

# BRT



## WHO WE ARE



We are the #BRT at the Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague! We operate under the leadership of Assoc. Prof. Ing. Hynek Roubík, Ph.D. Together, we are a dynamic group of researchers dedicated to advancing biogas research, bioresources management and sustainable technologies. Our motto is *'Fearless minds, Endless potential'*.

Our broad spectrum of activities encompasses research, development, implementation, project coordination, and communication and dissemination services. Our multidisciplinary approach allows us to address complex environmental challenges and contribute to sustainable development on a global scale. Together, we strive to share our knowledge, uphold the highest research quality standards, execute impactful projects, and celebrate the remarkable individuals who make our work possible. We invite you to join us on our journey towards a sustainable future.



## WHAT WE DO



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# MEET OUR TEAM

Our team is composed of an international, dynamic and dedicated group of people who, together, have brought their passion, knowledge and skills to the frontline of our mission and objectives.

For a glimpse into the faces behind our collective success, check out our #IamBRT series on social media or visit the BRT website!







“AT THE BRT,  
WE BELIEVE THAT THE  
PURSUIT OF KNOWLEDGE  
AND INNOVATION KNOWS  
NO BOUNDARIES”

- ASSOC. PROF. ING.  
HYNEK ROUBÍK, PH.D.

## A MESSAGE FROM THE FOUNDER & DIRECTOR

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As we reach the midpoint of 2024, I am pleased to share some of the BRT's significant achievements and milestones thus far.

From new projects and establishing the Agri Policy Lab to building close to 1,000 biogas plants or welcoming new employees and celebrating our students' successes and milestones, the BRT continues to grow through its team of talented individuals who bring diverse perspectives and expertise, strengthening our capacity to tackle complex challenges and achieve our research goals.



# MID-YEAR INSIGHTS

This year has been marked by growth, innovation and impact, all driven by our commitment to excellence in research and collaboration.

## SUPPORTING THE AGRISCI-UA PLATFORM

We have initiated a new project designed to enhance agricultural science in Ukraine (supported by Czech Ministry of Foreign Affairs and Czech Aid). This project focuses on capacity building, research collaboration, and knowledge exchange, contributing to the resilience and advancement of Ukraine's agricultural sector.



## ALMOST AT 1,000 BIOGAS PLANTS BUILT AROUND THE WORLD

We are beyond pleased to share that the BRT is close to successfully building 1,000 biogas plants worldwide, which initially seemed an almost impossible feat. But, with our current work in Zambia, we are getting very close. Now at mid-2024, we are over the 990 mark. The goal is to reach 1,000 by the end of the year!

## EXPANDING & UPGRADING

We established the Agri Policy Lab and made significant improvements to the BRT Laboratory by upgrading our facilities and equipment to support cutting-edge research. We also have a Marie Skłodowska-Curie Action (MSCA4UA) Project, allowing us to tackle some of the most pressing issues in biogas technology and waste management, including topics relating to phosphogypsum. Our new UNDP Challenge Fund Project focuses on composting and vermicomposting in Cambodia.







# NEWS

Stay updated on the latest happenings, achievements, and exciting developments with the BRT News section of our website. From project milestones to our dynamic team members' triumphs and achievements, dive into what makes us thrive!

**32 NEWS ARTICLES IN THE FIRST HALF OF 2024**



## HIGHLIGHTS:



### AGRI POLICY LAB

We established a new unit within the BRT - the Agri Policy Lab.

Its mission is to foster the development and implementation of effective agricultural and related policies through rigorous research, collaboration, and advocacy. By operating at the intersection of research, stakeholder engagement, and policy advocacy, the lab envisions a future where agricultural policies are not only well-informed but also contribute significantly to sustainable development.



### BRT JOINS THE AI NETWORK

Particularly focusing on chatbots and large language models, this network serves as a dynamic platform for connecting AI researchers worldwide.

