

*<ALG-AD PROJECT>*  
**DECISION SUPPORT TOOLS USER MANUAL**

---

Version *<1.0>*  
*<30/06/2022>*

## VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
1.0	<a href="#">Guolong Zhong</a>				

## ALG-AD DST DISCLAIMER

*Decision Support Tools (DST) are a set of intuitive tools to inform and guide investors, technology developers, businesses, policy makers and researchers on algae cultivation using digestate, featuring:*

- *An AD search tool provides GIS Map for AD plants in West European countries – the UK, Belgium, France and Germany.*
- *A document search tool includes all project documents and provides a smart search engine that guides end users to the document that matches their search query.*
- *A stakeholder search tool helps end users identify and connect with partners across North West Europe.*
- *A process pathway tool helps end users better understand AD process configuration and performance based on their AD process conditions and future requirements.*

*While using our tool, we may ask you to provide us with certain identifiable information about your AD site or process. The data you input in the tool will only be used to understand your circumstances about your AD process configuration and operation. The data will be erased automatically after you exit the tool. We will not collect, save, or share your data with others. Our tool may contain links to other websites that are not operated by us. If you click on a third-party link, you will be directed to that third party's site. We strongly advise you to review the Privacy Policy of every site you visit.*

*Birmingham City University (BCU) relies on its contributors, authors and reviewers to confirm the accuracy of the information presented. Some of the data within this tool has been collated from open-source datasets from reputable organisations and is accurate at the time of publishing. While the tool can provide professional support, Birmingham City University cannot provide warranties for the results provided, which are intended for guidance only and should be verified independently by users.*

*If you identify any issues with data or errors within the toolset, please do not hesitate to contact us.*

*For more information about the data privacy policy, please see our privacy notes here.*

*<https://www.bcu.ac.uk/about-us/corporate-information/policies-and-procedures/privacy-notices>*

## TABLE OF CONTENTS

<b>1</b>	<b>DECISION SUPPORT TOOLS INTRODUCTION.....</b>	<b>6</b>
1.1	Purpose of the ALG-AD Decision Support Tools .....	6
1.2	Target users .....	6
1.3	Key Features of Decision Support Tools.....	7
1.4	System requirement.....	7
1.5	First-time users.....	7
<b>2</b>	<b>HOW TO ACCESS THE DST.....</b>	<b>8</b>
<b>3</b>	<b>DST - AD PLANT SEARCH TOOL .....</b>	<b>10</b>
3.1	Rationale for the AD Plant Search Tool .....	11
3.2	Belgium AD plant map.....	11
3.2.1	Data source .....	12
3.2.2	Functions in the tool .....	12
3.2.3	Other information.....	16
3.3	France AD plant map .....	17
3.3.1	Data source .....	18
3.3.2	Functions in the tool .....	18
3.3.3	Other information.....	19
3.4	UK AD plant map .....	20
3.4.1	Data source .....	20
3.4.2	Functions in the tool .....	21
3.4.3	Other Information.....	22
3.5	Germany AD plant map.....	23
3.5.1	Data source .....	23
3.5.2	Functions in the tool .....	23
3.5.3	Other information.....	24
<b>4</b>	<b>DST – DOCUMENT SEARCH TOOL.....</b>	<b>25</b>
4.1	Data source.....	26
4.2	Functions in the tool.....	26
4.3	Other information .....	33
<b>5</b>	<b>DST – STAKEHOLDER SEARCH TOOL.....</b>	<b>34</b>
5.1	Data source.....	35
5.2	Functions in the tool.....	35
5.3	Other Information .....	42

<b>6</b>	<b>DST – PROCESS PATHWAY TOOL.....</b>	<b>43</b>
6.1	Data source.....	44
6.2	Tool interface .....	44
<b>7</b>	<b>DST – ADD AN ENTRY .....</b>	<b>52</b>
7.1	Add AD Plant .....	52
7.2	Add stakeholder .....	55
<b>8</b>	<b>DST – FEEDBACK RATING FORM .....</b>	<b>59</b>
8.1	Rate the DST .....	61
8.2	Additional Comments / Feedback.....	61
<b>9</b>	<b>DST – CONTACT FORM .....</b>	<b>62</b>
<b>10</b>	<b>FAQS.....</b>	<b>63</b>
	<b>APPENDIX A: ALG-AD DST USER MANUAL APPROVAL.....</b>	<b>64</b>
	<b>APPENDIX B: REFERENCES .....</b>	<b>65</b>

## **1 Decision Support Tools Introduction**

### **1.1 Purpose of the ALG-AD Decision Support Tools**

[ALG-AD](#) is an Interreg NWE-funded project in which new technology integration is being developed which captures the excess waste nutrients produced from the anaerobic digestion of food and farm waste to cultivate algal biomass for animal feed and other products of value. ALG-AD brings together a group of scientists and engineers from 11 different partners in four countries across North-West Europe. These academics are working together with industry to develop a circular economy solution to create wealth from waste.

Decision Support Tools (DSTs) are intuitive online tools that can help inform and guide technology developers, businesses, policy makers and researchers. We have worked with researchers and stakeholders from across North West Europe to collect and collate data on algal cultivation technologies, their performance, economics and environmental sustainability. Our team has turned this complex data into easily accessible tools to help you understand the process and the opportunities it can create.

The tools have been designed to enable end-users to explore the nature and scale of the opportunity. The tools can provide supporting information that is unique to your location and circumstances. They are flexible and adaptive to enable you to explore various process scenarios. Our database has been collated by our researchers from extensive field trials, economic and environmental assessments and existing open-source databases. The tools are designed so that new information can be added over time. This includes adding end-user data via our 'Add Entry' function.

You can use the link [www.alg-ad-dst.com](http://www.alg-ad-dst.com) to visit our DST website.

### **1.2 Target users**

Decision Support Tools (DSTs) are designed to help and guide technology developers, businesses, policymakers and researchers. However, the use of this tool is not limited to those people. End-users interested in algal and anaerobic digestion technology may also find the DST useful.

### 1.3 Key Features of Decision Support Tools

The ALG-AD Decision Support Tools provide functions of searching AD plants, documents and resources on algae and AD technologies, searching stakeholders and providing algal cultivation and PBR implementation suggestions.

We have developed a series of tools to help you understand and explore how algal cultivation technologies might work for you, including:

- An AD Plant search tool – to view and search the existing AD plants in Europe on a GIS map.
- A document search tool – to help you search for relevant information on algae and AD technologies, policy, research, etc.
- A stakeholder search tool – to help you identify and connect with partners across North West Europe,
- A process pathway tool- to help you better understand algal cultivation and PBR implementation suggestions based on your AD process conditions and future requirements,
- Add Entry function – to allow you to add AD plant to our map and share your information as a stakeholder with others.

You will find a detailed explanation of how to use each tool and function in this user manual. You can also watch the online demo of DST from [here](#).

### 1.4 System requirement

It is recommended to run the DST on Windows and macOS PC or laptops. The DST works with general internet browsers. For the best user experience, please use Chrome, Safari, and Microsoft Edge.

### 1.5 First-time users

First-time users may need to allow cookies to give permission to the DST website to store small bits of data on the device.

The DST website makes use of cookies to enhance the browsing experience and provide additional functionality. The use of cookies follows “[Birmingham City University Policies and Procedures about cookies](#)”.

For the use of the process pathway tool, it should take up to 2 mins to load for the first time, depending on the internet connection and PC performance.

## 2 How To Access The DST

The DST is hosted on our decision support tool website ([www.alg-ad-dst.com](http://www.alg-ad-dst.com)). This website provides you with an introduction to the ALG-AD project, decision support concept, the decision support tools, DST demo and user guide, etc. (see Figure 2-1)

