



Committee on Ecology and Transportation Newsletter

September 2019



The Chair's Message

*Daniel J. Smith, PhD, AICP
University of Central Florida*

ADAPTING TO CHANGING TIMES

By now most of you involved in TRB have heard about the current effort to reorganize the Technical Activities Division which includes the more than 200 standing committees. The TRB Technical Activities Division staff has been hard at work since last January's Annual Meeting coordinating with the Technical Activities Council and the Group, Section and Committee Chairs to develop a newly-realigned committee structure that will best sustain our capacity to attract the next generation of the brightest, most knowledgeable scientists and practitioners, continue to develop novel, innovative ideas, deliver valuable, cutting-edge peer-reviewed research and effectively disseminate this information to the nation's transportation community far into the 21st century. Decisions on the proposed realignment of the standing committees is coming soon. For now, you can review the status of this effort and still provide valuable input by visiting <http://www.trb.org/AboutTRB/TADStrategicAlignment.aspx>.

In keeping with the proposed realignment, updates to the TRB Strategic Plan and Critical Issues in Transportation have recently been released. Below is an excerpt from the TRB webpage describing the elements of each of these documents.

“The Executive Committee of the Transportation Research Board developed the current Strategic Plan, which was adopted on June 19, 2019. It includes an environmental scan, mission and goals, performance assessment, gap analysis, and objectives and action plan. The Executive Committee's Subcommittee on Planning and Policy Review has responsibility for updating and monitoring progress on the plan, which is viewed as a dynamic document. TRB Strategic Plans are developed about once every five years.

The Executive Committee also periodically compiles and updates a list of Critical Issues in Transportation—a document that has the broader purpose of identifying key areas and concerns of current interest to the transportation community. Critical Issues in Transportation was last updated in 2019 and, before that, in 2013. Previous editions of Critical Issues in Transportation have highlighted many of the issues that threaten the performance of the nation's transportation system. In recent years, the Executive Committee has added the need to respond to natural disasters; highlighted how transportation has become ever more linked to broader issues in society and in the economy; and drawn attention to the role transportation plays in energy and environmental issues.”



ADC30 Engages in Social Media

It's my pleasure to announce the launching of our brand-new Twitter account! That's right, we are officially joining the community of social media. Let's give a big shout out to Maggie Johnson for getting this up and running for us. Now I realize for many of us (me included) this is an unfamiliar and perhaps challenging new means of communication, and generally we've resisted engaging in it because we are already overwhelmed by our traditional forms of communication, but it's free, simple and an effective means to communicate your

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work and connect with the ADC30 community. Maggie has written a detailed article in this newsletter to guide you through the steps to engage on Twitter and contribute to broadening our exposure. Let the tweets begin! <https://twitter.com/EcologyTrans>.

Networking and Professional Development at the International Conference on Ecology and Transportation (ICOET 2019)

In less than a few weeks we'll be gathering for our mid-year meeting in conjunction with ICOET 2019 in Sacramento, CA.

The theme of this year's conference will be Achieving Balance in Ecology and Transportation. For more information, please read the feature in this newsletter on the conference provided by Deb Wambach. I look forward to seeing all of you planning to attend.

Lastly, I remind everyone to check our website www.ecologyandtransportation.weebly.com for periodic updates and announcements. On behalf of TRB, many thanks to those that submitted articles and to the steadfast members and friends of the Committee for their valued service.

Systematically Avoiding Violations/Promoting Stewardship NCHRP EMS Benchmarking Tool Now Available

Submitted by: Gary R. McVoy, Ph.D., McVoy Associates, LLC

The NCHRP 25-25, Task 111 Report on Environmental Management System Perspectives for State Departments of Transportation was recently completed for the AASHTO Committee on Environment and Sustainability by the Louis Berger Group with Dr. Gary McVoy PI, Robin Maycock PM, Douglas Parker, Researcher; and Wayne Kober as Senior Advisor. The NCHRP study examines how transportation agencies (DOTs) created, developed and are currently using Environmental Management Systems (EMS) in the context of ISO 14001.

