1 Rhodes University

Rhodes University undertook stakeholder engagement activities at several different levels.

a. Consolidating the proposal within the University

Prof. Shackleton contacted numerous colleagues within Rhodes University to ensure that the proposal was firmly rooted across different department within the University and not only Environmental Science. Several meetings were held with colleagues from the Institute for Water Research, Institute of Social and Economic Research, Department of Sociology, Botany Department, Geography Department, Environmental Learning and Research Centre and the Drama Department, as with colleagues from the University's administration, including the Research division.

The outcome of these meetings was that we were able to finalise which departments would house postgrad students during the CARIIA project implementation and how the expertise of the various departments would be drawn upon to implement the CARIIA project. Please refer to Appendix 1a for the breakdown of the Rhodes University team composition that was finalised through this process.

b. Building aspects of the proposal with external stakeholders

In engaging with external stakeholders one important objective was to identify research sites within South Africa and so various partners were contacted to evaluate the potential of particular research sites. Professor Doreen Atkinson of the Karoo Development Foundation was contacted to discuss the potential for conducting research in the Karoo, while the Association for Water and Rural Development (AWARD) were contacted to consider the potential of sites in the north of South Africa. The outcome of this engagement was that we were able to narrow down our proposed research sites to 3 within the Eastern Cape, a potential 4th site in the north of South Africa.

A second aspect was to gauge the interest in our project design and to reflect on how stakeholder concerns regarding policies and strategies for climate change adaptation would shape our proposal. To this end the CARIIA proposal was discussed at a workshop on 12-15 August that was designed to synthesise the key policy findings of our current IDRC project for policymakers. Prof Lekule and Dr Sangeda from Sokoine University also attended this workshop, in order for us to better understand the context in which we were both working. The workshop finished with a meeting of provincial policymakers on 16 August and their feedback gave us additional insight into how the implementation around CCA could be improved in South Africa and how the CARIIA project would best collaborate with government policies and programmes. We also administered a questionnaire at this meeting to obtain stakeholder input regarding future collaboration. Ultimately this informed how the final proposal was developed, including the 'Research into Use' strategy (see attendees in Appendix 2 and questionnaire in Appendix 4). Dr Luthando Dziba (CSIR, South Africa) and Dr Susannah Sallu (Leeds University) were also in attendance at the IDRC Ecohealth policy message development workshop, which resulted in their agreement to collaborate on the CARIIA project.

Some of the issues that emerged from the stakeholder engagement process related to: 1) the silo mentality of government and the need for CCA to be multi-sectoral in nature; 2) food security; 3) lack of simple information on climate change and profiles; 4) the focus on mitigation; 5) the need for improved land use practices; 6) the need for more local level data and place-based case studies that can be scaled up; 7) the need for spatial planning; 8) the need to address poverty and HIV/AIDS; 9) need for socio-economic studies; and 10) the problem of dysfunctional service delivery.

A third aspect was to build partnerships with other institutions, nationally and internationally, who would collaborate with us during CARIIAA's implementation. To this end Professor Shackleton communicated with various institutions, such as CSAG at the University of Cape Town, CSIR, CCAFs and the Stockholm Resilience Centre. The outcome of this is that various partners have agreed to assist the implementation of CARIIAA (see Table 1 below).

Finally, international climate change experts were consulted, and agreed in principle to be part of the project's International Reference Team.

Table 1: Partners' collaborators

RU	RU cont.	UA	MSSRF	SUA	DHAN
Stockholm Resilience Centre (Oonsie Biggs, Maria Tenga) www.stockholmresilience.com	Southern African Programme for Ecosystem Services, Change and Society (SAPECS) www.sapecs.org	Climate Change, Agriculture and Food Security (CCAfs) www.ccafs.cgiar.org	Central Arid Zone Research Institute (CAZRI) www.cazri.res.in	International Livestock Research Institute (ILRI) www.ilri.org/kenya	Action for Food Production (AFPRO) www.afpro.org
Stockholm Environmental Centre (Anna Taylor) www.sei-international.org/staff	AWARD Association for Water and Rural Development (RESLIM Project) www.award.org.za	Centre for Environmental Policy and Economics in Africa (CEEPA) www.ceepa.co.za	Central Research Institute for Dry land Agriculture (CRIDA) www.crida.in	Foundation for Sustainable Rural Development (SURUDE), Tanzania	ICRISAT www.icrisat.org
Leeds University (Susannah Sallu) www.see.leeds.ac.uk/people/s.allu	Select Local NGOs: RuLiv (Eastern Cape)	The Economy and Environment Program for Southeast Asia (EEPSEA) www.eepsea.net/	Indian Agriculture Research Institute (IARI) www.iari.res.in	Tanzania Multisector Learning Association (TMLA)	National Institute of Hydrology-Belgaum regional Centre www.nih.ernet.in
CSIR (Luthando Dziba) www.csir.co.za/nre/ecosystems/	Open University/Emerald Network Ltd/ Global Climate Adaptation Network/ RU (John Colvin) www.sysweb.open.ac.uk	World Agroforestry Centre (ICRAF) www.worldagroforestry.org/	International Crop Research Institute for Semi-arid and Tropics (ICRISAT), Hyderabad www.icrisat.org	INADES Formation-Capacity building www.inadesfo.net	IWMI-TATA-Water policy www.iwmi-cgiar.org/iwmi-tata-water-policy
University of Cape Town, CSAG (Chris Brown) www.csag.uct.ac.za	SEAD (Strategic Evaluation, Advisory and Development Consultancy) (Kevin Kelly) www.sead.co.za	Centre for International Forestry Research (CIFOR) www.cifor.org/	Microsoft, Intel Corporation and QualComm, India corporate offices	Regalia Media (private sector) www.regaliamedia.com	
School of Agriculture, Earth and Environmental Sciences, UKZN (Roland Schulze – Professor Emeritus)	Karoo Development Foundation (Doreen Atkinson) www.aridareas.co.za	International Crop Research Institute for the Semi-arid tropics (ICRISAT) www.icrisat.org/	Select Local NGOs and Community Based Organizations based in Maharashtra and Odisha		

