



INTEGRA  
**group**

# Yearbook 2021



# INTEGRA Group in 2021

The roots of the INTEGRA Group go back to 1992, when the EIA Regional Centre was founded. The establishment of Integra Consulting in 2006 and DHP in 2014 represented another key milestone. Since its foundation in 2017, INTEGRA Group has specialized in environmental assessment and sustainable use of natural resources. Planning of adaptation to climate change forms an important part of our work. We undertake our assignments not only in the Czech Republic and Slovakia, but also in a number of other countries and regions, including the Balkans, former Soviet Union countries, and Southeast Asia. In 2021, we completed a significant number of successful contracts and

extended our portfolio of activities to new areas (e.g. SMART solutions for local governments). As was the case in previous years, in 2021 we assisted our clients by providing consultancy services, designing and implementing projects, raising environmental awareness and strengthening the respective necessary skills. We cooperate with a wide network of experts. This allows us to achieve good results in projects that we are involved in.

INTEGRA Group consists of five specifically oriented companies, covering various agendas in the field of the environment.



**Integra Consulting** focuses mainly on environmental impact assessment, including assessment of the impact of concepts. In addition, it collects and evaluates environmental data relating to strategic planning and implementation of measures. The company is the base of the consortium with its offices in Prague, Bratislava, Tbilisi and Hong Kong.

**DHP Conservation** covers the field of nature conservation and biodiversity. It is active not only in the Czech Republic, but also significantly in candidate and partner countries of the European Union, where it participates in the transposition and implementation of the EU legislation. The company is based in Prague.

**PlanTerra – Institute of Landscape Adaptation** applies an innovative approach to the landscape. It assesses its condition and plans its modification for future needs so that such changes are beneficial for both users and the environment. The company has its office in Ostrava.

**Aquagen** is a company that has significant expertise in water management as well as experience in the care of vegetation and other components relating to transport infrastructure. The company's office is in Liberec.

**EIA Regional Centre** is the oldest Czech company focusing on EIA and SEA processes. It has been active in the field for 30 years. It is based in Klimkovice. The following stories are a selection of our activities over the past year. They demonstrate the range of our scope and the degree of innovation we seek to implement for the benefit of our clients. We look forward to having you, the readers of the present yearbook, participate in any of the future stories.

On behalf of the management team  
*Jan Dušek, Michael Hošek, Martin Smutný,  
Jiří Dusík a Vladimír Rimmel*



# Monitoring of biota on the D4/R7 road construction site



**Zuzana  
Lackovičová**  
junior consultant

In 2016, the construction work began on one of the largest infrastructure projects in Slovakia – the D4 motorway and the R7 expressway. This project aims to build the southern part of the Bratislava bypass and sections of the southern expressway network connecting the west and east of Slovakia. A total of 59 km of new motorways in the area of the Danube floodplain could not but affect areas important from the point of view of nature conservation. The monitoring of the environmental impacts of the construction, in which DHP Conservation monitored the components of the biota during the construction period, was of even greater importance. Its relevance lies

in observing the impact of construction activities in real time, and in indicating potential or emerging issues. At selected sites, DHP Conservation regularly monitored the status and evolution of flora and fauna communities and animal migrations in relation to the construction. Where negative impacts were observed that could have been avoided or when construction operations could have been modified to reduce the impact, appropriate mitigation measures were proposed. The DHP Conservation experts could subsequently state, among other things, that the deer population from the Jurský Šúr National Nature Reserve was able to overcome the new linear structure

using the ecoduct in Vajnory and that the new sections of the roads did not become an impermeable barrier for the animals.

# SEA of WSSDP for the Frýdlant region



**Ondřej Bušek**  
senior consultant

The Water Supply and Sewerage Development Plan (WSSDP) is a conceptual planning document which serves to coordinate and prepare projects regarding the development of water supply, sewerage and related infrastructure in a given area.

The environmental and public health impact assessment (Strategic Environmental Assessment) of the WSSDP Update in the region of Frýdlant started in 2017. However, the submitted environmental and public health impact assessment of the concept was returned

by the Ministry of the Environment as a competent authority several times for completion and revision.

We were contracted by Sweco Hydroprojekt to complete this SEA. In close cooperation with this company, we carried out the SEA, resubmitted it to the relevant authority, and discussed it at a public hearing in Frýdlant. The SEA process was successfully completed and granted the SEA consent in October 2021. Our partner Sweco Hydroprojekt was thus able to finish the WSSDP for the Frýdlant region and prepare it for approval.