An EMS is a systematic process for planning, executing, checking, revising, and improving environmental stewardship. Most commonly expressed in terms of "Plan-Do-Check-Act", EMS is the standard means for effective environmental compliance. The study found that individual units within DOTs including Capital Program NEPA compliance, Equipment Maintenance, Highway Maintenance Facilities, Highway Maintenance Activities, and Bridge Maintenance all incorporate EMS elements into their standard procedures. However, in practice - DOTs are often limited in their ability to proactively track or improve

environmental performance in a systematic manner due to gaps in the suite of interdependent EMS Plan-Do-Check-Act elements.

In order to improve understanding and awareness of EMS and facilitate assessment of EMS at state DOTs, an Excel® spreadsheet-based EMS Information Array (EMS IA) has been developed. The EMS IA provides hyperlinks to literature sources, DOT examples, and survey data, as well as a prototype benchmarking tool for gap identification at the agency level. A "scrolling" version of the EMS tool can also be used to benchmark individual state programs against survey data from other DOTs.

The EMS IA spreadsheet may be downloaded from the TRB website for immediate application and can be expanded or customized for local use. Application support may also be available through the TRB 20-44 Implementation Support Program. Matching funds are not required for this program and there is no due date for applications. Applications are considered upon submission and decisions sometimes take a month or more. Further information on this program may be found at <http://www.trb.org/NCHRP/NCHRPImplementationSupportProgram.aspx>.

| Click to Skip to Section..... | | Equipment Maintenance | | | | | References and Examples | | NCHRP EMS IA | | | | | | |
|--|----------------------------------|---|---------------------|-----------------------------------|--------------------------------|----------------|-------------------------|----------|-----------------------------------|-----------------|----------|-----------|-------------------|-------|----------------------|
| Equipment (Newspapers) | Highway Maintenance (Facilities) | Written procedures, record keeping, and training followed by audits are core EMS processes in Equipment Maintenance. However, less than half of the organizations responding have performance targets and less than a quarter report PDCA capabilities. | | | | | | | | | | | | | |
| Highway Maintenance Activities | Other | Plan | | Do | | | Check | | Act (Improve) | | | Other | | | |
| Index Maintenance | Open Access | Written Procedures | Performance Targets | Integrated with Quality Assurance | Training (at all staff levels) | Record Keeping | Reporting | Audit | Roll up to agency wide compliance | Audit follow-up | Research | ISO 14001 | Plan/Do/Check/Act | Other | Not Sure / No Answer |
| Cities / State Summary | | 13/13 | | 5/13 | | 12/13 | | 12/13 | | 9/13 | | 9/13 | | 4/13 | |
| Tabulated State Summary (States Actively Participating / Total States) | | 13/13 | | 5/13 | | 12/13 | | 12/13 | | 9/13 | | 9/13 | | 4/13 | |
| your dot | | X | O | X | X | X | X | X | O | X | O | O | O | | |
| Alabama | | X | | X | X | X | X | X | | X | | | | | |
| Maine | | X | X | X | X | X | X | X | X | X | | | X | | |
| Massachusetts | | X | | X | X | X | X | X | | X | | | | | |
| Minnesota | | X | | X | X | X | X | X | | | | | | | |
| Mississippi | | X | | X | X | X | X | X | | | | | | | X |
| Nevada | | X | X | | X | X | X | | | | X | | X | | |
| New Hampshire | | X | X | X | X | X | X | X | X | X | | X | X | | |
| North Carolina | | X | | X | X | X | X | | | | | | | | X |
| Oregon | | X | X | | X | X | X | X | X | X | | | | | X |
| South Carolina | | X | | X | X | X | X | X | | | | | | | |
| Tennessee | | X | X | X | X | X | X | X | X | X | | | | | |
| Virginia | | X | X | X | X | X | X | X | X | X | | | X | | |

10th Biennial International Conference on Ecology and Transportation September 22-26, 2019 Sacramento, CA

