



Healthy wetlands for the cranes and people of Rukiga, Uganda

Funded by the UK Government through Darwin Initiative



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A community member checks their net for fish, which are widely found in the wetland and a good source of protein.

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Background

Between 1986 and 2020, the Rushebeya-Kanyabaha Wetland, in South-West Uganda, has reduced in size by 33%, largely driven by expanding subsistence agriculture in an area with extremely limited livelihood alternatives. The remaining wetland and its catchment are rich in biodiversity, notably the Endangered Grey Crowned Crane, for which the wetlands are a critical nesting habitat. The c. 50,000 people of Rukiga also depend on the health of the wetland for their food and water security, livelihoods and health, including the ability of wetlands to slow the increasingly common floods, a result of climate change.

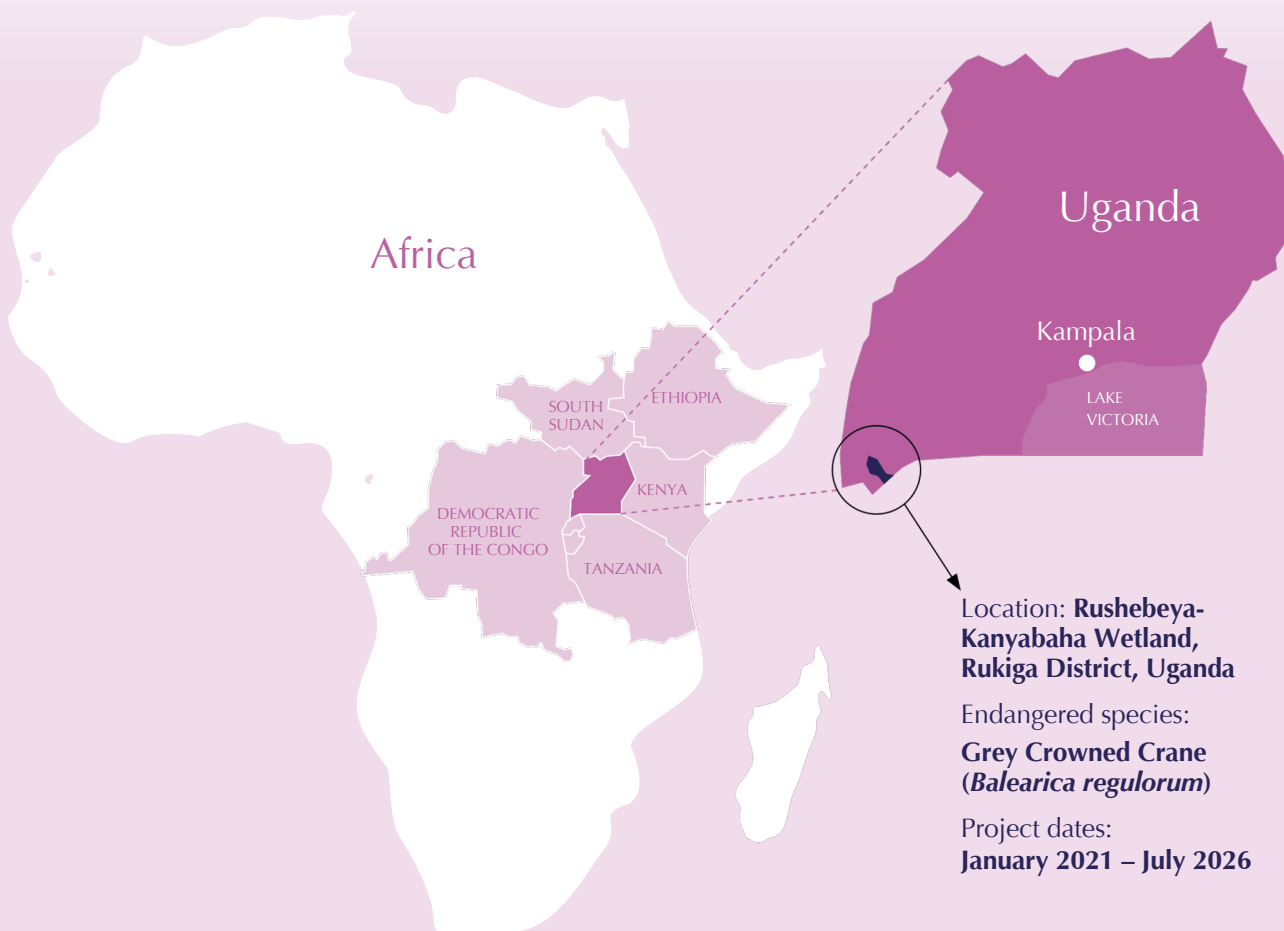
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“ ICF conserves cranes across East Africa, and there are no communities which are as supportive of our conservation work than the communities of Rukiga. We are convinced of the benefits of working in partnership with health organisations, to further both conservation and health outcomes, so we now plan to roll out this approach across the region. ”