# Property database of the Road and Motorway Directorate



**Jan Dušek**  
partner

Following the activities related to the Environmental Management and Maintenance of Land system (in Czech referred to as the “ESUP”) designed by Integra Consulting for the Road and Motorway Directorate of the Czech Republic (RMD), we became part of the team that helps the RMD set up the inventory of assets under their management.

In 2021, we conducted the Analysis of Options for Digitising Records of Assets. The analysis of existing data regulations and the datasets collected in compliance with these regulations focused on the format, structure of the data, and

usability for practical management and maintenance. We followed up with the preparation of the Methodology of Data Structures for the Needs of the Technical Documentation and Records of Assets, based on the requirements and needs of the data standard (State Fund for Transport Infrastructure (SFDI), Digital Technical Map (DTM), and the regulations of the Road and Motorway Directorate. We also developed a framework Methodology for the System of Asset Recording. This will serve as a basis for the implementation of a management and maintenance system that uses the data from the inventories in line with and with the possibility of use in other datasets

such as DTM (Digital Technical Maps), BIM (Building Information Modelling), etc.

Cooperation on asset inventories helps us maintain contact with key players in the respective sector and further modify environment friendly asset management to meet modern standards.

# Assessment of the amendment to the Vítkov Land Use Plan



Jitka Kaslová  
senior consultant

In recent years, with the expansion of renewable energy sources in the Czech Republic, new large-scale installations of photovoltaic power plants have been made, often on agricultural land. In 2021, for the private investor Vítkovská Energy s.r.o., we prepared the Assessment of the Impacts of the Vítkov Land Use Plan (Amendment No. 3) on the Sustainable Development of the Territory, which also included environmental impact assessment of the concepts (SEA).

The subject of the amendment to the Land Use Plan was the intended construction of two photovoltaic power plants located on agricultural land.

Since we already had a lot of specific information available at the SEA stage, we proceeded with a more detailed assessment than is usual for SEAs relating to land use plans. As part of the impact assessment, we produced, among other documents, the Assessment of the Impacts of the Project and Land Use on Landscape Character and the Analysis of Water Runoff Conditions and Water Erosion.

In addition, thanks to intensive communication with the customer and the respective authority, we were able to modify the location and size of one of the photovoltaic power plants whose

original location was in conflict with nature conservation and landscape protection. By taking the appropriate approach already within the SEA and land use planning phase, we helped find a suitable alternative for the location and scale of the project, which will be further assessed in the EIA process.

# Biodiversity management for the Alpaslan II dam in Turkey



**Michal Kešner**  
senior consultant

For the third year now, we have been providing environmental consultancy services to the multinational group Energo-Pro. Energo-Pro focuses on operating hydroelectric power plants in Central and Eastern Europe, but also in Turkey, where two new plants, Karakurt and Alpaslan II, were put into operation in 2021. At the final stage of the construction of the Alpaslan II dam, our team was called in to assess the environmental impact of the construction and especially the operation of the plant, and to propose sufficient measures to mitigate or compensate for the negative impacts of the project so that it could be implemented according to the International Finance Corporation guidelines. Prior to the filling of the reservoir, we surveyed the status

of the local plant and animal populations. With the help of Turkish experts, habitat mapping according to the European Union classification (EUNIS) was carried out and endemic plant populations were described. We also began monitoring mammals, reptiles, amphibians, birds, fish and other groups of aquatic organisms, and we continue to do so until today.

The next step was the proposal of mitigation and compensation measures, involving rescue transfer of animals from islands created by filling the reservoir, planting of 48 hectares of oak forest, cultivation and planting of two species of endemic plants, addition of sediment to the section of so-called hungry water below the dam, and many other

measures. All the steps of this project are subject to supervision and comments of the customer alone, the Turkish authorities, the local communities, the auditors and, through them, also the investors, who shall ensure that the biodiversity of the project site does not suffer any loss and, if possible, even benefits from the proposed measures. Thanks to the monitoring and implementation of mitigation and compensation measures, the project meets the requirements of the International Finance Corporation.

The established monitoring will continue for several years to ensure that the measures taken and implemented will fulfil their functions and that the negative impacts of the plant on biodiversity are eliminated.

# Impact assessment of the mining area Razová – Zadní vrch



**Lucia Micková**  
senior consultant

Under Act No. 100/2001 Coll., on Environmental Impact Assessment and on Amendments to Certain Related Acts, we have prepared a notice of intent for the planned project to establish the Razová – Zadní vrch mining area.