2.1.2 University of Alberta

Although the University of Alberta was not directly involved in engaging with project stakeholders at a country site level, they were nonetheless involved in activities best described under stakeholder engagement. As at Rhodes University, the University of Alberta ensured that the CARIAA proposal was firmly rooted across colleagues within the University. To this end a circular was sent out requesting that colleagues submit ideas on how they would like to become involved in the CARIAA proposal. Numerous responses were received and these have ultimately shaped the research design and the allocation of students across the University. Prof. Luckert and Swallow also participated at the 16 August meeting in East London, where discussions were held with policy makers on how the proposal could best respond to the South African policy context. Please refer to Appendix 1b for the breakdown of the University of Alberta's team composition that was finalised through this process.

2.1.3 Sokoine University of Agriculture

Sokoine University of Agriculture also ensured that work on the proposal development was carried out across University departments, including the involvement of researchers with the following expertise: animal science, agricultural engineering, forestry, agricultural economics, agronomy, and gender. Please refer to Appendix 1c for the breakdown of the Sokoine University of Agriculture's team composition that was finalised through this process.

Other stakeholders outside the University were also involved in the various aspects of the proposal development. Two days of meeting were conducted with key local partners to inform them about the CARIAA project and brainstorm the new proposal, with the following organizations being involved: Sokoine and Kibaha Research Institute (research), Tanzania Multisector Learning Association, SURUDE and INADES (NGOs), Regalia Media (private sector); International Livestock Research Institute (ILRI); three District councils and representatives from six villages.

The stakeholder engagement process identified the following research priorities:

- Assessment of the natural resource base (goods and services) that support rural livelihoods and their sustainability.
- Assessment and quantification of income sources and livelihood strategies in SARs of the study sites.
- Analysis of the risks and uncertainties that make people more vulnerable to climate change and other multi stressors.
- Assessment of barriers and local adaptive capacity across gender and other social groups.
- Analysis of policies and affordable practices to overcome barriers and consequences of climate change.
- Water issues: Investigation of viability of rain and surface water harvesting.

In addition, the core team at Sokoine had regular in depth meetings, where different aspects of the proposal were given to individuals to work on and to report back on at the next meeting.

2.1.4 DHAN foundation

Firstly the DHAN Foundation held internal discussions with their senior staff experts from research, micro-insurance, process documentation and communication, fisheries, coastal conservation and livelihoods and National Rural Livelihoods Mission, as well as further meetings with Agriculture Department officials. Please also refer to Appendix 1d for the breakdown of the DHAN foundation's team composition that was finalised through this process.

The DHAN Foundation took up stakeholder engagement in two different modes of consultation viz. a) the Multi-state Farmers Convention as part of their Agricultural Biodiversity, Food Security and Climate Change Programme and 2) a stakeholder's dialogue mechanism. In both processes, subject experts, representatives from academia, farmers, and women's self-help groups took part. A brief note of processes and outcomes are given below.

a. Farmers Convention on Agricultural Biodiversity, Food Security and Climate Change

The DHAN Foundation convened a farmers' convention on the said topic at Gandhi Museum premises in Madurai on July 13, 2013. About 100 farmers from Tamil Nadu, Karnataka, Odisha and Maharashtra took part. Besides that 40 international participants from the Agricultural Biodiversity Community from Africa and Holland participated as key observers. A renowned Gandhian Philosopher cum economist chaired the inaugural session and stressed the necessity of protecting the agriculture from the perils due to climate change and suggested relevant adaptation measures. A key note paper by an Agriculture Scientist was shared cautioning the threats faced by Indian agriculture and biodiversity in the wake of climate change events. Farmers representatives from each states shared their experiences and problems faced because of climate change. Five sub-groups were made out of participants to discuss their understanding of climate change, their risks and vulnerabilities and to deliberate on the coping mechanisms of the community, and expectations from government, academia and banks.