Submitted by: Deb Wambach, ICOET Conference Chair, Montana DOT; Fraser Shilling, ICOET Organizer (Road Ecology Center, UC Davis)

Only a few weeks remaining until the 10th biennial International Conference on Ecology and Transportation (ICOET). If you have not yet registered, there is still time! Go to <https://icoet.net/> or contact Fraser Shilling, UC Davis Road Ecology Center (REC) Co-Director (fmshilling@ucdavis.edu) for more information. Co-hosts Caltrans and the California Department of Fish and Wildlife, the ICOET Steering and Program Committees, along with lead organizer REC have put together an intensive and wide-ranging program featuring a variety of presentation types, field trips, keynote speakers, and special events in support of our conference theme “Achieving Balance in Ecology and Transportation.”

The conference will highlight ways that transportation agencies and partners, scientists, policymakers, and stakeholders work together to balance often-diverging goals for ecological sustainability and transportation. ICOET is designed to be highly interactive and interdisciplinary, allowing participants to take in the latest in best practices

and leading research in the field. The conference provides a forum to network with a variety of academics, practitioners, researchers, and industry leaders, often resulting in connections that grow into lasting relationships, shared experiences, and motivation for success.

ADC 30 will be holding its mid-year business and planning meeting at ICOET2019 on Sunday, September 22 from 3:30pm – 5:00 pm. In addition to planning and discussion of upcoming committee-sponsored events at the 2020 TRB Annual Meeting in January, they will conduct roundtable discussions on: 1) sponsored research and funding mechanisms through programs facilitated by TRB, AASHTO and FHWA; 2) improving our profile/broadening public awareness through social media and other outreach and education outlets; and 3) WVC data collection protocols and recording standards. This meeting is open to the public.

ICOET is a celebration of the global transportation ecology community and we look forward to seeing you there! On behalf of Deb Wambach, 2019 ICOET Conference Chair and the Steering Committee, the REC and partners welcome you to Sacramento, California September 22-26, 2019 for the 10th biennial ICOET Conference.



TRB 2020 ANNUAL MEETING

2020 TRB Annual Meeting
99th Annual Meeting
January 12-16, 2020
Washington, D.C.

The Transportation Research Board (TRB) 99th Annual Meeting will be held January 12–16, 2020, at the Walter E. Washington Convention Center, in Washington, D.C. The information-packed program is expected to attract more than 13,000 transportation professionals from around the world.

The meeting program will cover all transportation modes, with more than 5,000 presentations in nearly 800 sessions and workshops, addressing topics of interest

to policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions. A number of sessions and workshops will focus on the spotlight theme for the 2020 meeting: A Century of Progress: Foundation for the Future.

Workshops Announced: Details regarding the more than 100 specialty workshops are available online now. These workshops take place on the first and last day of the meeting. The full 2020 program, including information on all 800+ sessions, will be posted to this website in November, 2019.



The 99th Annual Meeting marks the beginning of the year-long TRB Centennial celebration. All full-meeting registrants onsite will be eligible to pick up a complimentary copy the TRB history book, *Transportation Research Board 1920–2020: Everyone Interested Is Invited*.

Montana Convenes Wildlife and Transportation Summit - Final Report Released

Submitted by: Deb Wambach, ICOET Conference Chair, Montana DOT; Fraser Shilling, ICOET Organizer (Road Ecology Center, UC Davis)

Montana is known for its wide-open landscapes and abundant wildlife. The 41st state is the gateway to natural destinations like Glacier and Yellowstone National Parks and offers world-class recreation and breathtaking scenic areas. Statewide, the Montana Department of Transportation (MDT) manages over 25,000 lane miles of highway that connect Montana's cities, towns, and rural areas. The state's infrastructure ensures the efficient transport of people, goods, and services contributing to the strength of the economy, while the abundance of wildlife across the state is not only an important economic element, it is also a pillar of the quality of life in the "Last Best Place." Highways and wildlife are both integral components of Montana, which is why it is necessary to address a growing set of issues related to wildlife and transportation conflicts. Partners convened at the inaugural Montana Wildlife and Transportation Summit held in December 2018 at Carroll College in Helena, Montana to chart a course for working together to improve safe passage for wildlife and travelers on Montana roads.

