



# Export Opportunities for European Biogas Technologies and Services from the Industry Perspective

Authors: Mieke Decorte, Angela Sainz, European Biogas Association

Reviewer(s): Franz Kirchmeyr (AKBOE), Frank Hofmann (FvB), Dominik Rutz and Oscar Gue (WIP), Dr. Johannes Anhorn and Ann-Kathrin van Laere (GIZ)

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**DiBiCoo – Digital Global Biogas Cooperation**

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## Executive Summary of D 2.3

One task of the DiBiCoo project is mapping the export opportunities for European biogas technologies and services from the industry perspective. For this purpose, a Biogas Industry Stakeholder survey was conducted, which collected input on the main challenges and trade barriers for the export of European biogas technologies and services, on preferred non-EU import countries, on desired requirements and functionalities of the DiBiCoo Online Information System as well as on desired support for capacity building in importing countries. The survey was distributed among EU biogas stakeholders by the project partners EBA, FVB and AKBOE.

This report describes in detail the results of this Biogas Industry Survey. The most important conclusions are:

- The most important trade barriers for exporting European biogas technologies and services are a lack of subsidy schemes related to biogas in non-EU countries, the lack of a stakeholder network of European companies in non-EU countries and the difference in technical requirements in non-EU countries compared to EU-countries. The DiBiCoo project can be of great importance to reduce mainly the second barrier.
- The most preferred non-EU import areas for European biogas technologies and services are Asia and North America. The high opportunities in Asia are according to the survey results due to an abundance of raw materials and a high need for energy. For North America, a lack of own competence and environmental awareness are mentioned.
- The biogas stakeholders in the survey indicated their preference to use the DiBiCoo online information system as a promotional tool and as a starting point to build-up relations in non-EU countries. There was only minor interest in using the tool as marketplace to sell their products and services. As a result, the type of information that stakeholders want to provide in the tool is basic information about the company and its services and products. 85% of the respondents indicated to be interested in the number of company profile visits on the online tool and 81% in the country from which the activity originates.
- Regarding the type of face-to-face capacity building measures, the respondents show preferences for conferences and networking events, together with site visits. According to the survey, the kind of stakeholders from non-EU countries for which face-to-face trainings are most urgently needed are policymakers and planners. Project development and project management, together with technical knowledge are indicated as most needed basic knowledge. Therefore, these topics should be dealt with in organized face-to-face capacity building events.

## Summary of the DiBiCoo Project

The **Digital Global Biogas Cooperation (DiBiCoo)** project is part of the EU's Horizon 2020 Societal Challenge 'Secure, clean and efficient energy', under the call 'Market Uptake Support'. The target importing emerging and developing countries are Argentina, Ethiopia, Ghana, South Africa and Indonesia. Additionally, the project involves partners from Germany, Austria, Belgium and Latvia. The project started in October 2019 with a 33 months-timeline and a budget of 3 Million Euros. It is implemented by the consortium and coordinated by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

The overall objective of the project is to prepare markets in developing and emerging countries for the import of sustainable biogas/biomethane technologies from Europe. DiBiCoo aims to mutually benefit importing and exporting countries through facilitating dialogue between European biogas industries and biogas stakeholders or developers from emerging and developing markets. The consortium works to advance knowledge transfer and experience sharing to improve local policies that allow increased market uptake by target countries. This will be facilitated through a digital matchmaking platform and classical capacity development mechanisms for improved networking, information sharing, and technical/financial competences. Furthermore, DiBiCoo will identify five demo cases up to investment stages in the 5 importing countries. Thus, the project will help mitigate GHG emissions and increase the share of global renewable energy generation. The project also contributes to the UN Sustainable Development Goals (SDG 7) for 'Affordable and clean energy', among others.

Further information can be found on the DiBiCoo website: [www.dibicoo.org](http://www.dibicoo.org)



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## List of Abbreviations

AD	Anaerobic Digestion
CHP	Combined Heat and Power Unit
D	Deliverable
EU	European Union



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## **I. Introduction**

This report has the goal to help the DiBiCoo consortium understand the challenges and barriers that European stakeholders face when exporting biogas technologies and services to developing and emerging countries.

For this purpose, in Task 2.3 of the DiBiCoo project, a Biogas Industry Stakeholder survey was conducted, which collected input on the following topics:

1. Main challenges and trade barriers for the export of European biogas technologies and services
2. Preferred non-EU import countries for European biogas technologies or services
3. Desired requirements and functionalities of the DiBiCoo Online Information System
4. Desired support for capacity building in the importing countries

The results of this survey will be used in the DiBiCoo project for the development of a digital matchmaking platform to facilitate the networking between EU companies and developing and emerging countries. Furthermore, the survey will provide input for face-to-face capacity building activities in the project, such as training courses, workshops etc.