b. Stakeholder dialogue

DHAN foundation also organised a dialogue meeting face to face with the personnel involved in CARIAA proposal development process. On August 14, 2013, a consultation process was conducted at DHAN Foundation Conference Hall (see Appendix 3). Participants included farmers, self-help group members, experts on natural resources management, disaster and risk reduction, fisheries, coastal livelihoods, micro-insurance, and development education. Mr Ramasamy Adhinarayanan, Project Investigator of CARIAA from DHAN Foundation facilitated the process by explaining briefly about climate change and its impacts and briefed the group re CARIAA proposal objectives. The process led to following outcomes:

General Views: There was a strong agreement among all stakeholders regarding

- Variability in rainfall, temperature.
- Pest and diseases and impacts on livestock populations.
- Extensive soil degradation, widespread menace of *Prosopis juliflora*.
- Vanishing number of native tree species.
- Change in crop mix – mixed cropping to pure single crop trend.
- Absence of organic amendments.
- Season of crop cultivation changed.
- Poor access to knowledge and services.
- People mindset and cultural barriers.

Specific research questions/demands:

Related to Agriculture:

- Mapping the vulnerability, risks and indigenous coping practices.

- Comparison of people's perception/ experiences and scientific data.
- Resilience of farming community and role of agriculture biodiversity conservation in terms of climate change.
- Action needed for increasing resilience.
- Insurance for small millets and mixed cropping.
- Knowledge and practice change – Behavioral Change Communication.
- Subsidy for inorganic farming and change of subsidy for organic farming.
- Effect of climate change on soil health and its productivity in the semi-arid regions in different soils.

Related to Water:

- Study of surface water bodies storage pattern and implications on food security. (number of fillings and number of rainy days)
- Early warning system to reduce the effect/impact of climate change on livelihoods of farming communities and disaster risk reduction.
- Drinking water demand and supply - centralised distribution and shortage of drinking water in the villages during summer.

2.1.5 MSSRF

Firstly MSSRF held internal discussions with their senior staff experts with expertise relating to GIS, food security, biodiversity and vulnerability assessment and adaptation costs. Please refer to Appendix 1d for the breakdown of MSSRF team composition that was finalised through this process.

a. Stakeholder consultation for Vidharba Region, Maharashtra, India

A stakeholder consultation meeting was held in Wardha, Vidharba region of Maharashtra on 22 July 2013. About 30 representatives, both men and women, mostly farmers participated in the meeting. The consultation component was exploratory in nature, intended to:

- identify issues and priorities of the local communities
- understand ground realities especially, on how climate related impacts are affecting the local communities' lives and livelihoods and how they cope up with the situation

The discussions were predominantly open ended focusing on issues of poverty, vulnerability, farmer suicides, delivery services, state support systems, local institutions and prevailing adaptation mechanisms.

Most of the participants attributed the prevailing distress situation to recurrent monsoon failures and ineffective extension services. The commonly cited problems include lack of quality seed supply, water, irrigation facilities, power supply, technical skills, information on weather and markets, crop insurance, over reliance on cotton crop, low yield, indebtedness, poor soil and water quality and inadequate legal support to protect their rights. Some expressed the need to move away from traditional cotton crop to Jowar (sorghum) and tur (lentils) and requested measures to improve soil health and improve irrigation facilities. Women representatives spoke about the need to strengthen the role of extension services, self-help groups and promotion of entrepreneurship at the local level.

The participants were of the view that though there are special packages for the region, access is an issue.

In sum, the emerging priorities for the local communities include: (a) streamlining institutional credit flows; (b) investments in water harvesting structures and conservation facilities; (c) crop improvement advisories; (d) soil conservation; (e) improved extension services; (f) value addition to agricultural products; (g) steady power supply; (h) crop insurance; and (i) timely information to manage weather related risks; and (j) skills development.

2.2 Proposal Development Workshop

A proposal development workshop was held at Rhodes University between 18-24 August, with the representatives shown in Table 2 below.

Table 2: Proposal Development Workshop attendees

Institution	Representative
Rhodes University	Sheona Shackleton
	Charlie Shackleton
	Nick Hamer
	Georgina Cundill
	Tally Palmer
	Lawrence Sisitka
University of Alberta	Marty Luckert
	Brent Swallow
DHAN Foundation	Gurunathan Arumugam
	Adhinarayan Ramasamy
MSSRF	Arivudai Nambi
SEAD (M&E)	Kevin Kelly
Emerald Network (RIU)	John Colvin

The workshop commenced with presentations to bring everyone up to speed with the work being done by the consortium partners and the current draft of the proposal. The CARIIA instructions and application form were then used as a guideline to work through each of the main components of the proposal. Draft versions of the proposal sections were provided for participants to read through before each major discussion. Other major activities, such as the completion of the work plans for each partner and the finalisation of the budgets were also worked on. Table 3 below is the draft agenda we used to ensure that all aspects of the proposal were covered. The agenda was however kept flexible and items were moved as required. The objective of the workshop was to have a penultimate draft of the proposal, work plans and budgets by the end of the week.

