Qualifying indigenous knowledge on climate change

Climate change is a defining issue, with its impact reaching global, regional and local scales. The current magnitude and variability of climate change has critical implications for agriculture, fisheries, forestry, life histories, community composition, and ecosystem across Africa.

The Sub-Saharan African region is among the most vulnerable to climate variability and extremes, given that only 4 per cent of the cultivated land is irrigated and food production is dependent mainly on rain-fed agriculture.

Farmers have been modifying their farm practices to adapt to climate change, but this remains a challenge to sustaining household food security. Many case studies in East, West and Central Africa reveal that households are successfully using their Local Indigenous Knowledge and Practices (LIKPs).

Alumni, Nelson Chilambo (Zambia) - Master of Agriculture, 2008; Eric Ndeh Mboumien (Cameroon) - Master of Environmental Science, 2012 and Pamela William Levira (Tanzania) - Master of Climate Change Adaptation, 2009; met at the Australia Awards Mining and Agriculture Symposium in October 2014.

Symposium participants were invited to propose projects that they would like to create based on the discussions and networks established. The three Alumni proposed a project to gather evidence on LIKPs, disseminate evidence to relevant audiences, strengthen the capacity of farmers and stakeholders to develop and adopt policies that integrate LIKPs with scientific tools. This group received a small grant of $15,000.
Achievement of overall project objectives

The project achieved its intended objective to enable communities to understand climate change, how it impacts livelihoods, and how they could contribute to and address the global climate challenge. As part of the project, Alumni prepared and published a compendium of LIKPs from three project countries, Tanzania, Zambia and Cameroon. In Tanzania, the booklet is also available in Swahili.

Concrete results achieved

**Outputs:** The project benefited communities in the three countries of implementation and some results are:

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<td>The project raised awareness on climate change to more than <strong>200</strong> farmer representatives (50 from Zambia, 100 from Tanzania, 50 from Cameroon) through public meetings and site visits.</td>
<td>Three project signboards were placed at strategic locations in the three countries.</td>
<td>The project team prepared, documented and distributed <strong>300</strong> booklets of their indigenous practices in Cameroon, Tanzania and Zambia. In Tanzania distribution included the Tanzania Meteorological Agency, the Tanzanian National Library and UNESCO.</td>
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<td>Joint video documentary with a compilation of experiences and images that shows Alumni working with agrarian communities. (see YouTube link: <a href="https://www.youtube.com/watch?v=wlquFXT4Bto&amp;feature=player_embedded">https://www.youtube.com/watch?v=wlquFXT4Bto&amp;feature=player_embedded</a>).</td>
<td>Fifty radio slots aired in Tanzania as part of the awareness on climate change and how the community can adapt.</td>
<td>Multi–stakeholder information sessions held to present initial findings and analysis from the field, attended by <strong>293</strong> people: Cameroon - 102 (49 women, 53 men), Zambia - 96 (41 women, 55 men), Tanzania - 95 (45 women, 40 men)</td>
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<td>Focus group discussion organised with local farmer groups (3 Cameroon, 3 Tanzania and 3 Zambia) with a membership of at least 20 each. These supported improved knowledge on climate change and its impacts on communities.</td>
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**Outcomes:**

The project team completed a policy brief on LIKPs linked to climate change mitigation and adaptation. The first draft paper was submitted to UNESCO Local Indigenous Knowledge and Practices.

There has been a new and renewed interest in taking steps to address climate change by gradually reducing activities that contribute to the destruction of the environment and emission of greenhouse gases and the scaling up of tasks to enhance community adaptation. Communities have started sowing vibrant seed species and using other known LIKPs to curb pest and disease attacks in challenging weather and climate.

The project attracted international community interest, UNESCO Dar es Salaam Office invited Pamela Levira in December 2016 to Marrakesh to attend World Indigenous Conference and Community of Practice (CoP) 22 to share Tanzania’s experience on the value of indigenous knowledge.

Through the memorandum of understanding with the Copperbelt University, Zambia, the project worked with more than 230 students who benefited from the Alumni’s expertise.

As a result of public meetings and site visits, the project improved community understanding on the impact of climate change and their potential contribution to enhancing their livelihoods. For testimony of rural women during field interactions (see YouTube link: https://www.youtube.com/watch?v=BHDkUd1oCG4&feature=youtu.be).
Many institutions in the agriculture and environment sector, in other countries, are expressing interest in working with the Alumni to scale up the project. A CoP on Local Indigenous Knowledge and Practices linked to Climate Change Mitigation and Adaptation was created to share experiences in the three countries.

