**发展中国家沼气推广管理研修班项目简介表**

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| 项目名称  | 发展中国家沼气推广管理研修班 |
| 承办单位 | 农业农村部沼气科学研究所 |
| 举办时间 | 2021年4月13日至4月30日 | 项目语言 | 英语 |
| 邀请国别 | 发展中国家 | 计划人数 | 25人 |
| 培训目标 | 1.使学员了解中国一带一路倡议相关情况、中国沼气技术的现状与未来发展、沼气相关政策法规以及沼气标准化体系及分类；2.使学员初步了解中国农村户用沼气池的设计与施工、大中型沼气工程设计、大中型沼气工程运行与管理等政策技术；3.使学员初步了解中国农村人居环境的发展经验以及农村人居环境整治技术模式；4.学员结业时，能够根据所学内容，结合本国行业情况提出本国相应领域的发展建议。 |
| 学员要求 | 专业背景 | 从事能源、环境、农业等领域的研究、生产、推广和管理等的政府官员与技术人员 |
| 年龄 | 不高于学员所在国法定退休年龄 |
| 身体健康 | 身体健康，能够按时参加线上培训 |
| 语言能力 | 学员应具备英语听、说、读、写能力 |
| 其 它 | 学员需在开班前准备可再生能源国家报告 |
| 培训内容介绍 | 1. 主要培训课程及内容介绍该研修班将通过专题讲座、专题研讨、云参观、云文化体验等形式，与参加研修班的官员共同探讨发展中国家沼气推广管理工作。1. 中国基本国情，介绍中国的政治、社会、历史以及传统文化等方面的基本情况。
2. “一带一路”概况：介绍“一带一路”的背景、共建原则、重大意义以及“一带一路”高峰论坛和国际合作。
3. 中国沼气技术现状与发展概况：介绍中国沼气发展历史、模式与支持机制。
4. 秸秆资源化利用关键技术：介绍沼气、燃料乙醇、肥料、饲料等秸秆资源化利用关键技术。
5. 大中型沼气工程的设计：介绍大中型沼气工程工艺计算，各工艺单元的设计，主要设备选型，选址及平面布置等。
6. 中国沼气技术质量监督标准：介绍沼气产品及设备、户用沼气的相关质量标准和规范。
7. 农村户用沼气池的设计与施工：介绍户用沼气池运行原理、工艺，户用沼气池的设计、施工等。
8. 大中型沼气工程运行与管理：介绍大中型沼气工程的运行和管理，以及在区域能源供给和农业核心纽带等方面的作用策略。
9. 农村人居环境整治技术及模式：介绍中国农村人居环境整治的发展情况、主要技术和产品。

(10)沼气发电技术：介绍沼气发电最新政策现状与发展趋势，技术进展与应用。(11)沼渣沼液的处置及环境效益：介绍沼渣、沼液的基本特征、利用方式和环境影响。(12)中国农村人居环境的发展和实践：介绍中国农村人居环境治理的成就和经验。研修班将安排学员云参观双流永安沼气合作社、成都双流新农村建设、成都顺美国际贸易有限公司车间、德阳农村集中供气沼气工程、农业农村部沼气科学研究所综合实验室、[农业部农村可再生能源开发利用重点实验室](http://kl.biogas.cn/CN/Default.aspx)等。安排学员云体验八达岭长城和故宫、成都大熊猫繁育基地、四川省都江堰水利工程等，感受世界自然文化遗产及中国改革开放的发展成就。此外，研修班还将安排学员与专家进行“沼气技术与推广管理交流座谈”、“项目期中小结及答疑”、“项目总结交流座谈”等在线交流，通过研修项目，使学员了解我国沼气技术与发展概况，认识发展沼气可以改变农村人居环境以及沼气在新农村建设中的重要意义，为学员所在国沼气推广和发展提供借鉴，促进我国与其他发展中国家在沼气领域的交流与合作。2. 主讲人整体情况介绍本项目邀请研究所具有丰富国际班授课经验的专家进行授课，均具有高级职称，绝大部分为生物学、环境科学、环境工程、农村经济政策等相关领域专家。（1）罗惜民：农业农村部沼气科学研究所处长（2）邓良伟：农业农村部沼气科学研究所研究员，总工（3）何明雄：农业农村部沼气科学研究所研究员（4）张鸣鸣：农业农村部沼气科学研究所研究员（5）王文国：农业农村部沼气科学研究所研究员（6）雷云辉：农业农村部沼气科学研究所研究员（7）张蓓：农业农村部沼气科学研究所副研究员（8）潘科：农业农村部沼气科学研究所高级工程师（9）贺莉：农业农村部沼气科学研究所高级工程师（10）刘刈：农业农村部沼气科学研究所副研究员（11）罗涛：农业农村部沼气科学研究所副研究员3. 结业评估：课程结束后，学员应提交可再生能源国家报告。 |
| 举办地点 | 四川省成都市 | 云参观考察城市 | 北京市，四川省都江堰市、德阳市 |
| 备注 | 1.本次培训使用ZOOM平台进行线上培训，学员需具备网络、电脑、麦克风、摄像头等设备。开班前请提前与承办单位取得联系，熟悉ZOOM平台软件、做好网络测试。2.教学期间，请学员遵守上课时间和教学纪律，出勤记录将作为颁发培训结业证书的依据。3.课前准备：需提前10分钟进入教室准备上课。将个人姓名改为英文（与护照一致）姓名-国别名称。上课期间，主持人会将学员设置为静音。进入会议室准备上课时，请学员开启视频，便于点名。4.纪律要求：在项目实施过程中，请严格遵守项目日程安排，不得无故退出培训。5.信息安全：为保护信息安全和个人隐私，上课过程中请不要录音、截屏或分享到任何社交媒体。6.学员需按照日程安排准备专题研讨相关材料，按照要求提交相关电子素材。7.课程配备英语交传。 |
| 承办单位简介 | 农业农村部沼气科学研究所成立于1979年，主要承担以沼气为主的农村可再生能源以及农村能源与农村环境治理、农业生态修复交叉领域的基础和应用基础研究、前沿技术研究、重大关键共性技术研究等公益性科研，以及相应的技术推广和培训工作。自建所以来一直致力于通过培训、示范工程和合作研究，积极推动相关领域的知识传播与技术转移。1981年，中国政府与联合国开发计划署签署协议，在农业农村部沼气科学研究所成立了“中国成都亚太区域沼气研究和培训中心（BRTC）”。2014年，联合国粮农组织（FAO）认定沼气所为“FAO沼气技术研究培训参考中心”。1979年至今，农业农村部沼气科学研究所承办中国政府与国际组织主办的对外培训项目130多期，培训了来自120多个国家的3000多名国际学员。受中国政府和国际组织委托，农业农村部沼气所多次派遣专家赴发展中国家开展培训和示范项目，积极参与农业技术与产品引进与输出，并与欧美等发达国家科研机构建立了长期合作关系。  |
| 承办单位联系方式 | 项目联系人：张汶(女士)/赖成晞(先生)/罗惜民（先生）办公电话：0086-28-85230677，0086-28-85589845手机：0086-13308071295(张)；0086-13308229597（赖）；0086-13880648415（罗）传真：0086-28-85230677E-mail：biomatc@163.comFacebook：TC Bioma |

