JANUARY 2026 ISSUE

CoEB NEWSLETTER

RWANDA BIODIVERSITY CHRONICLE

Insights in Biodiversity Conservation and Research Advancement

In this edition:

- Director's message
- Conservation strategy and field research
- Research, innovation, and implementation
- Scientific seminars and knowledge sharing
- Biodiversity survey in remnant forests
- Recent publications

Written by : CoEB Team

Assoc. Prof. Venuste Nsengimana, CoEB Director

DIRECTOR'S MESSAGE

As we welcome 2026, I extend my sincere appreciation to all our partners, collaborators, and the team from the Center of Excellence in Biodiversity and Natural Resource Management for their unwavering achievements throughout 2025. Together, we achieved significant milestones, from advancing the Community-Based Biodiversity Conservation (COMBIO) and conducting Ndego Wetland Bioassessment necessary for the preparation of Kayonza Water and Irrigation Infrastructure (KWII) project and enhancing the Rwanda Biodiversity Information System (RBIS) for national data integration. These achievements were made possible through strong collaboration with the Ministry of Environment, Rwanda Agriculture Board (RAB), Rwanda Forestry Authority (RFA) and the International Union for Conservation of Nature (IUCN). Your continued support has been vital in turning scientific research into practical solutions that strengthen biodiversity conservation, climate resilience, and sustainable livelihoods. As we embark on a new year, CoEB remains committed to deepening research excellence, expanding partnerships, and promoting evidence-based biodiversity management that benefits both people and nature.

I wish you a prosperous, impactful, and collaborative 2026, a year of continued discovery and shared success in biodiversity conservation.

Rwanda's path toward a community-based carbon credit market

Group photo of community based credit market workshop

From 19–20 November 2025, the CoEB Director participated in a consultative workshop organized under the Community-Based Biodiversity Conservation (COMBIO) project. The workshop focused on designing a community-based carbon credit selling mechanism in Eastern Rwanda, an innovative step toward linking communities directly to national and international carbon markets. This initiative aims to enhance climate change mitigation, forest landscape restoration, and green economic growth. A major outcome of the initiative is the establishment of a Biodiversity Fund that will ensure sustainable financing for conservation efforts and community inclusive. The workshop provided a platform to strengthen institutional coordination and technical readiness for a functional carbon market system.

JANUARY 2026 ISSUE

## Ndego wetland bioassessment: Science Guiding Sustainable Irrigation

Under the Kayonza Water and Irrigation Infrastructure (KWII) Project, the Center of Excellence in Biodiversity and Natural Resource Management carried out a bioassessment of Ndego Wetland from 1–5 December 2025 in Eastern Province. The study established a biodiversity baseline to ensure that irrigation expansion aligns with environmental sustainability. Surveys across Kibare, Nasho, Ihema and water collection sites identified 93 bird species, including the endangered Grey-crowned Crane *(Balearica regulorum)*, and 101 plant species, among them four Albertine Rift endemics. The team also recorded 10 amphibian species, notably the endemic Rwanda Long Reed Frog (*Hyperolius rwandae*), and discovered *Povilla adusta*, a rare mayfly previously known only from Lake Tanganyika and 30 butterfly species. Findings confirmed that despite human pressures, studied areas remains a vital ecosystem, supporting a wide range of biodiversity.

CoEB exhibited at the 3rd UR Stakeholders' Meeting

From 29–31 December 2025, the Center of Excellence in Biodiversity and Natural Resource Management participated in the 3rd University of Rwanda Stakeholders' Meeting at Kigali Conference and Exhibition Village (KCEV). The exhibition featured flagship initiatives of the CoEB namely, the National Zoological Collection, National Herbarium, and the Rwanda Biodiversity Information System (RBIS), highlighting the biodiversity research, conservation, and digital data management. The exhibition attracted strong engagement from policymakers, students, and development partners, who praised work CoEB of in preserving biological heritage of Rwanda.

Enhancing biodiversity data management through RBIS training
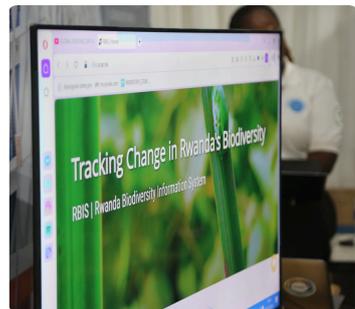
To enhance biodiversity data sharing under the Community-Based Biodiversity Conservation (COMBIO) Project, the Ministry of Environment (MoE) and the University of Rwanda, Centre of Excellence in Biodiversity and Natural Resource Management hosted a three-day training workshop on Rwanda Biodiversity Information System (RBIS) from 17 to 19 December 2025 in Bugesera District. The training brought together COMBIO focal persons from seven district of Eastern Province along with experts from MoE, RFA, IUCN, and ARCOS. The upgraded RBIS now enables users to generate biodiversity data, maps, and reports, strengthening the capacity of Rwanda for ecosystem monitoring and biodiversity conservation.