## II. Methodology

The Biogas Industry Stakeholder survey described in the introduction was distributed among EU biogas stakeholders including turnkey system providers, component producers, services/technical experts, maintenance providers and facilitators. The complete survey can be found in Annex 1.

Existing databases from the biogas associations (EBA, FVB, AKBOE) were used to contact stakeholders. By using several databases with different characteristics, the project team ensured to contact a wide range of stakeholders. The European Biogas Association sent the survey by email to 92 contacts from 26 national associations, to 182 contacts from 80 companies, research institutes, universities, public authorities and individuals active in the field of biogas and to 216 external stakeholders. The survey was also promoted on Twitter, where EBA has over 4 400 followers and LinkedIn, where the association has over 2 200 followers. It was also included in the newsletter, with 2 000 subscribers, and the website, with over 2 000 visitors per month.

The German Biogas Association has 539 companies registered as members. About 1 200 persons/institutions were informed about the DiBiCoo online survey through FvB's company newsletter (which was sent twice to the companies, in December 2019 and January 2020). Austrian Compost & Biogas Association (AKBOE) sent the request for the online survey to 415 national contacts from Austria which commercially deal with anaerobic digestion and/or gasification.

In addition to the contacts in the database, some stakeholders were contacted directly in personal meetings, at conferences and trade fairs, or by telephone and email. All stakeholders were informed about the DiBiCoo projects, the aim of the survey and provided with a link to fulfil the questions. Rules under GDPR were followed.

The Biogas Industry Stakeholder survey was open starting from 14 January 2020 and closed on 2 March 2020.



### III. Results

In total, 52 biogas stakeholders provided their input via the survey to the DiBiCoo project. All stakeholders agreed with processing their data within the DiBiCoo project. Among the participants, 22 indicated to be turnkey system providers, 21 service/technical experts, 14 component producers, nine other, six maintenance providers and one facilitator. Four respondents skipped the question. Other stakeholders had also expertise as project developers, investors, gas distribution companies and research institutes. Some of the participants have activities in more than one area.

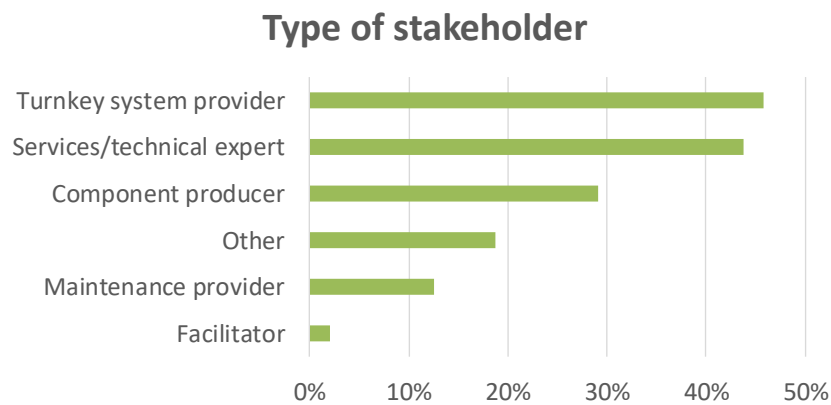


Figure 1: Type of biogas stakeholders

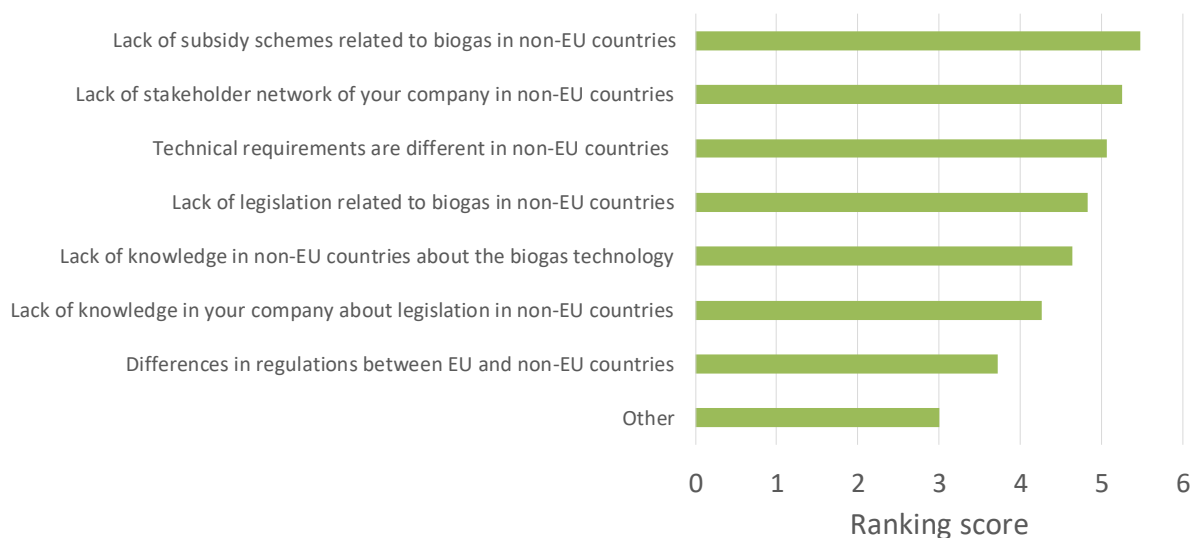
## (1) Main challenges and trade barriers for the export of European biogas technologies and services

