

9-13 September, 2024

Programme book

IENE International Conference Prague 2024

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Nature Conservation Agency of the Czech Republic www.nature.cz

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Welcome

Ladies and gentlemen, dear colleagues, dear friends,

it is my great pleasure to welcome you to the IENE 2024 conference. IENE conferences have a long tradition, and our conference follows the meetings in Evora (2020) and Cluj (2022). This year, our conference takes place in beautiful Prague - "the heart of Europe". It is organized by the Nature Conservation Agency of the Czech Republic together with the Czech University of Life Sciences Prague. We are grateful to the Ministry of the Environment of the Czech Republic, the Road and Motorway Directorate of the Czech Republic and other co-organizers and sponsors for their support and help with conference preparation.

The Czech University of Life Sciences, whose campus provides a modern and pleasant meeting place, was chosen as the venue for the conference. There are more than 300 registered participants from 39 countries all over the world, which provides the prerequisite for a successful and fruitful conference and exemplifies the global commitment addressing the challenges we face.

We are living in a rapidly changing world, with expanding new technologies and growing demands on mobility, as well as increasing volumes of freight and goods transport and energy transfer. At the same time, we face significant challenges from the dual crises of climate change and biodiversity loss. Our theme, 'Biodiversity in the Headlight of Future Transport', reflects the urgent need to balance technological progress with the preservation of our natural world. New perspectives and approaches will be presented in the keynote and plenary lectures.

IENE conferences have always been a great opportunity to exchange experience, gain new knowledge, and obtain a global perspective on habitat fragmentation and other impacts of transport and energy infrastructure on nature. They also offer a unique chance to meet colleagues from other countries and establish personal contacts or even friendships, which are essential for further cooperation on this crucial topic. I will repeat here the words of one of the founders of IENE - Hans Bekker - the IENE conferences are always like an engine giving new motivation and new power. I hope that this will also be the case with our IENE 2024 conference. I wish everyone that the IENE 2024 conference will be a fruitful, successful and inspiring event. I wish you all to spend pleasant and inspiring days here in Prague.

Václav Hlaváč on behalf of the conference organizers

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IENE conferences

IENE (Infrastructure & Ecology Network Europe) is a global network of experts that promotes knowledge sharing for safe, sustainable and biodiversity-friendly pan-European transport infrastructure.

Every second year IENE arranges an international conference on biodiversity and transportation. This event addresses a wide international audience and encompasses a broad spectrum of topics. IENE2024 Conference in Prague will span over 5 days, including pre-conference courses, lectures, field excursions, poster session and interactive sessions (workshops). Conference language is English.

IENE 2024 organizers

IENE: Infrastructure & Ecology Network Europe Nature Conservation Agency of the Czech Republic Czech University of Life Sciences Prague

Ministry of the Environment of the Czech Republic

Co-organizer Transport research centre HBH Project Road and motorway directorate

Supporters LIFE One Nature LINK Projekt PUDIS Prague City Hall

Organizing committee

Raptor protection of Slovakia

Václav Hlaváč – Nature Conservation Agency of the Czech Republic (chair) Tomáš Růžička – Nature Conservation Agency of the Czech Republic (co-chair) Petr Zasadil – Czech University of Life Sciences Prague (co-chair) Květa Černohlávková – Nature Conservation Agency of the Czech Republic Zdeněk Keken – Czech University of Life Sciences Prague Vendula Ludvíková – Czech University of Life Sciences Prague Martin Strnad – Nature Conservation Agency of the Czech Republic Linda Zachystalová – Nature Conservation Agency of the Czech Republic

Programme committee

Martin Strnad (Nature Conservation Agency of the Czech Republic, CZ – co–chair), Václav Hlaváč (Nature Conservation Agency of the Czech Republic, CZ – co–chair), Yannick Autret (French Ministry for the Ecological and Solidarity Transition, FR), Manisha Bhardwaj (University of Freiburg, DE), Marita Böttcher (Federal Agency for Nature Conservation, DE), Wendy Collinson Jonker (Independent, ZAF), Ivo Dostál (Transport Reseach Centre, CZ), Denis François (Gustave Eiffel University, FR), Edgar van der Grift (Wageningen Environmental Research, NLD), Eric Guinard (Cerema, FR), António Mira (University of Évora, PRT), Carme Rosell (Minuartia, ESP), Andreas Seiler (Swedish University of Agricultural Sciences, SWE), Fraser Shilling (University of California Davis, USA), Seyna Smoes (The French Foundation for Biodiversity Research, FR), Marguerite Trocmé (Federal Roads Office, CHE), Romana Uhrinová (Friends of the Earth Carnivores, CZ), Linda Zachystalová (Nature Conservation Agency of the Czech Republic, CZ)

Local organizing team

Petr Anděl (Evernia, CZ), Ivo Dostál (Transport Research Centre, CZ), Marek Gális (Raptor Protection of Slovakia, SVK), Jiří Jedlička (ASITIS, CZ), Michal Králik (HBH Projekt Slovakia, SVK), Jakub Mlejnek (Czech University of Life Sciences Prague), Helena Prošková (Czech University of Life Sciences Prague), Marek Sekerčák (HBH Projekt Slovakia, SVK), Eva Soulková (Czech University of Life Sciences Prague), Tomáš Šikula (HBH Projekt, CZ), Kateřina Trejbalová (Czech University of Life Sciences Prague), Romana Uhrinová (Friends of the Earth Carnivores, CZ), Barbora Žabová (Czech University of Life Sciences Prague)

List of abstract reviewers

Yannick Autret, Manisha Bhardwaj, Marita Böttcher, Caryl Buton, Rory Canavan, Wendy Collinson, Ivo Dostál, Marcus Elfström, Denis François, Edgar van der Grift, Clara Grilo, Jan Olof Helldin, Karolina Jasińska, Jiří Jedlička, Michal Králik, Dagny Krauze–Gryz, Cristina Amador López, António Mira, Federico Morelli, Paola Reason, Rodney van der Ree, Carme Rosell, Sara Santos, Andreas Seiler, Martin Strnad, Marguerite Trocmé, Romana Uhrinová

IENE 2024 awards

The IENE Awards have become a cherished tradition within the IENE network, serving as a platform to honour extraordinary engagement and work. IENE recognizes outstanding efforts to mitigate the detrimental environmental impacts of infrastructure, acknowledged as a growing threat to biodiversity. This encompasses cumulative effects on species and ecosystems. Notably, the award appreciates remarkable endeavours in the design, construction, and management of transportation and other linear infrastructure–related habitats, defining their potential role as biodiversity refuges or corridors. Extraordinary efforts may include impact assessments, mitigation plans, or technical measures at local, regional, or national scales, as well as research achievements, information, education, or promotion activities.

The IENE 2024 Personal Award – presented to Hildegard Meyer for her long-term commitment to overcome the ecological impact of transport infrastructure and to reconnect wildlife, landscapes and people in the Carpathian region.

The IENE 2024 Project Award – presented to GreenPlan Project – Connecting Nature to land Planning by Norwegian institute for nature Research (NINA) for its broad commitment to ecology and infrastructure.

The IENE 2024 Lifetime Achievement special Award - presented to Hans Bekker

The Conference Awards

Two more prizes will be awarded during the conference The IENE 2024 Best Poster Award The IENE 2024 Best Photo Award

General information

Brief guide to Prague

Looking at the map we can find that Prague really is a focal point; the heart and centre of the continent. However, Prague is not only the geographical heart of Europe, but also a place where for centuries different nations were mixing and different cultures were merging, influencing each other. Those who walk through Prague, walk through the history of Europe and its cultural richness.

For more than one thousand and one hundred years, visitors to Prague have been trying to give Prague a suitable name: stone Prague, golden Prague, magic Prague, hundred-spired Prague, Prague, mother of the all cities... each of these names highlights one of its many attractive features.

Hundred-spired Prague – as this name suggests, Prague is the city of architectural treasures. It might be impossible to count all the large and small spires of Prague's churches, palaces and houses. This city has been developing for more than one thousand years, and over the course of time many memorable buildings have been built. In spite of often having been destroyed over time, Prague has been able to keep its grand architectural legacy. It excels in Romanesque monuments and it is known as a world-renowned work of Gothic city planning. The re-catholicization of the country was accompanied by a remarkable development of the Baroque style. Hundreds of artists, mainly from Italy and Germany, gave Prague its Baroque appearance, which the city has been preserving since that time. The countenance of Prague reflects every cultural period and every artistic style.

The name Magic Prague is known all over the world. Doctor Faust's Prague, Golem's Prague – this name was given to the city after the mythical clay giant symbolizing Jewish magic. Rudolphian Prague – after Emperor Rudolf II, who contributed to its reputation to a great extent. This emperor of alchemists, the admirer of occultism and Maecenas gathered in Prague one of the biggest collections of art of that time. The remains of this collection, which are still preserved in Prague, are remarkable. However, the emperor left behind something that cannot be taken from the city – the atmosphere of mystery.

The CZU campus

The Conference takes place in the campus of Czech University of Life Sciences Prague (CZU). The campus is about 20 minutes drive from the city centre. The campus is situated in the northwest suburb of Prague – in the city district Suchdol. It is a quiet garden–suburb with a few small protected areas near–by. Due to its location, Prague is a very good starting point for field excursions across the whole Bohemia.

The modern campus offers a concentration of all services and facilities in one place. There are six Faculties with classrooms and lecture theatres, two congress halls, students' dormitories, Menza (a student restaurant), restaurants and bars, parking etc. The main venue of the conference is situated to a modern Congress Centre of the University. All these facilities are within 10 minutes by foot around the campus. There are 2 hotels in the immediate vicinity of the campus.

Address

Czech University of Life Sciences Prague (Česká zemědělská univerzita v Praze) Kamýcká 129, 165 00 Praha 6 Suchdol, Czech Republic



Geographical location 50°7'49"N 14°22'24"E

Information about transport

The reference point for making your way to the CZU campus is the **Dejvická A** metro station. After you make your way to the **Dejvická** station via any of the methods specified below, take bus number **107** (heading to Suchdol) or **147** (heading to Výhledy) and go to the **"Zemědělská univerzita"** stop. Here you will find the entrance to **CZU**.

Metro

The Prague Metro network consists of 3 lines designated by letters and differentiated in colour. Green colour (Depo Hostivař station – **Dejvická station** – Nemocnice Motol **line A**), yellow colour (Černý most station – Zličín station – line B), red colour (Háje – Letňany station – line C), with transfers possible at Muzeum station (lines A and C), Můstek station (lines A and B), Florenc station (lines B and C). Metro operates daily from 05:00 to 24:00. The time interval between train departures is approximately 2 to 4 minutes during the workday rush hours, and from 5 to 10 minutes during off–peak hours. To reach the CZU campus, you should travel to **Dejvická station** and then to change to a bus.