One of the expert studies prepared for the project as part of the notification assessed the impact of the project on nature and landscape protection interests. The aim of this study was, on the basis of a field survey, to assess the significance of the site in question in terms of the occurrence of plants and animals, with particular emphasis on specially protected species, and to assess the potential impacts

of the project. Based on the impact assessment, modifications to the project were proposed in cooperation with the investor to provide for the preservation of the old growth forest. Consequently, the extent of the project was reduced as to the territory. The most valuable old growth forests dominated by beech and silver fir, which are located south of the area concerned, will be preserved. The scope of the project shall be adjusted according to the results of the landscape impact assessment, avoiding the opening into the eastern part of the area, while the extraction (quarry faces) shall be located behind the ridge of the Zadní vrch Hill. Before the implementation of the project,

it was also proposed to install nesting boxes for the Boreal Owl and other bird species. As a result of the proposed measures, it will be possible to implement the project with significantly reduced environmental impacts as opposed to the original plan.

# SEA of the Bratislava Port Masterplan



**Michal Musil**  
senior consultant

Within the preparation of the Bratislava Public Port Development Strategy Phase II (Bratislava Port Masterplan), we conducted Strategic Environmental Assessment (SEA) for company Verejné prístavy, a.s. Thus, we were able to participate in the preparation of a decision-making process on the further development of this attractive area in close proximity to the centre of the city of Bratislava.

Apart from the standard analysis of potential environmental impacts, the SEA also addressed the risks associated with climate change. Particularly relevant to the port area in terms of possible future climate development is the risk

of drought and the related limitations on port operability as well as the risks of extreme weather events such as storms and strong winds posing a risk to cranes and other port infrastructure. Therefore, the SEA final recommendations also included those that take into consideration the identified climate risks when designing the specific technical solutions for port facilities.

The strategy considered several options for spatial development of the port. For this reason, a multi-criteria comparison of individual development options was also carried out within the SEA in order to identify the optimal solution in terms of environmental protection, that is, the

solution with the minimum negative impacts, particularly with regard to the presence of NATURA 2000 sites in the area concerned.

The resulting option for the development of the Port of Bratislava, recommended by the Strategy, has the potential to contribute to the revitalisation of the neglected port area and its functional reintegration into the city centre. It will also strengthen the role of freight and passenger water transport at the expense of environmentally less favourable modes of transport. At the same time, such development should not have significant adverse impacts on the environment.

# Elimination of collisions with wildlife on the road I/13 (Radar)



**Rastislav  
Rybanič**  
senior consultant

Innovation is an essential part of the work of the INTEGRA Group. We strive to design and implement new approaches to environmental problems. The radar-detected presence of wildlife on or near the road, which alerts drivers via warning lights, is an example of a promising SMART approach towards road safety.

Collisions with wildlife on the roads usually have fatal consequences for both motorists and animals. Besides safety and health implications, they also result in property damage. While protective fencing, ecoducts and green underpasses are already standard solutions on motorways to avoid interactions with

animal migration routes, this problem persists on lower class roads.

On the section of the I/13 road between exit 80 on the D8 motorway and the village of Libouchec, we proposed the installation of radar equipment on a critical part of the road, i.e. on a migration route with regular collisions. The radar will monitor the movement of wildlife in both directions during the migration period of deer, roe deer and wild boar to their grazing areas. The radar technology and software is being developed in cooperation with the British company NAVTECH Radar. A section of the road outside the migration corridor is to be

fenced off to guide game to this secure crossing. When game goes beyond a certain safety line towards the road, the radar will give a signal to the warning lights. These will alert motorists with warning flashes to reduce their speed and be vigilant. A similar system has not yet been installed in Europe, but we believe it will prove useful and will be applicable on other critical road sections.

# Adaptterra Awards – Competition for the best adaptation to climate change



**Andrea Šandová**  
office manager

We cooperate with the Partnership Foundation as an expert guarantor of the competition Adaptterra Awards. Total 101 inspiring projects from all over the Czech Republic have been submitted to the third year of the competition Adaptterra Awards 2021. The finalists and winners were selected and visited by an expert jury consisting of experts from the Czech Hydrometeorological Institute, the Ministry of the Environment, Charles University, architectural studios, the Prague 7 Municipal Authority with competence for territorial development, and other organisations. The winners were announced at the Pleasant and Resilient City conference held in Prague in November 2021. In October 2021, we

organised an excursion for the winners of the last 3 years of the competition, visiting some of the projects in our country and also inspiring examples abroad (Munich). We maintain a database of good practice on the website [www.adaptterraawards.cz](http://www.adaptterraawards.cz), we publish a catalogue of the best projects from each year of the competition and many other interesting facts, inspirations and articles. At the same time, we are working on the upcoming competitions.