To identify the main challenges and trade barriers a ranking question was introduced in the survey and the respondents were asked to rank the following potential trade barriers related to the export of their biogas technologies and serviced to non-EU countries:

- Differences in regulation between EU and non-EU countries
- Technical requirements are different in non-EU countries
- Lack of subsidy schemes related to biogas in non-EU countries
- Lack of knowledge in your company about legislation in non-EU countries
- Lack of knowledge in non-EU countries about the biogas technology
- Lack of stakeholder network of your company in non-EU countries
- Lack of legislation related to biogas in non-EU countries

Based on the replies in the survey, a ranking score was calculated for each potential trade barrier. The ranking scores are displayed in Figure 2. The lack of subsidy schemes related to biogas in non-EU countries and the lack of a stakeholder network in non-EU countries were ranked as the most important trade barriers whereas differences in regulation between EU and non-EU countries and other barriers were ranked as less important. It must be noted, however, that the variance in the importance of the different trade barriers is not too high according to the survey.

### What are the main barriers for the export of your biogas technology or services to non-EU countries?



**Figure 2:** Main barriers and opportunities for the export of biogas technology and services to non-EU countries

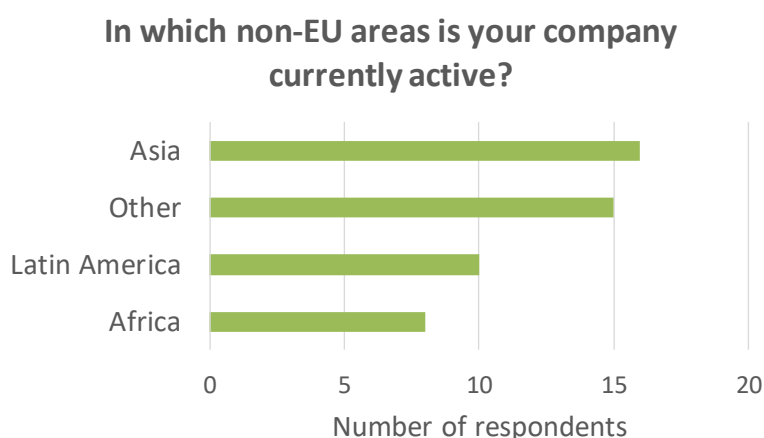
Apart from the potential trade barriers introduced by the DiBiCoo consortium the respondents were asked to complement their ranking with other potential trade barriers according to their experience. Other barriers mentioned (in random order) include the lack of project financing and low interest bank loans, the lack of regulation concerning treatment of organic residues, other types of waste compared to Europe, the lack of local key experts for technical and commercial assistance, dependency on changes in incentive schemes, the lack of national

subsidies for export and financing projects in other countries, the fact that European technology is perceived as expensive, the lack of insight into the local market, cultural and language barriers, the lack of grid connection, the lack of ability to maintain an organization, cheap pathways to treat certain types of waste in a non-sustainable way in non-EU countries and time zone differences. Trade barriers related to the lack of language skills, project financing and cultural differences were also mentioned by several stakeholders. One stakeholder mentioned that setting up a financing/funding instrument to kickstart first projects would greatly help non-EU countries.

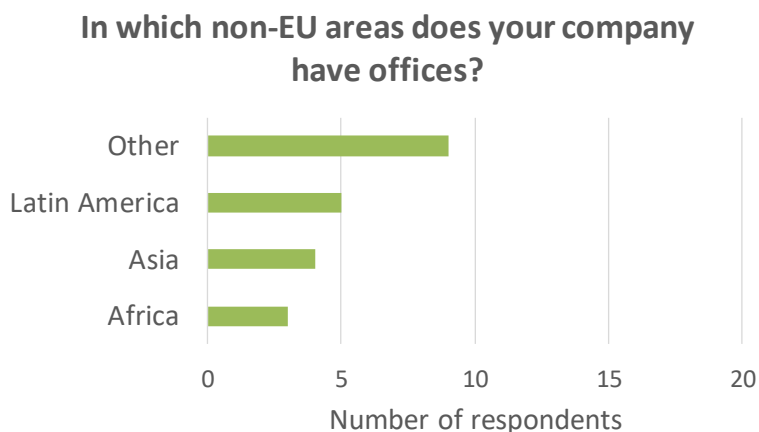
## (2) Preferred non-EU import countries for European biogas technologies or services

Next, the Biogas Industry Survey investigated which non-EU areas are of high interest for European biogas companies. First, the survey gathered information on the non-EU areas in which European biogas stakeholders are already active and in which areas they have offices. The results are shown in Figure 3 and Figure 4.