Buses

At **Dejvická** take a bus number **107** or **147** and get off at the bus stop **Zemědělská univerzita** or Kamýcká (if you are accommodated in hotel Carl Inn or in hotel Elio Garni). The stop is announced on the bus public address system and you can also read it on the digital display. This journey takes around 10 minutes. Daytime operation is from 04:48 to 00:18 (the last trip).

Night-time service is provided by bus number 909 (Vítězné náměstí bus stop - 00:57; 01:57; 02:57; 03:57;).

Trams

The daytime and night-time operation of trams is similar to bus operation. Night-time operation is from 00:30 to 4:30 and is provided by tram numbers 91 to 99 with traffic intervals 30 minutes from Monday to Friday and 20 minutes on Friday and weekend. Use tram number 91 (Dejvická or Vítězné náměstí stop).

Prague City Transport Fares

Travelling by city transport is possible only with a valid ticket.

Passengers have to obtain their tickets before entering the Metro system. The ticket is valid only if marked in the validation appliance. Tickets can be bought in majority of buses and trams (online payment by credit card) at selected Metro stations or in "Dopravni podnik" Information Centres, hotels, at news stands, travel bureaus, department stores, etc. Single tickets can also be bought from the ticket machines located at Metro stations or near some stops of surface transport. The ticket is possible to buy also from your cell phone. Send SMS message in format DPT31 (valid for 30 minutes) – cost 31 CZK, DPT42 (valid for 90 minutes) – cost 42 CZK, DPT120 (valid for 24 hours) – cost 120 CZK, DPT330 (valid for 3 days) – cost 330 CZK to number 902 06.

Transfer ticket (90 min): 40 CZK Discounted (seniors from 60 to 70 years): 20 CZK Transfer ticket (30 min): 30 CZK Discounted (seniors from 60 to 70 years): 15 CZK Children 0 to 15 years: free of charge Seniors from 70 years: free of charge 1 day ticket: 120 CZK/ 60 CZK (discounted) 3 days ticket: 330 CZK/ discounted not provided

Timetables online are available at the webpage: https://idos.idnes.cz/pid/spojeni/

Transport – taxi

You will find taxis in front of hotels (although these are generally more expensive) and at other key locations in the city. You can request a taxi at the reception desk.

Selected Nonstop Taxi Dispatching Offices

AAA Radio Taxi - phone +420 222 333 222, +420 140 14 City taxi - phone +420 257 257 257 Profitaxi - phone +420 261 314 111

Phone app – Uber, Bolt, Liftago

You can also use services of Uber, Bolt or Liftago via the app on your phone. Uber and Bolt can be driven by a driver without taxi licences, so they are much cheaper than Liftago. The price for one kilometre varies between 10–30 CZK.

Transport to the hotels

CZU Campus Hotel: Take the bus (Suchdol direction), by bus 107 or 147, Zemědělská univerzita stop CZU Dormitories: Take the bus (Suchdol direction), by bus 107 or 147, Zemědělská univerzita stop Hotel Elio Garni: Take the bus (Suchdol direction), by bus 107 or 147, Kamýcká stop Hotel Carl–Inn: Take the bus (Suchdol direction), by bus 107 or 147, Kamýcká stop

Parking at CZU campus

The CZU campus has hundreds of parking spots available to those who make their way to CZU via car. To get past the barriers, you need to ring the CZU security and say that you are a participant of the IENE 2024. We recommend large car park P1 to the left of the main entrance to the campus, which is immediately next to the dormitories.

Practical information

Telephone

Country code: +420

Important telephone numbers:

Emergency 112 Ambulance 155 Police **158** Fire Service 150 Municipal police **156** Emergency road service 1230, 1240 General information 12 444

Medical care service

Contact the Registration desk if you need a pharmacy or if you have a non-emergency health problem. You can reach a 24-hour pharmacy at Prague 6 – Vítězné náměstí 13 (Dr. Max), +420 225 574 363 (10 minutes by bus from campus – Dejvická station – bus numbers 107, 147 in direction from the University campus).

During the work days there is also a pharmacy, practitioner and dentist available nearby the Campus (contact the Registration desk for further information).

Bank and currency exchange

The currency is the Czech crown (Kč/CZK). Banknotes are in denominations of CZK 5000, 2000, 1000, 500, 200 and 100. Coins are in denominations of CZK 50, 20, 10, 5, 2 and 1.

Delegates may change foreign currency in CZU campus (Library building; open hours 8:00-12:00 and 13:00-15:00) or at the airport upon arrival to Prague or at the city centre, also at many exchange bureaus, railway stations or in most of the hotels. International credit cards are currently accepted for payment in most places (hotels, restaurants and shops). Credit and debit cards can be used withdraw money from ATMs.

ATM machines

There are 2 ATMs situated in the Campus and many other downtown. Both are situated in the students' dining hall (Menza building).

Insurance

The organisers of the Conference recommend the participants to arrange their own insurance for health, travel and property. The organisers will not accept any liability for personal injury or for loss of, or damage to, property.

Conference information

Registration desk

The Conference bureau/registration desk (MCEV I building, room Z 115) will be open as follows:

Monday, September 09	8:30 - 17:00
Tuesday, September 10	8:00 - 18:00
Thursday, September 12	8:30 - 18:00
Friday, September 13	8:30 - 16:00

NOTE

You will also find an alternative help desk/registration desk in AULA building on Monday (Sept 09) during Opening Ceremony (17:00 - 19:00)

A cashier service is available at registration desk for onsite registrations, payments and/or purchase of social events and tour tickets. Please note that only a limited number of tickets for additional events may be available.

Conference venue

All science events will be held in the Campus of Czech University of Life Sciences Prague, Kamýcká 129, Prague 6 – Suchdol. Most of the programme will be situated in the Faculty of Environmental Sciences building (MCEV I and MCEV II) – parallel sessions, interactive sessions, posters, training courses, exhibition, coffee breaks and lunches.

All the plenary talks, parallel sessions, interactive sessions and opening and closing ceremonies will be also streamed (available on the conference website after login to your IENE 2024 account).

Plenary room

All the plenary sessions will be held in AULA building.

Parallel sessions

All oral presentations will be held in the lecture rooms of the Faculty of Environmental Sciences building (MCEV I and MCEV II) Z I, Z II, D217, D 218 and D 119 according to the daily schedule.

Posters

The poster session will be located in the hall of the Faculty of Environmental Sciences building. Stands for posters are marked with numbers which are available on the conference website and in the Programme book below (Chapter List of posters). Organising staff will help you there if requested.

The stands for posters will be available from Monday 12:00 to Friday 15:00.

IENE 2024 training courses

Both training courses will be held also in the Faculty of Environmental Sciences building (MCEV III) - rooms VN 305, VN 306.

Conference exhibitors

Location of the conference exhibitors' booths. tables

The conference exhibitors are an integral part of the Conference and are situated in the hall of MCEV I building, in front of the rooms Z I and Z II.

Message board

A message board is located in the Registration desk. Please feel free to post messages, flyers, job openings, etc. That may be interesting for other meeting participants.

Children drawings exhibition

An exhibition of children drawings of first grade students on the theme fauna and infrastructure will be on display at the conference venue. The conference organizers would like to thank Petr Anděl (Evernia, CZ) for organizing the exhibition.

Photo coner

You can also take a photo in our photo corner as a memory for the IENE 2024. The photo corner is located in the main venue hall in the rest area.

Cloak room

A cloakroom with the possibility of storing small luggage (lockable lockers) is available in AULA building during the Opening Ceremony and Welcome Reception on Monday evening and at the registration desk.

Internet access

During the Conference it will be available a computer room Z 120 open daily from 8:30-18:00 (except Wednesday).

Free Wi-Fi connection will be provided for all IENE 2024 participants. All the buildings used for IENE 2024 conference (AULA, Faculty of Environmental Sciences building and Club C) are equipped with wireless internet.

Network name (SSID): CZU-guest User name: IENE2024 Password: iene2024

Dress code

Welcome Reception Conference Dinner in Strahov Monasterv Field Trips Other

business casual business casual comfortable clothes and shoes casual

Delegate identification

Admission to the scientific sessions and other events is permitted only to those wearing the official Conference badge. Individuals who lose their badge will be required to pay a fee to obtain a replacement badge (300 CZK).

Badge colour code

orange
green
blue
grey
red
purple

A number of Conference helpers (organising staff) will be available at all times and will be happy to assist with participant's queries. Helpers can be identified by their red staff T-shirt.

Meals

Breakfast

If you are accommodated in CZU Student's dormitories/CZU campus Hotel and you ordered and paid for your breakfast, you will need a breakfast ticket. The breakfast ticket is a part of documentation received during check in in the reception of CZU Dormitories. The breakfasts are prepared in Club C in time 8:00-10:00 (from Monday to Friday).

A limited number of breakfasts can be purchased at the Registration desk at least one day in advance.

Coffee during the breaks

In the morning and also in the afternoon coffee and refreshments will be served for Conference delegates at the area of sessions will be held in the hall of MCEV I and MCEV II.

The price for the coffee breaks includes coffee or tea, mineral water and one piece of a sweet desert or one piece of breadstuff or fruit.

NOTE: Please do not take dishes out of the building or bring them into the lecture rooms!

Lunches

Buffet lunches will be served for Conference delegates at the area of sessions in the hall of MCEV I and MCEV II on Tuesday, Thursday and Friday.

Box lunches will be given to all registered participants for individual field trips on Wednesday, Sept 11. Participants with some dietary requirements will receive box lunch according to the requirement specified during registration.

Food and drink on your own

Restaurants and other places to eat in/close to the CZU campus:

- Bistro u Ledňáčka offers breakfasts, snacks and drinks
- Aula Café offers small snacks and drinks.
- Club C offers typical Czech lunches and drinks
- Hotel Carl Inn offers typical Czech lunches, soups, meat and pasta.

Social events

Opening Ceremony and Welcome Reception

Time and date: 17:00-22:00 on Monday 9th September 2024 Price: Included in the registration fee for participants and registered accompanying persons. Transfer: no transfer will be provided – the event is hold in the CZU campus.

The opening ceremony will be held in AULA. The welcome cocktail and light buffet will be served there. You will have a chance to make friends and renewal, acquaintances and join fellow delegates.

This event has been implemented with the financial support of the Prague City Hall.

Unformal Evening in the Campus Pub Club C

Time and date: 19:00-23:00 on Wednesday 11th September 2024 Location: Club C, CZU campus Price: individually, at own expense

Conference Dinner

Time and date: 19:00-23:00 on Thursday 12th September 2024 Location: Strahov Brewery, Strahovské nádvoří 301/10, Prague 1 – Hradčany Price: EURO 75 Transfer: no transfer will be provided - using public transport.

Filed trips

All five field trips will be organized on Wednesday 11th September. If you didn't book any field trip, you can buy it at the Registration desk according to actual availability. For further information contact the Registration desk. Meeting point for all field trips is in CZU campus, Parking Dormitory A.