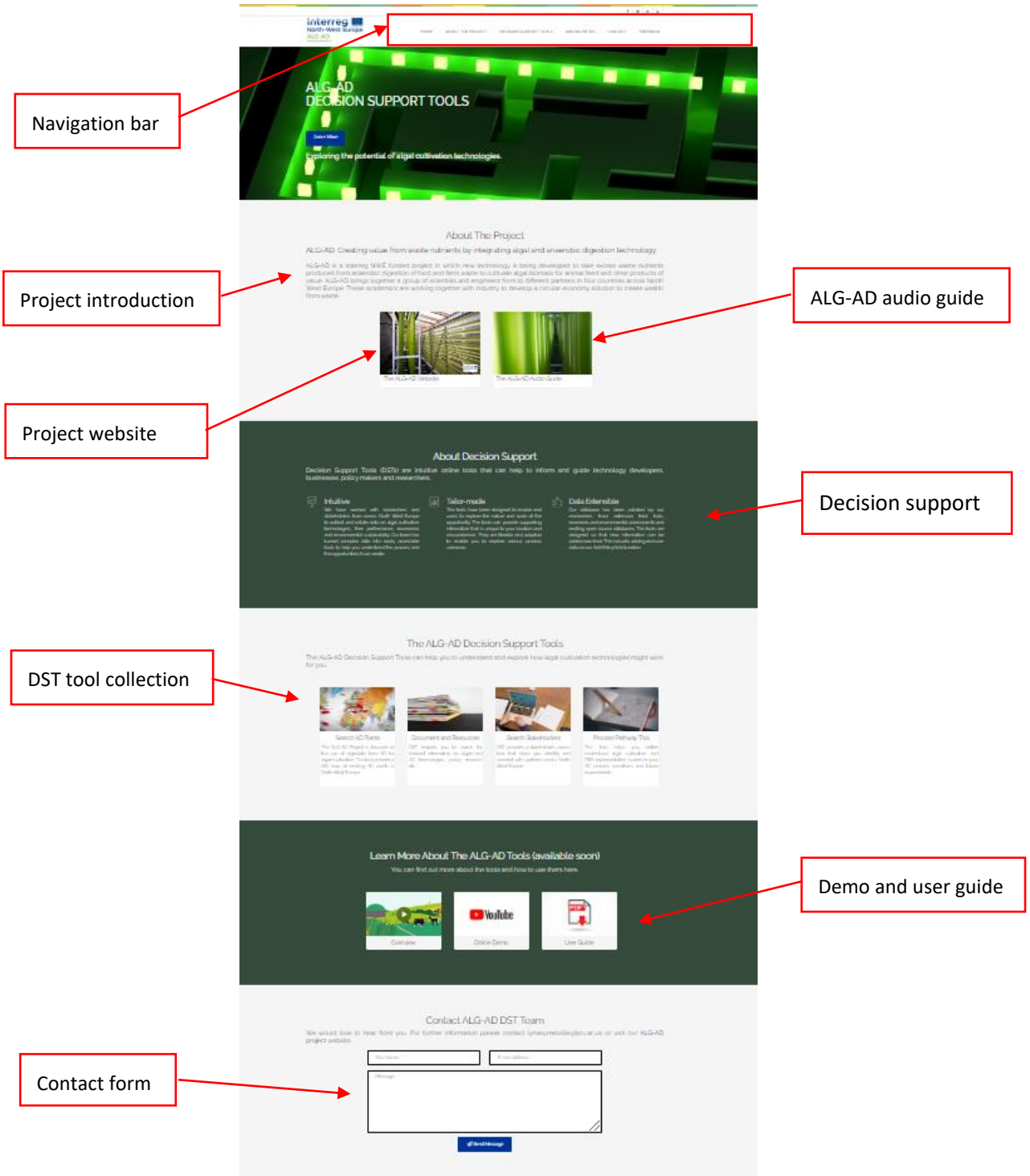
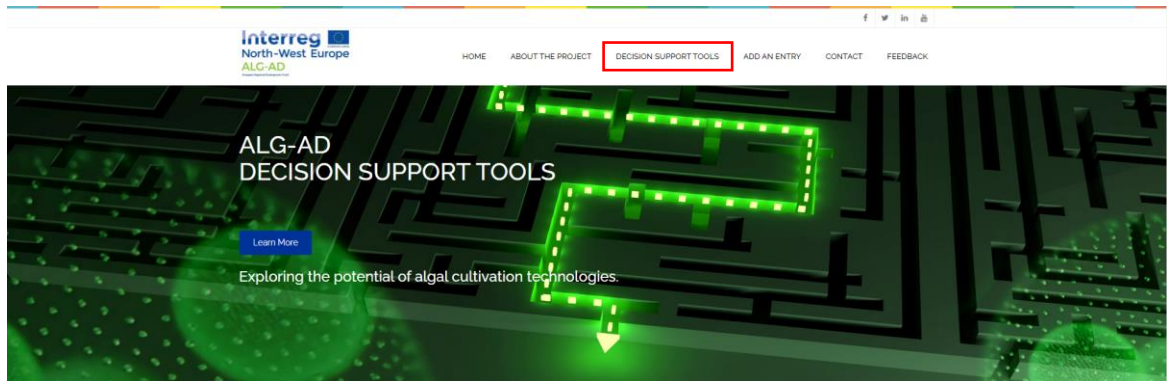
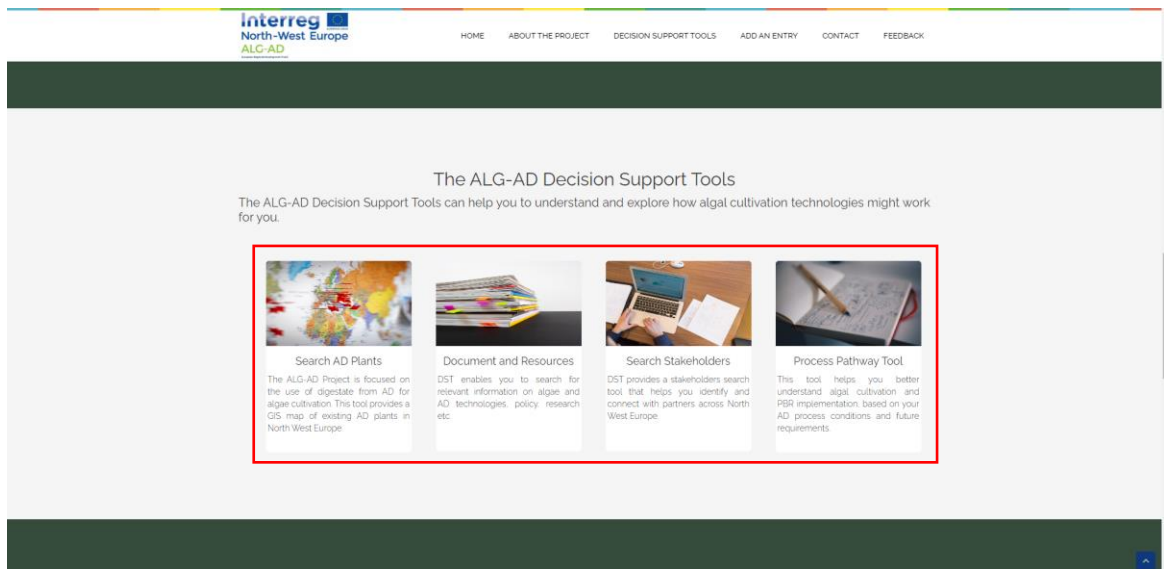


Figure 2-1. DST website home page

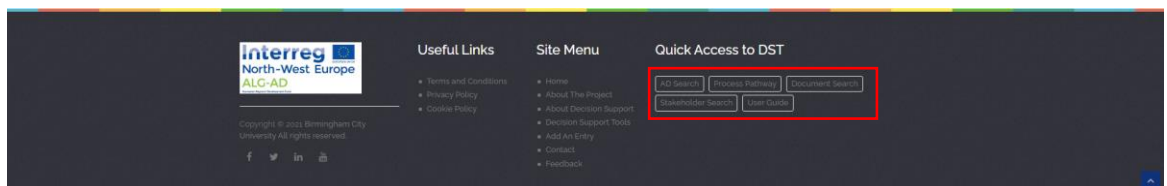
You can find the tools from the “Decision Support Tools” toggle in the navigation bar on the top of the webpage (see Figure 2-2a). Alternatively, you can also access our DST by selecting the modular function from the DST section on the home page (see Figure 2-2b). The website footer provides quick access to each DST function (see Figure 2-2c).



(a) Access the DST from the navigation bar on the top of the webpage



(a) Select the modular function from the highlighted section



(3) Use the quick access to DST from the website footer

Figure 2-2. How to access the DST

The following sections explain how to use each function in DST in detail. You can find the online demo of DST [here](#).

### 3 DST - AD Plant Search Tool

You can find the “AD Plant Search Tool” from the drop-down menu in the navigation bar on the top of the DST website (see Figure 3-1). By clicking the “AD PLANTS” in the drop-down menu, an index page will show that asks you to “select a country to start” (see Figure 3-2). Next, you can select a country from the drop-down list to direct you to the AD plant map.

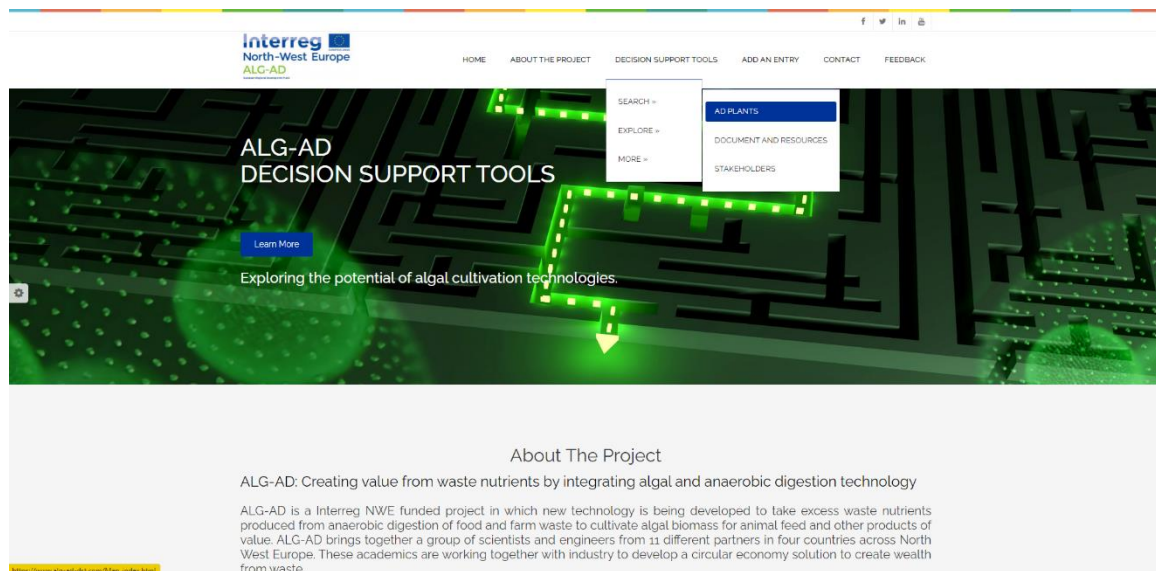


Figure 3-1. Find the “AD Plant Search Tool” from the drop-down menu

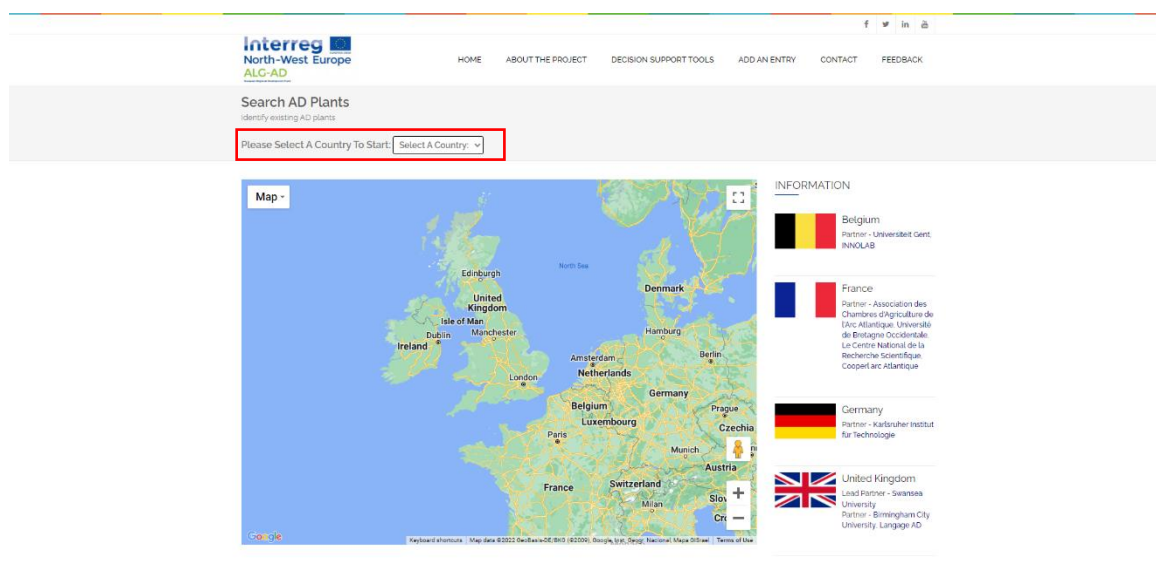


Figure 3-2. Select a country from the map index page

### 3.1 Rationale for the AD Plant Search Tool

Research conducted during the ALG-AD project highlighted that AD plants with a predominantly plant-based feedstock are most suitable for this particular application. Animal products that are fit for human consumption e.g., from food wastes are also suitable however feedstocks containing animal wastes, animal by products or human wastes would require additional treatment measures to ensure safety and are less suitable for this application.