Of the 52 respondents, in total 26 companies indicated to be already active in non-EU areas. The most common areas are Asia (16 companies) and Latin America (10 companies). Also, North America was mentioned by nine companies under the category 'other'. 13 companies reported to have offices outside Europe. Active companies are often active in more than one non-EU area and similar, companies with offices in non-EU areas often have offices in more than one non-EU area.



*Figure 3: Non-EU areas where respondents are currently active*



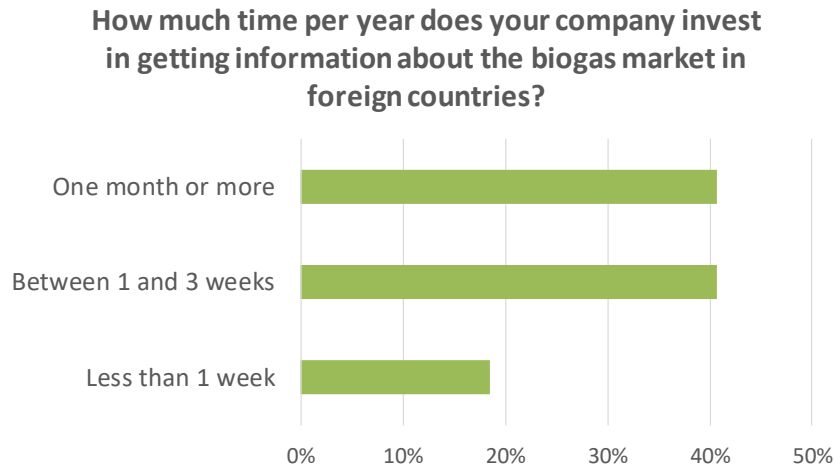
*Figure 4: Non-EU areas where respondents have offices*

Next, the respondents specified the regions where they see export opportunities. The most mentioned areas are Asia (six times), North America (five times), USA (four times), Canada (three times), Latin America (three times) and Africa (three times). The high opportunities in Asia are according to the survey results due to an abundance of raw materials and a high need for energy. For North America, the lack of own competence and environmental awareness are

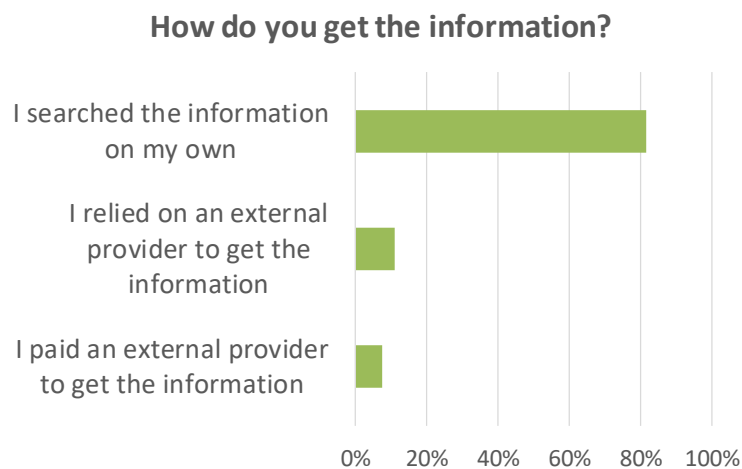
mentioned whereas for the USA high gate fees for household waste, equal language and time zone are mentioned as favourable assets for importing European biogas technologies.

### (3) Requirements and functionalities of the DiBiCoo Online Information System

One of the DiBiCoo project tasks is to develop a digital matchmaking platform to facilitate networking. It shall help EU companies to market their products abroad. The results below have the goal to assist the DiBiCoo consortium in the development of the matchmaking platform.