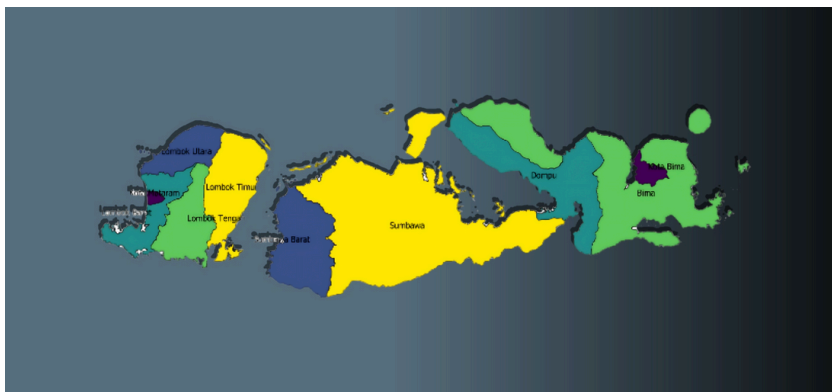
By uniting experts from diverse fields, such as biogas production and artificial intelligence, the BRT and the AI Research Network are poised to drive innovation, accelerate research progress, and pave the way for a more sustainable future!



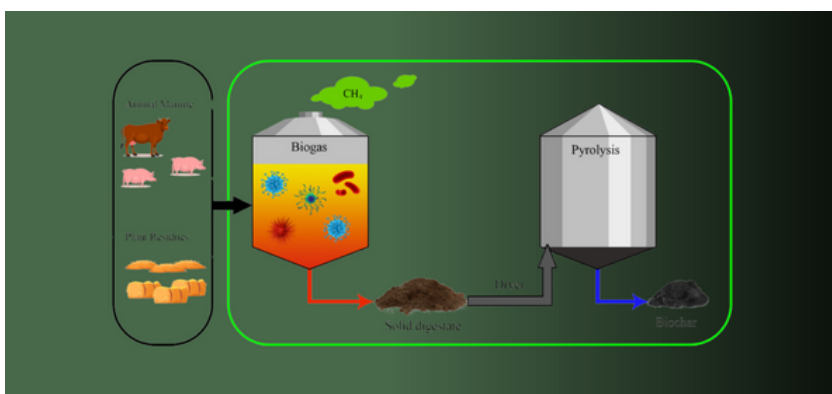


## THE START OF OUR BRT POPULARIZATION SERIES

Our young researchers are diligently working to increase the visibility of the success and potential of bioenergy sources across the globe. With this popularization series, we aim to showcase the impact of our research on renewable energy in strategic countries around the globe.



INDONESIA



VIETNAM



ETHIOPIA



## NEWLY APPOINTED FTZ VICE DEAN OF SCIENCE, RESEARCH, AND DOCTORAL STUDIES

Assoc. Prof. Ing. Hynek Roubík, Ph.D., founder and director of BRT at the Czech University of Life Sciences Prague (CZU), was appointed as the new Vice-Dean of Science, Research and Doctoral Studies at the Faculty of Tropical AgriSciences (FTZ).

*"I am very enthusiastic about this opportunity. My commitment to helping our faculty to have a collaborative, innovative, and impactful research environment is my main motivation. In this new role my hope is to encourage an open and friendly atmosphere. I take a moment to thank Prof. Jan Banout, who was my predecessor in the position and congratulate him on his new role as Vice-rector of our university."*

-Hynek Roubík



# GAINING EXPERIENCE

## INTERNSHIPS ABROAD

### »»» HIDAYATUL FITRI

Completed an internship in Hue City, Vietnam focusing on biogas technology and its impact on local farmers, particularly women, she explored the intersection of sustainable technology with cultural heritage, enjoying both rural village life and historical sites like Thien Mu Pagoda. Her experience highlighted biogas's role in empowering women through technical skills and leadership opportunities, enriching her understanding of community dynamics and sustainable practices.

### »»» ANTOINE BERCY

Completed an internship at SUEZ in Narbonne, France. Working in the Bioressourcelab, he gained practical skills and insights into private research dynamics, emphasizing the importance of innovation viability. Beyond professional growth, the experience allowed him to explore the scenic landscapes of southern France and forge valuable connections for future collaborations.

To broaden and develop the professional skills of our team members and widen their scientific network and cultural experiences, the BRT encourages its students to embark on internships. These internships are connected to their scientific journey and enable them to have hands-on, practical and in-field experiences, which are critical to their future careers.

### »»» LYDIA MAWAR NINGSIH

Completed an internship at Boras University, Sweden, focusing on Volatile Fatty Acid analysis in soybean-based wastewater. While she gained valuable research skills under the supervision of Prof. Mohammad Taherzadeh and Dr. Steven Wainaina, she also enjoyed exploring Gothenburg and the natural beauty of Boras.