Table 3: Agenda for Proposal Development Workshop

Date	Activity	Details	Outputs
Sun 18 Aug	Preparation for workshop Sheona, Marty, Brent and others	Incorporate feedback into draft sections for proposal, plan workshop. Print sections of proposal for days 1 and 2 so participants can read before discussing.	Printed versions of proposal and proposal instructions for everyone
Mon 19 Aug INTRO and MANAGE-MENT	Introductions Presentations on existing IDRC projects (Faustin, Brent, Sheona) Presentations on DHAN and MSSRF (A.Gurunathan and Mr. Adhinarayanan, Nambi) Management , organizational issues and governance (Marty)	10 min presentations that overview existing IDRC projects Discussion of how CARIAA will build on these 5- 10 min presentations on DAHN and MSSRF Work through the outline Marty has prepared. Check all the organograms. Agree on the proposed governance structure	Final/penultimate 10 page governance and management section
Tue 20 Aug RESEARCH & ACTION	Proposal preliminaries and research (Sheona) Conceptual frameworks (Sheona) Sites – short presentations by partners on proposed sites. Description for strategy and process for identifying research sites, size of target groups (All) Main research activities and methods (Marty) Who? Other collaborators Capacity building (number of students, social learning, research capacity development, exchanges) (not main focus) Cross- consortia themes (Marty)	Work through objectives, research problem and justification Agree on the conceptual framework and overall framing for the project. Develop a list of sites and an argument re how we will/have select/ed sites. Go through draft. Think about who we might want to include and how we will address these issues. What are some of the best bet options? Can we evaluate actions in existing sites? Re actions - Who, how, costs? When in project as need to think about in terms of work plans. What do we want common across sites. Theatre, SL, gardens, etc.	Final/penultimate 1 and 6 page objectives and justification section Conceptual frameworks and agreed approach for looking at vulnerability and adaptation. Research and activities for Work Packages clearly described List of best bet options List of research related to identifying options for adaptation. Better understanding of who will do this and costs.

Date	Activity	Details	Outputs
	Start discussion on actions – WP 3. (Nambi)		
Wed 21 Aug ACTION RESEARCH INTO USE, ENAGAGEMENT	<p>Continue discussion on actions. (Nambi)</p> <p>Presentations from stakeholder engagement at each study site (all partners) (stakeholder demand for research, priority research areas, etc.) (All)</p> <p>Short presentation on “research into use” ideas from John Colvin (more practical) (10b -15 mins)</p> <p>Short presentation on “theory of change” from Brent Swallow (more conceptual) (10 – 15 mins)</p> <p>Research in to use and theory of change</p> <p>Expected outputs (Charlie)</p>	<p>See above</p> <p>Work through ideas for the ‘research into use’ section including how the consortium will organise, share and translate research results and engage with relevant stakeholders. Agree on a practical framework and strategy.</p> <p>Work through ideas on “theory of change, anticipated outcomes and impact pathway”. Make sure it complements the research into use section. Agree on a conceptual framework. Make a list of anticipated results.</p> <p>Work through draft done by Charlie</p>	<p>Final/penultimate 5 page “research into use” section</p> <p>Final/penultimate 6 page theory of change section</p> <p>Final/penultimate list of outputs (1 page)</p>
Thur 22 Aug WORK-PLANS & BUDGETS	<p>General discussion re work plans: how to organise (e.g. according work packages possibly), degree of detail</p> <p>Budgets (Nick)</p> <p>Value for money (Nick)</p>	<p>All complete workplans in own groups and then present to team.</p> <p>All work through budgets own groups.</p> <p>Discuss how we can argue that we are providing value for money.</p>	<p>Work plans for each group</p> <p>Penultimate/final budgets for each partner</p>
Fri 23 Aug M & E	Budgets continued if not completed.		

Date	Activity	Details	Outputs
	M & E section. How to monitor and assess progress. Who. Use of M&E. Loose ends: ethics, risks, annexes Core team continue with writing		Draft material for each of these sections.
Sat 24 Aug	Core team write		Draft proposal with all sections completed

2.3. Writing up full proposal

By the end of the workshop we had made considerable progress towards meeting the objective of having a penultimate draft of the proposal. After the workshop individuals were tasked with writing up final drafts of the various sections, which were then reviewed by other team members. Consortium team members kept in regular contact via email and skype calls at this stage. The final draft of the proposal was edited by Sheona Shackleton and Marty Luckert, while Nick Hamer finalised the various budgets.

2.4 Technical and other support and administration by IDRC

Once the project was approved there were not any challenges relating to support and administration by IDRC.

2.5 Challenges

While writing the proposal a number of technical challenges were encountered regarding the templates supplied to submit the proposal and budgets. Having the proposal document set for printing on US sized paper, created problems when trying to print the work plans on A4 paper and created challenges in being able to work collaboratively on finalising the workplans. We were unable to print any of them. Ultimately an A4 version of the proposal form resolved this problem, however this was at a late stage and meant that some time was lost on carrying out this activity. Moreover, there were repeated occasions of Word crashing when we tried to cut and paste the workplans developed by each partner into the template. Sheona Shackleton ultimately had to retype them.