*Figure 5: Time per year spend to gather information about biogas markets in foreign countries*



*Figure 6: Used methods to collect information*

### How would you use the matchmaking platform?

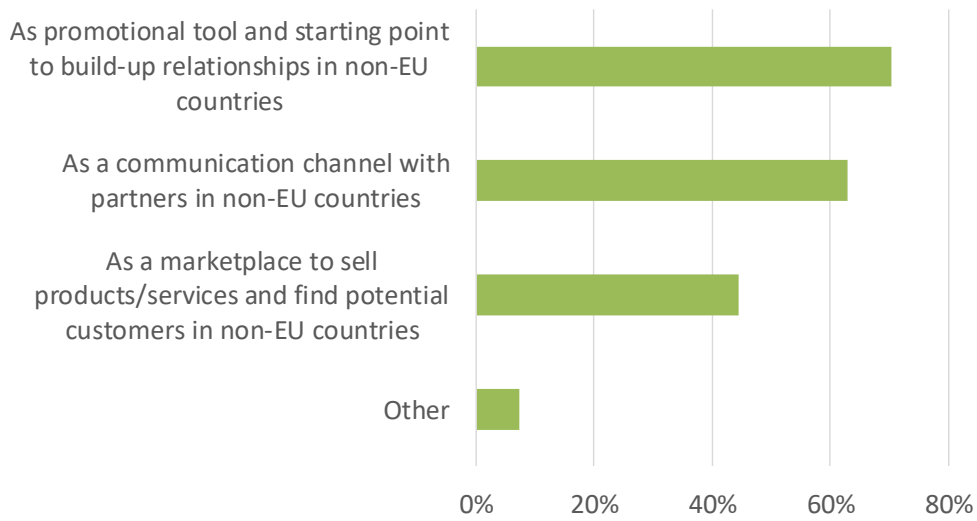


Figure 7: Preferred usage of the matchmaking platform

### Which details would you like to share about your company?

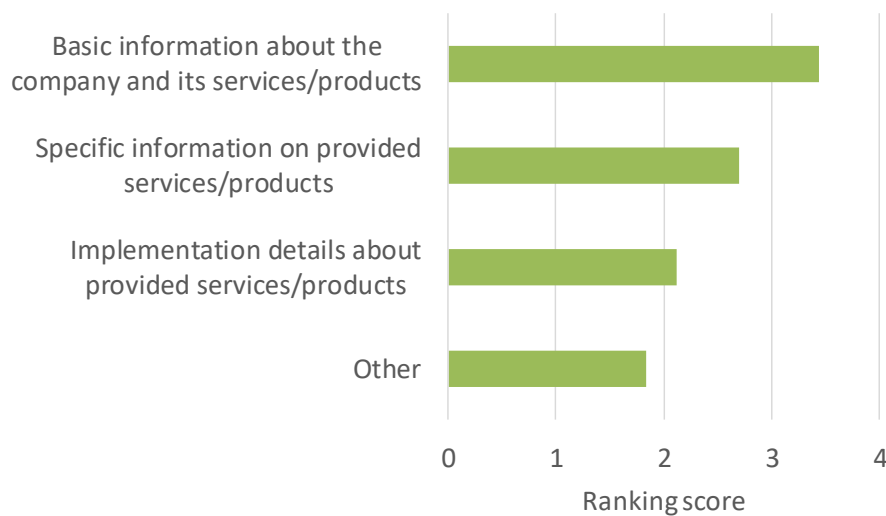


Figure 8: Preferred company details to be shared on the matchmaking platform

### Where would you like to display your company profile?

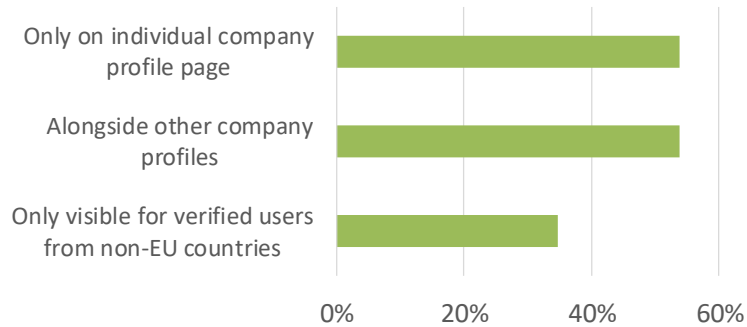


Figure 9: Preferred methods to display company profiles

### Which details about importing partners would you like to find in the platform?

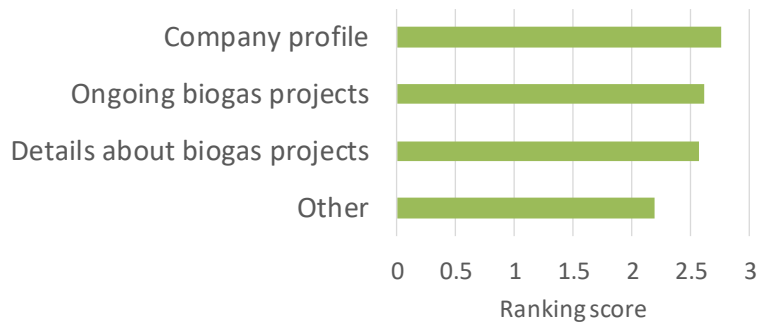


Figure 10: Details about importing partners to be found in the platform

### Which details on the tool user activity would be useful for your company?

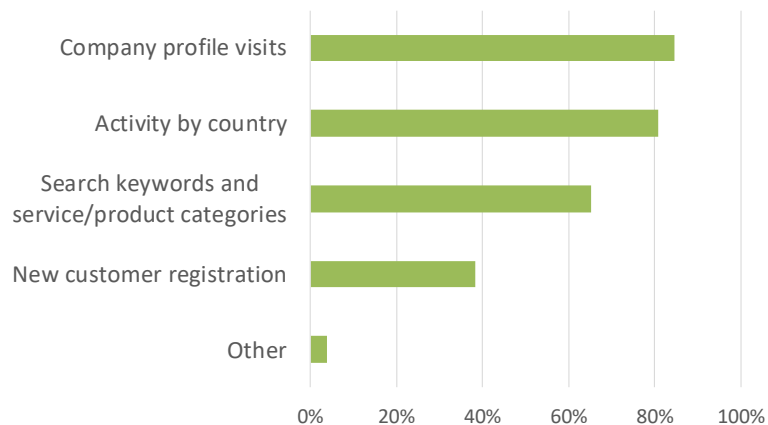


Figure 11: Useful details on tool user activity

The main conclusions following from the graphs above are:

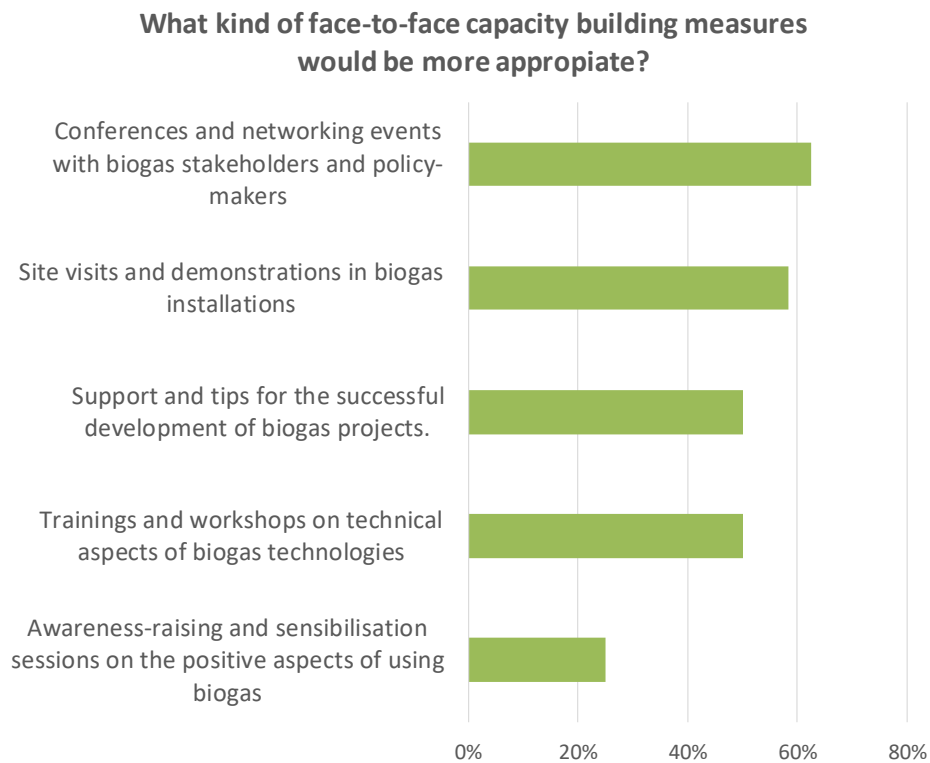




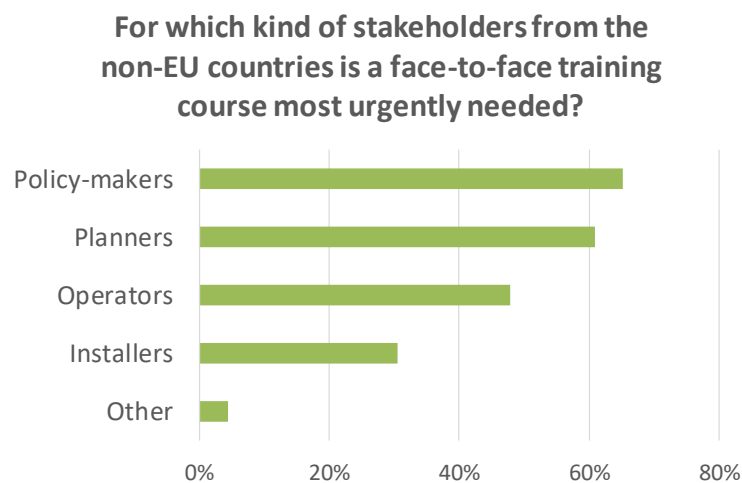
- Most of the companies invest large amounts of time (41% more than one month per year and 41% between 1 and 3 weeks per year) in gathering information on biogas markets in foreign countries. In addition, most often (in 81% of the cases) this information is gathered without an external provider. Both results show the high relevance and need from the EU biogas stakeholders of having access to a digital information system, which will be developed in the DiBiCoo project.
- The biogas stakeholders in the survey indicated their preference to use the matchmaking platform as promotional tool and starting point to build-up relationships in non-EU countries (71%) and as a communication channel with partners in non-EU countries (63%). Less than half (44%) of the respondents would be interested in using the tool as marketplace to sell their products and services.
- When asked about the type of information the participants would be willing to provide in the tool, 72% of the respondents ranked “Basic information about the company and its services/products” as the option with the highest importance.
- The survey results do not indicate a preference for either an individual company page or displaying the company profiles alongside each other. Both are equally preferred. Less than half (34%) of the stakeholders indicated that their company profile should only be visible for verified users of the online tool.
- For the question regarding the information that the European stakeholders would like to find in the tool about the importing partners, the ranking options do not show clear preferences from the respondents. The respondents indicated a preference for other details to be found in the matchmaking platform such as number of current employees of the partner company, details about planned and potential biogas projects, interests of the partner company and contact details. Details about planned and potential biogas projects would enable the European companies to approach the importing partner with specific information, according to one of the respondents.
- Finally, the useful details on tool user activity were investigated. 85% of the respondents are interested in the number of company profile visits, 81% in the country from which the activity originates and 65% show interest in a search function for keywords and service/product categories.

#### **(4) Desired support for capacity building in the importing countries**

Besides the online tool, face-to-face capacity building activities, such as training courses, will be conducted by the DiBiCoo partners to enable networking between EU biogas stakeholders and importing partners. The results below have the goal to assist the DiBiCoo consortium in the organisation of these face-to-face capacity building activities.



*Figure 12: Appropriate face-to-face capacity building measures*



*Figure 13: Type of stakeholders for which face-to-face training is most urgently needed*