The IENE 2024 conference field trips have been implemented with the financial support of the Road and Motorway Directorate.

Field trip 1: Elbe lowland

- Meeting time: 7:15 (please, be on time!)
- Duration: 7:30–19:30, bus leaves EXACTLY at 7:30
- not be extreme.
- Shoes: The route is not physically demanding, the terrain is flat, you will go along paths. Comfortable walking shoes are recommended.
- Food and beverages: Refreshments will be provided twice (box lunch for the road and later catering at 4 5 p.m. in the rescue station). In addition, one refreshment stop (approx. at 11 a.m.) will be at the petrol station, where is also KFC and Burger King. You can optionally buy refreshments there. Don't forget to take your medication, the excursion is planned for the whole day.
- Money: It is advisable to bring Czech crowns, euros or a credit card for the stop at the above-mentioned petrol station.

Guide contact details - Jitka Uhlíková (jitka.uhlikova@nature.cz, phone: 00420 724 169 297) More info: https://www.iene2024.info/en/field-trips

Crêperie Café Girafe – it has a Mediterranean style, offers pancakes in many ways, pasta and salads, etc.

Clothing: Based on weather forecast. Generally, the excursion will be held in the lowlands landscape, thus the weather will

Field trip 2: Roadless Area Brdy on electric-bikes

- Meeting time: 7:15 (please, be on time!)
- Duration: 7:30–19:30, bus leaves EXACTLY at 7:30
- Clothing: Generally, the excursion will be held in the hilly terrain, the weather can be very variable (rain showers, wind). Bring bike clothes, spare t-shirt, pants etc. The route poses a higher physical demand. We recommend bringing vour own helmet.
- Shoes: Comfortable shoes for biking are recommended.
- Food and beverages: Refreshments will be provided twice (box lunch for the road and later catering in the House of Nature – Brdy visitor centre).

Don't forget to take your medication, the excursion is planned for the whole day. Guide contact details - Martin Strnad (martin.strnad@nature.cz, phone: 00420 607 545 140) More info: https://www.iene2024.info/en/field-trips

Field trip 3: South Bohemia

- Meeting time: 7:15 (please, be on time!)
- Duration: 7:30–19:30, bus leaves EXACTLY at 7:30
- Clothing: Based on weather forecast. Generally, the excursion will be held in the lowlands, thus the weather will not be extreme.
- Shoes: The route is not physically demanding, the terrain is flat, you will go along paths. Comfortable walking shoes are recommended.
- Food and beverages: Refreshments will be provided twice (package for the road and later catering at in the rescue station). In addition, one refreshment stop (aprox. at 12h) will be at the petrol station. You can optionally buy refreshments there.
- Money: It is advisable to bring Czech crowns, euros or a credit card for the stop at the above mentioned petrol station.

Don't forget to take your medication, the excursion is planned for the whole day. Guide contact details - Cristina Amador López (cristina.amador-lopez@nature.cz, phone: 00420 739 896 499), Tomáš Libosvár (t.libosvar@hbh.cz, phone: 00420 731 193 836) More info: https://www.iene2024.info/en/field-trips

Field trip 4: Czech-Moravian Highlands

- Meeting time: 7:15 (please, be on time!)
- Duration: 7:30–19:30, bus leaves EXACTLY at 7:30
- Clothing: Based on weather forecast. Generally, the excursion will be held in the hilly landscape, thus the weather will not be extreme.
- Shoes: The route is not physically demanding, the terrain is flat, you will go along paths. Comfortable walking shoes are recommended.
- Food and beverages: Refreshments will be provided twice (package for the road and later catering in the rescue station). In addition, one refreshment stop (in the morning) will be at the petrol station, You can optionally buy refreshments there.
- Money: It is advisable to bring Czech crowns, euros or a credit card for the stop at the above-mentioned petrol station.

Don't forget to take your medication, the excursion is planned for the whole day. Guide contact details - Václav Hlaváč (vaclav.hlavac@nature.cz, phone: 00420 602 205 590) More info: https://www.iene2024.info/en/field-trips

Field trip 5: Prague and its surroundings

- Meeting time: 8:45 (please, be on time!)
- Duration: 9:00-15:00, bus leaves EXACTLY at 9:00
- Clothing: Based on weather forecast. Generally, the excursion will be held in the lowlands, thus the weather will not be extreme.
- Shoes: The route is not physically demanding, the terrain is flat, you will go along paths. Comfortable walking shoes are recommended.
- Food and beverages: Refreshments will be provided once (package for the road). In addition, one refreshment stop will be at the petrol station. You can optionally buy refreshments there.

Guide contact details - Václav John (vaclav.john@nature.cz, phone: 00420 723 237 347). More info: https://www.iene2024.info/en/field-trips

IENE 2024 exhibitors

HBH

HBH Projekt, an independent Czech consultancy, specializes in transport and engineering construction. Offers comprehensive project preparation, ecological consulting, and oversee construction. Our experts support clients with environmental assessments and legal advice. Founded in 1992, we are leaders in Czech and Slovak road design, promoting digitalization and modern construction management tools. www.hbh.cz



MAIBACH

Maibach is one of the leading European supplier of amphibian protection systems for temporary and permanent installations. The system includes walls and fences, stop drains, tunnels and accessories.

Maibach products are designed in close co-operation with herpetologists. The materials are in accordance with European standards. www.maibach.com



Programme overview

Friday Sept 13		Interactive sessions		Coffee Break & Posters		Interactive Sessions			LUNCN & POSTERS		Interactive Sessions		Closing Ceremony											
Thursday Sept 12		2× Plenary (AULA)		Coffee Break & Posters			Parallel Sessions		0 40000			onoicco loller ed			Coffee Break & Posters		Poster Session					Conference dinner	(Strahov Monastery)	
Wednesday Sept 11		Field trips:			South Bohemia 7:30 – 19:30		Czech-Moravian	Highlands	7:30 - 19:30		The Elbe Lowland 7:30 - 19:30			Roadless Area Brdy 7:30 – 19:30		Drague and its	surroundings	9:00 – 15:00				Unformal evening	(CZU, Club C)	
Tuesday Sept 10		Opening + 2× Plenary (AULA)		Coffee Break & Posters			Parallel Sessions		0 4000	בעוונוו א רטאפוא					Coffee Break & Posters		IENE GA Meeting (16:15 – 18:00)							
Monday Sept 09		Registration	(8:00 - 18:00)	IENE GB & SEC meeting	for invited only)				IENE Working groups (for invited only)					Opening Ceremony	(AULA)	Keynote Speech	(AULA)		Welcome Reception (AULA)					
Sunday Sept 08	Pre- conference Training Courses																							
Time	9:00 - 9:30	9:30 - 10:00	10:00 - 10:30	10:30 – 11:00	11:00 - 11:30	11:30 – 12:00	12:00 – 12:30	12:30 – 13:00	13:00 – 13:30	13:30 – 14:00	14:00 - 14:30	14:30 - 15:00	15:00 - 15:30	15:30 - 16:00	16:00 – 16:30	16:30 – 17:00	17:00 – 17:30	17:30 – 18:00	18:00 – 18:30	18:30 – 19:00	19:00 – 20:00	20:00 – 21:00	21:00 – 22:00	22:00 - 23:00

List of sessions

Торіс	Date	Time	Room
Animal–Detection and Driver Warning Systems	13 Sep	9:00–10:30	ZII
Communicating your transport ecology story to the community, engi- neers and your Mum: Enthralling your audience with a captivating blog or stunning audio–visuals	13 Sep	11:00–12:30	D218
Ecoconnectivity in the capital of Europe	13 Sep	9:00–10:30	D218
Ecological defragmentation of waterways – do's and don'ts and differ- ences with defragmentation of roads	13 Sep	11:00–12:30	D217
Effectivity of mitigation measures	10 Sep	11:00–13:00	D218
Effectivity of mitigation measures for ungulates and wildlife vehicle collision	10 Sep	14:00–16:00	D218
Enhancing international collaboration between transport infrastructure and ecology to meet urgent challenges	13 Sep	9:00–10:30	ZI
European perspectives on infrastructure and biodiversity research fundings: challenges and solutions	13 Sep	13:30–15:00	ZI
Evaluation and monitoring of crossing structures	12 Sep	11:00–13:00	D217
Fauna protection during planning	12 Sep	14:00–16:00	D217
Fauna protection on transport and energy infrastructure	12 Sep	11:00–13:00	ZI
Global Gateway Initiative: an opportunity for best practices in sustainable Transport and Energy Infrastructure development	13 Sep	9:00–10:30	D217
Green and gray infrastructure	10 Sep	11:00–13:00	D217
Guidelines for mitigating the impact of infrastructure on nature	10 Sep	11:00–13:00	D222
Habitats along transport and energy infrastructure	12 Sep	14:00–16:00	D218
Harmonising Infrastructure and Biodiversity: The EU-funded SYMBIOSIS Initiative	13 Sep	11:00–12:30	ZI
How to ensure future-proof policy making, collaboration and knowl- edge exchange in the face of new challenges: An international, interdis- ciplinary and interactive exchange of best practices	12 Sep	11:00-13:00	D222
Interactive Session: Impact Mitigation for highways in the D–A–CH countries – legal basis, effectiveness of implementation and current challenges in the light of climate and landscape change	13 Sep	13:30–15:00	ZII
Interactive Session: Integrating Nature–Positive Strategies in the Trans- port Sector: Advancing nature recovery through the Transport4Nature Initiative	13 Sep	11:00–12:30	ZII

Maintaining ecological connectivity
Mitigating fauna traffic mortality
Mitigation measures for amphibians, reptiles, bats
Monitoring of wildlife vehicle collisions, identification of hots
Power lines and biodiversity protection
Research and education
Road verges and biodiversty I
Road Verges and Biodiversity II
Roads and endangered mammal species
Safer Railways for Wildlife



	10 Sep	14:00–16:00	D217
	10 Sep	14:00–16:00	ZI
	12 Sep	11:00–13:00	D218
ots	10 Sep	11:00–13:00	ZI
	12 Sep	14:00–16:00	ZI
	12 Sep	14:00–16:00	D222
	10 Sep	11:00–13:00	ZII
	10 Sep	14:00–16:00	ZII
	12 Sep	11:00–13:00	ZII
	12 Sep	14:00–16:00	ZII