We also encountered a compatibility problem with the proposal development template and MS Office Word 2013, which made it impossible to open this file as it continually crashed. Marty Luckert in Canada had the same problem. This also created problems for printing.

The 'macro enabled' Excel budget spreadsheet had certain limitations with standard Excel features not functioning. This made it difficult to work with figures within the spreadsheet and some basic features, such as cut and paste did not function without compromising the layout of the cells. Another challenge with the Excel budget forms supplied for the CARI AA proposal was that the workbook struggled to handle the amount of information required for the consolidated budget, resulting in the

workbook freezing up and crashing the file on a regular basis. This meant it was not possible to adequately edit the final version of the budgets and time was lost on carrying out this activity.

As our proposal development approach and budget were drawn up prior to receipt of the full proposal development instructions, there were certain changes of emphasis in how the proposal was developed and who carried out the various activities. This meant that the proposed proposal finalization visits to India and Tanzania were not undertaken, as it was essential for Sheona Shackleton and Marty Luckert to work on the final version of the full proposal which was more time consuming than originally anticipated. These circumstances also meant that additional administrative support and support for the compilation workshop was drawn from Rhodes University as the consortium lead.

2.6 Other project management issues

The project has been fortunate in having efficient administration at both departmental and University levels, which has meant that there have been no major obstacles around effectively administering the project.

3. Recommendations

It is recommended that the aforementioned technical challenges are taken into account when developing future calls, as such issues create additional difficulties in the critical final stages of writing a proposal.

Appendices

Appendix 1: Member Institution Contact Information and Team Composition

1a: Rhodes

LEAD INSTITUTION CONTACT INFORMATION	
Name of Institution:	Rhodes University
Type of Institution: <i>(refer to instructions)</i>	Academic
Focus of Institution: <i>(refer to instructions)</i>	Academic Research
Mailing Address: <i>Building, Suite</i> <i>Number and Street or PO Box</i> <i>District, City</i> <i>Province/State</i> <i>Country</i> <i>Postal Code</i>	Rhodes University Department of Environmental Science Grahamstown Eastern Cape South Africa 6140
Facsimile Number:	+ 27 46 603 7574
Name of Principal Investigator (PI):	Sheona Shackleton
Telephone Number of PI:	+27 46 603 7009; +27 82 889 4075
Email Address of PI:	s.shackleton@ru.ac.za
Name of Administrative Contact:	Nick Hamer
Email Address of Administrative Contact:	n.hamer@ru.ac.za
Additional Email Contact: <i>(optional)</i>	c.shackleton@ru.ac.za

LEAD INSTITUTION TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Shackleton	Sheona	F	Professor	Livelihoods, ecosystem services, climate change adaptation, natural resource management, NTFPs	PhD	PI	66%
Hamer	Nick	M	Project manager	Environmental studies, project management	MSc	Project coordinator	100%
Palmer	Caroline	F	Professor	Water resource management, water quality, transdisciplinarity	PhD	Researcher/ supervisor	5%
Colvin	John	M	Visiting researcher	Research into use, social learning, policy	PhD	Advisor – research into use	5%
Lotz-Sisitka	Heila	F	Professor	Environmental learning, social learning	PhD	Researcher/supervisor	5%
Van Niekerk	Robbie	M	Professor	Social policy	PhD	Researcher/supervisor	5%

LEAD INSTITUTION TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Shackleton	Charlie	M	Professor	Ecosystem services, natural resource use, NTFPs	PhD	Researcher/supervisor	10%
Helliker	Kirk	M	Associate Professor	Land tenure, institutions	PhD	Researcher/ supervisor	5%
Cocks	Michelle	F	Senior Researcher	Culture, identity, indigenous knowledge, natural resources. Biocultural diversity	PhD	Researcher/ supervisor	5%
Gambiza	James	M	Senior lecturer	Land degradation, rangeland management, natural resource management	PhD	Researcher/ supervisor	5%
Cundill	Georgina	F	Senior lecturer	Social learning, institutions, social-ecological systems	PhD	Researcher/ supervisor	10%
Vetter	Susanna	F	Senior lecturer	Rangeland management	PhD	Research/ supervisor	5%

LEAD INSTITUTION TEAM COMPOSITION							
Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Sutherland	Alexandra	F	Senior lecturer	Drama for development	MA	Advisor	3%

1b University of Alberta

INSTITUTION 2 CONTACT INFORMATION	
Name of Institution:	University of Alberta
Type of Institution: <i>(refer to instructions)</i>	Academic
Focus of Institution: <i>(refer to instructions)</i>	Academic research
Mailing Address: <i>Building, Suite Number and Street or PO Box District, City Province/State Country Postal Code</i>	Department of Resource Economics and Environmental Sociology. University of Alberta 515 General Services Building Edmonton Alberta Canada T6G-2H1
Facsimile Number:	780 4920268
Name of Principal Investigator (PI):	Martin K. Luckert
Telephone Number of PI:	7804925002
Email Address of PI:	mluckert@ualberta.ca
Name of Administrative Contact:	Patrick V. Ndlovu
Email Address of Administrative Contact:	pndlovu@ualberta.ca
Additional Email Contact: <i>(optional)</i>	