### 3.2 Belgium AD plant map

On the Belgium AD Plant map, you will see different types of AD plants pinned on the map with different colours (see Figure 3-3). In the ALG-AD project, we categorise Belgium AD plants into the following four types based on the predominant feedstock:

- Type 0 (grey pin) - Unknown or Unverified feedstock,
- Type 1 (green pin) - Predominantly plant-based (food wastes, energy crop, grass clippings, wood wastes, green waste, paper etc., including organic waste from food processing which we assume fit for human consumption),
- Type 2 (purple pin) - Mixed Feedstocks containing plant-based material and animal wastes (including slurries and manures),
- Type 4 (blue pin) - Sewage and wastewater effluents (not-classified).

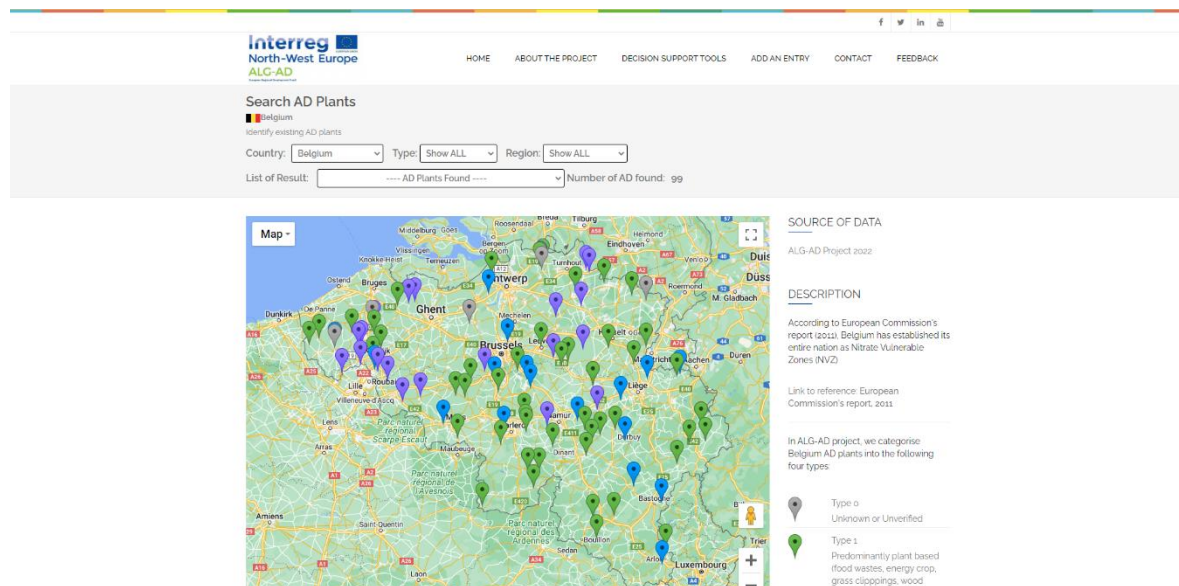


Figure 3-3. Belgium AD Plants Map

By clicking on the AD plant pin on the map, an information window will appear, which shows detailed information about the selected AD plant (see Figure 3-4).

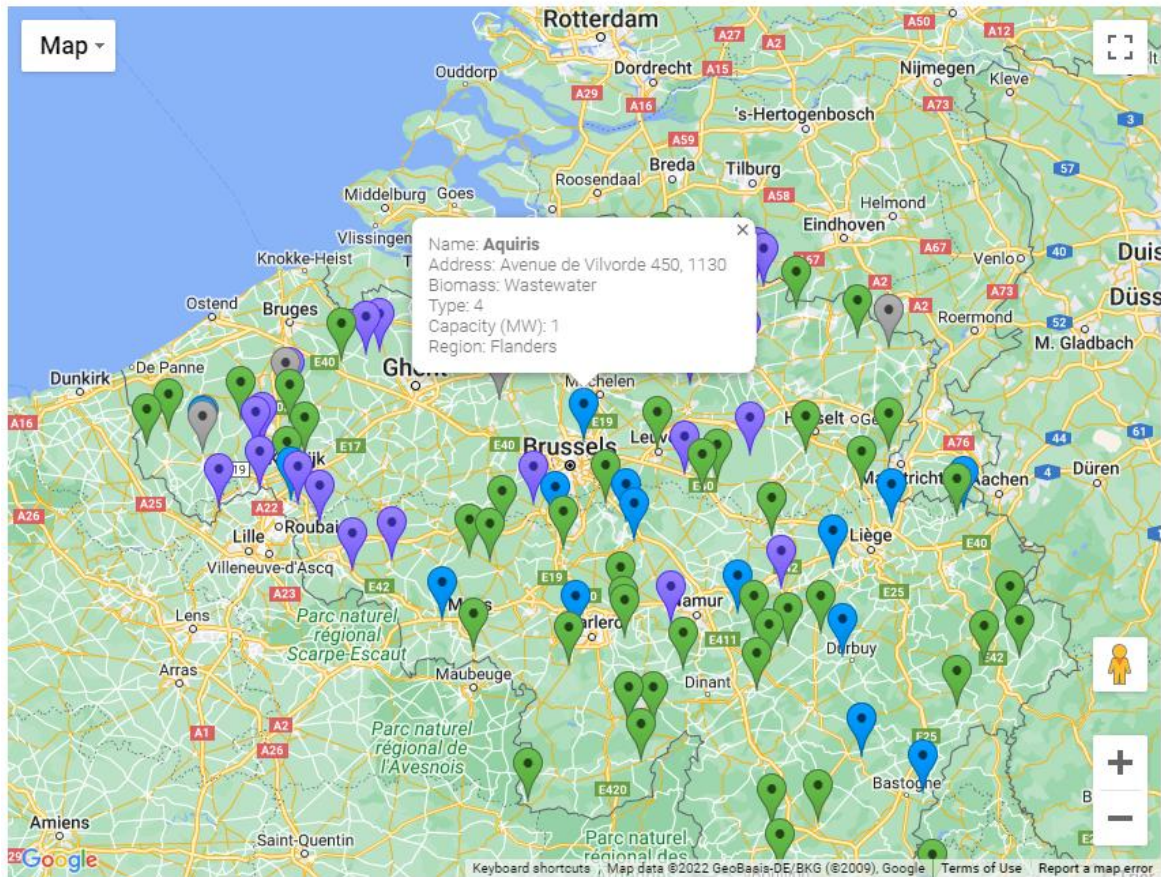


Figure 3-4. Information on selected AD plants on the Belgium AD Plants Map

### 3.2.1 Data source

The source data of Belgium AD plants are collected from the ALG-AD project. According to [European Commission's report \(2011\)](#), Belgium has established its entire nation as Nitrate Vulnerable Zones (NVZ).

### 3.2.2 Functions in the tool

#### a) Zoom-in and zoom-out

You can view the map by using the zoom-in and zoom-out functions.

Move the cursor on the map to a position where you would like to zoom in/out, then press and hold the “Ctrl” key and scroll the middle button of the mouse; you will be able to zoom in and zoom out from the current position (see Figure 3-5).

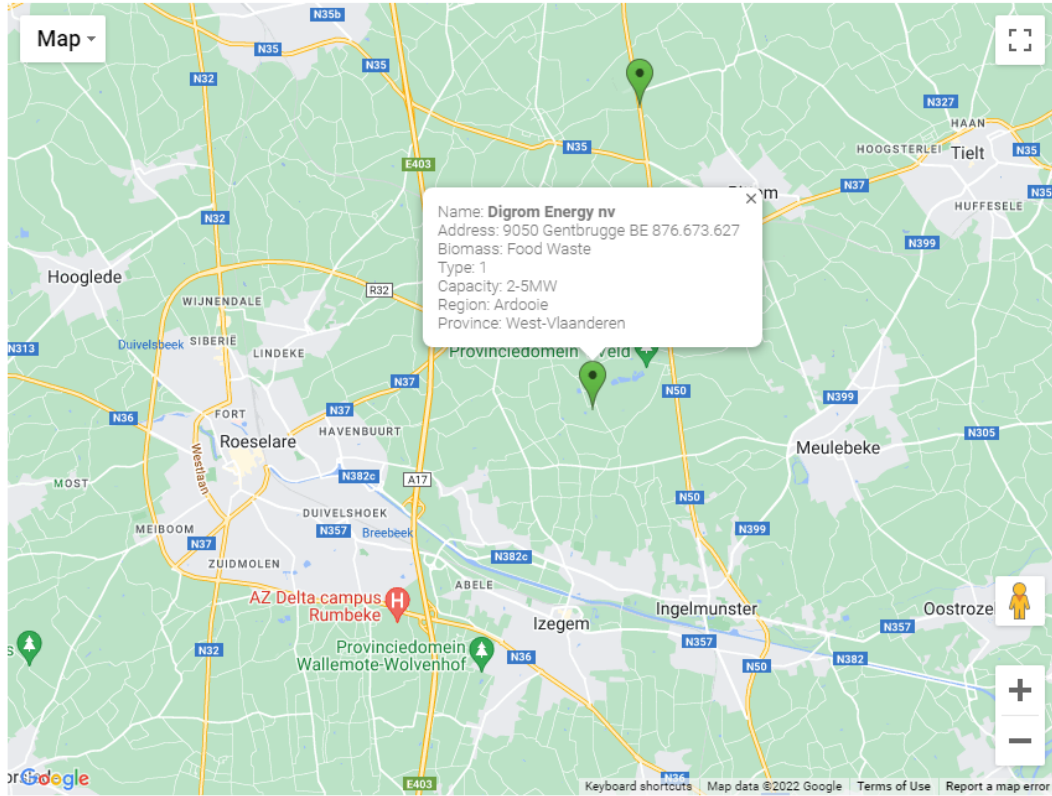


Figure 3-5. Zoom-in view of a selected AD plant

b) Filter by type

The AD plants can be filtered and shown on the map by using the filtering function. You can select one type from the “Type” option list, for example, “Type - 1”, as shown in Figure 3-6. Then, only AD plants in Type-1 will be displayed on the map.