**Seminar on Biogas Promotion and Management for Developing Countries Project Introduction**

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| Name | Seminar on Biogas Promotion and Management for Developing Countries |
| Organizer  |  Biogas Institute of Ministry of Agriculture and Rural Affairs (BIOMA), P.R. China |
| Date | April 13 to 30, 2021 | Language | English |
| CountriesInvited  | Developing countries. | Planned Numberof Participants | 25 |
| Training Objectives | 1. To enable participants to understand China’s Belt and Road Initiative, the current status and future development of China’s biogas technology, biogas related policies and regulations, and biogas standardization systems and classifications;
2. To enable participants to have a preliminary understanding of the design and construction of household biogas digesters in rural China, the design of large and medium biogas plants, and the operation and management of large and medium biogas plants;
3. To enable participants to have a preliminary understanding of China’s experience on developing human living environment in rural areas and the technical models of improving human living environment in rural China;
4. At the end of the seminar, participants can put forward development suggestions in their corresponding fields in their home countries based on the content they have learned and with consideration of the industry situations in their own countries.
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| Requirements for Participants | Professional Background | Officials and technicians engaged in the research, production, promotion and management of energy, environment and agriculture. |
| Age | Under the legal retirement age of the participant’s home country |
| Health Status | In good health; able to participate in online seminar on time |
| Language Competence | Able to understand, speak, read and write in English |
| Others | Participants should prepare a country report on renewable energies before the seminar starts.  |
| Seminar Content | 1. Introduction of the main training subjects and content

The seminar will discuss the promotion and management of biogas in developing countries with participant officials through lectures, symposiums, cloud visits, cloud cultural experience and other forms. 1. China's Basic National Conditions -- introduces China’s politics, society, history, traditional culture, etc.
2. Overview of the Belt and Road Initiative – introduces the background of Belt and Road, its principle of achieving shared growth through collaboration, its significance, the Belt and Road Forum and international cooperation.
3. Status quo and Development of Biogas Technology in China – introduces the development history, models and support mechanism of China’s biogas.
4. Key Technologies on Using Straw as a Resource – introduces key technologies for the utilization of straws such as biogas, fuel ethanol, fertilizer, and feed.
5. Design of China’s Large and Medium Biogas Plants – introduces the process calculation of large and medium biogas plants, the design of each process unit, the selection of main equipment, site selection and layout, etc.
6. Quality Supervision Standards for Biogas Technology in China – introduces relevant quality standards and specifications for biogas products, equipment and household biogas.
7. Design and Construction of Rural Household Biogas Digesters -- introduces the operation principles and technology of household biogas digesters, as well as the design and construction of household biogas digesters.
8. Operation and Management of China’s Large and Medium Biogas Plants -- introduces the operation and management of large and medium biogas plants, as well as their role strategies in regional energy supply and agricultural core links.
9. Technology and Model of Rural Human Living Environment Management -- introduces the development, main technologies and products of China's rural human living environment improvement.
10. Biogas Power Generation Technology -- introduces the latest policy status, development trend, technological progress and application of biogas power generation.
11. Disposal of Solid and Liquid Digestate and its Environmental Benefits -- introduces the basic characteristics, utilization methods and environmental impact of biogas digestate.
12. Practice and Experience of China’s Rural Living Environment -- introduces the achievements and experience of China's rural human living environment management.