**What would be the basic required knowledge for biogas staff in non-EU countries to start a biogas project?**



**Figure 14:** Basic required knowledge for biogas staff in on-EU countries to start a biogas project

The main conclusions drawn from the graphs above are:

- Regarding the type of face-to-face capacity building measures, the respondents show preferences for conferences and networking events (63%) together with site visits and demonstrations in biogas installations (58%). They showed less interest in awareness-raising and sensibilisation sessions on the positive aspects of using biogas (25%).
- According to the results from the Biogas Industry Survey, the kind of stakeholders from non-EU countries for which face-to-face training is most urgently needed are policymakers (65%) and planners (61%).
- Finally, the respondents gave their thoughts on which basic knowledge for biogas staff in non-EU countries is required to start a biogas project. Project development and project management aspects together with technical knowledge are equally important with 70% of the respondents indicating them as important basic required knowledge.

## Annex

### Screenshots of the survey

#### Industry perspective on current opportunities and challenges for exporting European biogas technologies

##### Data consent

*The results of this questionnaire will help us understand the challenges and barriers that European stakeholders face when exporting their biogas technologies and services to developing and emerging countries. The input you provide will be processed by the DiBiCoo project partners to produce a report on those challenges and barriers. We will also take it into account to develop an online match-making tool that will connect exporting and importing countries at global level and to implement capacity building activities in importing countries. By ticking the box below, you give your consent to the use of your input as described above.*

\* I agree with the processing of my data within the DiBiCoo project

I'm ready to answer the survey.

##### Company profile

###### My company is a...

*Multiple options are possible.*

- Turnkey system provider
- Component producer
- Services/technical expert
- Maintenance provider
- Facilitator
- Other

### Challenges and trade barriers for exporting European biogas technologies

**What are the main trade barriers for the export of your biogas technology or services to non-EU countries?**

*Rank your answers from more to less important (1 to 9)*

<input type="checkbox"/>	Lack of subsidy schemes related to biogas in non-EU countries
<input type="checkbox"/>	Differences in regulations between EU and non-EU countries
<input type="checkbox"/>	Lack of knowledge in non-EU countries about the biogas technology
<input type="checkbox"/>	Lack of stakeholder network of your company in non-EU countries
<input type="checkbox"/>	Lack of knowledge in your company about legislation in non-EU countries
<input type="checkbox"/>	Technical requirements are different in non-EU countries (e.g. other types of wastes)
<input type="checkbox"/>	Lack of legislation related to biogas in non-EU countries
<input type="checkbox"/>	Other