# PUBLICATIONS

Explore our latest publications! Dive into insightful research, groundbreaking studies, and innovative findings from our team. Stay informed and inspired by our contributions to science & discover the knowledge that drives us forward!

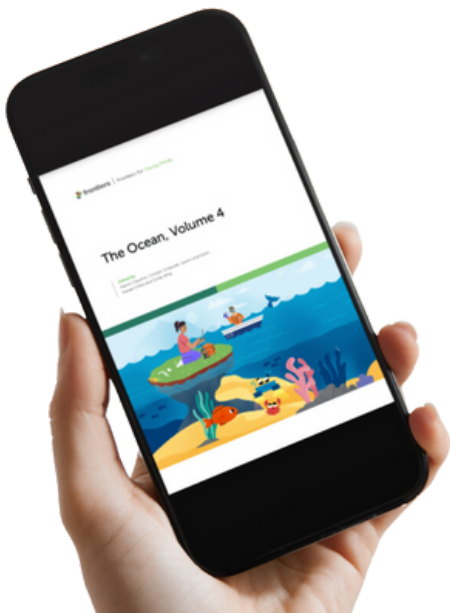
8  
**PUBLICATIONS  
IN THE FIRST  
HALF OF 2024**



## HIGHLIGHT:

### NEW E-BOOK CHAPTER CONTRIBUTION

The Frontiers for Young Minds E-book, "The Ocean vol.4", features article, "Poo is Precious" where BRT director Assoc. Prof. Ing. Hynek Roubík, Ph.D., and colleagues explore how we can harness the nutrients of wastewater to solve rather than create environmental problems.





**20+ ACTIVE  
PROJECTS  
IN THE  
FIRST HALF  
OF 2024**



**bio  
capital**



# PROJECTS

**HIGHLIGHTS:**



## »»» OSIRIS

Aims to enhance Open Science and Reproducibility by gathering data on influencing factors, testing evidence-based solutions, identifying stakeholder incentives, and embedding reproducibility in research design.