Dr. Adalbert Aine-omucunguzi
International Crane Foundation/
Endangered Wildlife
Trust Partnership

*The Grey Crowned Crane (*Balearica regulorum*) is Uganda’s national bird and listed as Endangered in the IUCN Red List of Threatened Species. They mate for life and can often be seen dancing, bowing and jumping with their partner.*



Location: **Rushebeya-Kanyabaha Wetland, Rukiga District, Uganda**

Endangered species:
Grey Crowned Crane (*Balearica regulorum*)

Project dates:
January 2021 – July 2026

“Implementing a project focussed on environmental as well as human health has unlocked funding to ensure 50,000 people gain healthcare services from the 21 clinics our hospital was previously unable to support. Health services, for some of our most marginalised communities, has become possible only because of this multi-sectoral approach and a biodiversity donor. This is transformational.”

Dr. Rutaremwa Esther
Rugarama Hospital

Community Views

Research¹ undertaken within the project communities highlighted that the people living in the area have a deep understanding of the connections between their own health and that of their local environment. They spoke about how wetlands slow floods, provide food, like mudfish, and provide materials needed for handicrafts, such as baskets and mats. We heard how, due to climate change, unpredictable seasons and rainfall patterns are leading to crop failures and how floods and heavy rains destroy crops, leading to malnutrition. Relatedly, many people spoke about the challenges of large families, which diminish available farmland over time as parents subdivide land for their children’s inheritance, making it harder to feed everyone. This is exacerbated by the lack of quality family planning information and services, leading to larger families than desired. Alongside this, soil erosion, tree felling and a lack of anti-erosion measures further reduce soil quality and crop yields, increasing the need to convert remaining fragments of the wetland into agricultural land. Communities also told us how low incomes and poverty lead to gender-based violence (which puts women at greater risk of unintended pregnancy).

¹ Including 28 focus-group discussions and 40 key informant interviews.



A Conservation and Health Group show their first oyster mushroom harvest, only 30 days after receiving spores from project partners as part of ‘climate-smart’ agricultural training. Mushrooms are very nutritious and in high demand locally, so can be profitable for subsistence farmers.

“Our work in Rukiga is achieving such impressive results that an ever growing number of health and conservation organisations are seeking advice on how to replicate our approach. Project data has also been helpful in our work to change conservation policy, too. For instance, IUCN’s Global Species Action Plan references the importance of removing barriers to family planning as part of conservation action. Our project is having positive benefits far beyond Rukiga itself.”

Kathryn Lloyd
Margaret Pyke Trust

Our response

Given the connected human health, livelihood and environmental challenges community members told us they are facing, we are implementing an integrated programme of climate-smart agricultural livelihoods, healthcare training and service provision, wetland, upland and crane conservation and public education, directly responding to the calls of the community. To build resilient landscapes and communities for Rukiga’s cranes and wetlands, we have:

- Brought 400 hectares of wetland and 1,000 hectares of upland farm under Community Conservation Agreements, leading to habitat restoration and management.
- Reached 9,588 people with interactive education on human health, environmental health, sustainable livelihoods, and the links between them.
- Provided an additional 4,320 people with elephant grass stems, trained them in their use and coordinated community-wide action to stabilise hillslopes.
- Trained 292 healthcare workers and provided 16,311 health consultations (3,780 for family planning).
- Provided healthcare services at 21 previously un-used or under-used clinics.
- Trained 1,392 households on sustainable agriculture practices and market access (and supplied tools, seeds, and elephant grass stems).
- Trained and supported 96 farmers to establish oyster mushroom farming as part of climate-smart ‘backyard’ agricultural practices.