The Summit Final Report is now available online at www.mdt.mt.gov/pubinvolve/mwt/. The report contains specific recommendations and commitments that resulted from the gathering as well as a summary of the conference proceedings.

More than 160 people participated in the Summit, which was co-convened by the Governor's office; Montana



Department of Transportation; Fish, Wildlife & Parks; the Western Transportation Institute; and Montanans for Safe Wildlife Passage. Participants included local, state, and federal agencies, tribal nations, non-governmental organizations, and other interested stakeholders.

"Our state ranks second to only West Virginia for traffic-related collisions with wildlife," said Gov. Steve Bullock during a speech he gave to open the Summit. "As we work to improve safety and improve wildlife connectivity, it will take engagement of all of the people these journeys touch along the way."

The two-day Summit was designed to be the beginning of a more comprehensive, long-term dialogue to address transportation and wildlife issues. It was a first step for stakeholders to share information, strengthen working relationships, and develop collaborative strategies to address wildlife and transportation conflicts in Montana. For more information, please contact Deb Wambach, (406) 444-0461 or dwambach@mt.gov.



Committee on
Ecology and
Transportation
(ADC30)

Call for Posters

for the
TRB 2020
Annual Meeting

The Transportation Research Board (TRB) Committee on Ecology and Transportation (ADC30) invites submissions for a poster session at TRB's 2020 Annual Meeting in Washington, DC this coming January. Please submit your abstract for consideration in the Ecology and Transportation (ADC30) poster session emphasizing environmental/ecological topics.

The top 20 posters meeting these general criteria will be considered for inclusion in the meeting program. Abstracts should be about 350 words and submitted electronically by September 20, 2019. Authors will be notified by October 1, 2019. Please consult the Poster Instructions here: <http://www.trb.org/AnnualMeeting/AMSpeakerPresenter.aspx>.

If you are selected to present a poster at the meeting in January, please make yourself or a colleague available to register for the conference and accompany your display to interact with conference attendees.

Please submit your abstracts and mock-ups to daniel.smith@ucf.edu. Please be sure to include the words "TRB ADC30 Poster Session" in the subject line of all related emails.

For more information, please contact committee Chair, Daniel Smith at daniel.smith@ucf.edu.



Don't miss this opportunity to share your work with thousands of other transportation professionals!

Tweeting for Wildlife

Submitted by: Maggie Ernest Johnson, Adaptation Program Manager, Association of Fish & Wildlife Agencies, mjohnson@fishwildlife.org

One of the important functions of ADC30 is to communicate the results of recent and ongoing research to and throughout the transportation community. Our purpose is to engage in education and outreach (among other activities) to highlight and integrate sound ecological principles into transportation planning, decision-making, maintenance, and design. In order to keep pace with rapid technological change while still advancing our communication and outreach goals, a thoughtful engagement on social media would seem to be an appropriate compliment to the committee's existing website and newsletter as a way of achieving those goals. Social media can act as a conduit to disseminate information, as well as a forum to engage new users and communities in dialogue, and finally, to amplify the work of the committee and the broader transportation community.

After completing a survey of committee members, prompting discussion at the 2019 TRB Annual Meeting, and engaging with the “young members” of ADC30, we've decided to pilot a social media account for the committee on Twitter. Twitter offers a way to engage with a growing transportation ecology community, develop interest in the field with new and diverse audiences, and help the committee demonstrate its leadership in the field. Twitter is easier to maintain because it only requires short blurbs followed by pictures, links, videos, or other content and does not necessitate a huge time commitment in preparing original content. Twitter is free and all of its content is public so anyone can join in the conversation. It also offers the opportunity to ‘like’ or ‘share’ content from partners which helps to amplify their reach, build relationships, and keep a pulse on new and emerging trends in transportation ecology. It is also a preferred platform for younger generations and for science communication professionals.