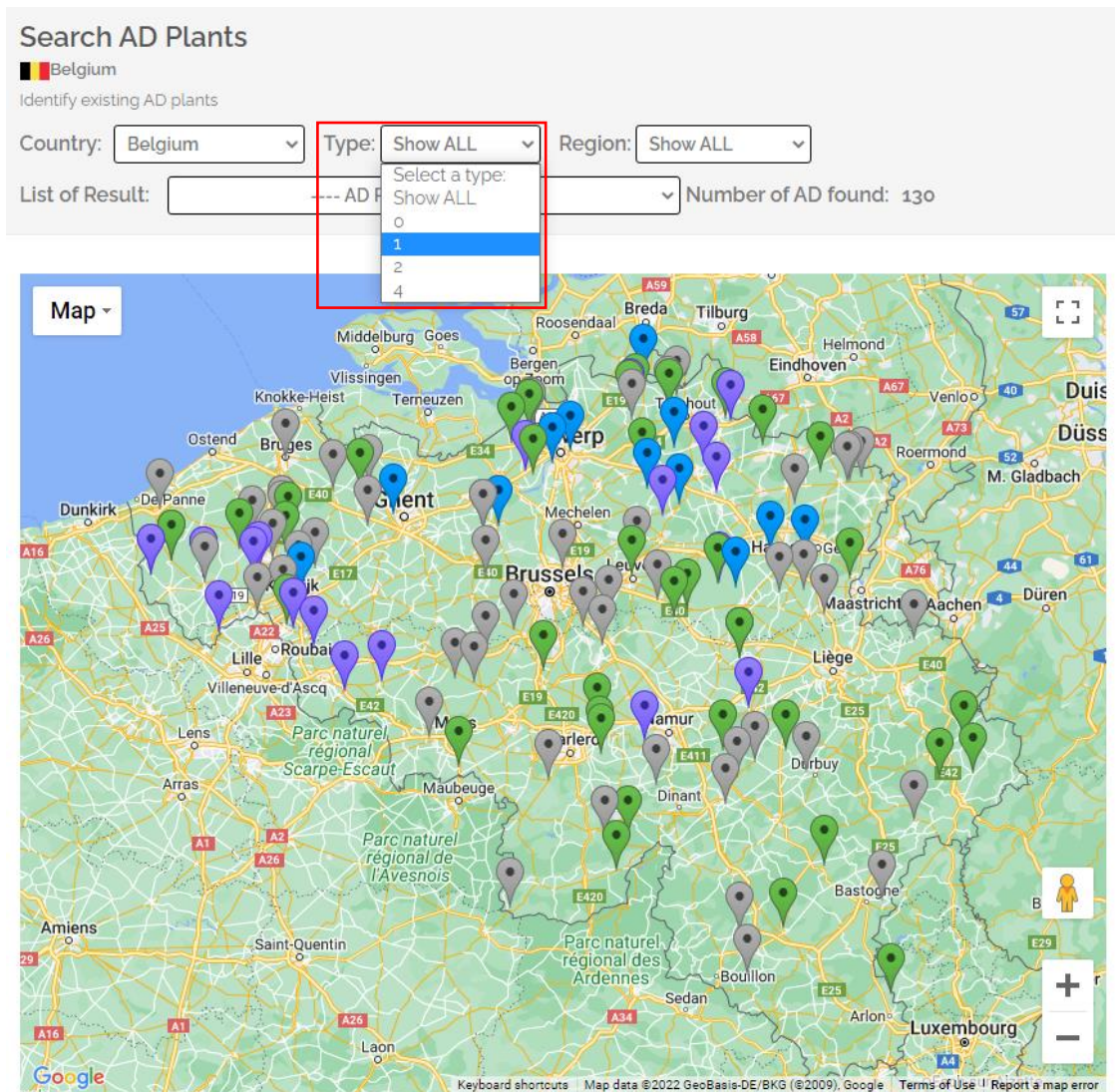


Figure 3-6. Filtered by AD plant type (example: Type-1)

The list of result shows the filtering results according to the filtering condition (see Figure 3-7). By clicking the AD plant name in the “List of Result”, the selected AD plant will pop up with an info window on the map (see Figure 3-8).

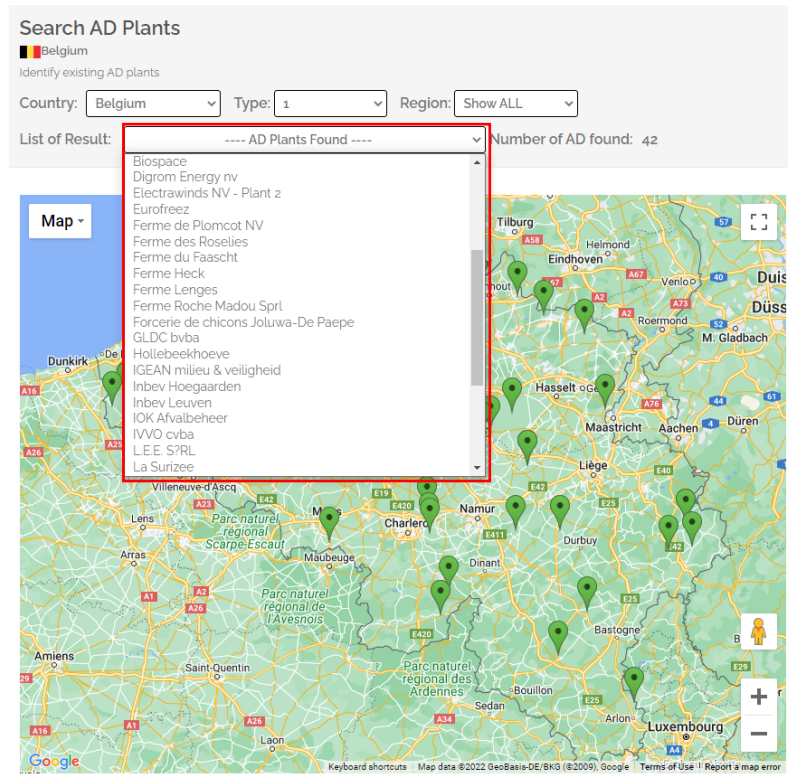


Figure 3-7. List of result after filtering

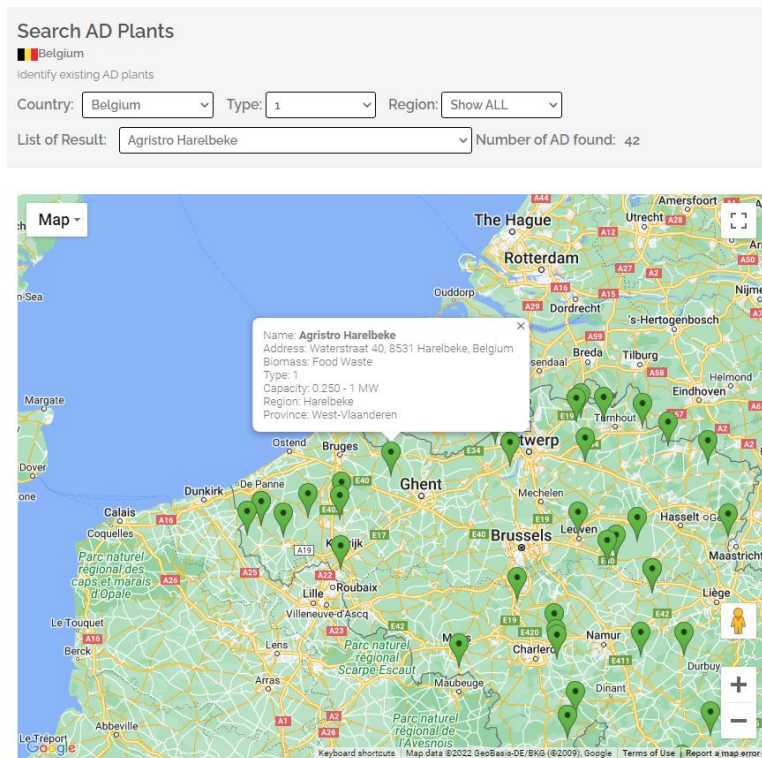


Figure 3-8. AD plant with the pop-up info window after being selected from the list of result

## c) Filter by region

You can also select one region from the “Region” option to filter further. For example, “Flanders”, as shown in Figure 3-9. The filter results will be shown on the map.

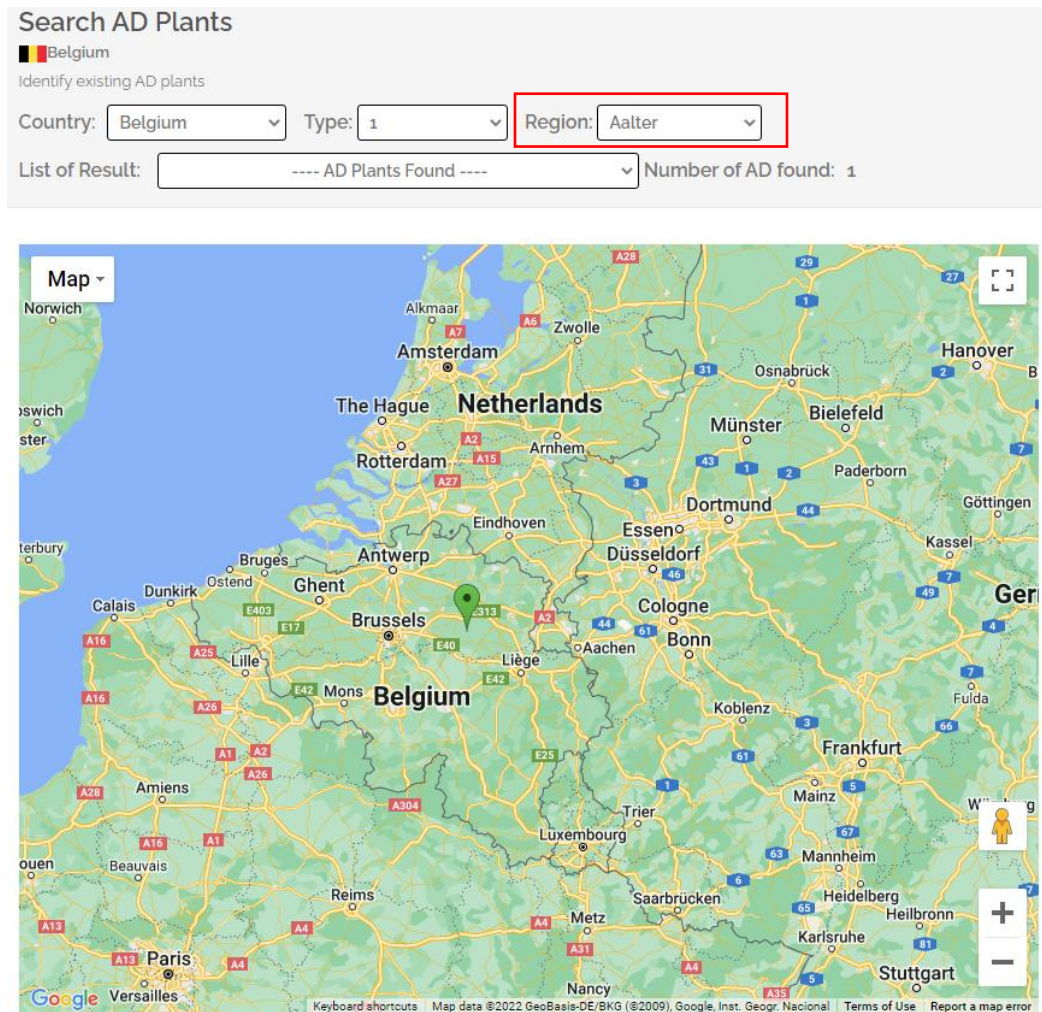


Figure 3-9. Further filtered by Region (example: filtered by type -1 and region Aalter)

### 3.2.3 Other information

Information about the source of data, description and AD plant category can be found on the right side of this page.