The contest allows us to cooperate with a large group of experts and institutions. In this way, we have an overview of many interesting planned and implemented adaptation projects in our country and abroad.



Winner in category  
Open Landscape:  
**Uneven-aged stand forest  
management near Klokočná**



Winner in category  
Built-up Areas:  
**Ecocentre Na Pasece  
in Veliková**



Winner in category  
Work Environment:  
**Pavilion of Tropical  
AgriSciences**



Winner in category  
Our Home:  
**Domov Podhradi - Community  
housing for the elderly**

# SEA of the south-western region of Bangladesh including the Sundarbans



**Martin Smutný**  
managing partner

The Sundarbans is an area bordering Bangladesh and India, home to the world's most extensive mangroves, which cover an area of approximately 10,000 km<sup>2</sup>. For its unique value and natural wealth, the Sundarbans has been a UNESCO World Heritage Site since 1997. In response to the concerns about the potential negative impacts of development in the region of the Sundarbans, the Government of Bangladesh initiated a SEA process in early 2020 in order to analyse the potential impacts of the planned development in the region on the values of the area. The SEA process was coordinated by the Ministry of Environment, Forest and Climate Change of Bangladesh and implemented by the

Center for Environmental and Geographic Information Services (Dhaka) and Integra Consulting.

The main output of the SEA (apart from a number of sub-analyses including modelling of potential air and water pollution at the regional level) were recommendations for optimising future socio-economic development with a view to minimising negative impacts on the area of the Sundarbans and the values it represents. This set of recommendations was compiled in a strategic plan for environmental management and monitoring, along with proposals for "what specifically needs to be done" to minimise

negative impacts or to enhance positive impacts, "who shall do it, when and how", and "what human, financial and material resources are required". An example of such a recommendation is the proposal to tighten air pollution limits in compliance with the World Health Organisation standards.

[www.seasw-sundarbansbd.org](http://www.seasw-sundarbansbd.org)



# Compensation for loss of water in wells



[integracons.com](http://integracons.com)

[aqua-gen.cz](http://aqua-gen.cz)

**Michael Hošek**  
partner

The construction of the new I/22 road in Strakonice (urban bypass) has significantly affected the wells in its vicinity, causing a partial or complete loss of water. For the Road and Motorway Directorate of the Czech Republic, we prepared an analysis of the situation and, upon consultation with the owners of the wells, proposed adequate compensation measures. We simultaneously discussed these with the water management authority so that the proposals would be accepted from its point of view. We provided the client with comprehensive material on the basis of which the measures discussed with all stakeholders may be directly implemented.

The report was compiled in cooperation with our partner Sweco Hydroprojekt. Within the Integra Group, Integra Consulting and Aquagen participated in the project. In this project, we applied our experience in environmental assessment and proposals for remedial measures, as well as our experience in negotiating with stakeholders. Regardless of the high number of stakeholders involved, the final proposal is technically feasible, yet sufficient in terms of remedy of the deteriorated condition.

# Restoration of surface canals in the Rejvíz National Nature Reserve



**Přemysl Bureš**  
senior consultant

In the course of our activities, we encounter unique assignments from different fields. These are often interesting projects requiring a specific approach and disciplinary overlap – locations and assignments that demand a very sensitive attitude with maximum respect for the given location and its conditions. The Rejvíz National Nature Reserve is such a place.

Thanks to the cooperation with the Nature Conservation Agency of the Czech Republic – Administration of the Jeseníky Protected Landscape Area, we had the opportunity to develop a study

that contributes to the protection and preservation of a unique area that has evolved for thousands of years. The main goal of the study “NNR Rejvíz – Study of the Restoration of the Drainage System of Surface Canals” was to analyse the impact of man-made canals, to assess their actual impacts, and to propose a set of measures that will allow for the optimization of the hydrological regime in the area.

The team of experts analysed in detail the provided documents and publicly available statistical data, carried out a detailed field survey of the area along

with an analysis of the composition of the soil profile, and subsequently drew up an alternative solution.