Detailed Scientific Programme

September 08th 2024

09:00–18:00	Pre-conference training course – Monitoring roadkill and wildlife mitigation measures	Room: VN305
09:00–16:00	Pre–conference training course – Road vegetation over time: from the first rows of trees to the conservation of biodiversity	Room: VN306
	September 09 th 2024	
9:00-12:00	IENE GB & SEC meeting	Room: D222
13:00–16:00	IENE WG Safer Railways for Wildlife	Room: D222
13:00–16:00	CEDR working group meeting	Room: VN305
13:00–16:00	IENE WG Handbook	Room: VN306
17:00–18:00	Opening Ceremony	Room: AULA
18:00–19:00	Keynote speech – Gaya Herrington	Room: AULA
18:00	End of the road, or changing course away from a cliff? Sustainable futures in transportation Herrington, G.	
	Gaya Herrington's research gained international acclaim in 2021 when her study, "Update to Li went viral. With this empirical data comparison to scenarios created with a global model by <i>N</i> the 1970s, Gaya revealed that humanity is closely on track for a sharp decline in societal wells set in around present time.	imits to Growth" IIT scientists in being starting to
	Since then, Gaya has been shaping conversations at local and global levels with her message sustainability will not be achieved without transforming our economic system away from an operpetual growth to one that centers around human and ecological wellbeing.	that true bsession with
	In her keynote speech for IENE, Gaya will discuss why we need to move to a "wellbeing econo this could mean for transportation. Why is switching to electric cars not enough? What would transportation sector look like? How exactly would our country get there? Implications will be with active participation from the audience, from the practical design level to the spiritual lev cultural values.	my", and what a "wellbeing" discussed, vel of shifting
	September 10 th 2024	
09:00–09:45	Plenary talk – Ladislav Miko: European biodiversity on crossroads – strategically but also literal	ly! Room: AULA
09:00	European biodiversity on crossroads – strategically but also literally! Miko, L.	
	European biodiversity as a whole is not sufficiently improving despite probably the most deve framework and several decennia of efforts. Moderate progress was achieved, but only in some indicators. One of reasons for this is the fact, that drivers negatively impacting biodiversity – development of transport and transport infrastructure – are growing with comparable speed	eloped legal e of biodiversity such as as efforts

to address biodiversity crisis. Responding to these trends is not trivial, and proposing just even stricter nature conservation rules and growing area of protected areas would not deliver. Systemic and functional approach is necessary, and it cannot be replaced by most "patches" of what remained more or less functional from the past. Missing links and lost functionalities need to be repaired, renewed and/or compensated by newly developed elements. This approach is integrally included in recently adopted new Kunming-Montreal biodiversity framework, and in European Union it will be supported (among others) by freshly adopted Nature restoration law. In relation to transport infrastructure this will require changed approach in evaluation of environmental impacts, based not only on compensation of immediately affected ecosystem services, but also on pro-active action covering functionalities lost in the past. It will be therefore essential to define to what extent and how the future development of transport infrastructure should be planned and which parts of it can be returned to nature or compensated by targeted measures. This means that development of European (or national) transport and biodiversity strategies should proceed in coordinated way, informing each-other, and in collaboration with strategic environmental impact assessment. Following changes caused by altering climate, biodiversity in European Union stands on crossroads; European landscape needs de-fragmentation, increased space for natural processes and connectivity and in addition to existing patches of functional ecosystems in protected areas, building of new, rather "ordinary", but functional elements which were lost in last several decennia. 09:45-10:30 Plenary talk - Rodney van der Ree: Transport ecology - how far have we come, where do we need to go, and how do we get there? Room: AULA Transport ecology – how far have we come, where do we need to go, and how do we get there? van der Ree, R. 100 years ago D. Stoner published the first 'road ecology' study documenting roadkill on a road trip with his wife across the USA. It is timely to review our understanding of the ecological impacts of transport infrastructure, our efforts to avoid, minimise and mitigate those impacts, assess how effective those strategies are, and to consider directions for the future. In comparative terms and at a global scale, we have acquired vast amounts of data on the primary impacts of roads and vehicles, but much less about railways and trains, and even less about other linear and transport systems, such as transmission lines and pipelines. Efforts to mitigate the main impacts - barrier effects and wildlife-vehicle collisions - is almost 'business as usual' in many parts of the world. However, our understanding of the effectiveness of these efforts is less clear. Other impacts, often considered 'indirect', are potentially just as significant but rarely comprehensively addressed. This is concerning because the length of transport networks, the number of vehicles and per capita travel continues to grow. Integration of quantitative connectivity assessments in impact assessments is lacking, as are strategic and cumulative impact assessments. Project financing in developing countries needs stronger safeguards, research and monitoring needs more scientific rigour, experiments are urgently required, genuine engagement with indigenous and local people is necessary, and the future must embrace the rapidly evolving world of AI, machine learning and other technology. A large portion of this presentation will focus on the role of developing technological applications. 11:00-13:00 Monitoring of wildlife vehicle collisions, identification of hotspots Room: ZI Chair: Clara Grilo Spatially explicit models to evaluate the risk of extinction associated with roadkill Neves, T.; Grilo, C. Understanding Roadkill Hotspots: Insights from Comprehensive Wildlife Roadkill Databases Mira, A.; Garcia, G.; Pedroso, N.; Manghi, G.; Salgueiro, P.; Santos, S. Seasonal variation of Animal Vehicle collisions hotspots. The importance of a full scale identifications of mortality clusters as a management tool detrimental to mitigation actions design. Moreira, G. P.; Morais, S. F.; Andrade, R. R.; Basílio, P. M.; Carreira, P. E.; Gonzales, C. C.; Trabulo, S. L. Using a ten-year citizen science dataset to understand roadkill occurrence on a Mediterranean island Stamatiou, M.; Zotos, S.; Vogiatzakis, N. I. Long-term monitoring of systematic roadkill survey by citizen science in Taiwan.

Chen, W.; Lin, T.; Tsai, F. 12:40 Spatio-temporal patterns of wildlife-vehicle collisions in Poland Jasińska, K. D.; Krauze-Gryz, D.; Brach, M.

09:45

11:00

11:20

11:40

12:00

12:20

12:50	Roadkill monitoring in the National Park of Koroneia and Volvi lakes in Central Mac Georgiadis, L. ; Koukaki, E.; Karta, L.; Kontos, K.; Kontsiotis, V.	11:40	An Analysis of the Effectiveness of Mitigation Mea Song, E. ; Kim, I.; Kim, K.	
11:00–13:00	Road verges and biodiversty I	Room: ZII Chair: Denis Francois	12:00	Effectiveness of transport mitigation measures fo Kutal, M. ; Duľa, M.; Gula, R.; Toczydłowska, J.; Milar
11:00	Enhancing biodiversity: Exploring the potential of verges along different traffic mo Noben–Grzonka, S. ; Bartels, P.; Erpenbach, A.; Esser–Heyden, D.; Flues, S.; Heibeck, M.: Schmidt, S.: Sundermeier, A.: Symmank, J.	des in Germany N.; Kurze, S.; Leiblein–Wild,	12:20	Effectivity of underpasses for the small fauna and Reck, H. ; Nissen, H.; Schulz, B.; Schulz, H.; Winkler,
11:20	Listen to the Yellow rattle: How the principle of self-organised biogenic heterogen for maintenance and defragmentation measures to preserve biodiversity along an	eity can be used d across transport	12:40	A79 Motorway – Ecological continuity operation an Pouchelle, H.; Aliaga, A.
	infrastructure Reck, H. ; Donath, W. T.; Nissen, H.; Bockwoldt, D.; Zimmerbeutel, A.; Paul, J.; Diekötte	er, T.; Schulz, B.; Böttcher, M.	12:50	Exploring wildlife crossing effectiveness on the N- Hlatshwayo, T. I. ; Zungu, M. M.; Collinson–Jonker, V
11:40	Tarping to Control Invasive Knotweeds : Lessons from a Full Scale Experiment alon Dusz, M. ; DOMMANGET, F.; PETIT, A.; DECHAUME–MONCHARMONT, C.; EVETTE, A.	g Railways		
12:00	The use of artificial intelligence (AI) for monitoring invasive alien plant species and Wätjen, M.	d wildlife-vehicle collisions	11:00–12:30	Guidelines for mitigating the impact of infrastruc
12:20	From scientific study to the reality: a case study of PPP project of new Czech highw Hula, V. ; Pedret, D.; Burešová, R.; Štefánik, M.	ay	11:00	Actions to reduce large carnivore road mortality r Europe Rosell, C. ; Fernández, M. L.; Ricci, S.; Voumvoulaki,
12:40	Nature–Friendly Vegetation Management of the Newly Constructed D3 and D4 Moto Bohemia Janáková, J. ; Kloubcová, J.	orway Sections in South	11:20	The Spanish Strategy for the Defragmentation of Oñorbe, M. ; ROSELL, C.; FERNÁNDEZ, M. L.
12:50	Technical conditions for planting and caring for road vegetation in the Czech Repu Jedlička, J. ; Dostál, I.; Šikula, T.; Májková, B.; Ličbinský, R.; Straková, M.	blic	11:40	Policy recommendations for mainstream Green In infrastructure development in the framework of H Georgiadis, L. ; Chalkia, E.; Loukea, M.; Mot, R.
11:00–13:00	Green and grav infrastructure	Room: D217	12:00	Biodiversity and infrastructure: Contribution of in Austrian Biodiversity Strategy 2030+ Danzinger, F. ; Grillmayer, R.; Rehberger, O.; Moser,
11:00	Quantifying effects of transport infrastructure on biodiversity based on estimated	Chair: Ivo Dostál habitat functionality	12:10	Key factors for success when knowledge is to be t Sjölund, O. A.
11:20	Kindvall, O. Priority ecological connectivity areas for spatial planning interventions Laner, P. ; Favilli, F.	,	12:20	Cross–Collaboration in Action: Achievements of th Butynski, M.
11:40	Concept of the "Indicator of Landscape Fragmentation Dynamics" Dostál, I. ; Anděl, P.; Hejkal, Z.		12:30–13:00	Pannel discussion: Importance of handbooks to p
12:00	EUBIOCOR – identifying European biological corridors to enhance the TEN–N: from macroregional to local level Pilati, A. ; Favilli, F.; van Der Sluis, T.; van Eupen, M.; van Rooji, S.		11.00 16:00	
12:20	Green network in the cityscape – challenges and prospects for wild mammals Remm, P.; Jaik, K.; Remm, J.		14:00	Semi-domestic reindeer and large linear infrastru
12:40	Content, Use and further Development of the European Defragmentation Map (EDM Böttcher, M. ; Reck, H.; Baierl, C.	4)		use – the case of Liehittäjä Helldin, J. ; Mangi, A.
			14:20	Ungulate use of an Animal Detection and Driver V Bhardwaj, M. ; Erixon, F.; Holmberg, I.; Lomdal, A.; Se
11:00–13:00	Effectivity of mitigation measures	Room: D218 Chair: Antonio Mira	14:40	Biodiversity Monitoring with Intelligent Sensors: A Collisions Moulherat, S. ; Pautrel, L.; Debat, G.; Etienne, M.; Ge
11:00	Effectiveness of technical interventions for improving the permeability of Egnatia Western Macedonia, Greece Voumvoulaki, N. ; Georgiadis, L.; Mertzanis, Y.; Psaralexi, M.; Tsaknakis, G.; Lyberopou	Motorway for wildlife in ulos, G.; Theodoropoulou,	15:00	Wildlife mortality on roads in relation to landscap Raymond, S. ; Thomas, R.; Chadwick, A. E.; Perkins,
11:20	E.; Psaroudas, S. Do wildlife crossing structures mitigate the barrier effect of roads on animal move Soanes, K.; Rytwinski, T.; Fahrig, L.; Huijser, M.; Jaeger, I.; Teixeira, F.; van der Ree, R .;	ment? A global assessment van der Grift. E.	15:20	Impact of hunting activity on wildlife-vehicle col collision risk Colino Rabanal, V.; Lorenzo García, J.
		, 		

asures at Roadkill Hotspots in South Korea

or large carnivore dispersal in the Czech Republic nowski, A.; Romportl, D.; Selimovic, A.; Vorel, A.

d the necessity to adapt standards r, C.; Holst, U.; Böttcher, M.

nd monitoring of mitigation measures

N4 Toll Route (TRAC N4), Gauteng Province, South Africa W. J.; Downs, C. T.

cture on nature

Room: D222 Chair: Carme Rosell

risk: guidelines from experiences in countries of Southern

i, N.; Mertzanis, Y.; Latini, R.; Bil, M.; Mertens, A.