CoEB at the 2nd Rwanda conference on gender and climate change

The Center of Excellence in Biodiversity and Natural Resource Management (CoEB) participated in the 2nd Rwanda Conference on Gender and Climate Change, from 26–27 November 2025 at M-Hotel, Kigali. The event, themed "Elevating Evidence into Action: A Gender-Responsive Climate Policy Dialogue," was organized by the Women for Water and Climate Change Cooperation Network (WWCCN) in collaboration with the Ministry of Environment and partners including GIZ and GGGI.

The CoEB is committed to ensuring that climate and biodiversity research in Rwanda is scientifically sound, gender-sensitive, and socially inclusive.

Group photo at 2nd Rwanda conference on gender and climate change

UNIVERSITY of RWANDA

SCIENTIFIC RESEARCH SEMINARS AND KNOWLEDGE SHARING

From November 2025 to January 2026, the Center of Excellence in Biodiversity and Natural Resource Management hosted a series of seminars bringing together; researchers, lecturers, students, and practitioners to exchange scientific insights and field experiences. Discussions covered major themes including biodiversity conservation and ecosystem restoration, wildlife research and monitoring, and community-based approaches to sustainable livelihoods. Here are some of the presenters

BUTTERFLY FARMING FOR CONSERVATION AND COMMUNITY LIVELIHOODS

Delivered on 12 November 2025, Dr. Jean de Dieu Uwizelimana, Lecturer at the University of Rwanda and Research Associate to the CoEB, presented findings from his project on community-based butterfly farming at Ibanda-Makera Forest. His research documented 112 species, including those of high ecotourism and educational value and he has highlighted that the project trained 50 local residents in butterfly breeding and host plant propagation. Dr. Uwizelimana explained that butterfly farming not only supports forest restoration and environmental education, but also improves local income, contributing to 25% increase in household earnings. He concluded that integrating such initiatives into conservation strategies strengthens community ownership and enhances biodiversity protection across Rwanda's forest landscapes.

TREE-BASED LIVELIHOODS IN REFUGEE SETTLEMENTS

On 19 November 2025, Ms. Sarah Juster, a PhD candidate at Virginia Tech (USA), shared research from Imvepi Refugee Settlement in North western Uganda. Her study involved 400 households and examined how refugees and host communities use tree-based solutions for food, fuel, and ecosystem stability. Her findings showed that integrating agroforestry and reforestation practices reduced fuelwood conflicts by 40%, improved soil fertility, and promoted collaboration between displaced and host populations. Ms. Juster emphasized the importance of incorporating traditional ecological knowledge into humanitarian and environmental planning, noting that tree planting can serve as both a peacebuilding and restoration tool in displacement settings.

A BUILDING CAPACITY IN APE RANGE COUNTRIES FOR PROTECTING GREAT APES

Delivered on 26 November 2025, Dr. Tene Sop from the International Union for Conservation of Nature (IUCN) presented the findings of the study on the newly established Ape Institute for Conservation Science, which supports research capacity building in African and Asian ape range countries.
He reported that Africa hosts nearly 95% of the world's great ape populations, yet faces critical data gaps and limited local expertise to guide conservation policy. The institute aims to strengthen regional databases, train local scientists, and promote evidence-based decision-making for ape protection. Dr. Sop emphasized that empowering African researchers through data sharing and technology will ensure that great ape conservation remains locally driven and scientifically grounded.

JANUARY 2026 ISSUE

ADVANCING MAMMALOGY RESEARCH IN RWANDA

On 10 December 2025, Mr. Methode Majyambere, a PhD candidate and an Assistant Lecturer at the University of Rwanda, presented the findings of the study on diversity and conservation of mammals in Rwanda. His analysis identified 215 mammal species, ranging from small rodents to primates, with significant populations in protected areas such as Nyungwe and Akagera National Parks. Majyambere emphasized the need for capacity building and funding to advance mammalogy in Africa. He proposed establishing regional research networks, mentorship programs, and stronger collaboration among African universities. He concluded that improved mammal research would contribute to informed conservation policies and the protection of Africa's unique biodiversity.

INDIGENOUS TREE RESTORATION ALONG MUKUNGWA RIVER

Presented on 17 December 2025, Mr. Safari Claude, Head of Programs at the Wildlife Conservation Initiative (WCI), shared results from the Indigenous Tree Restoration Program in Nyabihu District. The initiative restored 25 hectares of degraded land along the Mukungwa River buffer zone using 15 native tree species, achieving 85% survival rate within the first year. Claude explained that combining scientific restoration methods with traditional planting knowledge helped engage youth and local communities, ensuring project sustainability. He highlighted that reforestation of riverbanks improves soil stability, reduces flooding, and enhances biodiversity, aligning with Rwanda's national restoration goals.

