

AFRICAN CONFERENCE FOR LINEAR INFRASTRUCTURE AND ECOLOGY



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The second African Conference for Linear Infrastructure and Ecology (ACLIE), co-hosted by the Endangered Wildlife Trust (EWT), Grevy's Zebra Trust (GZT), and Ewaso Lions (EL), took place between 12 and 17 August 2021. The first ACLIE conference was held in 2019 in the iconic Kruger National Park, South Africa, with 115 participants from 21 countries. ACLIE 2021 attracted almost 200 participants from 25 countries, 11 of which were African. We also had participants with diverse backgrounds from the engineering, ecology, policy, and finance sectors.

Linear infrastructure is essential for connecting society: our roads, railways, pipelines, and power lines all serve to link our cities, developments, resources, energy and water supplies. Therefore, it is perhaps ironic that linear infrastructure does exactly the opposite for natural systems – by crisscrossing landscapes, linear infrastructure serves to fragment ecosystems, isolate populations, and reduce natural flows. Roads, railways, fences, and power lines constrain animal movement, pose direct threats to species from collisions and indirect threats from increased human access to previously untapped resources, and new pathways for invasion by alien flora and fauna, with significant ecological consequences.

In many ways, Africa represents the final frontier for infrastructure development. The continent's population has doubled in the last three decades and currently stands at 1.3 billion. Most experts agree

that if it continues at its current rate, Africa's population will double again by 2050. This means that about two-thirds of the world's population growth is expected to take place on our continent, and by 2050 Africa will be home to more than a quarter of the world's people. As populations and economies grow, they require greater investments in infrastructure. Over the next few decades, we will need significant investments in railways, roads, energy, and other infrastructure to meet the growing demands of emerging African economies.

ACLIE 2021 intends to foster and build on cross-sectoral African engagement and encourage the exchange of solutions around "Connecting for Resilience". Considering the most pressing issues of our time - climate change, biodiversity loss, COVID-19, and the spectre of future pandemics - efforts to maintain ecological and human resilience are critical. The ability of ecosystems to maintain their functions and services is fundamental to sustainable development and human health.

This year's conference was centred around four major sub-themes, one for each day.

- **The first theme was centred around adapting to climate change:** *ACLIE 2021 aimed to play a role in mainstreaming the topic of linear infrastructure into climate change adaptation discussions and research, viewing this as critical for holistic planning and sustainable outcomes.*
- **Theme two focused on innovating for mitigation and improvement:** *ACLIE 2021 highlighted existing African and global examples of innovation while promoting stronger communities of practice, knowledge-sharing, and policy that can support the development of context-appropriate mitigation solutions for linear infrastructure in Africa.*
- **The third theme was planning for snowballing, and cumulative impacts:** *ACLIE 2021 furthered the discussion on planning for cumulative impacts by highlighting research, good practice, examples of coordination, and opportunities for policy development and implementation.*
- **The fourth and final theme centred on applying economic tools and finance for reducing environmental impacts:** *ACLIE 2021 fostered cross-sectoral and practical discussions on how practitioners in Africa can engage with the full suite of economic tools and financing for improved mitigation outcomes.*

After nearly a year and a half of the global pandemic, we're all extremely familiar with online engagement, and this format has certainly enabled the participation of people from afar and allowed for constructive interaction among participants.

Each day, this conference kick-started with an indaba, with a line-up of esteemed experts who shared their insights around the specific theme for the day. These were followed by the 20x20 sessions, where a series of presenters presented 20 images from a project they are involved in for 20 seconds. These included mitigation measures used in Cape Town to assist the Endangered Western Leopard Toad to cross the road, the use of a remotely piloted aircraft system (i.e., a drone) for marking power lines, and using bioacoustics methods to understand the linear movement of Endangered marine mammals. There were so many fantastic presentations about African issues that it is hard to select just a few to provide examples.

A new type of presentation for ACLIE was the Lion's Den session, which provided a space where solutions were pitched to a panel of leaders, with opportunities for questions and input from the

audience. Pitches included an intelligent green and grey infrastructure design system (iGGIDS), which obtained buy-in from the 'Lions', and the redesign of a roadkill reporting app.

Each of the first three days ended off with specialist training sessions delivered by leaders in their fields. This kind of training contributes strongly to the capacity building element of ACLIE and featured training on 'Economic tools for informing linear infrastructure decision making', energy system reliability through wildlife interaction mitigation', and 'design, construction and maintenance of wildlife crossing structures'.

Leonard Sielecki, Wildlife Program Manager from the British Columbia Ministry of Transportation and Infrastructure, said, *"I am very impressed by the large South African and African representation. You have attracted a very impressive, very comprehensive range of wildlife protection-related people from the African Continent."*

Further to this, Kishaylin Chetty, Senior Environmental Advisor for Eskom, said, *"The ACLIE conference is an exceptional event, that coordinates industry, civil society, government, and specialists to come together to discuss theory and feasibility surrounding linear infrastructure and its practice through Africa. The conference is a founding pillar towards responsible development in Africa."*

"ACLIE has been an extremely important convergence of knowledge, expertise, and practice from the linear infrastructure and ecology and conservation worlds. We have seen everything from demonstrations of laying overpasses to the importance of road verges and powerline diverters. Critically, we have also received commitments from major financiers of how they intend, and are, streamlining their policies to ensure that, as Africa builds new infrastructure, our landscapes will remain connected, and we will remain the drivers of the process. There are few things more hopeful". Resson Kantai Duff, Deputy Director of Ewaso Lions

"Despite the challenges of holding a conference remotely, ACLIE 2020 was superbly organised and moderated. Participants were lively and active, and I got to meet and learn from a lot of globally experienced ecologists and industry professionals. I especially enjoyed listening to cutting edge innovations in modelling and data collection as well as successful Private-Public Partnerships that have informed infrastructure development. Can't wait for the next conference!" David Kimiti, Deputy Director Research and Impact, Grevy's Zebra Trust

We want to extend our thanks to AfricaMassive for logistical support of the event, Dr Rodney van der Ree and Dr Fraser Shilling for the donation of the prizes, and all the speakers and attendees, without whom this conference would not have been possible.

Finally, we'd like to announce that the next ACLIE will be held in Kenya in 2023.

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Kind Regards

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The core supporters of the Wildlife and Transport Programme are Bakwena Platinum Corridor Concessionaire, De Beers Group of Companies, Ford Wildlife Foundation, N3 Toll Concession and TRAC N4, dedicated to minimising the negative interactions between wildlife and transport infrastructure

Who we are: <https://youtu.be/CPXUvmVyIWc>

The Endangered Wildlife Trust fully supports the efforts of our government to stem the rate of transmission of the COVID 19 virus and is committed to playing our part in being a responsible global citizen. As a result, the EWT head office will remain closed from the 18 March and we will not be engaging in any public events, meetings or gatherings. The EWT will however continue to operate at full steam, albeit from different locations. Our staff are available on email, cell phone and will hold meetings via various platforms such as Skype and Zoom. Our field staff remain committed to providing mission critical field services and support to our partners as required. We wish all effected people a speedy recovery over this time and we remain committed to seeing our beautiful country prosper once this difficult time has passed. For more information please contact ewt@ewt.org.za