To pilot this, we have gone live with our Twitter account this past August. You can find us by searching “Ecology &



Transportation” or by our ‘handle’ @Ecology_Trans. We hope that our committee members and friends will follow and engage if you or your organization is active on Twitter. For now, the account will be maintained by a social media coordinator to ensure the content is appropriate, does not violate the TRB or NASEM requirements, and maintains a consistent tone and voice. We will track engagement and share the preliminary results with the committee at the mid-year meeting coming up at ICOET.

We recognize that social media, such as Twitter, might be foreign territory for some committee members. We will continue to engage with all of you through our traditional channels of emails, newsletters, calls, meetings, and website. Social media just offers another platform for us to engage and broaden our reach so that we can more robustly achieve our communication and outreach goals. We hope you will follow us or encourage your tech-savvy friends and colleagues to do the same!

To help us generate content, here's some items you can send to us to share (submit content to mjohnson@fishwildlife.org):

- Camera trap pictures at culverts/crossings (*include who to credit and get permission to publicsh*);
- Links to relevant projects you're working on;
- News articles or peer-reviewed papers of interest; and
- Upcoming workshops or conferences

Inaugural African Linear Infrastructure and Ecology Conference



Submitted by: Wendy Collinson, Wildlife and Transport Programme Manager, Endangered Wildlife Trust, wendyc@ewt.org.za

It is likely that many drivers have, at some point, accidentally hit an animal on the road. The consequences? Not only an injured or dead animal, but probably an insurance claim, or a visit to the emergency room for various injuries. At the inaugural African Conference for Linear Infrastructure and Ecology (ACLIE) 2019, which was held this past week in the iconic Kruger National Park, and co-hosted by the Endangered Wildlife Trust (EWT) and Eskom, solutions to prevent wildlife roadkill and improve driver safety were addressed. Work undertaken in Canada, demonstrated in one of the many fascinating presentations at the conference, shows that building wildlife bridges over or under roads effectively helps many animals to cross over the road, while avoiding an interaction with a vehicle. Simple, but effective!

Similarly, the Eskom/EWT Strategic Partnership – an African first – excited international delegates who saw how this unique relationship is directly reducing wildlife interactions with electrical infrastructure and preventing disruption to our power supply.

Centred around linear infrastructure, namely roads and rail, energy, power lines, canals, pipelines, and fences, and their impacts on the environment, ACLIE was the first of its kind, not only for Africa, but also in the framework of combining transportation and energy at one forum outlining multiple,

common threats to the environment. ACLIE sought to move away from the current international conference framework, which usually focuses on each form of linear infrastructure in isolation (for example, roads only), and introduced a less siloed approach that combined all forms of transportation and energy, since these necessary modes usually co-exist and have multiple negative impacts on biodiversity. Examples include the loss of wildlife due to roadkill and electrocution on power lines. The EWT's Wildlife and Transport and Wildlife and Energy Programmes have been addressing these impacts and developing solutions for years and were the drivers behind this international gathering of experts, to expand the knowledge pool. The impacts are not unique to South Africa, however; they are a threat worldwide.

Presentations ranged from global perspectives to individual country case studies, covering current scientific research, policy, legislation and best practice, and all with the potential to enhance both the project development process and the ecological sustainability of all linear infrastructure



STRATEGIC PARTNERSHIP

■ Inaugural continued on page 7

Inaugural continued from page 6



ACLIE delegates

modes. A common thread across many presentations was the threat posed by current and future development across Africa. Over the next decade, major developmental projects have been planned for Africa, which will see ‘development corridors’, comprising networks of power lines, roads, railways, pipelines, and ports being constructed to facilitate the movement of commodities. There are over 30 development corridors taking shape across Africa, spanning over 53,000 km in length, and potentially affecting protected areas with high conservation values and multiple threatened species. It is therefore timely that ACLIE was held, in order to better prepare ecologists and sustainability experts for this explosive development. The conference attracted many key players, including the World Bank and USAid (PowerAfrica), and was a golden opportunity to facilitate discussions and influence decision-makers around future developments on the continent.

