

Biogas Research Team

The main long-term research interest of the Biogas Research Team (from Faculty of Tropical AgriSciences, Czech University of Life Sciences Prague lead by M.Sc. Hynek Roubík and Assistant prof. Jana Mazancová, Ph.D. and from HUAF – Hue University of Agriculture and Forestry by prof. Le Dinh Phung, Ph.D.) is to reveal current state, bottlenecks and perspectives of small-scale and medium-scale biogas plants in Southeast Asian countries. This is done in cooperation with other institutions such as HUAF, other CULS faculties -Faculty of Engineering, Faculty of Agrobiological Sciences, Faculty of Natural Resources, Faculty of Economics and Management, with Czech NGO People in Need, and Dutch NGO SNV, etc.. Biogas Research Team is working on long-term research of small and medium-sized biogas plants and their impact on local and global ecosystems.

The main objective of currently solved research in cooperation with HUAF is to determine the real impact of small biogas plants in Vietnam on climate change and to contribute crucially to the current global debate on small biogas plants in developing countries. The research is also addressing the sub-themes, such as:

- Impact analysis of small-scale biogas plants to rural households in Vietnam (economic, social and environmental),
- Analysis of the quality of biogas in Vietnamese small-scale biogas plants,
- The quantification of the potential amount of biogas production in Vietnam and its climate value,
- The quantification of emission reduction potential through use of small-scale biogas plants,
- The quantification of methane and other potential contributors to the greenhouse effect due to the technology defects and excreta from livestock, and
- Break-even point analysis of emissions from small-scale biogas plants compared to fossil and traditional fuels used in Vietnam.

Further members of the Biogas Research Team:

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Main publications:

Roubík, H., Mazancová, J., Banout, J., Verner, V., 2016: Addressing problems at small-scale biogas plants: a case study from central Vietnam. *Journal of Cleaner Production* 112 (4), 2784-2792. doi:10.1016/j.jclepro.2015.09.114 (IF-3.84)

Roubík, H., Mazancová, J., 2016. Small- and medium-scale biogas plants in Sri Lanka: Case study on flue gas analysis of biogas cookers. *Agronomy Research* 14 (3), 907-916 . (SJIR-0.3)

Roubík, H., Mazancová, J., 2014: Identification of Context Specific Knowledge as Tool for Facilitators and their Quality Involvement. *Proceedings of the 11th International Conference of Efficiency and Responsibility in Education (ERIE 2014)*, Prague, pp. 664-670. ISBN 978-80-213-2468-8.

Roubík, H., Valešová, L., Verner, V., Mazancová, J., 2014: Gender Inequality in Rural Areas of Central Vietnam – Case Study in Thua Thien Hue Biogas Plant Owners. *SGEM2014 Conference Proceedings*, ISBN 978-619-7105-23-0/ ISSN 2367-5659, September 1-9, 2014, Vol. 2, 319-326. DOI: 10.5593/SGEMSOCIAL2014/B12/S2.042.