Results have exceeded our hopes and expectations. Between the 2020/21 and 2022/23 breeding seasons, there was a 227% increase in sightings of breeding pairs of Grey Crowned Cranes (11 to 36), and a 146% increase in the number of sighted juveniles that fledged (13 to 32). Agricultural output has increased by 122% in some sites, allowing women to reinvest surplus income into village savings and loan schemes. Data² shows 2,075 unintended pregnancies have been averted, helping women to plan their families around their income generating activities and other life plans.

² Calculated using “Impact 2” a socio-demographic mathematical model that allows us to estimate the impact of our healthcare provision.

Sustainable Development Goals advanced by our project



Community Conservation Groups weigh their climbing bean harvests ahead of market day. Climbing beans are an excellent source of dietary fibre and protein, they can survive in limited space, are quick growing and have high crop yields.

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“Using integrated health and conservation messages helps people to understand the relationships between human health, livelihoods and environment. Digging trenches and terracing slopes stops the most fertile soil washing away, helping crops, and the wetland and cranes below. Integrated messages [have] enabled women to use family planning without interference from their husbands [as] they have [heard] project messages on health, livelihoods and environment in community meetings and churches.”

Orishaba Allen
Project Peer Educator
and Rukiga resident



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Orishaba Allen, a peer educator in Rukiga District, is well-known in her community. She shares information to people about the connections between human health and environmental health.

Project design

One of several unique aspects of our project is its design. Our hypothesis was that an integrated approach to health, livelihoods and environmental activity would generate greater health and conservation outcomes than if actions in each of these sectors were delivered alongside each other but separately, as they ordinarily are. We therefore designed the project to allow for a comparative analysis between these two approaches. In phase one of our project (2021-2023), we had two types of project community, ‘parallel’ and ‘integrated’. In both areas, community members benefitted from the same health, livelihood and environmental actions but the way in which the activities were undertaken was different. In the ‘parallel’ areas, health actions were undertaken separately from the climate-smart agricultural livelihood and environmental actions, as if two projects were happening in parallel. In the ‘integrated’ areas every health, livelihood and environmental activity was adapted, using the connections between the way the community see their interrelated challenges, with project partners working together, to provide services and support in an integrated way.

Our results indicate our hypothesis was correct, there were even greater results in the ‘integrated’ areas. We have seen that in the ‘integrated’ areas, the community is even more supportive of project actions:

- Peer educators are more motivated and significantly more active and engaged, undertaking twice as many home visits, reaching more than five times as many people.
- Attendance by men and women at community talks on both health education and conservation increased by more than 50% exposing more men to health messages and more women to conservation and livelihood messages.
- More women attended health services.
- Women were 25% more likely to choose a long-acting and reversible contraceptive method, which is more effective at preventing an unintended pregnancy.
- Women were more protected from gender-based violence.
- Community Conservation and Health Groups saved more money and their membership grew in size by 20% more participants.
- Community Conservation and Health groups also implemented more environmental conservation activities (trenching, planting elephant grass, creating compost and waste pits etc) - 100% of the integrated sites had planted elephant grass, while only 30% of the parallel sites had.
- Men were more involved in discussions around family planning.
- Project partners were able to share resources and have access to wider networks and ways of working to increase efficiency and cost-saving.

“Our research has shown that delivering an integrated response to the interconnected environmental, livelihood and health issues people are facing, has better outcomes than when delivered separately. We have seen that cross-sector integration motivates both programme staff and users from the communities, leading to a higher quality of interactions and enthusiasm. This has the potential to reach non-beneficiaries and to influence programme development far beyond the project site.”

Professor Susannah Mayhew
London School of Hygiene
& Tropical Medicine

The future

Following our promising results, we have scaled our approach to landscape level, integrating all of our actions across all project communities. We are strengthening human and ecosystem resilience against climate shocks, building the resilience of 50,000 people who live in the wetland and its catchment, with further climate-smart livelihood, health and wetland conservation actions.

We are also undertaking further analysis to more deeply compare ‘parallel’ and ‘integrated’ qualitative and quantitative data. We believe this analysis might help others when considering project design and policy, as well as donors to better understand how to support successful and sustainable projects.

Contact

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Rukiga District has steep slopes on which smallholder farmers grow crops, and narrow wetland valleys, which are the predominant source of drinking water for communities.