INSTITUTION 2 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Luckert	Martin	M	Professor	Natural Resource Economics, Forest Economics, Development	PhD	Principal Investigator	35%
Parkins	John	M	Associate Professor	Rural and Environmental Sociology	PhD	Researcher	10%
Swallow	Brent	M	Professor and Department Chair	Environment Economics, Development Economics	PhD	Researcher	10%
Kaler	Amy	F	Assistant Professor	Social Structure and Social Policy	PhD	Researcher	5%
Adamowicz	Wiktor	M	Professor	Natural Resource and Environmental Economics	PhD	Researcher	5%
Parlee	Brenda	F	Associate Professor	Social Responses to Ecological Change	PhD	Researcher	5%
Wichmann	Bruno	M	Assistant Professor	Environmental and Resource Economics,	PhD	Researcher	5%

INSTITUTION 2 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
				Industrial Organization, Social and Economic Networks, Experimental Economics			
Marcoul	Philippe	M	Associate Professor	Financial Economics, Industrial Organization, Contract Theory	PhD	Researcher	5%
Jeffrey	Scott	M	Professor	Production and Resource Economics, Agricultural Business Management	PhD	Researcher	5%
Goddard	Ellen	F	Professor	Agricultural Marketing and Business, Consumer and Market Demand Policy	PhD	Researcher	5%

INSTITUTION 2 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Rhonda	Breitkreuz	F	Assistant Professor	Human ecology, Gender, Family and Policy Studies	PhD	Researcher	5%
Lars	Hallstrom	M	Associate Professor	Public, Environmental, Health and Rural Policy, Social equity, Knowledge transfer	PhD	Researcher	5%
James	Rude	M	Associate Professor	Trade Policy, Agricultural Marketing, Price Analysis	PhD	Researcher	5%
Henry	An	M	Assistant Professor	Agricultural Economics, Development Economics, Microeconometrics	PhD	Researcher	5%
Feng	Qui	F	Assistant Professor	Agricultural Policy, Price and Market Analysis, Agricultural Production and	PhD	Researcher	5%

INSTITUTION 2 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
				Supply, Risk and Insurance Modeling			
Mohapatra	Sandeep	F	Associate Professor	Agricultural economics, Applied Econometrics, Economic Development	PhD	Researcher	5%
Anders	Sven	M	Associate Professor	Food Marketing and Retailing, Value-chain Analysis, Industrial Organization	PhD	Researcher	5%

1c Sokoine University of Agriculture

INSTITUTION 3 CONTACT INFORMATION	
Name of Institution:	SOKOINE UNIVERSITY OF AGRICULTURE
Type of Institution: <i>(refer to instructions)</i>	ACADEMIC (UNIVERSITY/RESEARCH INSTITUTE)
Focus of Institution: <i>(refer to instructions)</i>	ACADEMIC RESEARCH
Mailing Address: <i>Building, Suite Number and Street or PO Box District, City Province/State Country Postal Code</i>	DEPARTMENT OF ANIMAL SCIENCE AND PRODUCTION P.O BOX 3004, CHUO KIKUU, MOROGORO. TANZANIA
Facsimile Number:	
Name of Principal Investigator (PI):	PROF. FAUSTIN LEKULE
Telephone Number of PI:	+255 754 690023, +255 787 690023
Email Address of PI:	lekulefp@yahoo.com , lekule@suanet.ac.tz
Name of Administrative Contact:	
Email Address of Administrative Contact:	
Additional Email Contact: <i>(optional)</i>	sangeda@yahoo.com , sangedaz@gmail.com

INSTITUTION 3 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Lekule	Faustin	M	Professor	Livestock Production	PhD	Co-PI (livestock based technologies to improve household livelihoods)	40%
Sikira	Anna	F	Senior lecturer	Rural Development and Gender	PhD	Gender and food security issues	30%
Kimaro	Didas	M	Associate Professor	Land Use Planning and Management	PhD	Land use planning and Agriculture	20%
Waized	Betty	F	Lecturer	Agricultural economics and Food Science	PhD	Food science and agricultural economics	15%
Sangeda	Anthony	M	Lecturer	Forestry and Range Science	PhD	Climate change, pastoralism and Forestry	40%
Nindi	Stephen	M	Principal research officer	Political ecology	PhD	Land Use Systems and Environment Management	15%

1d DHAN Foundation

INSTITUTION 4 CONTACT INFORMATION

Name of Institution:	DEVELOPMENT OF HUMANE ACTION (DHAN) FOUNDATION
Type of Institution: <i>(refer to instructions)</i>	NON GOVERNMENTAL ORGANISATION
Focus of Institution: <i>(refer to instructions)</i>	PRACTICE: LIVELIHOOD PROMOTION AND IMPROVEMENT FOR POVERTY REDUCTION
Mailing Address: <i>Building, Suite Number and Street or PO Box District, City Province/State Country Postal Code</i>	DHAN FOUNDATION 1A, VAIDHYANATHAPURAM EAST, KENNET CROSS ROAD MADURAI TAMIL NADU INDIA 625 016
Facsimile Number:	+91 452 2602247
Name of Principal Investigator (PI):	ARUMUGAM GURUNATHAN
Telephone Number of PI:	+91 9443419064, +91 452 2302580
Email Address of PI:	ghanfoundation@ghan.org
Name of Administrative Contact:	RAMASAMY ADHINARAYANAN
Email Address of Administrative Contact:	ghanfoundation@ghan.org , aadhi@ghan.org
Additional Email Contact: <i>(optional)</i>	ghantank@ghan.org