### 3.3 France AD plant map

In the ALG-AD project, we categorise France's AD plants into the following five types (see Figure 3-10):

- Type 0 (grey pin) - Unknown or Unverified,
- Type 1 (green pin) - Predominantly plant-based (food wastes, energy crop, grass clippings, wood wastes, green waste, paper etc., including organic waste from food processing which we assume fit for human consumption),
- Type 2 (purple pin) - Mixed Feedstocks containing plant-based material and animal wastes (including slurries and manures),
- Type 3 (red pin) - Mixed feedstocks containing Category 2 animal by-products or wastes/ licences held
- Type 4 (blue pin) - Sewage and wastewater effluents (not-classified).

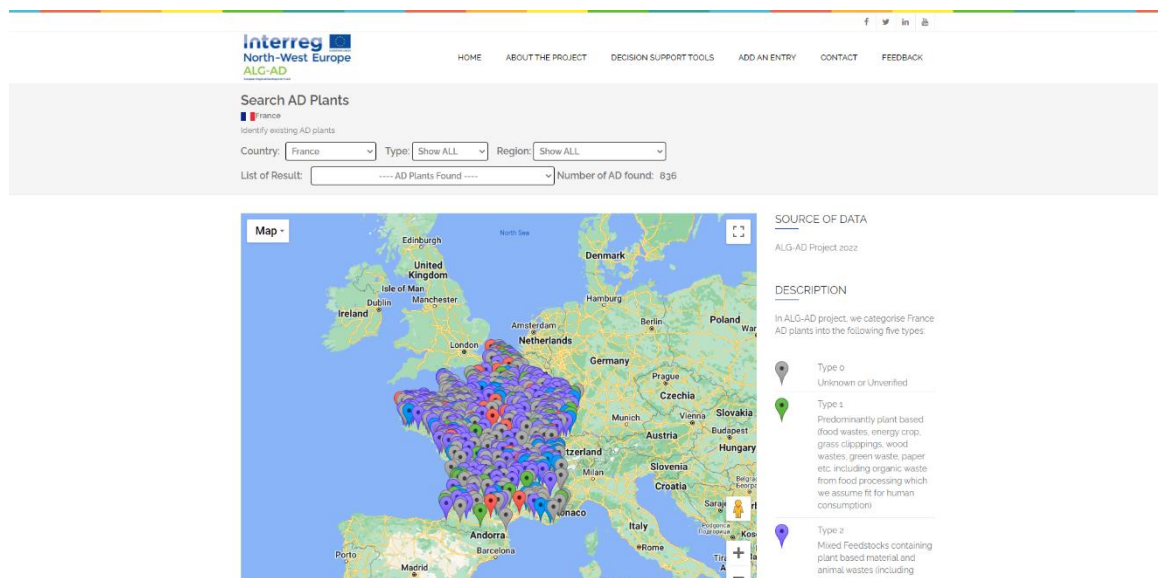


Figure 3-10. France AD Plants Map

By clicking on the AD plant pin on the map, an information window will appear, which shows detailed information about the selected AD plant (see Figure 3-11).

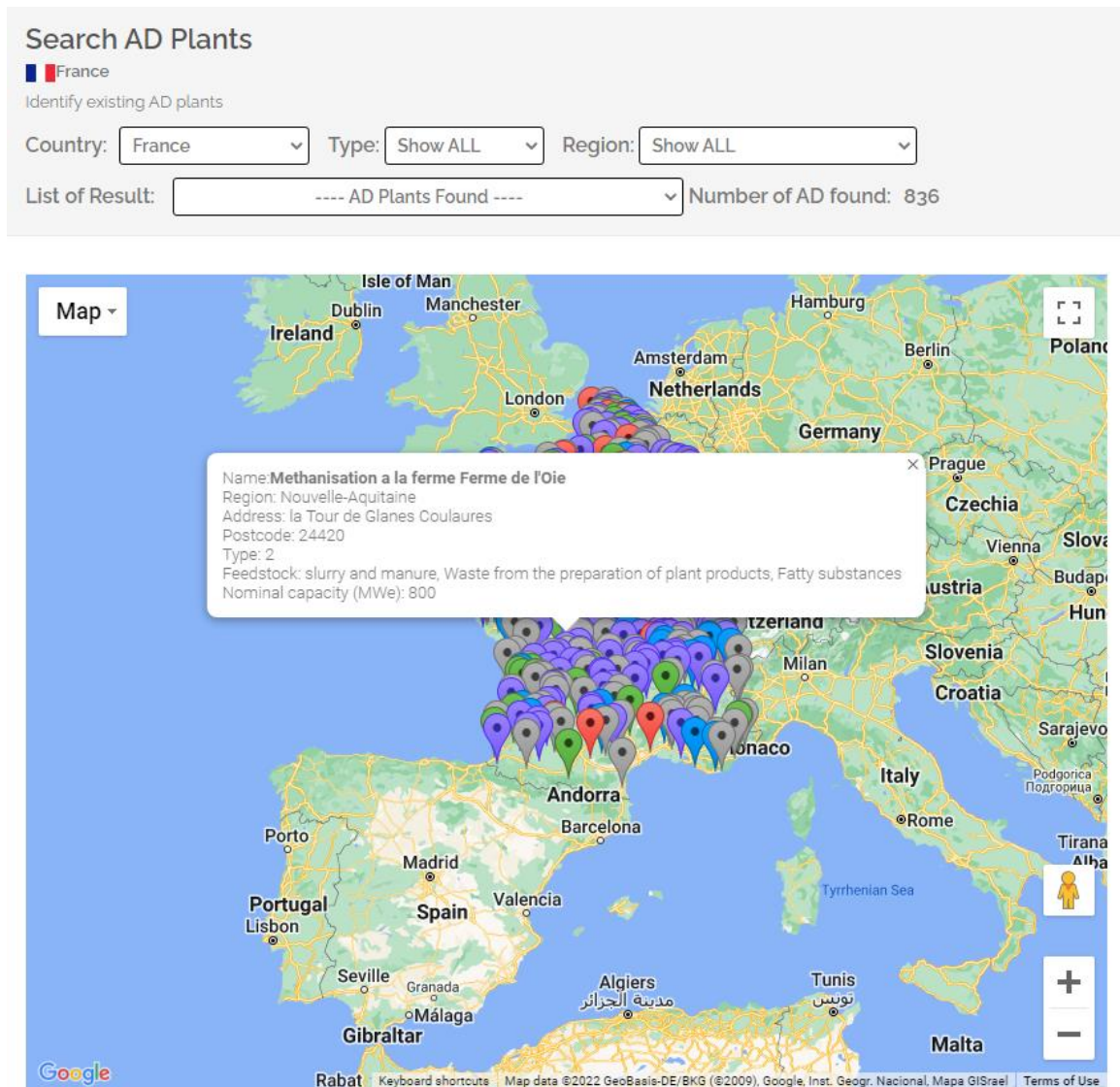


Figure 3-11. Information on selected AD plants on the France AD Plant Map

### 3.3.1 Data source

The source data of France AD plants are collected from the ALG-AD project.

### 3.3.2 Functions in the tool

#### a) Zoom-in and zoom-out

You can view the map by using the zoom-in and zoom-out functions. Move the cursor on the map to a position where you would like to zoom in/out, then press and hold the “Ctrl” key and scroll the middle button of the mouse; you will be able to zoom in and zoom out from the current position.

## b) Filter by type and region

Like the Belgium map, the France AD plants can be filtered by “type” and “region” by using the filtering function. For example, select “Type - 2” and region “Grand-Est” as shown in Figure 3-12; the filtered AD plants will be displayed on the map. By clicking the AD plant name in the “List of Result”, the selected AD plant will pop up on the map (see Figure 3-12).

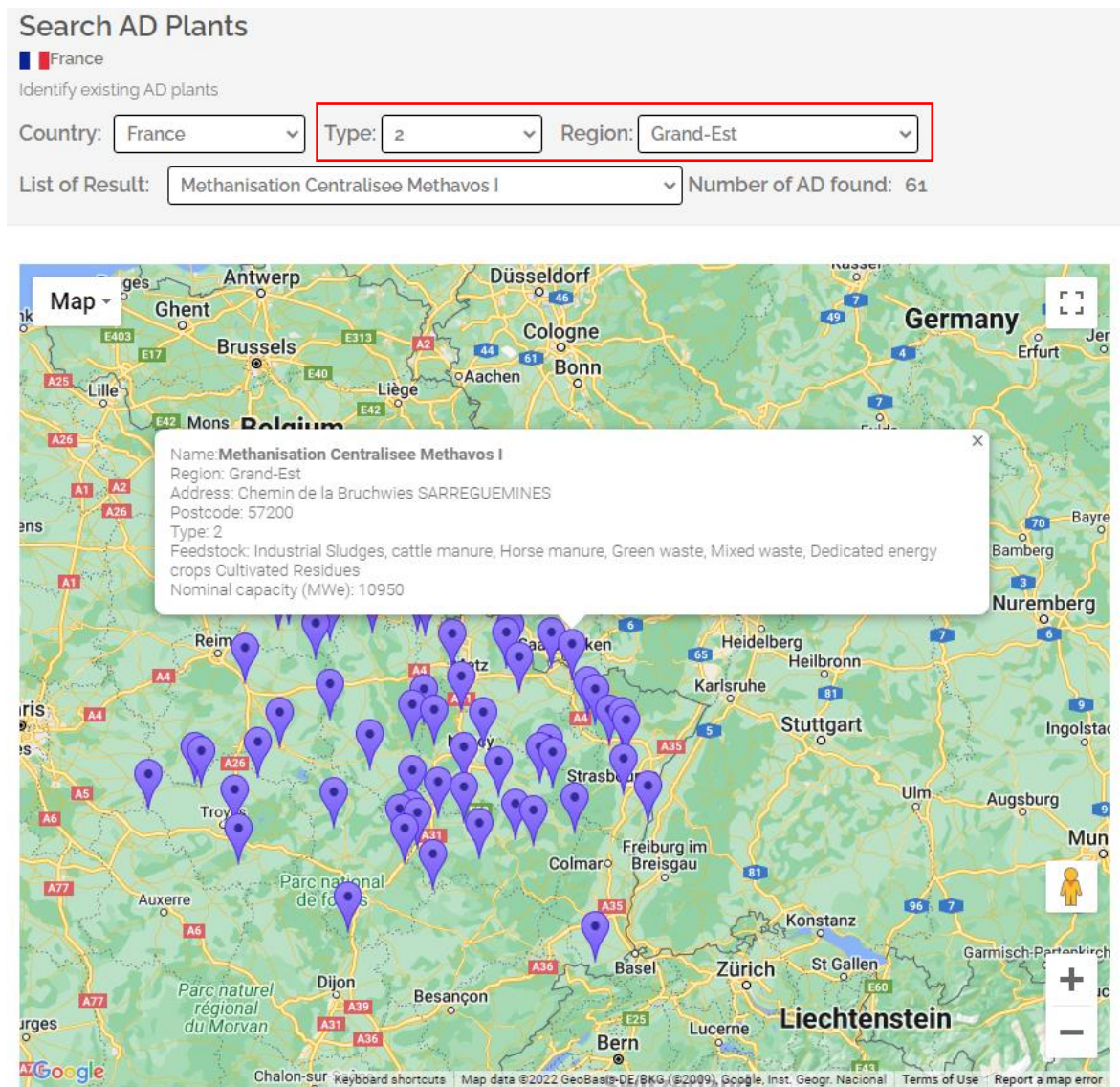


Figure 3-12. Filtered by AD plant type and region in France

### 3.3.3 Other information

Information about the source of data, description and AD plant category can be found on the right side of this page.