**Contribution to country development:**

The project will contribute to national goals of promoting food security in all three countries and address the sustainable development goal of eradicating extreme poverty and hunger.

**Ripple effects of the project:**

There are indirect project beneficiaries who benefited from the awareness campaigns, and data collection process. Overall, the project has impacted the lives of more than 500 participating households and 5,000 from site visits and knowledge sharing from the published booklet. The project allowed Alumni to continue collaborating with other projects, and the team has been writing concepts papers for funding. Pamela has been sharing the skills gained from the project with co-workers, and this has improved the quality of the organisation's concept notes. She has led in preparing more than three concept notes for the Tanzania Meteorological Agency.

In Tanzania, the team had difficulties in explaining the importance of LIKPs as there is no organisation in the district that represents persons living with disabilities.

In Zambia, Lwítikila ward of the Mpika district, the project impacted three persons with disabilities who were deliberately included to participate in the baseline survey. Through their participation, they contributed to the compilation of the LIKPs and applied the knowledge they gathered to their farming activities. They appreciated their involvement as there is no organisation in the district that represents persons living with disabilities.

**Challenges faced:**

In Tanzania, the team had difficulties in explaining the importance of the project to farmers as they were expecting immediate gains, including improved farm inputs and payments for contributing to the survey. The project team conducted awareness meetings with the community leaders explaining the benefits of LIKPs. Community leaders were then able to convince the community on how they were going to benefit from the project.

There was inadequate visibility of the project sites as funds provided could only cover one project information board in each country. The project also underbudgeted the publishing and site visit costs. To address this, the team sought assistance from different institutions such as Dares Salaam Street radio who provided slots for interviews to create community awareness on LIKPs. Support was received on printing the booklets from Tanzania Meteorological Agency and Action Group on Governance and Environmental Management in Cameroon.

It was also challenging to test the viability of some LIKPs described by the communities.

**Partnerships created:**

The project improved collaboration between the Tanzania Meteorological Agency and other national organisations focusing on climate change issues. For example, through the project, Tanzania Meteorological Agency collaborat-}

ed with six representatives from the Tanzania Association of Women Leaders, Agriculture and Environment in the design of the questionnaire and survey administration. Dr Karen McNamara, Senior Lecturer at the School of Earth and Environmental Sciences at The University of Queensland also supported with the project design and questionnaire development.

In Cameroon, the project collaborated with line ministries and institutes working in the agriculture, rural development and scientific research sectors. The project sought support from the divisional and sub-divisional delegates of Cameroon Agriculture and Rural Development (also known as MINADER), Livestock, Fisheries and Animal Industries and the Ministry of Women Empowerment and Family (MINPROFF), Environment, Nature Protection and Sustainable Development (MINEPSUD). These government officials facilitated the work and enhanced credibility in the communities. The relationship is expected to last as these departments will continue promoting the CoP and the use of LIKPs to mitigate drivers of climate change.

Further, in Cameroon, strong links have been established between organised farming groups in the six project sites in Cameroon including Optimist Friends Farming Group Bafut, Chain of Friends (COF) Farming Group Mbengwi, Bamenda II Poultry Farmer’s Union. A new collaboration was established with the Cameroon Ministry of Scientific Research and Innovation (MINRESI) to share project findings during the Cameroon Days of Scientific Innovation (JERSI).

**Sustainability and recognition:**

- The project empowered agrarian communities to co-create the global solution to climate change. The knowledge generated and compiled in a simple manual is valuable and able to benefit communities and those beyond the project area. Through the CoP, there will be ongoing discussions on LIKPs.
- The project aims to transform LIKPs into business and education opportunities for the participating communities. As a business opportunity, once the LIKPs are packaged as handbooks, they can be used to promote climate tourism in these communities. As an educational opportunity, it is anticipated that the packaged LIKPs will provoke interest for further research.
- The new collaborations forged with diverse stakeholders, across the three countries and other Alumni working in the same sector, may result in the replication of the project across Africa.
- The booklet on LIKPs, radio slots, social media and promotional materials included the Australian Aid logo and acknowledged Australia's support.
- The joint video available on YouTube recognises Australia's contribution.