Habitats Affected by Linear Transportation Infrastructure

nfrastructure and ensuring ecological connectivity in Horizon 2020 BISON project

nfrastructure operators to achieving the targets of the

, D.; Hahn, E.; Obermayr, G.; Rath, M.; Banko, G.

translated into action

he Asian Elephant Transport Working Group

progress from theory to action

Room: **D222**

Room: **ZI** Chair: **Manisha Bhardwaj**

ructures; road mortality, fencing, barrier effects and passage

Warning System in Sweden seiler, A.; Håkansson, E.; Elfström, M.; Christensen, B.; Olsson, M.

An Integrated Pipeline for Mitigating Animal–Vehicle

Gendron, L.; Hautière, N.; Tarel, J.; Testud, G.; Gimenez, O.

pe fragmentation , E. S.

llisions: characteristics of hunting clubs that increase

15:30	Influence of field crops on the occurrence of deer vehicle collisions in Baden–Württe Märtz, J. ; Bouvier, A.; Brieger, F.	emberg	15:30	ArcGis online tool for functional ecological corri Mampaey, J. ; Impens, T.; Verhees, J.; Hendrickx, K
15:40	Wildlife–Vehicle–Collision Mitigation at Linear Infrastructure: Final Conclusions and the WiConNET–Project Schalk, P. A. ; Schalk, A. R.	Recommendations from	15:40	Exploring the drivers of spatial–temporal change focus on the impacts of transportation infrastrue Prados, Y.
15:50	Towards open and global access to terrestrial vertebrate roadkill data			
	Grito, C.; Neves, T.		14:00–16:00	Effectivity of mitigation measures for ungulates
14:00–16:00	Road Verges and Biodiversity II	Room: ZII Chair: Heirich Reck	14:00	Temporal variations in the effectiveness of perin deer (Capreolus capreolus) Colino Rabanal. V. : Gutiérrez Cruz. S.
14:00	Road verges as habitat for species from historic agricultural landscapes: implication road construction Lennartsson, T. ; Westin, A.; Stenqvist Millde, Y.	s for management and	14:20	Wildlife fencing at German highways and federal Brieger, F. ; Strein, M.
14:20	Local history reflected in plants along roads – Vascular plants as Biological Cultural and ancient roads Westin , A : Lennartsson, T	Heritage in road verges	14:30	Nonlinear phenomena in mammalian alarm calls Terrade, A. ; Tesson, B.; Perricher, A.; Vion, C.; Mas
14:40	Biological cultural heritage of roads		14:50	Wild ungulate use of underpasses – tunnel lengt Elfström, M. ; Håkansson, E.; Helldin, J.
15:00	Bumblebee workers learn to avoid traffic		15:00	Collision protocol on the French national road n BRETAUD, J. ; CLUZEAU, A.
15:10	Vascular plant diversity in road verges of high conservation value is threatened by the	ne invasive alien herb L.	15:10	Carcass-location bias in roadkill studies D'Amico, M.; Román, J.; Rodríguez, C. ; Revilla, E.
	Dániel-Ferreira, J. ; Lennartsson, T.; Wissman, J.; Knudsen, C.; Eckstein, L. R.		15:20	Do odour repellents influence roe deer behaviou Jurečka, M. ; Andrášik , R.; Bíl, M.; Bartonička , T.
15:20	Ecosystem characterization of roadsides by its biophysical compartments: a literatul territory. Mayoral Solis , Z. ; Marche, B.; Chaudron, C.; Camargo Pardo, M.	re review for the French	15:40	Roads and habitat corelates: Assessment of Land National Highway 715 passing through Kaziranga
15:30	Railway Cultivation from the Art of Improving Nature to Bequest – plants to adornmo protection and kitchens Lindgren. A.	ent,		
15.40	Effects of traffic and management on pollinator communities in flower-rich road ver	σec.		September
13.10	Öckinger, E.; Horstmann, S.	500	07:30-19:30	Field trip 1: The Elbe Lowland
14:00–16:00	Maintaining ecological connectivity	Room: D217 Chair: Dušan Romportl	07:30-19:30	Field trip 2: Roadless Area Brdy on electric bikes
14:00	A comprehensive framework to quantify cumulative anthropogenic impacts on ecolo plan defragmentation strategies Panzacchi, M. : van Moorter, B.: Stange, F.	gical connectivity and	07:30–19:30	Field trip 3: South Bohemia
14:20	Assessing the influence of road density on land cover patterns in different ecosystem Perumal, L. ; New, M.	ns	07:30-19:30	Field trip 4: Czech-Moravian Highlands
14:40	Ensuring animal migration and habitat connectivity in the Rail Baltica railway projec Jēgere, I.; Mae, K. ; Ojasild, T.	t	09.00-15.00	rietu trip 5: Prague anu its surroununigs
15:00	Updated permeability and infrastructure conflict map of Romania Borlea, S. ; Nistorescu, C. M.; Doba, A.; Moţ, R.			
15:10	An ecological network for large carnivores as a key tool for protecting landscape cor Carpathians Vlkova, K.; Zyka, V.; Romportl, D.	nectivity in the		
15:20	The "General Wildlife Corridor Plan" (GWP) – an example from Southwest Germany Wilhelm, C. ; Strein, M.			

idors in Limburg

ges in urban and rural infrastructure development, with a ucture on biodiversity

and wildlife vehicle collision

Room: **D218** Chair: **Marcus Elfström**

meter fences to prevent wildlife roadkills: the case of the roe

roads – requirements and management implications

ls reduce receiver habituation ssenet, M.; Anikin, A.; Locatelli, Y.; Mathevon, N.; Reby, D.

th and availability of crossing opportunity matters

network

ur near roads?

nd use and Land cover mapping and roadkill occurrences in a Karbi Anglong Landscape

11th 2024

	September 12 th 2024	11:00–13:00	Interactive Session: How to ensure future–proof exchange in the face of new challenges: An inter		
09:00-09:45	Plenary talk – Marguerite Trocmé: Lessons learned from 35 years of road ecology	Room: AULA		exchange of best practices	
09:00	Lessons learned from 35 years of road ecology Trocmé, M.		11:00	How to ensure future–proof policy making, collab challenges: An international, interdisciplinary and IJsselstijn, H.; Frans, M.; Schaap, N.	
	This talk examines the evolution of highway planning and maintenance in Switzerland fr Most of the motorways were before environmental impact studies. However landscape as the early planning teams. As of 1988 an environmental impact assessment (EIA) was requ projects. The EIA reports pointed out the fragmentation of habitats caused and the need fauna passages. The first fauna passage in Switzerland was built in 1992. In 2001 a nation program was launched. This program aims at the restoration of the most important wild the country through the construction of 51 wildlife passages along the national roads sys more passages were added. Extensive mitigation measures to replace impacted habitats The guideline 18006 on the financing of the maintenance of mitigation measures in 2005 milestone, securing these measures on the long term. The environmental follow–up of t phase was put into place with the Association for road engineers (VSS) in 2002. This is no practice. Today environmental elements such as verges and their biodiversity are part of and managed as such on the long term. With more than 30 environmental standards for language and recognition between engineers and environmental experts has grown.	om 1987 to 2024. Irchitects were part of uired for the highway I to mitigate this with al defragmentation life corridors in stem. In 2022 5 is are also required. is set an important the construction ow a well embedded if the road assets roads a common		Successful reintroduction programs of badgers, be Netherlands have led to an increase of these speci- however are that infrastructural elements are incre- due to digging activity or nest building. Roads, rail- importance to a country that lies partly below sea a new balance between nature preservation and in integrity, efficiency and safety of our networks whi model of the learning landscape. It involves collab knowledge institutions and interest groups. In this lessons from international practices. We will brieff aim to exchange with other international represen interests are done internationally. We will first disc (1) finding a balance between curative and prevent uncertainties such as future effects of climate chan measures against infrastructural damage; and (3) s ecologists, administrators, legal advisors, enginee	
09:45- 10:30	Plenary talk – Václav Hlaváč: Fauna protection during transport and energy infrastructu development in the Czech Republic	re Room: AULA			
09:45	Fauna protection during transport and energy infrastructure development in the Czech F Hlaváč, V.	Republic	11:00–13:00	Fauna protection on transport and energy infrast	
	The Czech Republic is a Central European country with an area of 78,867 km2 and ten milli density of road and rail networks is high, but the density of motorways is still lower than i	on inhabitants. The n Western Europe.	11:00	Al-based Predictive Wildlife Detection for SNCF Re Meyer, F. A. ; Jordan, D.	
	Therefore, an increase of another 30% is planned. The rail network is outdated, and a new rail plan is being prepared. The power line network is also dense, but in connection with t renewable energy sources, the distribution and transmission system is to be strengthened	extensive high-speed he development of . A study conducted	11:20	Fully Autonomous AI–Driven Solutions to Prevent Widén, A.; Nozkova, S.	
	in previous years has shown that a large number of animals die due to collisions with cars 50 thousand roe deer, 550 thousand hares and 350 thousand hedgehogs are killed on road fragmentation of habitats by transport infrastructure has even stronger impacts. Although survive many years after construction, their long-term existence is threatened. The Europe example of a species that will probably become extinct in the Czech Republic as a result o	each year. More than Is every year. The isolated populations ean moose is an f fragmentation in	11:40	One year of operation of the smart sign based on animal-vehicle collisions: initial results on its effe Colino Rabanal, J. V. ; Rodríguez Díaz, R.; Blanco Vil Errandonea, A.; Puerta García, F. J.	
	the coming years. A complex system of migration corridors of large carnivores was define fragmentation. The primary task was to ensure the protection of migration corridors in spa was achieved in previous years. Currently, the migration corridors are protected against bu	d to prevent habitat atial planning, which uildings, fencing and	11:50	How to prevent Dangerous Liaisons: studying Whi Bonnet–Lebrun , A.; Garnier, K. M. L. ; Brand, A.; Du	
	other interventions that can limit animal migration. To date, 25 large green bridges have b where migration corridors are crossed by highways. Other large green bridges are propose highways. The use by animals and the effectiveness of these measures are now being veri paid to culverts and bridges over waterways – which are adapted to serve as fauna passag	een built in places d on newly planned ñed. Attention is also es. Special attention	12:10	Evaluating the effectiveness of the most common (Ciconia Ciconia) nests on transmission power line Martins, C. R.; Bernardino, J. ; Morgado, R.; Moreira,	
	has long been devoted to the otter. Road mortality has been monitored for a long time in places of frequent mortality are identified and gradually made passable. Similarly, road m for other protected species such as large carnivores, moose, beaver, endangered reptiles,	this species, critical ortality is monitored amphibians, and	12:20	Prevention of bird collisions with noise barriers in Viktora, L.	
	bats. Protection of birds on power lines has been given attention in the Czech Republic si According to the law, only bird-safe structures avoiding electrocution can be used for buil and reconstruction of existing ones in the Czech Republic since 1992. Despite this, thousar to electrocution and collision with the wires every year. The reason was the lack of knowle structures are really safe and where, on the contrary, bird mortality occurs. For this reason	12:30	The effect of highway traffic on bird diversity in fr Hladík, Š. ; Zasadil, P.; Barták, V.; Keken, Z.		
	on bird mortality has been initiated in the Czech Republic in recent years. During this stud poles and 6,400 km of power lines (about 10% of the country's total) were inspected. The to identify types of poles which are dangerous for birds from the point of electrocution and	y, about 76,000 power im of the study was d also the number of	11:00–13:00	Roads and endangered mammal species	
	birds dying on individual types of poles. Collected data show that at least 117,000 birds die and collision with wires in the Czech Republic every year. Based on this study, new guideli birds from electrocution and collisions were prepared as a mandatory basis for all new bu there are still thousands of old structures that are fatally dangerous for birds throughout reaching a complete solution to the problem in the Czech Republic may take another 10 –	e due to electrocution nes for protecting ildings. However, the landscape and 20 years.	11:00	Increasing ecological connectivity while contribut practical example with the European mink (Muste Fernández, M. L. ; Olalde, M.; Carreras de Bergarech	