### 3.4 UK AD plant map

In the ALG-AD project, we categorise UK AD plants into the following four types (see Figure 3-13):

- Type 0 (grey pin) - Unknown or Unverified,
- Type 1 (green pin) - Predominantly plant-based (food wastes, energy crop, grass clippings, wood wastes, green waste, paper etc., including organic waste from food processing which we assume fit for human consumption),
- Type 2 (purple pin) - Mixed Feedstocks containing plant-based material and animal wastes (including slurries and manures),
- Type 3 (red pin) - Mixed feedstocks containing Category 2 animal by-products or wastes/ licences held

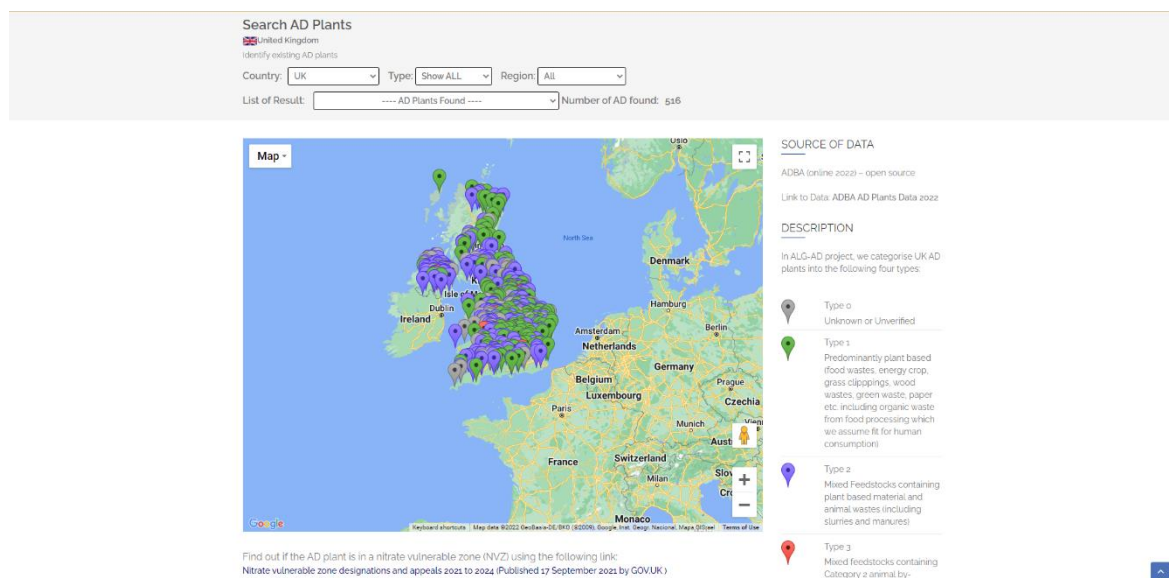


Figure 3-13. UK AD Plants Map

#### 3.4.1 Data source

The source data of UK AD plants are collected from [ADBA AD Plants Data 2022](#).

To find out if the AD plant is in a nitrate vulnerable zone (NVZ), the following link is provided: [Nitrate vulnerable zone designations and appeals 2021 to 2024](#) (Published 17 September 2021 by GOV.UK)

### 3.4.2 Functions in the tool

#### a) Zoom-in and zoom-out

You can view the map by using the zoom-in and zoom-out functions. Move the cursor on the map to a position where you would like to zoom in/out, then press and hold the “Ctrl” key and scroll the middle button of the mouse; you will be able to zoom in and zoom out from the current position.

#### b) Filter by type and region

The UK AD plants can be filtered by “type” and “region” by using the filtering function. For example, select “Type - 0” and region “England” as shown in Figure 3-14; the filtered AD plants will be displayed on the map. By clicking the AD plant name in the “List of Result”, the selected AD plant will be shown (see Figure 3-14).

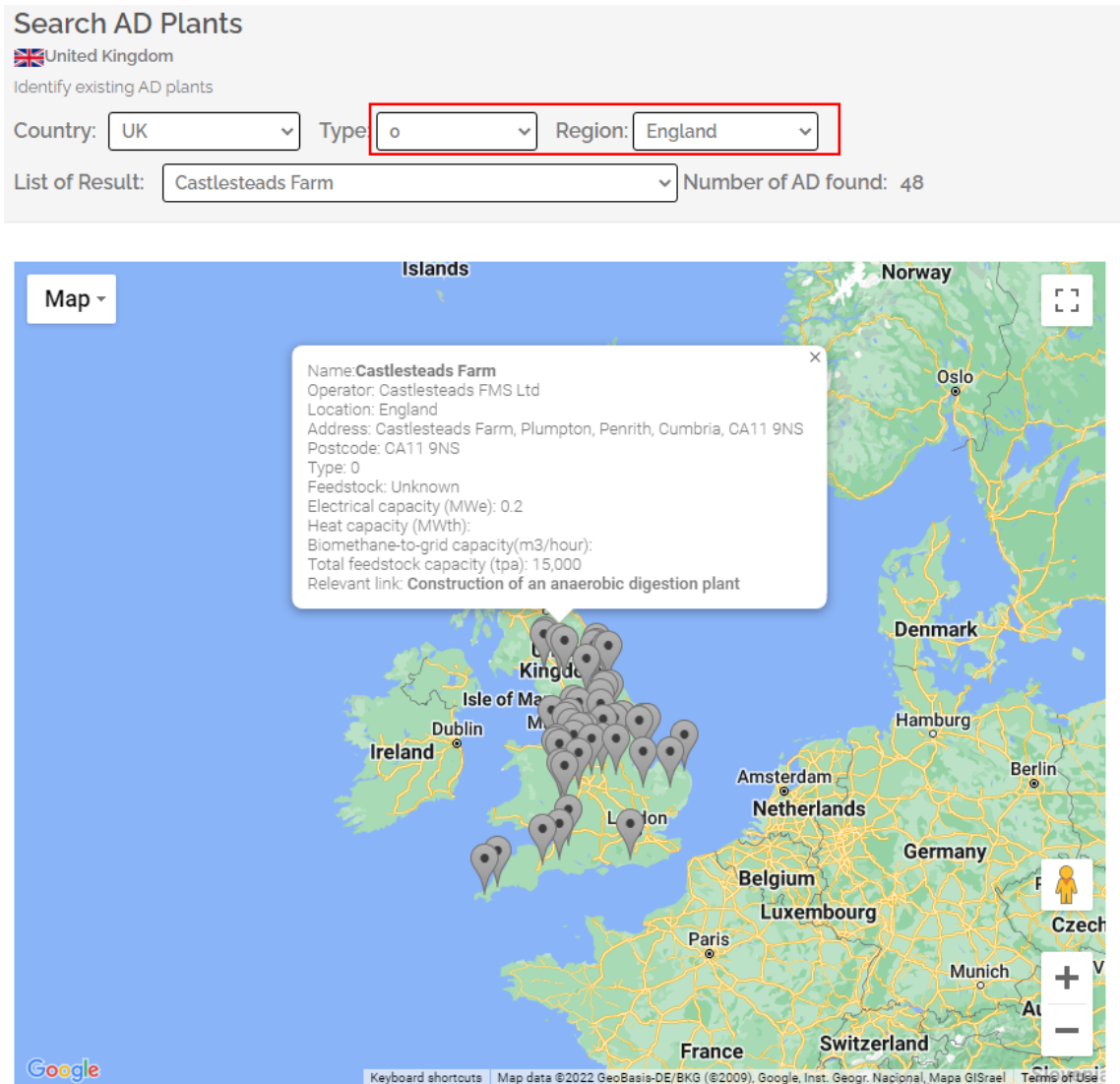


Figure 3-14. Filtered by AD plant type and region in the UK

A list of result will be shown with all the AD plant names provided, as shown in Figure 3-15.

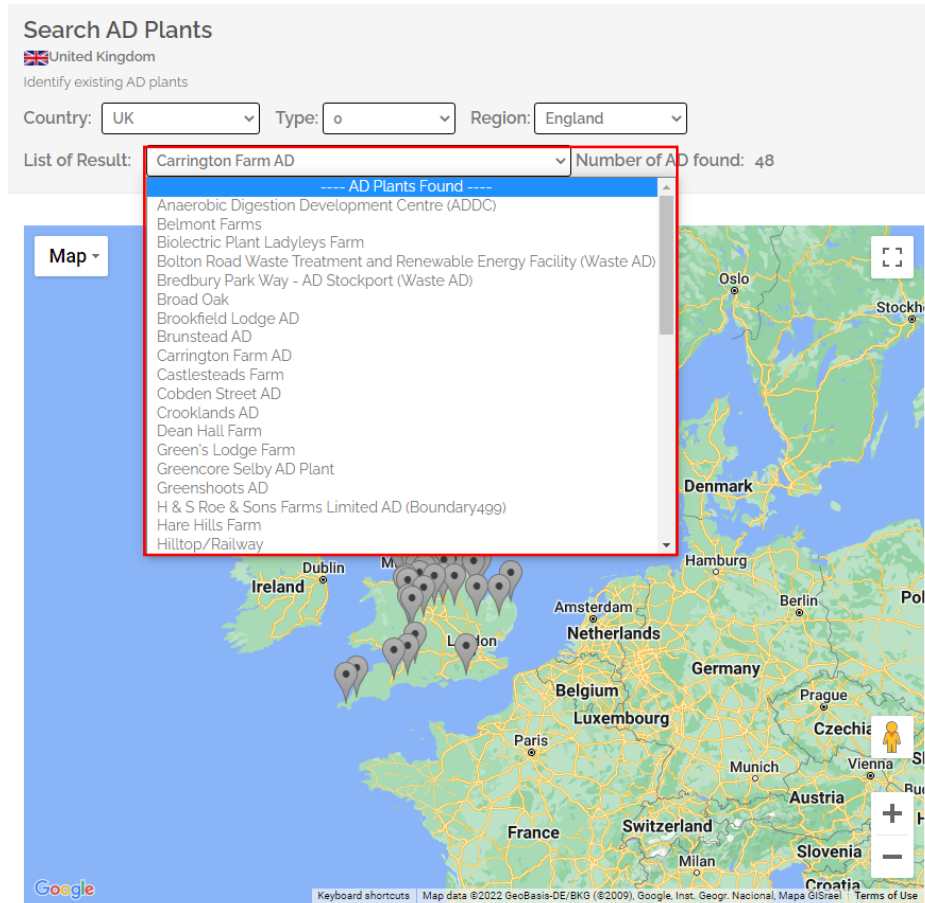


Figure 3-15. List of result after filtering (condition: type-0 and England)

### 3.4.3 Other Information

Information about the source of data, description and AD plant category can be found on the right side of this page.