The seminar will take participants to cloud visit the Yongan Biogas Cooperative in Shuangliu district of Chengdu, the New Countryside Development of Shuangliu district of Chengdu, the workshops of Chengdu Shunmei International Trade Co., Ltd., the Rural Centralized Gas Supply Biogas Plant in Deyang, the Comprehensive Laboratory of BIOMA, and the Key Laboratory of Development and Application of Rural Renewable Energy, Ministry of Agriculture and Rural Affairs of China. Participants will also be arranged to cloud visit Badaling Great Wall, Forbidden City, Chengdu Research Base of Giant Panda Breeding, and Dujiangyan Water Conservancy Project in Sichuan, etc. Participants can experience the world's natural and cultural heritage and the development achievements of China's reform and opening up. The seminar will also arrange online exchanges for participants and experts, including “Symposium on Biogas Technology and Promotion Management ", "Mid-term Summary and Q&A of the Seminar", " Summary and Exchange Meeting of the Seminar", etc. Through the Seminar, participants will get the general picture of biogas technology and development in China, realize that biogas development can change rural living environment and understand the significance of biogas in the development of new countryside, so the seminar can provide reference on biogas development and promotion for the recipient countries and promote exchanges and cooperation between China and other developing countries in the field of biogas.1. Overview of lecturers

This seminar invites experts of BIOMA with rich international class teaching experience to teach, all of them have senior professional titles. Most of them are experts in biology, environmental science, environmental engineering or rural economic policy. 1. LUO Ximin: Director, BIOMA
2. DENG Liangwei: Professor, Chief Engineer, BIOMA
3. HE Mingxiong: Professor, BIOMA
4. ZHANG Mingming: Professor, BIOMA
5. WANG Wenguo: Professor, BIOMA
6. LEI Yunhui: Professor, BIOMA
7. ZHANG Bei: Associate Professor, BIOMA
8. PAN Ke: Senior Engineer, BIOMA
9. HE Li: Senior Engineer, BIOMA
10. LIU Yi: Associate Professor, BIOMA
11. LUO Tao: Associate Professor, BIOMA
12. Seminar completion assessment: Participants should submit a country report after the training.
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| Site of Seminar | Chengdu city, Sichuan province | Cities visited online | Beijing, Dujiangyan city and Deyang city of Sichuan province |
| Notes | 1. This seminar uses ZOOM for online training. Participants need to have access to the Internet, a computer, a microphone, a camera and other equipment.2. During the seminar, participants are requested to abide by class time and teaching disciplines. Seminar completion certificates will be issued on the basis of attendance records.3. Preparation before class: participants should enter the classroom 10 minutes in advance to prepare for class and change the personal title to English name (consistent with passport) - country name style. During the class, participants’ microphones are set to mute by the host. While preparing for the class, participants need to turn on the video for the host to see.4. Disciplinary requirements: Throughout the seminar, participants should strictly abide by the seminar schedule and should not withdraw from the seminar without reason.5. Information security: In order to protect information security and personal privacy, participants should not record, take screenshots or share to any social media during class.6. Participants should prepare relevant materials for symposiums according to the schedule and submit relevant electronic materials as required.7. Online consecutive English interpretation is provided. |
| About the Organizer | Founded in 1979, Biogas Institute of Ministry of Agriculture and Rural Affairs (BIOMA), P.R. China is mainly responsible for the basic and applied research, frontier technology research, major key generic technology research, other public welfare research and the technical extension and trainings in biogas and other rural renewable energies, rural environmental treatment and the cross field of agro-ecological restoration. BIOMA has been committed to actively promoting knowledge dissemination and technology transfer in related fields through trainings, demonstration projects and cooperative research. In 1981, upon the agreement between Chinese government and UNDP, the Asia-pacific Biogas Research and Training Center (BRTC) in Chengdu of China was established at BIOMA. In 2014, FAO designated BIOMA as “FAO Reference Center for Biogas Research and Training”. Since its establishment in 1979, BIOMA has held more than 130 international training courses sponsored by the Chinese government and international organizations for more than 3000 international participants from over 120 countries. At the same time, entrusted by the Chinese government and international organizations, experts from BIOMA have conducted overseas training and demonstration projects in developing countries, actively participated in the introduction and export of agricultural technologies and products, and established long-term cooperative relations with scientific research institutions in Europe, America and other developed areas. |
| Contact of the Organizer | Contact: Ms. ZHANG Wen/ Mr. LAI Chengxi/Mr. LUO Ximin Office Phones: 0086-28-85230677,0086-28-85589845Mobile Phones:0086-13308071295(ZHANG),0086-13308229597(LAI),0086-13880648415(LUO) Fax: 0086-28-85230677E-mail: biomatc@163.comFacebook: TC Bioma |