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policy making, collaboration and knowledge national, interdisciplinary and interactive

Room: **D222**

boration and knowledge exchange in the face of new Ind interactive exchange of best practices

eavers, storks, wolves and other endangered species in The ies in our densely built environment. Negative consequences easingly facing destabilization due to animal presence, mostly lways and water embankments, infrastructural assets of vital level, are at risk of being damaged. We are searching for nfrastructural stability. The Dutch approach to ensure the ile facing ecological changes is based on the Ruijters (2006) poration between government bodies, executive agencies, session we will venture over country borders, and exchange fly outline our national programmatic approach. We then ntatives how policy making, collaboration and balancing of cuss propositions and will then breakout in three subtopics: tative measures, (2) creating a knowledge base on broader nge, or how to avoid affecting the food chain by applying setting up viable collaborations. We hope to discuss this with ers and scientists from other countries.

tructure

Room: **ZI** Chair: **Martin Strnad**

Réseau

Wildlife Collisions on Roads, Railways and Runways

n temporal models that alerts in real-time about the risk of fectiveness

llegas, M.; González Arias, J.; Pérez Aguilera, E.; Ruiloba

ite Storks' colonisation of high voltage pylons by 2030 Ipuy , J.; Gendre, N.; Dugué, H.; Barbraud, C.

n deterrence device in Portugal for preventing white stork ne pylons a, J.; Pintado, G.; Martins, J.; Moreira, F.

n the Czech Republic

27

ragmented agricultural landscape

Room: **ZII** Chair: **Václav Hlaváč**

ting to adapting roads against climate change effects. A ela lutreola) in Northern Spain he, J.; Rosell, C.

11:20	Road mortality of otters in the Czech Republic – its effect on population, influencing and possible solutions	g factors	12:00	Amphibians road mortality mitigation in Czechia Krása, A.
11:40	Polednik, L. ; Beran, V.; Hlavac, V.; Polednikova, K. Highly unpredictably otter road mortality in Austria hinders effective prevention me	Pasures	12:20	Success in reptile recovery across a fauna-desig Elfström, M. ; Lindqvist, M.
11.50	Kranz, A. ; Poledník, L.	serve in India	12:30	Pipe Culverts as Possible Mitigation Measure for Bats
11.50	Saxena, A.; Rajvanshi, A.; Habib, B.			Sennblad, A.; Honner, I.; de Jong, J.
12:10	Disentangling the road network: an assessment of the spread of road infrastructure landscapes Habib, B. ; Saxena, A.	in Indian tiger	12:50	Noise impacts on bats – assessing disturbance f Reason, F. P.
12:20	Impacts of linear transport infrastructure on terrestrial vertebrate species and cons Wang, Y. ; Yang, Y.; Tao, S.; Kong, Y.	ervation in China	14:00–16:00	Power lines and biodiversity protection
12:40	Temporal and spatial changes of ungulate activity before and after the constructior Maierdiyali, A. ; Wang, Y.; Lu, Z.	n of Qinghai-Tibet Railway	14:00	Renewables Grid Initiative: Collaborative approa Innis, L.
12:50	The wolf and the highway: The impact of collisions on Grey Wolf population viability Bouma , C. M. ; Morel, T.; Severijns, M.; Broekhuis, F.	y and road safety	14:20	Solution of bird mortality on power lines in the Škorpíková, V. ; Hlaváč, V.; Uhlíková, J.
11:00–13:00	Evaluation and monitoring of crossing structures	Room: D217	14:40	Strategies for Mitigating Wildlife Mortality on Po Shaforost, O.
		Chair: Tomáš Libosvár	15:00	From "LIFE Energy" to "LIFE Danube Free Sky" – a
11:00	Ecoduct Kempengrens: cross border defragmentation works! Claus, K. ; Lambrechts, J.; Feys, S.			the Danube River Gális, M.
11:20	Characteristics of wildlife overpasses in Hungary Tari, T. ; Nagy, E.; Kovács, F. M.		15:20	The story of Saker Falcon in Slovakia Chavko, J.; Gális, M. ; Slobodník, R.
11:40	Influence of human activity on ungulates' usage of crossing structures in Sweden Knufinke, J. ; Bhardwaj, M.; Elfström, M.; Graf, L.; Olsson, M.; Helldin, J.		15:40	Much more than white storks: results of the first pylons in Portugal Martins, C. R. ; Morgado, R.; Bernardino, J.; Leitão,
12:00	Monitoring of the Czech ecoducts Libosvár, T. ; Hejkal, Z.; Strnad, M.; Slepica, M.; Šikula, T.; Hlaváč, V.; Dostál, I.; Jedlička	, J.		
12:20	Presentation of France's New Fauna Passages Database "SIPAF" – A Step Towards Standardising Fauna Passage Monitoring		14:00–15:20	Safer Railways for Wildlife
12.20	Guinard, E. ; Pichard, O.; Cluzeau, A.; Criado, S.; Trauet, S.	pritoring studios	14:00	Safer Railways for Wildlife Seiler, A.
12.50	Dornick, V. B.		14:10	Mortality on the tracks: spatiotemporal patterns Bhardwaj, M. ; Collinson–Jonker , W.; Thela, K. S.; [:]
12:40	Evaluation of Wildlife Crossing Structures in South Korea Kim, K. ; Song, E.; Kim, I.; Kim, S.		14:20	An innovative railways sleeper for amphibians: r Moulin, M. ; Rabaseda, S.; Petit, A.; Clevenot, L.; D
11:00–13:00	Mitigation measures for amphibians, reptiles, bats	Room: D218 Chair: Antonín Krása	14:30	Explaining factors of wildlife-trains collisions ar wildlife by wild ungulates in north-western Fran Heydorff-Decaux, T.
11:00	Developing a Caltrans approved wildlife fencing attachment for guardrail systems to and provide habitat connectivity for reptiles, amphibians and small mammals.	o reduce road mortality	14:40	Using acoustic warning to avert ungulates from a Olsson, M.; Eilertsen, S.; Berndt, C.; Windsvold, A
11:20	Road impacts: from analysing feedback to establishing a national protocol for asses tunnels for amphibians	ssing the effectiveness of	14:50	Factors influencing flight behaviour and detection video study Monssen, L. E.
11:40	AMPHIbian CONservation and habitat restoration (LIFE AMPHICON) – best practices	and hands-on	15:00	Pilot study on train-mounted speakers to deter Winsvold, A. ; Støckert, R.
	experiences from Slovenia Poboljšaj, K.		15:10	A new Electronic System to protect Railways fror Schalk, P. A.; Schuh, T.

a – an overview

gned overpass

r Road–Induced Barriers of Movement for Clutter–adapted

from the perspective of a bat

Room: **ZI** Chair: **Marek Gális**

aches to nature-friendly electricity grid development

Czech Republic

ower Lines while Improving Grid Reliability

protection of birds on power lines in Slovakia and along

t national survey of birds nesting on transmission power line

, H. A.; Cidraes–Vieira, N.; Pedroso, R.; Palma, L.; Moreira, F.