The EWT’s Matt Pretorius presenting “A power line collision model for Lesser Flamingos in South Africa.”

Case studies of how to prevent Martial Eagles being electrocuted on power lines, or Samango Monkeys being killed on roads in South Africa, to examples from North America on the design of bridges specially constructed over roads to assist wildlife in crossing, and prevent collisions on roads, were just some of the practical illustrations of the significance of this work. Keynote speakers included Yolán Friedmann, the EWT’s CEO, Deidre Herbst, the Environmental Manager from Eskom Holdings SOC Ltd, and George Ledec, the lead ecologist with the World Bank.

Wendy Collinson-Jonker, EWT Wildlife and Transport Programme Manager, elaborated, “We were extremely proud to be able to showcase our projects to the rest of the world at

ACLIE, as well as share potential solutions for the proposed linear infrastructure developments across the African continent. The challenge will be implementing many of these solutions, but the input and support from experts who attended ACLIE may well assist us in ensuring development that is more resilient and ultimately benefits the economy but conserves the environment.”

Feedback from the conference delegates supports the need for ACLIE to become a regular event on the global calendar – only through bringing together experts from around the world, will we truly address this very real threat to biodiversity.

Rodney van der Ree, an Associate Professor from the University of Melbourne, said, “The conference was a fantastic opportunity to network and look at innovative solutions to the problems posed by linear infrastructure. It was particularly great to see so many African countries represented here, given the current programme of infrastructure development on the continent – this suggests recognition of the potential threats and ownership of the need to find ways to address them. The opportunities for building sustainable infrastructure in the long-term are an exciting outcome of ACLIE.”

Kishaylin Chetty, Senior Environmental Advisor at the Eskom Biodiversity Centre of Excellence, added, “The ACLIE 2019 conference brought industry and wildlife impacts to a discussion forum where all parties can work towards shared objectives, expanding knowledge, and understanding how to ultimately minimise the threat to wildlife. This is an incredibly exciting opportunity.”