INSTITUTION 4 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Arumugam	Gurunathan	M	Program leader	Water resources development, and project management	PG Diploma in Rural Management	Co-PI	30
Marimuthu paramasivam	Vasimalai	M	Executive director	Strategic management, water management,	Masters in business	Project advisor /Think tank	10

INSTITUTION 4 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
				institutional development and governance building	administration (Ahmedabad)		
Ramasamy	Adhinarayan	M	Team leader	Climate change adaptation and natural resource development	BSc Agriculture	Project manager	80
Sivarajan	Gayathri	F	Team leader	Micro insurance, gender and development	BSc Agriculture	Insurance knowledge sharing, best bets	20

INSTITUTION 5 CONTACT INFORMATION

Name of Institution:	M.S.Swaminathan Research Foundation
Type of Institution: <i>(refer to instructions)</i>	Research NGO
Focus of Institution: <i>(refer to instructions)</i>	Practice: Agriculture & Rural Development
Mailing Address: <i>Building, Suite Number and Street or PO Box District, City Province/State Country Postal Code</i>	III Cross Road, Institutional Area, Taramani Chennai Tamil Nadu India 600113
Facsimile Number:	+91-44-22541319
Name of Principal Investigator (PI):	Arivudai Nambi Appadurai
Telephone Number of PI:	+91-44-6528 4773
Email Address of PI:	arnambi@yahoo.com
Name of Administrative Contact:	Mr. Sunder Vadivelu
Email Address of Administrative Contact:	climate_change@mssrf.res.in
Additional Email Contact: <i>(optional)</i>	k.sundervadivelu@gmail.com

INSTITUTION 5 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Appadurai	Arivudai Nambi	M	Director	Climate Change Adaptation	PhD	Co-PI Strategic leadership, Program Coordination	40%

INSTITUTION 5 TEAM COMPOSITION

Family name	Given name	Male (M) / Female (F)	Job title	Field of expertise	Highest degree obtained	Project role/responsibility	% time committed to project
Venkatachalam	Arivudai Nambi	M	Director	Biodiversity	PhD	Programme Implementation	20%
Patnaik	Unmesh	M	Principal Scientist	Vulnerability Assessment & Adaptation Costs	PhD	Situation Aanalysis, Economic Aspects	20%
Ramani	Rukamani	F	Director	Food Security	PhD	Local Instituions, Gender	10%
Anand	Jay	M	Senior Scientist	GIS	M.S	GIS, Filed Coordination	10%

Appendix 2: Rhodes University/ECSECC provincial stakeholder meeting

No	Designation	Name & Surname	Contact Number	Email
1	Secretariat/ ECSECC	Siv Hesjedal		
2	Secretariat	L Vellem		
3	Secretariat	Ms Z Ngesi	081 037 8639	zanele.ngesi@ectreasury.gov.za
4	Secretariat	Ms A Nakani	081 037 8648	andisiwe.nakani@ectreasury.gov.za
5	Lecturer	Anthony Z Sangeda	Sokoine University, P.O. Box 3004, Moragoro, Tanzania	sangeda@yahoo.com
6	Professor	Fuastin P. Lekule	Sokoine University, P.O. Box 3004, Moragoro, Tanzania	lekulef@yahoo.com
7	Professor	Martin Luckert	780 492 5002	marty.luckert@ualberta.ca
8	SLG	Nokhutele Mrasi	071 001 5018	
9	Provincial Secretary	Owen Sibusiso Ndidi	072 247 1721	owendidi@gmail.com
10	SLG	Ngolekalwelikhaya Ngaleko	071 248 5912	
11	Professor	Sheona Shackleton	082 889 4075	s.shackleton@ru.ac.za
12	Project Manager	Nomonde Hlatshaneni	043 701 3400	nomonde@ecac.org.za
13	Mr	Theuis Morgenths	043 683 5445	theuis.morgenths@drad.gov.za
14	Doctor	Pelisa Dana	082 480 6586	pelisa@ecac.org.za
15	Mr	Linsiwe Mabuya	076 364 3957	lmabuya@msh.org
16	Mr	Mfundo Mbashe		mfundo.mbashe@gmail.com
17	Mr	Bhasela Jalezo	073 187 4275	mabhaso@gmail.com
18	ECPC	Bayathokozisa Shweni	081 036 8669	bayathokozisa.shweni@ectreasury.gov.za
19	ECPC-Health	Xamlashe M	043 708 2135	xamlashefam@mweb.co.za
20	ECSECC. GIS SP	Bulelwa Lubelwana	043 701 3400	bulelwal@ecsecc.org
21	Dep of Agriculture, Director	Patrick Futshane	082 043 4322	patrick.futshane@drdar.gov.za
22	DDG: Rural Development	K R Manzi	079 194 1396	kunjulura.manzi@drdar.gov.za