The study serves as a basis for the preparation of selection procedures, project documentation and, last but not least, for obtaining financial means from the European Structural Funds. The cooperation between the members of the project team and the investor's representatives resulted in a study that lays the foundations for the long-term preservation of the unique natural communities in the Rejvíz National Nature Reserve.

# Biological survey of the Carbol Lagoon



**Alice Háková**  
senior consultant

In 2021, we conducted a biological survey of the Carbol Lagoon at the former Dukla Mine in the Karviná region, and subsequently elaborated a “biological” assessment of its reclamation. The results of the surveys showed that the Carbol Lagoon, which was formed on the site of the original tailing pond, is a habitat for a number of rare plant and animal species. Following consultation with the project investor, part of the water area was left without intervention to limit the impact of the planned reclamation on wildlife. The original living conditions for the local flora and fauna will thus be partially preserved.

The area in the south-eastern part of the lagoon was chosen to be retained without intervention. There, the disturbance is eliminated because the filling will be carried out from the north. Along the shores, the present macrophytes can colonise the northern and western banks of the newly created lagoon and enhance its potential for the occurrence of amphibians and birds.

Essential is early consultation of the project with the investor and, where appropriate, modification of its technical design or extent, along with the proposal

of appropriate mitigation measures targeting specific communities and species, which are incorporated into the project documentation.

# Data management – CEV application



**Kateřina  
Gombošová**  
junior consultant

The purpose of the CEV application (Central Register of Defects) is to allow road managers to keep a clear and complete record of the legal inspections conducted, defects found on roads, and to monitor the warranty periods of the constructions and repairs completed. We have been managing this database for the Road and Motorway Directorate in the Ústí nad Labem Region (ŘSD) as a subcontractor since 2020.

Our goal is to ensure data management and warranty registration in the CEV application. We are therefore involved in controlling the data that is entered into the system by the inspectors carrying out

routine inspections. We verify the correct description of the defect recorded, its location, and the documentation filed, which is an essential part of the next step.

As a supervisor, we are responsible for resolving the defects reported by the inspector. We decide what is to be done next with the defect – assigning each defect to a contractor and supervising proper completion of the work. We check the completeness of the data entered by the contractor upon rectification of the defect, focusing on the technical units performed, the date of rectification of the defect and supplied photo documentation. The

accuracy and conclusiveness of the photo documentation is reviewed here. We check the individual IDs on the acceptance report and confirm the correctness of the data entered. The protocol is also approved by the investor's technical supervisor. After both parties have approved the acceptance protocols, we file them in the register.

Based on the request and the documentation provided by the client, we also produce the warranty file. We record completed construction and repairs in the system and apply the recorded defects within the claims against contractors.

# Chateau wine cellar Klimkovice, wind power plants



**Vladimír Rimmel**  
partner

In 2007, following 15 years of activities in the field of environmental impact assessment (EIA), we began to build a wine cellar. The town of Klimkovice offered premises from the 15th and 16th centuries in the underground of the castle. In the summer of 2008, we opened the first part – the entrance staircase, a small wine tasting room and an archive for the long-term storage of wine. Since that time, the cellar has been bustling with wine tastings of leading Moravian winemakers and wine importers, wine-accompanied work events and various celebrations. The archive contains approximately 7,000 bottles, which are aging and waiting for their opportunity.

Nevertheless, besides the wine, we are still engaged in the EIA process. Among the various projects being assessed, the most interesting and at the same time the most complicated are the wind power projects. For example, the project Jívová Wind Park (near the border of the Libavá military area) passed through the EIA process already in 2009. However, the work on its construction has not been started yet. The second application for an extension of the EIA opinion had to be submitted in 2021. The document concludes that neither the construction nor the operation of the proposed wind park will cause any excessive impacts on the individual components of the environment.

Despite the significant support for renewable energy sources, it is not at all certain whether the five planned power plants with the overall capacity of 15 MW will be built at the proposed site.



### **Social responsibility**

The INTEGRA Group members help both the environment and society. Therefore, they regularly support several partners, including Caritas Czech Republic and the Nature Conservation Forum.



**ZAMECKÝ VINNÝ SKLEP**  
KLIMKOVICE

### **Work and pleasant experience can be combined...**

Do you wish to meet us in an informal environment while enjoying excellent Moravian and Czech wines? We are pleased to invite you to our Chateau Wine Cellar Klimkovic.

2022