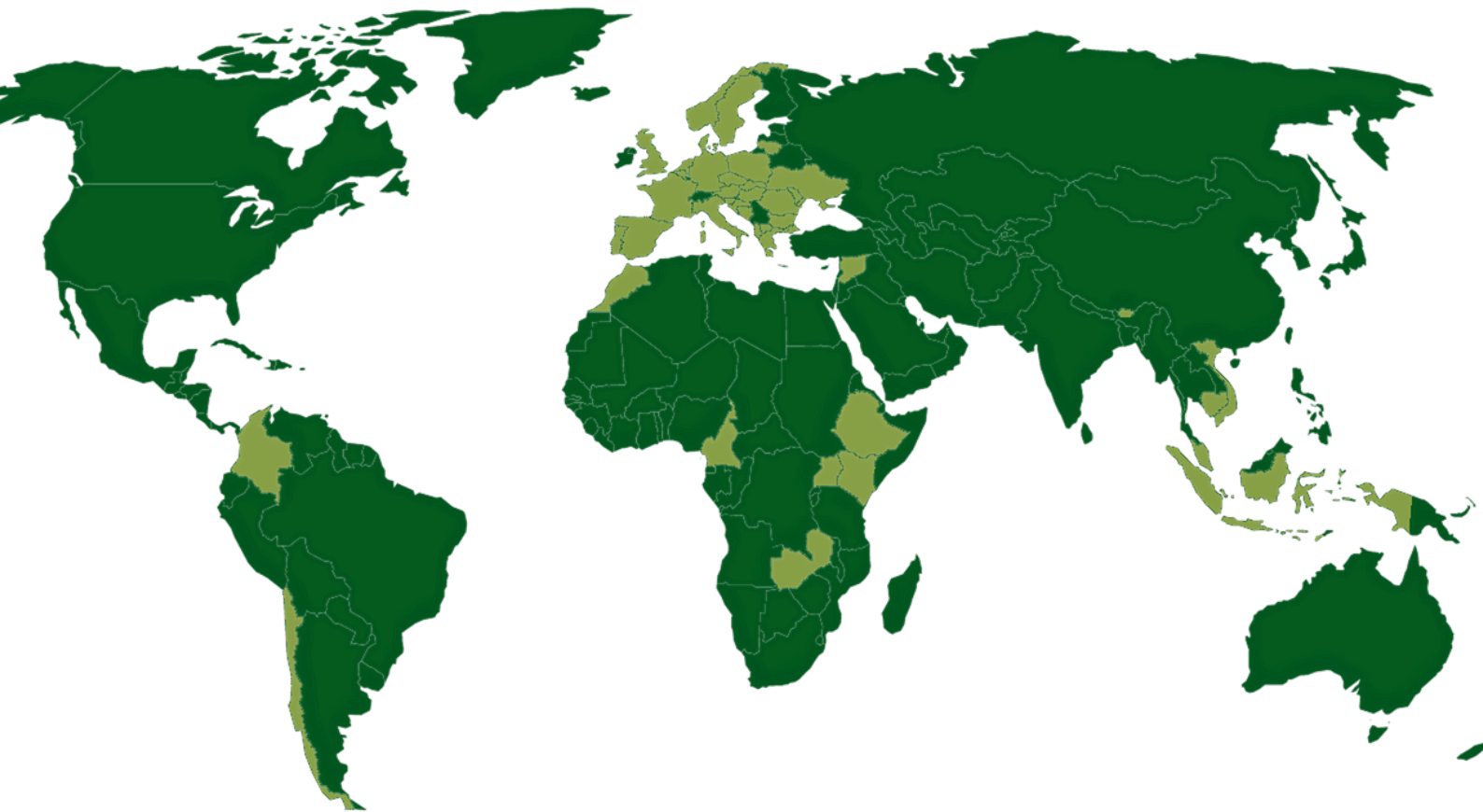
## »»» COMUNIDAD

Combines European Global Navigation Satellite Systems (EGNSS) and Copernicus Data to develop innovative downstream services for forestry in Chile and rural development in Colombia.

## »»» BIO-CAPITAL

Focuses on mobilizing investments to protect and restore biodiversity by harnessing innovative financial solutions and advanced geospatial analytics.

# INTERNATIONAL ENGAGEMENTS



In today's interconnected world, collaboration and innovation across borders are crucial to ensure high-quality research to enhance our impact on society. The BRT contributes to a collective effort to create sustainable solutions by working hand-in-hand with local communities to ensure a greater impact and the sustainability of our outputs.

Our team executes projects and research activities in various countries worldwide - where we focus on community engagement through capacity building, knowledge sharing and innovation.

**BRT WORKS  
IN 40+  
COUNTRIES  
AROUND THE  
GLOBE**



# CONGRATULATIONS 2024 BRT GRADUATES

## BACHELORS & MASTERS



Four master students and three bachelor students have successfully defended their theses this year!

Their research covers a range of important topics, from biogas technology adoption to waste management and bioenergy production.

Thank you to all the supervisors, reviewers, and opponents for their invaluable support!



**Junior researcher &  
PhD student**

## CHARLES OGBU

Charles Ogbu has successfully completed his departmental defense. This monumental achievement is a testament to his dedication and hard work. We wish him luck at his final defence in September!

### Topic:

Environmental Assessment of Wastewater Treatment-Based Resource Recovery in Nigeria

### Supervisors:

- doc. Ing. Bc. Tatiana Alexiou Ivanova, Ph.D.
- doc. Ing. Hynek Roubik, Ph.D.
- Prof. Temitayo Ewemoje, Ph.D.



# OUR MAIN EVENT

Join us for the 5th  
International Multidisciplinary  
Conference for Young  
Researchers (MCYR).

Use this unique opportunity to  
showcase your work, gain  
valuable feedback, and connect  
with professionals and  
institutions across various  
natural resources disciplines.

Prague, Czech Republic  
**3-4 October, 2024**

Submit your  
Abstract today





# SAY HELLO TO THE NEW & IMPROVED BRT DIVISION

The BRT is rebranding! Henceforth, we will no longer be known as the Biogas Research Team but rather as the BioResources & Technology Division.

Biogas research is and remains the foundation of our scientific efforts. However, our research activities have expanded far beyond. From waste management and bioeconomy to environmental and ecological engineering, innovative technologies, food security, biodiversity, and much more.

Stay tuned for our big rebranding launch at the upcoming MCYR conference. See you there!