Room: **ZII** Chair: **Andreas Seiler**

s to rail–kill in the Balule Nature Reserve, South Africa Swanepoel, H. L.; A. P.

reconnecting wetlands crossed by existing railroad lines Durand, E.

nd use of underpasses and overpasses not dedicated to nce – PhD study currently on progress

a level crossing for fauna prior train arrival. A; Lundin, U.; Rydlöv, J.; Seiler, A.

on of wild ungulates on railways – a train-mounted

wildlife from railways

m Wildlife–Collisions

15:20–16:00	Panel disscussion – Safer railways for wildlife	Room: ZII	14:00–16:00	Research and education
14:00–16:00	Fauna protection during planning	Room: D217 Chair: Lazaros Georgiadis	14:00	A programmatic approach to the future-proof in Netherlands is finding a new balance between in IJsselstijn, H. ; Frans, M.; Schaap, N.
14:00	Application of multi–criteria analysis and development of scenarios for the de infrastructures ensuring ecological connectivity in Western Macedonia, Greece Georgiadis, L. ; Kontos, T.; Dimitrakopoulos, G. P.; Vakalis, S.	sign of energy and transport	14:20	Creation of viable ecological management partne ÉTRILLARD, C.; FRANÇOIS, D. ; GODEAU, J.; BOSONE
14:20	Implications of Future expansion and diversification of transport infrastructure biodiversity and recommendations for changing Lahore to a more biodiverse of Akbar , F. K.	e of Lahore (Pakistan) for its ity	14:40	The infrastructure and biodiversity European stra transformative changes Autret, Y. ; Goger, T.; Navarro, C.; Hedelin, F.; Rosel
14:40	Using Existing Infrastructure to Improve Wildlife Connectivity Clarke, K.; Bega, S. ; Parr Farris, E.		15:00	ESG reporting in the context of transport infrastr Wimmerová, L. ; Keken, Z.; Zdražil, V.
15:00	Lessons learned and ecological adaptations made during construction phase (Belgium) Maes, K. ; Durinck, P.; Goffi, C.	@ Oosterweel (Antwerp,	15:20	Inclusion of the issue of landscape fragmentatio elementary schools. Andĕl, P.
15:10	Flemish Vademecum Road Infrastructure: Ecological Engineering Moelants, M.		15:40	Assessing Ecosystem Services for Railway Infrast Franzoni, L.; Yilmazer, P.; Schuh, T.; Strong, N.; Bel
15:20	Standardising nature surveys: enhancing biodiversity assessment and habitat in infrastructure planning Sahlman, T.	mapping	16:30–18:00	Poster Session
14:00–16:00	Habitats along transport and energy infrastructure	Room: D218 Chair: Jiří Jedlička		September
14:00	Energy and biodiversity potential from roadside maintenance in Southern Swe Emilsson, T. ; Nilsson, D.; Svensson, S	den	09:00–10:30	Interactive Session: Enhancing international coll infrastructure and ecology to meet urgent challe
14:20	Bat'lignes: listening to the response of bat and bush cricket communities to po alternative managements Thibault, M.; Garnier, K. M. L. ; Kauffmann, C.; Bas, Y.; Kerbiriou, C.	ower line clearings and their	09:00	Enhancing international collaboration between t to meet urgent challenges Hahn, E. ; Rosell, C.; Rydlov, J.; Georgiadis, L.; Autre
14:40	Railway habitats are important for rare and endangered species Stenmark, M.			Climate change and biodiversity loss represent to today. These issues not only impact ecosystem s
14:50	Sustainable roadside management practices: eliciting patterns of maintenance Marche, B.; Corrigeux, B. ; Camargo, M.; Artunduaga, J.	e practices in France		and human well-being. As the world undergoes t it is imperative that we implement rapid and effe There is a critical need for collaboration between
15:00	Biodiversity promotion areas along highways in Switzerland Eicher, C. ; Zippert, Y.			existing silos and collaboratively find solutions t in both nature and infrastructure. Achieving sust intersectoral and multi-stakeholder collaboratio
15:10	Prospective reflection on the commitment of landowners for ambitious ecolog rights–of–way in forest François, D. ; ÉTRILLARD, C.	ical management in powerline		effective collaboration are already underway thr PIARC, UIC, UNEP, WWF, the Bern Convention, am Memorandum of Understanding (MOU) between language for professionals across different discip
15:20	Before–After native vegetation response to road paving intervention across Bra Franceschi, C. I.; Kindel, A.; Peres, A. C.; Dambros, D. S. C.; Colares, F. L.; Cabral, S	azilian biomes . J.		Handbook for Action'), and the launch of the HO between biodiversity and transport developmen enhance international cooperation among transp we can address current and emerging conflicts, u

infrastructure.

Room: **D222** Chair: **Zdeněk Keken**

ntegration of flora, infrastructure and fauna: How the nfrastructural integrity and ecological developments

nerships for rights–of–way of linear transport infrastructures E, L.; MARTINEZ, F.; NYSSEN, P.

rategic research and innovation agenda as driver for

ell, C.; Loukea, M.

ructure

on and wildlife protection in teaching at the 1st grade of

tructures low, M.

Room: Poster area

r 13, 2024

laboration between transport enges

Room: ZI

transport infrastructure and ecology

ret, Y.; Seiler, A.; Poutiers, M.

two of the most significant challenges our societies are facing services but also threaten the resilience of infrastructure transformations through decarbonization and digitalization, fective measures that deliver positive outcomes for nature. en stakeholders in infrastructure and ecology to break that mitigate conflicts and drive transformative changes tainable transport networks requires the development of ons to identify cost-effective solutions. Initial steps towards rough efforts by organizations such as IENE, CEDR, FEHRL, nong others. Noteworthy examples include the signing of a PIARC and IENE, their joint efforts to establish a common iplines (as seen in the 'Biodiversity and Infrastructure: A DRIZON 2020 BISON project, which addresses specific conflicts nt. This interactive session seeks to explore new avenues to sportation and ecological organizations. By working together, understand the underlying drivers, and accelerate the iodiversity loss and enhance the resilience and safety of our

	Wildlife-vehicle collisions cost millions of Euros each year in loss of life and damages. Wildlife crossin structures combined with suitable fencing are a commonly implemented mitigation strategy to reduce wildlife-vehicle collisions and increase landscape connectivity for wildlife. However, the effectiveness fencing for traffic safety has an arguable effect on wildlife mortality since wildlife-vehicle collisions to occur more often on medium-sized roads, where fencing for wildlife is not prioritized, and wildlife cro structures are seldom installed due to economical and constructional constraints. In such instances, a Detection and Driver Warning Systems (ADDWS; i.e., at-grade fauna passages with animal detection sy may serve as an alternative to wildlife bridges and underpasses, since they are cheaper to install and simpler to construct. Following the progress of the Animal-Detection and Driver Warning Systems (AD this workshop will be an active working session to address goals of the ADDWS working group. The air collate existing data on ADDWS systems, and discuss research questions and analysis. All participants workshop are asked to contribute data and knowledge to the working group. While the workshop buil previous working group activity, new members are always welcome.			
09:00-10:30	Interactive Session: Global Gateway Initiative: an opportunity for best practices in sustainable Transport and Energy Infrastructure development Room: D217			
09:00	Global Gateway Initiative: an opportunity for best practices in sustainable Transport and Energy Infrastructure development Grilo, C. ; Martins, R.; Bernardino, J.; Ceia–Hasse, A.; Moreira, F.; Marques, A. T.; Neves, T.; Silva, J. P.; Beja, P.			
	The Global Gateway initiative is a European strategy that aims to enhance sustainable connections across the energy, and transport sectors in both marine and terrestrial environments. Over the period of 2021 to 2027, the European Union plans to mobilise up to €300 billion in investments on high-quality projects, with a focus on countries in Africa, Latin America, and Asia, that encompasses biodiversity-rich areas with numerous threatened species. Despite the ambitious goals of promoting the highest environmental standards in transport and energy projects under this initiative, there is a significant challenge in addressing the potential negative impacts on biodiversity. The lack of comprehensive information on which species are particularly vulnerable to roads, railways and power lines and best practices to mitigate its negative effects represents a considerable obstacle. To achieve the goal of no net loss of biodiversity, it is critical to conduct comprehensive assessments on which species and ecosystems could be affected by these infrastructures and on the mechanisms necessary to implement best practices that promote ecologically sustainable infrastructures. Our session aims to give participants a snapshot of the lessons learned from the Belt and Road Initiative (ambitious plan of infrastructure investment to connect China with the rest of the world). We also aim to promote a discussion among stakeholders (academia, transport and energy authorities, environmental agencies) regarding environmental assessments, mitigation strategies and monitoring mechanisms that should be addressed by the European Union towards effective implementation of environmental safeguards in the Global Gateway initiative, using the best science–based solutions.			

Interactive Session: Animal-Detection and Driver Warning Systems

Animal-Detection and Driver Warning Systems

Bhardwaj, M.; Olsson , M.; Deis, M.; Brieger, F.

09:00-10:30 Interactive Session: Ecoconnectivity in the capital of Europe

Room: **D218**

Room: ZII

09:00 Ecoconnectivity in the capital of Europe Van Raemdonck. M.: Maes. K.: Vercauteren. I.

09:00-10:30

09:00

"Working at the ring road" is a project that redesigns the Brussels Ring Road. As the ring road crosses several Natura 2000 areas like the Haller forest, Laarbeek forest and Sonian forest, and currently it's literally a barrier for migrating fauna and flora in an already densely populated area. The objective of the program around the Brussels Ring Road is to improve public transport (high speed bus and tramway), stimulate the modal shift (bicycle highway) and redesign the road itself (solving infrastructure and mobility issues) whilst also fixing the ecological problems, by ameliorating the surroundings for both society and nature. For the latter, we have two fundamental ecological goals: 1) Solving ecological barriers permanently in the exploitation phase. Fauna should be able to migrate alongside the ring road towards and from the Natura 2000 and other greenblue areas, but also in and out of the European capital. Hence, we made an ecoconnectivity map of the whole of the Northern region around the Brussels Ring Road. 2) Minimizing the impact on existing populations and habitats in the construction phase by inventing/creating the minimum disruption plan ecology. This plan is a nature based approach synchronized with the project phases to evacuate plants and animals out of the working zones and maintain species as much as possible permanently in situ.

Both goals are an absolute novelty in Belgium. During IENE 2018, we already presented the idea of the ecoconnectivity map. This edition is a moment of reflection of this map and to explain what we've learned so far.

11:00-12:30 Interactive Session: Harmonising Infrastructure and Biodiversity: The EU-funded SYMBIOSIS Initiative Harmonising Infrastructure and Biodiversity: The EU-funded SYMBIOSIS Initiative 11:00 Yilmazer. P.: Goger. T.

SYMBIOSIS is a pioneering interdisciplinary EU-funded initiative in biodiversity, aligning with the UN's vision for responsible land use and the European Green Deal. It will build a community of practice between transport infrastructure, energy distribution and production, and biodiversity, while addressing the role of strategic planning in climate change and building resilient infrastructure. The collaborative approach will accelerate action, seamlessly integrating diverse stakeholders within the CSA framework and the EU-Rail Master Plan. SYMBIOSIS offers a holistic approach integrating biodiversity consideration through the entire lifecycle of infrastructure projects. Introducing an impact assessment tool for linear infrastructure, it promotes digitalisation, contributing to a unified European biodiversity baseline through standardised data collection, monitoring and mapping in transport and energy projects. Committed to nature-based solutions for climate-resilient infrastructure, SYMBIOSIS establishes a methodology contributing to the "theory of change", guiding decisions and facilitating information exchange for "no net loss" and "net gain" biodiversity objectives. Building on the momentum created in projects such as the EU-funded BISON project, SYMBIOSIS envisions the coexistence of sustainable infrastructure with thriving biodiversity, advocating for social, economic and environmental well-being. The side event including kickoff meeting will introduce SYMBIOSIS, outline work packages and timelines, discuss stakeholder engagement and digitalization, and chart next steps. SYMBIOSIS will target to provide recommendations for biodiversity-related research and innovation, guiding decisionmakers and investors on pathways leading to a sustainable, biodiverse future. It showcases transformative change through cross disciplinary efforts for harmonious coexistence.