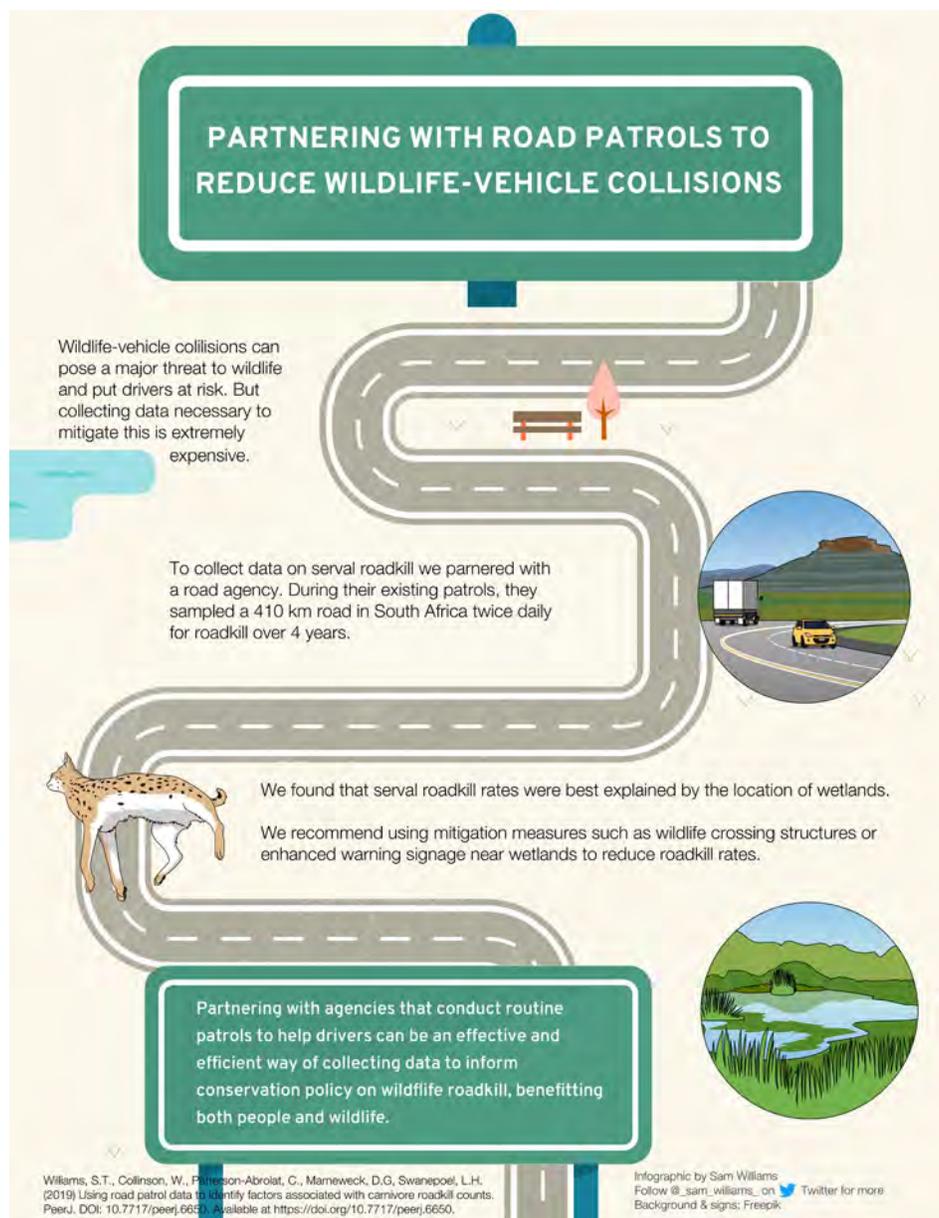
ACLIE 2019 was organised with the assistance of africaMASSIVE, and was supported by Eskom Holdings SOC Ltd, Road Ecology Center – UC Davies, TRAC N4,

Exciting new research from the Endangered Wildlife Trust

Submitted by: Wendy Collinson, Wildlife and Transport Programme Manager, Endangered Wildlife Trust, wendyc@ewt.org.za

Collisions between wildlife and vehicles pose a threat to both animals and drivers. The Endangered Wildlife Trust, the University of Venda and the N3 Toll Concession collaborated together to work out how to reduce serval roadkill on the N3, the main highway linking Johannesburg to Durban.

In their recently published study (<https://doi.org/10.7717/peerj.6650>) they suggest that concentrating wildlife crossing structures and warning signage near wetlands would be the most effective way to reduce serval roadkill rates. They also demonstrate that partnerships between industry and academia can be an efficient and effective means of collecting data to help solve such problems. <https://peerj.com/articles/6650/>



IENE 2020

INTERNATIONAL CONFERENCE

LIFELINES

Linear Infrastructure Networks with Ecological Solutions



SAVE THE DATE

New abstract submission deadline:
15 September 2019

Early bird registration closes:
30 November 2019

Conference:
6-9 April 2020

The **University of Évora** and the **Infrastructure and Ecology Network Europe**, have the pleasure to invite you to the **IENE 2020 International Conference**, which will take place in **Évora, Portugal**, between **6 and 9 of April 2020**.

CONFERENCE HIGHLIGHTS

- Thematic sessions and workshops
- Training Sessions
- Final Seminar of the LIFE LINES project (free admission)
- Field trips

| REGISTRATION* | FEE |
|-------------------|-------------|
| Early Bird | 350€ |
| Regular | 450€ |
| Late | 550€ |

* Conference dinner, field trips and training sessions are not included

Assessment, Mitigation and Monitoring • Infrastructure-related Habitats • Citizen Science • Linear Infrastructure Ecology • Financing Linear Infrastructures • Legislation and Policy • Replicating Ecological Solutions

Contact

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Visit our website

www.iene2020.info

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