GROWTH AND SURVIVAL OF NATIVE TREE SPECIES IN COMBIO SITES

Delivered on 24 December 2025, Mr. Julien Nsanzimana, Founder and Director of NextGen Urban Link Hub, presented findings from six COMBIO Project restoration sites in Eastern Rwanda. His study assessed the growth performance and survival of native tree species across different soils and rainfall zones. Mr. Nsanzimana reported survival rates ranging from 60–100%, with resilient species achieving 4.8 meters in height after one year. He recommended species-site matching, the use of organic fertilizers, and community training to enhance reforestation success. His findings provide valuable data to improve climate-resilient landscape restoration across Rwanda.

SANITATION SYSTEMS AND URBAN ENVIRONMENTAL SAFETY IN KIGALI

On 14 January 2026, Ms. Marie Léonce Murebwayire, PhD candidate at the University of Rwanda College of Science and Technology, presented her research on onsite sanitation systems and their impact on fecal sludge characteristics in Kigali. Surveying 300 households, she found that 80% rely on onsite systems, yet 52% fail to meet national compliance standards. Ms. Murebwayire noted that poor operation and maintenance practices reduce treatment efficiency and increase environmental risk. She urged stronger policy enforcement, better system designs, and public awareness to improve sanitation and protect urban ecosystems.

JANUARY 2026 ISSUE

BIODIVERSITY INVENTORY IN REMNANT FORESTS IN RWANDA

The CoEB conducted a comprehensive biodiversity inventory in the remnant forests of Eastern Rwanda specifically in Nyagasenyi, Ibanda-Makera, and Western in Sanza. The study aimed to establish a scientific baseline for conservation planning, and long-term biodiversity monitoring. By comparing species richness and composition across the sites, the assessment provides insight into their relative ecological integrity and conservation significance.

PLANTS

The survey recorded 337 plant species distributed in 87 families and 38 orders of these, 261 species are native, while 76 are introduced, including 16 classified as invasive.

VERTEBRATES

The vertebrate assessment revealed high faunal diversity across the three forests. Bird surveys documented 134 species of birds. 15 species of mammals, including forest-dependent species such as the four-toed sengi (*Petrodromus tetradactylus*). The herpetofaunal inventory identified 17 amphibian and 13 reptile species, including three Albertine Rift endemics, the Near Threatened African rock python (*Python sebae*), a potentially new toad species (*Sclerophrys sp.*), and a possible new national record for a skink (*Trachylepis cf. quinquetaeniata*).

INVERTEBRATES

Invertebrate surveys further demonstrated species of 122 butterflies and 35 species of months, distributed into 11 families. Soil-litter sampling yielded 124 families and 22 orders, while three phyla and five classes of water macroinvertebrates were identified in the study.

PUBLICATIONS

1. Ntirenganya, E., Goftishu, M., Sokame, B. M., Assefa, Y., & Nsengimana, V. (2025). Pest status and dynamic of sugarcane stemborer (Eldana saccharina) in sugarcane plantations of Nyabugogo tropical Wetland, Rwanda. International Journal of Tropical Insect Science, 1-14. Read more

2. Majyambere, M., Niyodushima, P., & Nsabimana, A. (2025). Optimizing Field Taxonomy: Development of a Field-Adapted Identifi-cation Key to the Rodents of an Afromontane Tropical Rainforest. Read more

3. Dusabimana, J. C., Mind'je, R., Mupenzi, C., Mindje, P. K., & Mindje, M. (2025). Spatio-temporal land use/land cover changes and subsequent ecosystem service value dynamics in Musanze District, Rwanda. Environmental Monitoring and Assessment, 197(11), 1-19. Read more

4. Borzée, A., Prasad, V. K., Neam, K., Tarrant, J., Kosch, T. A., Barata, I. M., ... & Wren, S. (2025). Conservation priorities for global amphibian biodiversity. Nature Reviews Biodiversity, 1-18. Read more

OUR PARTNERS

Ministry of Environment

Republic of Rwanda - Ministry of Education

UNESCO - United Nations Educational, Scientific and Cultural Organization

CNRU - RWANDA National Commission for UNESCO

REMA

RAB

RDB - RWANDA DEVELOPMENT BOARD

RFA - RWANDA FORESTRY AUTHORITY - Nurturing Rwanda's Green Heritage

NYUNGWE NATIONAL PARK RWANDA

DIAN FOSSEY GORILLA FUND - Helping People. Saving Gorillas. - EST. 1967

Akagera NATIONAL PARK RWANDA

LEUPHANA UNIVERSITÄT LÜNEBURG

Coeb Rwanda   coebrwanda   CoEBrwanda

https://coebiodiversity.ur.ac.rw