### 3.5 Germany AD plant map

In the ALG-AD project, we currently categorise Germany AD plants into the following two types by feed types (see Figure 3-16):

- Unknown (grey pin) - Unknown or Unverified,
- Partial feed (green pin) – Partial feed
- Full feed (purple pin) - Full feed

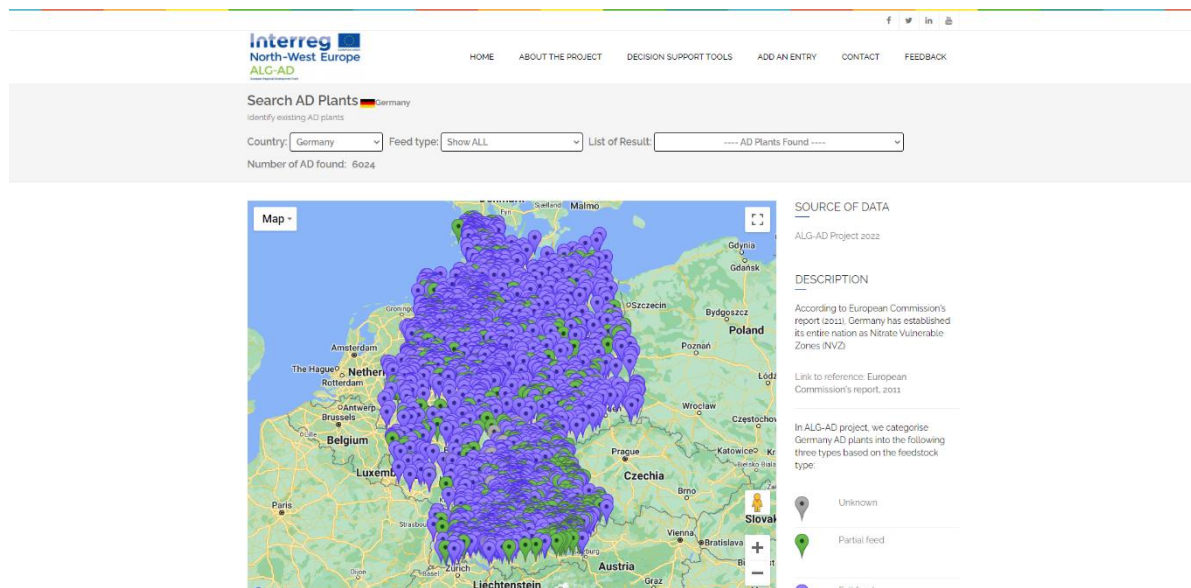


Figure 3-16. Germany AD Plants Map

#### 3.5.1 Data source

The source data of Germany AD plants are collected from the ALG-AD project. According to [European Commission's report \(2011\)](#), Germany has established its entire nation as Nitrate Vulnerable Zones (NVZ).

#### 3.5.2 Functions in the tool

##### a) Zoom-in and zoom-out

You can view the map by using the zoom-in and zoom-out functions. Move the cursor on the map to a position where you would like to zoom in/out, then press and hold the “Ctrl” key and scroll the middle button of the mouse; you will be able to zoom in and zoom out from the current position.

## b) Filter by feed type

The Germany AD plants can be filtered by “feed type” using the filtering function. For example, select “partial feed”, as shown in Figure 3-17, and the filtered AD plants will be displayed on the map. You can also find the list of result and select the target AD plant from the list.

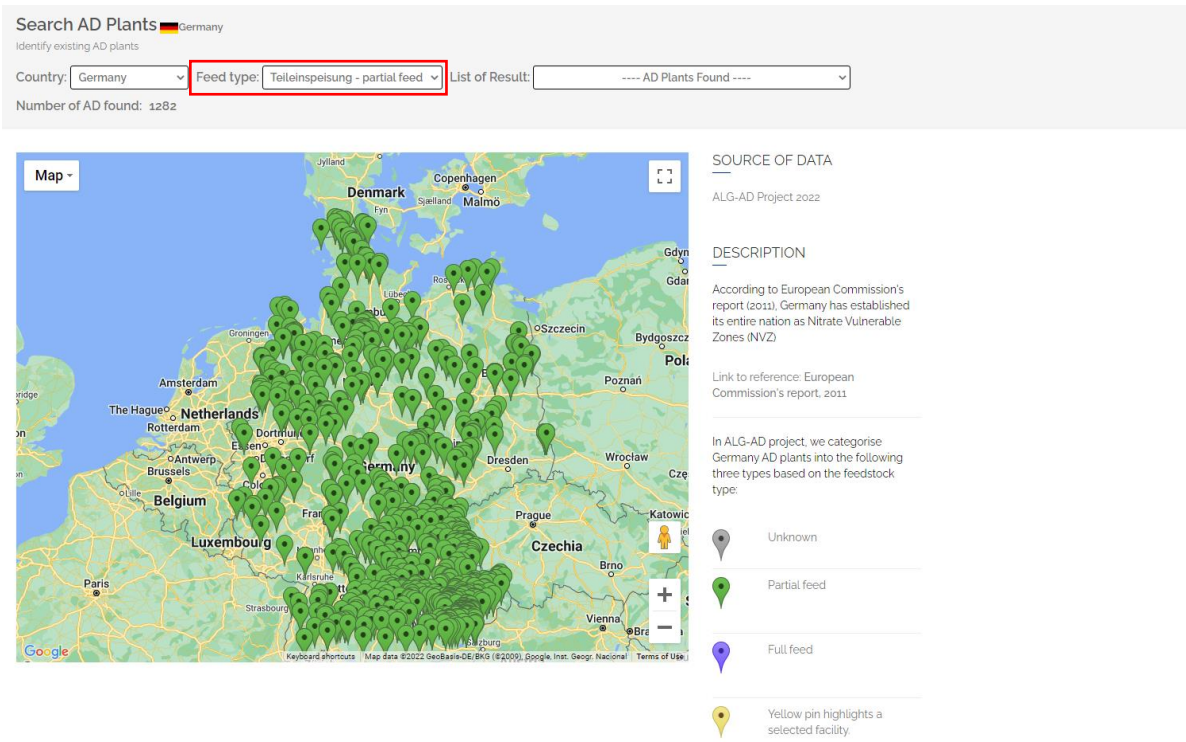


Figure 3-17. Filtered by AD plant feed type in Germany

### 3.5.3 Other information

Information about the source of data, description and AD plant category can be found on the right side of this page. You can also share your AD plant data with us through the “Add An Entry” function (explained in Section 7.1) to add your AD plant to our map.

## 4 DST – Document Search Tool

You can find the “Document Search Tool” from the drop-down menu in the navigation bar (see Figure 4-1 and 4-2).

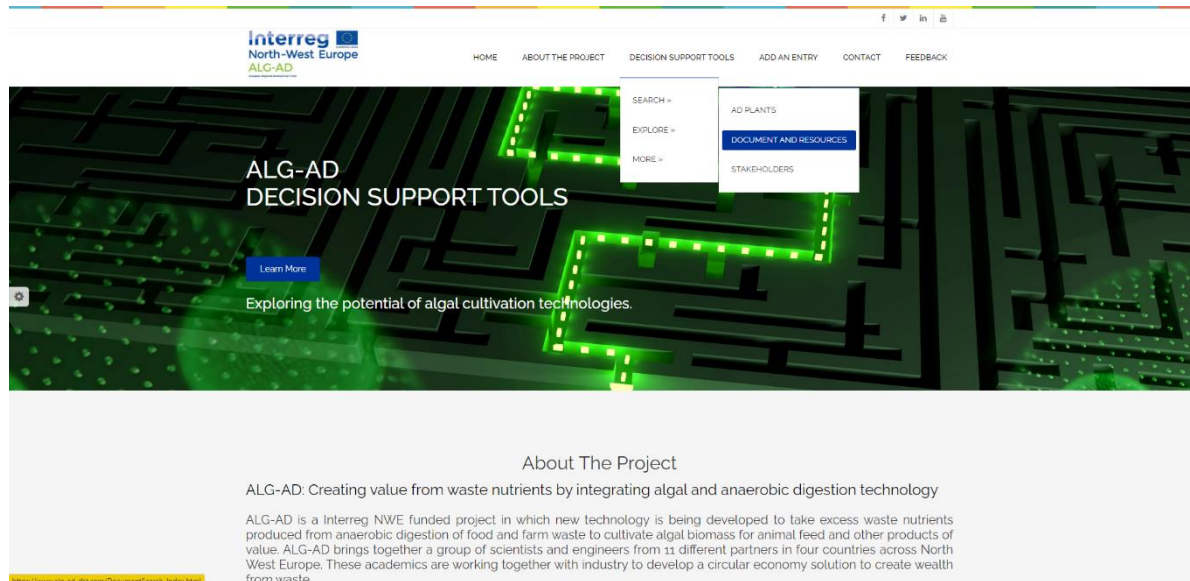


Figure 4-1. Find “Document and Resource” from the drop-down menu to use the Document Search Tool.