*Please explain your answers below and specify your 'other' choice if applicable.*

**If already active in non-EU countries, what were the other challenges, apart from trade barriers, to overcome?**

### Preferred non-European importing countries for European biogas technologies or services

**In which non-EU areas is your company currently active?**

*Multiple choices are possible.*

Africa

Latin America

Asia

Other

**In which non-EU areas does your company have offices?**

*Multiple choices are possible.*

Africa

Latin America

Asia

Other

**In which non-EU areas does your company currently see exporting opportunities and why?**



### Desired requirements and functionalities of the DiBiCoo Online Information System

The aim of DiBiCoo project is to support the business partnership build-up between EU biogas stakeholders and potential consumer partners in non-EU countries (Africa, Asia and Latin America). One of DiBiCoo project tasks is to develop a digital matchmaking platform to facilitate the networking. It should help EU companies to market their products abroad. Companies will have the opportunity to present themselves on the platform. In order to develop this matchmaking platform appropriate for your business needs, we would appreciate your input by answering the following questions related to digital matchmaking platform.

#### How much time per year does your company invest in getting information about the biogas market in foreign countries?

#### How do you get the information?

#### How would you use the matchmaking platform?

*Tick the corresponding boxes.*

- As promotional tool and starting point to build-up relationships in non-EU countries
- As a communication channel with partners in non-EU countries
- As a marketplace to sell products/services and find potential customers in non-EU countries
- Other

#### Which details would you like to share about your company?

*Please specify your preferences from more to less likely (1 to 4)*

☰	↓	Basic information about the company and its services/products
☰	↓	Implementation details about provided services/products
☰	↓	Specific information on provided services/products
☰	↓	Other

### Where would you like to display your company profile?

*Multiple options are possible.*

- Alongside other company profiles
- Only on individual company profile page
- Only visible for verified users from non-EU countries

### Which details about importing partners would you like to find in the platform?

*Please rank your preferences from more to less relevant (1 to 4).*

☰	+	Company profile
☰	+	Ongoing biogas projects
☰	+	Details about biogas projects
☰	+	Other

*Please explain your answers below and specify your 'other' choice if applicable.*

### Which details on the tool users activity would be useful for your company?

*Tick the corresponding boxes.*

- Company profile visits
- New customer registration
- Activity by country
- Search keywords and service/product categories
- Other

### Desired support for capacity building in the importing countries

Besides the online tool, also face-to face capacity building activities, such as training courses, will be supported by DiBiCoo. In order to organise good capacity building events appropriate for your business needs, we would appreciate your input by answering the following questions.

#### What kind of of face-to-face capacity building measures would be more appropriate?

*Multiple choices are possible.*

- Conferences and networking events with biogas stakeholders and policy-makers
- Trainings and workshops on technical aspects of biogas technologies
- Site visits and demonstrations in biogas installations
- Awareness-raising and sensibilisation sessions on the positive aspects of using biogas
- Support and tips for the successful development of biogas projects.
- Please explain your choices here if relevant.

#### For which kind of stakeholders from the non-EU countries is a face-to-face training course most urgently needed?

*Multiple choices are possible.*

- Planners
- Installers
- Operators
- Policy-makers
- Other
- Please explain your choices here if relevant.

#### What would be the basic required knowledge for biogas staff in non-EU countries to start a biogas project?

- Technical knowledge
- Project development and project management aspects
- Policy related expertise
- Knowledge on safety aspects
- Sensibilisation for local support to biogas plants
- Other

Please explain your choices if relevant.



## The DiBiCoo Consortium Partners

### Coordinator



### Partners from exporting countries



### Partners from importing countries





# Digital global Biogas Cooperation

Project website: [www.dibicoo.org](http://www.dibicoo.org)

## Project Coordinator Contact

Dr. Johannes Anhorn  
Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH

I [www.giz.de](http://www.giz.de)

Wielinger Straße 52  
82340 Feldafing, Germany

T +49 8157 938 0  
E [johannes.anhorn@giz.de](mailto:johannes.anhorn@giz.de)

## Authors

Mieke Decorte & Angela Sainz, EBA

## Review

Franz Kirchmeyr (AKBOE), Frank Hofmann (FvB), Dominik Rutz and Oscar Gue (WIP), Dr. Johannes Anhorn and Ann-Kathrin van Laere (GIZ)

## Photo credits/sources

DiBiCoo consortium if not otherwise stated.

Staff member (<Consortium Member>/name) if not otherwise stated.

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