11:00-12:30 Interactive Session: Integrating Nature-Positive Strategies in the Transport Sector: Advancing nature recovery through the Transport4Nature Initiative

11:00 Integrating Nature–Positive Strategies in the Transport Sector: Advancing nature recovery through the Transport4Nature Initiative. Canavan, R.

> In the face of accelerating biodiversity loss, the transport sector and associated linear infrastructure developments have a critical role to play in promoting environmental sustainability through targeted nature restoration efforts. This presentation builds on the IENE Transport4Nature Initiative for integrating naturepositive objectives within the transport industry, emphasising the strategic setting of clear, measurable committments for biodiversity conservation and ecosystem restoration. Consideration of appropriate methodologies for assessing ecological impacts specific to transport projects, e.g. roads and railways, which often present unique challenges due to their extensive spatial footprints and fragmentation effects, and linking these to overarching corporate strategies and targets. This extends to the implementation of sciencebased targets (e.g. SBTN), that align with international conservation goals (i.e. Global Biodiversity Framework) and voluntary frameworks (e. TNFD), facilitating a balance between infrastructure development and nature recovery. In addition, the significance of cross-sector collaboration, involving policymakers, environmental NGOs, and industry stakeholders, to enhance the efficacy of nature targets is highlighted. The presentation underscores the urgent need for the transport sector to adopt and rigorously pursue nature-positive strategies as part of their core business operations, thereby contributing to a sustainable and ecologically responsible future.

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Room: ZII

Interactive Session: Ecological defragmentation of waterways – do's and don'ts and differences with defragmentation of roads	Room: D217	13:30–15:00	Interactive Session: European perspectives on infr research fundings: challenges and solutions
Ecological defragmentation of waterways – do's and don'ts and differences with defragme Horckmans , K. ; Claus, K.	entation of roads	13:30	European perspectives on infrastructure and biodi Autret, Y. ; Goger, T.; Navarro, C.
Since 2019 the Flemish government works on the Flemish Action Program for Ecological D Until now this program focusses on roads. Starting from 2025 we wish to develop an integ- inland waterways. Strongly human influenced navigable waterways (canals) have unnature to vertical slopes. Although most animals are good swimmers, they cannot exit the water drown. Canals are therefore hard borders for nature and species migration that divide ha healthy gene exchange. Solutions are necessary. The nature restoration law acknowledges goals for connectivity and free flowing rivers. However, defragmentation of waterways needs a different approach than roads. Fencing f guiding is difficult because of the double function of the water body as barrier for most s for some. Fauna exits need to be numerous and well placed, but present possible safety a issues. Monitoring is a challenge on his own. In this session we will present current knowledge, solutions and approach in Flanders as Solutions comprise roadside bridges, several types of animal escapes, fish passages and a n interactive part we wish to gather good practices and knowledge, discuss challenges, u possibilities for innovative monitoring techniques and future research projects. This sessi-	efragmentation. grated approach for al and very steep after entering and bitats and prevent s this within the for ecological pecies but habitat and management an introduction. spawning places. In unsolved problems, ion could be a		This Workshop, mostly addressed to research fund challenges in terms of sustainable funding of infra It aims at contributing to put IENE association as a coordination. According to the G20, the forthcomin transport and energy sectors represents a major o Deal. However, the 50% increase in networks by 20 environment. Sustainability research and policy in account both biodiversity and climate issues in a r operational point of view, the critical weakness of by the weakness of the industrial actors able to ar in the various member states. After two short prel critical mapping and the feedback of the French N ecosytems, we will organise a debate and discussio corporate or European fundings can be coordinate European research and innovation community able elaboration of a concrete roadmap for IENE as a Eu
first step for an international working group on this theme complying with the requireme	nts of the nature		
		13:30–15:00	Interactive Session: Impact Mitigation for highway effectiveness of implementation and current chall of climate and landscape change
Interactive Session: Communicating your transport ecology story to the community, engineers and your Mum: Enthralling your audience with a captivating blog or stunning		13:30	Impact Mitigation for highways in the D-A-CH cour
audio-visuals Communicating your transport ecology story to the community, engineers and your Mum:	Room: D218 Enthralling your		Darbi, M.; Süßenbacher, R.; Glatz–Jorde, S.; Schmidt Hoffmann, F.
audience with a captivating blog or stunning audio-visuals.			All three D. A. Cl. countries (Correspond Austria and)
van der Ree, R.; Topp, K.; Bega, S.; Hewavithana, D.			to counterbalance the unavoidable impairments of
It is predicted that 25-million lane-km of new roads will be built by 2050, and 90% of this OECD countries. Many countries and regions lack the expertise, resources and political wi ecologically-friendly infrastructure development. An important key step in improving the ecologically sound advice and designs is ensuring that everyone has a better understand and solutions. Global efforts to communicate and disseminate information must be (1) A it be found and accessed? (2) Relevant to the audience – does each audience get the info need? (3) Understandable – can the information gap or need? (5) Is it aesthetically appealing ar your audience to read more? In this workshop, we will give practical advice, instruction, h enable you to write a blog-style summary or produce a short social-media clip of your refor a relevant audience. We will guide you through the process, including (1) Identifying you Defining your audience. (3) Crafting your message. (4) Revising and editing your story. (5) I promoting your story. You are invited to use the tips you learn today to prepare a short a www.TransportEcology.info or a short video or visual content for social media. www.Trans a freely accessible resource for planners, designers, ecologists, engineers, funders, and th implement best practice.	will be in non- ll to implement uptake of ing of the impacts ccessible – can rmation they roup? (4) Usable ad does it invite hints and tips to search or project our 'story'. (2) Disseminating and rticle or blog for portEcology.info is he community to		projects. Despite the long standing experiences, no of compensation measures exists and their long te a growing uncertainty due to the effects of climate will build on the transnational research project "Co by an interdisciplinary and international project te project aims for a presentation of the status quo a proof compensation planning. In the first part of t different perspectives. Subsequently, the second p towards the future with an expert panel and the au the legal standards, 2. Implementation of compens state, tools and lessons learnt, 3. Challenges from practitioners and scientists. The goal of the interact with regard to how the planning, safeguarding, ma measures can be improved in the future.
	 Interactive Session: Ecological defragmentation of waterways – do's and don'ts and differences with defragmentation of vaterways – do's and don'ts and differences with defragmentation of waterways – do's and don'ts and differences with defragmentation 2019 the Flemish government works on the Flemish Action Program for Ecological D Until now this program focusses on roads. Starting from 2025 we wish to develop an integinated waterways. Strongly human influenced navigable waterways (canals) have unnature to vertical slopes. Although most animals are good swimmers, they cannot exit the water drown. Canals are therefore hard borders for nature and species migration that divide ha healthy gene exchange. Solutions are necessary. The nature restoration law acknowledge: goals for connectivity and free flowing rivers. However, defragmentation of waterways needs a different approach than roads. Fencing f guiding is difficult because of the double function of the water body as barrier for most 5 for some. Fauna exits need to be numerous and well placed, but present possible safety a issues. Monitoring is a challenge on his own. In this session we will present current knowledge, solutions and approach in Flanders as Solutions comprise roadside bridges, several types of animal escapes, fish passages and an interactive part we wish to gather good practices and knowledge, discuss challenges, upossibilities for innovative monitoring techniques and future research projects. This sees first step for an international working group on this theme complying with the requireme restoration law. Interactive Session: Communicating your transport ecology story to the community, engineers and your Mum: Enthralling your audience with a captivating blog or stunning audio-visuals. Communicating your transport ecology story to the community, engineers and your Mum: audione with a captivation blo experiment and incomating aportane key step in improving the ecologically sound advi	<text><text><text><text><text><text><text><text><text></text></text></text></text></text></text></text></text></text>	Interactive Session: Ecological defragmentation of vader ways - do's and don'ts13:30-1500Ecological defragmentation of vader ways - do's and don'ts and differences with defragmentation of roads13:30Secon: 2019 the Flemish government works on the Flemish Action Program for Ecological Defragmentation, for yout the flemish government works on the Flemish Action Program for Ecological Defragmentation, for yout the valer after entering and the water valer entering and the water valer entering and the very steep of you verical slopes. Although moust animals are good swimmers, they cannot exit the water after entering and the very steep of you verical slopes. Although moust animals are good swimmers, they cannot exit the water after entering and the very steep of you verical slopes. Although moust animals are good swimmers, they cannot exit the water after entering and the very steep of you verical slopes. Although moust are necessary. The nature restoration has acknowledges this within the slopes and the double function of the water body as barrier for most Species but habitat sizes. Monitoring is a challenge on his own.13:30-1500In this session we will present current knowledge, sloutions and approach in Flanders as an introduction. So this steep on bit of you you transport ecology story to the community, mointers of the nature estoration law.13:30-1500Interactive Session: Communicating your transport ecology story to the community. The sizes Monitoring you transport ecology story to the community. The size of the siz

frastructure and biodiversity

Room: ZI

diversity research fundings: challenges and solutions

ders (public and private), will present an overview of the astructure research and innovation and their impact. central place for pan-european research action ing investment of over \$94 trillion worldwide in the opportunity for stimulus packages such as the EU Green 040 is also a major challenge for biodiversity and the the transport and energy sector must now take into much more ambitious and coordinated way. But from an research has several consequences, marked in particular nswer to the needs and its almost fractal fragmentation liminary presentations: the EU R&I funding opportunities lational Research Programme on infrastructure and ion. Those exchanges will explore how local, national, ed or optimized to ensure the development of a pan le to answer to growing needs. The expected result is the uropean central place for research.

ays in the D–A–CH countries – legal basis, Illenges in the light

Room: **ZII**

untries – legal basis, effectiveness of implementation d landscape change dt, N.; Albrecht, J.; Werner, M.; Meier, R.; Bandelmann, T.;

d Switzerland) have impact mitigation regulations in place of nature and landscape resulting from infrastructure no systematic evaluation of the effectiveness and efficiency term management remains a major challenge. To this adds te and landscape change. The proposed interactive session Compensation areas in transition" which is being carried out team from practice and science in the D–A–CH countries. The and the development of recommendations for a future– f the session outcomes of the project will we presented from part will aim for a discussion of challenges and pathways audience. The suggested outline includes: 1. Comparison of nsation measures for infrastructure development – current n climate and landscape change, 4. Panel discussion with active session is thus to inform practice across countries maintenance and monitoring of compensation areas and

List of posters

- "Dead on road": A meta-analysis of reptile roadkill in the Western Palearctic 1 Delgado, D. J.; Benedetti, Y.; Arslan, D.; Morelli, F.
- Roads to hell for otters? The Eurasian otter and traffic a problem in Poiplie region (south Slovakia) 2 Urban, P.; Hrdý, T.; Černecký, J.
- Trends in ungulate-train accidents in Sweden 3 Jasińska, K. D.; Seiler, A.; Berndt, C.; Håkansson, E.; Wahlman, H.; Olsson, M.
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