23	Dietician	Nomsa Sighaza	071 719 8572	n.sighaza@gmail.com
24	Rhodes-IDRC	Nick Hamer	084 722 3458	n.hamer@ru.ac.za
25	CES	Alan Carter	083 379 9861	a.carter@cesnet.co.za
26	ECSECC/ECDC	Srutefedal	082 796 7033	siv@ecsecc.org
27	Rhodes University	Georgina Cundill	072 146 0007	g.cundill@ru.ac.za
28	EC Dept of Rural Dev and Agric Reform	Tina Rust	043 683 5488	tinarust@mweb.co.za
29	EC Dept of Rural Dev and Agric Reform	Jean Rust	043 683 5467	jean.rust@gmail.com
30	ECRDA	Luvo Qohgqo	071 605 8679	gonggol@ecrda.co.za
31	ECDC	Lutho Vellen	078 782 5475	luthovellen@gmail.com
32	UCT	Anna Taylor	072 411 1075	anna.taylor@uct.ac.za
33	PhD Student	Lrijaya Dassanayake	17802009798	dassanay@ualberta.ca
34	RULIV	Nik Hugow	083 680 4188	nik@ruliv.org.za
35	Rhodes University, Professor	C. Shackleton	046 603 7001	c.shackleton@ru.ac.za
36	SALGA	Z. Mpulampula	043 727 1150/ 078 457 7318	zmpulampula@salga.org.za

Appendix 3- DHAN Stakeholder Consultation workshop**Date: 14.08.2013****Venue: Central Office Meeting Hall**

S.No	Name	Location	Specialisation	Contact Number
1	Mr.R.Adhinarayanan	DHAN Foundation, CCA	Climate Change Adaptation	94438 32662
2	Ms.S.Gayathri	People Mutuals	Micro Insurance	98423 61013
3	Mr.S.Singarayar	Panchayat theme	Democratizing Panchayat institutions	94438 32322
4	Mr.P.Rajan	Tata DHAN Academy	Advanced Centre for Enabling Disaster Risk Reduction	90476 58160
5	Mr.N.Venkatesan	DVTF- Madurai	Water theme	
6	Mr.A.Madhankumar	DVTF- Madurai	Centre for Research	94860 17722
7	Mr.P.Subburaj	CALL Programme	Coastal conservation and livelihoods	98428 83251
8	Mr.K.N.Rajkumar	DVTF- Madurai	Micro Finance for farming	94864 67312
9	Ms.M.Ilamathy	Kurinji Vattara Kalanjiam	Canal irrigated farmer	77085 84798
10	Mr.S.P.Madhan Mohan	DVTF- Madurai	Fisheries	98421 79883
11	Ms.S.Devi	T.Kallupatti Vattara Vayalagam	Rainfed Farmer	95857 93987
12	Ms. Muthu Karuppayee	T.Kallupatti Vattara Vayalagam	Farmer	
13	Mr.R.Thangaraj	T.Kallupatti Vattara Vayalagam	Rainfed Farmer	96267 63958
14	Mr.N.Palaniraj	T.Kallupatti Vattara Vayalagam	Rainfed Farmer	97878 70551
15	Mr.A.Gurunathan	DVTF- Madurai	Water theme	94434 19064
17	Mr.A.Vellaisamy	Mudukulathur	Tankfed Farmer	97880 55754
18	Mr.M.Kalyana Sundaram	INAFI	Micro-finance and banker	99946 58887
19	Mr.P.Krishnamoorthy	CDC	Communication and documentation	94435-72724

Appendix 4- Stakeholder questionnaire

Stakeholder inputs for DFID-IDRC CARIAA proposal for a 5 year project on climate change adaptation in 3 countries

1a. Regarding vulnerability and climate change adaptation (CCA) in relation to poor people, what would you say are the priorities for the Eastern Cape?

1b. Nationally?

2. What are the key challenges wrt to implementing adaptation policies and programmes?

3. What kind of information/data would your sector need in order to work on climate change initiatives and strategies? What are the main gaps? What sort of research will be useful?

4. What do you see as the main barriers to addressing climate change adaptation in poor communities in your sector and other sectors? (can range from governance, to financial, knowledge, skills, etc.)

5. At what scale would you find information most useful and where are the gaps?

Level	Useful	Gap	Your priority
Provincial			
District municipality			
Local municipality			
Place-based case studies			

6. What do you think is the best way to involve stakeholders in a big project like CARIAA? How should we as researchers work with you?

7. Who should we be working with for the Eastern Cape? Who are the critical stakeholders?

8. What important structures are there to work with?

9. What existing projects/programmes do you feel we should link to?

10. What about links at national level?

11. Have you used research before in what you do? YES/NO

How useful was it?

How can it be made more useful?

12. What are the constraints/ limitations in terms of stakeholders being involved in such projects?