**WE  
ARE  
REBRANDING**

*YOU KNOW US AS:*



Biogas Research Team

*WE ARE UPDATING TO:*



**BioResources  
& Technology**

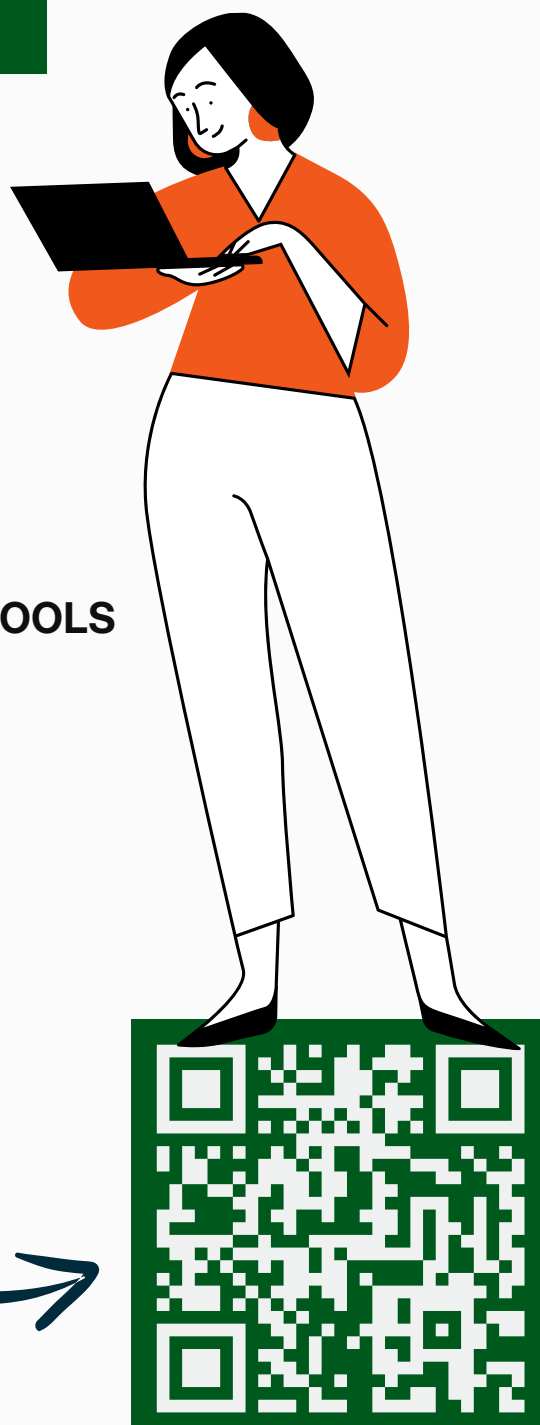
COMING SOON

# OUR SERVICES

We offer a plethora of services for all your communication and dissemination needs!

- WEBSITE DEVELOPMENT
- SOCIAL MEDIA MANAGEMENT
- CONTENT CREATION
- COMMUNICATION & DISSEMINATION TOOLS
- EVENT PLANNING & COORDINATION
- EDITING & PROOFREADING

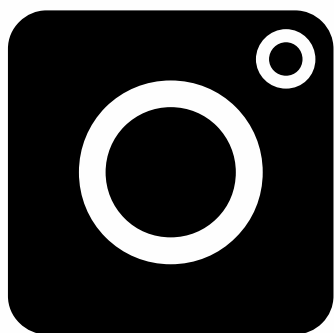
Explore our diverse interactive services portfolio and choose the service that best suits your needs



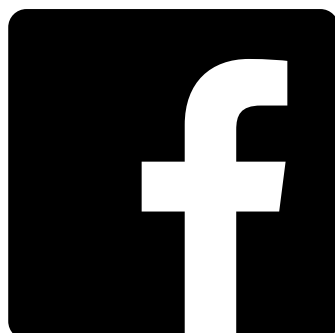




# FOLLOW ALONG



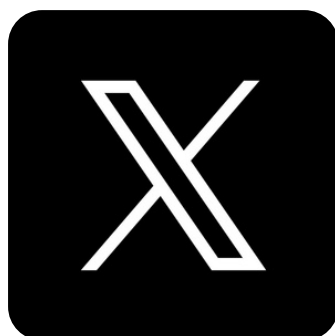
**Instagram**



**Facebook**



**LinkedIn**



**X**



**YouTube**



*"Fearless minds, Endless potential"*