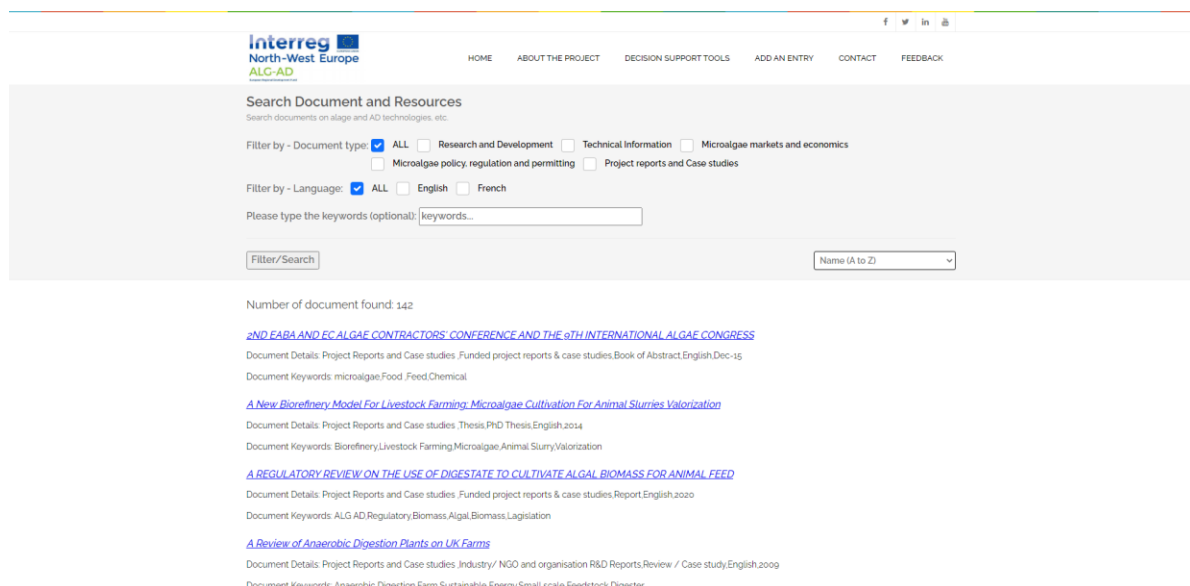


Figure 4-2. Document Search Tool interface

## 4.1 Data source

The documents and resources has been collected throughout the ALG-AD project and is directly relevant to this application. The data includes information relevant to research and development, technical information, microalgae markets and economics, microalgae policy, regulation, permitting, and project reports and case studies.

## 4.2 Functions in the tool

### a) Filter by document type (multiple filter conditions)

This document search tool allows you to apply multiple filter conditions to search for the relevant documents by ticking boxes. Two document types are selected in the following example, which are “Research and Development” (Figure 4-3) and “Technical Information” (Figure 4-4), and the results are shown on the runtime.

### Search Document and Resources

Search documents on alage and AD technologies, etc.

Filter by - Document type:

☐ ALL
 ☒ Research and Development
 ☐ Technical Information
 ☐ Microalgae markets and economics
 ☐ Microalgae policy, regulation and permitting
 ☐ Project reports and Case studies

Filter by - Language:

☒ ALL
 ☐ English
 ☐ French

Please type the keywords (optional):

Name (A to Z)

Number of document found: 24

[A Technological Overview of Biogas Production from Biowaste](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Jun-17

Document Keywords: Anaerobic Digestion,Biogas,Sustainable Energy,Lignocellulosic waste,Microbial Community

[Anaerobic digestate as substrate for microalgae culture: The role of ammonium concentration on the microalgae productivity](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Jan-14

Document Keywords: High rate ponds,Wastewater,Anaerobic Digestion,Biomass ,Nutrient

[Biomass and lipid productivities of Chlorella vulgaris under autotrophic, heterotrophic and mixotrophic growth conditions](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Mar-09

Document Keywords: Algal Fuels,Autotrophic,Biodiesel ,Chlorella Vulgaris,Glycerol,Heterotrophic,Lipid

[Different microalgae species as a substitutive protein feed for soyabean meal in grass silage based dairy cow diets](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,2019

Document Keywords: Microalgae,Spirulina platensis,Chlorella vulgaris,Nannochloropsis gaditana,Soya bean meal,Dairy cow

[Effect of different carbon sources on microbial community structure and composition of ex-situ biofloc formation](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Jan-20

Document Keywords: Carbon Source,High-throughput sequencing,Biofloc,Structure,Microbial community

Figure 4-3. Example - Filter the document by “Research and Development”.

**Search Document and Resources**  
 Search documents on algae and AD technologies, etc.

Filter by - Document type: ☐ ALL ☒ Research and Development ☒ Technical Information ☐ Microalgae markets and economics  
☐ Microalgae policy, regulation and permitting ☐ Project reports and Case studies

Filter by - Language: ☒ ALL ☐ English ☐ French

Please type the keywords (optional):

Number of document found: 41

[A Technological Overview of Biogas Production from Biowaste](#)

Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Jun-17

Document Keywords: Anaerobic Digestion, Biogas, Sustainable Energy, Lignocellulosic waste, Microbial Community

[Anaerobic digestate as substrate for microalgae culture: The role of ammonium concentration on the microalgae productivity](#)

Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Jan-14

Document Keywords: High rate ponds, Wastewater, Anaerobic Digestion, Biomass, Nutrient

[Best Practice Guidelines for Seaweed Cultivation and Analysis](#)

Document Details: Technical Information, Methods, Laboratory - Analysis and Sampling, Report, English, 2016

Document Keywords: Seaweed, Cultivation, microalgae, Bioremediation

[Best Practices for the Pilot-Scale Cultivation of Microalgae](#)

Document Details: Technical Information, Methods, Laboratory - Analysis and Sampling, Report, English, 2015

Document Keywords: Microalgae, Biomass, Enalgae, Cultivation, inoculation, Harvest

[Biomass and lipid productivities of \*Chlorella vulgaris\* under autotrophic, heterotrophic and mixotrophic growth conditions](#)

Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Mar-09

Document Keywords: Algal Fuels, Autotrophic, Biodiesel, *Chlorella Vulgaris*, Glycerol, Heterotrophic, Lipid

**Figure 4-4. Example - Filter the document by “Research and Development” and “Technical Information”.**

**b) Filter by language (multiple filter conditions)**

This document search tool also allows you to filter the document by “Language” (English and French). By selecting the target language, the document will be searched and listed in the results (see Figure 4-5).

### Search Document and Resources

Search documents on alage and AD technologies, etc.

Filter by - Document type: ☒ ALL ☐ Research and Development ☐ Technical Information ☐ Microalgae markets and economics  
☐ Microalgae policy, regulation and permitting ☐ Project reports and Case studies

Filter by - Language: ☐ ALL ☐ English ☒ French

Please type the keywords (optional):

Number of document found: 5

[Eco-extraction et analyse des lipides de micro-algues pour la production d'algo-carburant](#)

Document Details: Project Reports and Case studies ,Funded project reports & case studies,Report,French,2013

Document Keywords:

[Etude des conditions de culture d'un écosystème complexe microalgues / bactéries : application au développement d'un procédé d'extraction-valorisation des nutriments issus des digestats](#)

Document Details: Project Reports and Case studies ,Funded project reports & case studies,Report,French,2014

Document Keywords:

[Les matières premières agricoles pour l'alimentation humaine et animale : l'UE et la France](#)

Document Details: Project Reports and Case studies ,Funded project reports & case studies,Report,French,2019

Document Keywords:

[L'efficacité nette de conversion des aliments par les animaux d'élevage : une nouvelle approche pour évaluer la contribution de l'élevage à l'alimentation humaine](#)

Document Details: Project Reports and Case studies ,Funded project reports & case studies,Report,French,2019

Document Keywords:

Figure 4-5. Example - Filter the document by language “French”

#### c) Search by keywords

You can search the document by typing keywords from the search box. The search function works together with the filtering function. For example, you can search the documents related to Algae by inputting “Algae” and then clicking the “Filter/Search” button (see Figure 4-6). You can also filter the results further by selecting the “Research and Development” from the document type filter (see Figure 4-7).

**Search Document and Resources**  
Search documents on algae and AD technologies, etc.

Filter by - Document type: ☒ ALL ☐ Research and Development ☐ Technical Information ☐ Microalgae markets and economics  
☐ Microalgae policy, regulation and permitting ☐ Project reports and Case studies

Filter by - Language: ☒ ALL ☐ English ☐ French

Please type the keywords (optional):

Number of document found: 105

[2ND EABA AND EC ALGAE CONTRACTORS' CONFERENCE AND THE 9TH INTERNATIONAL ALGAE CONGRESS](#)  
Document Details: Project Reports and Case studies, Funded project reports & case studies, Book of Abstract, English, Dec-15  
Document Keywords: microalgae, Food, Feed, Chemical

[A New Biorefinery Model For Livestock Farming: Microalgae Cultivation For Animal Slurries Valorization](#)  
Document Details: Project Reports and Case studies, Thesis, PhD Thesis, English, 2014  
Document Keywords: Biorefinery, Livestock Farming, Microalgae, Animal Slurry, Valorization

[ALG-AD Newsletter, Spring-2021](#)  
Document Details: Project Reports and Case studies, Funded project reports & case studies, Newsletter, English, 2021  
Document Keywords: ALG AD, Microalgae, Food, Farm

[ALG-AD Newsletter, Summer-2021](#)  
Document Details: Project Reports and Case studies, Funded project reports & case studies, Newsletter, English, 2021  
Document Keywords: ALG AD, Microalgae

[Algae as a Feedstock for Chemicals](#)  
Document Details: Microalgae policy, regulation and permitting, Planning and permitting, Regulatory Fact Sheet, English, 2014

Figure 4-6. Example – search by keyword “algae”

**Search Document and Resources**  
Search documents on algae and AD technologies, etc.

Filter by - Document type: ☐ ALL ☒ Research and Development ☐ Technical Information ☐ Microalgae markets and economics  
☐ Microalgae policy, regulation and permitting ☐ Project reports and Case studies

Filter by - Language: ☒ ALL ☐ English ☐ French

Please type the keywords (optional):

Number of document found: 11

[Anaerobic digestate as substrate for microalgae culture: The role of ammonium concentration on the microalgae productivity](#)  
Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Jan-14  
Document Keywords: High rate ponds, Wastewater, Anaerobic Digestion, Biomass, Nutrient

[Different microalgae species as a substitutive protein feed for soyabean meal in grass silage based dairy cow diets](#)  
Document Details: Research and Development, Peer Reviewed Publications, Publication, English, 2019  
Document Keywords: Microalgae, Spirulina platensis, Chlorella vulgaris, Nannochloropsis gaditana, Soya bean meal, Dairy cow

[Integration of anaerobic digestion and microalgal cultivation for digestate bioremediation and biogas upgrading](#)  
Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Oct-19  
Document Keywords: Biogas, Microalgae, Carbon capture, CO<sub>2</sub> tolerance, Anaerobic Digestion

[Integration of sludge digestion and microalgae cultivation for enhancing bioenergy and biorefinery](#)  
Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Aug-18  
Document Keywords: microalgae, Sludge, Anaerobic Digestion, Bioenergy, Waste

[Large-Scale Waste Bio-Remediation Using Microalgae Cultivation as a Platform](#)  
Document Details: Research and Development, Peer Reviewed Publications, Publication, English, 2019

Figure 4-7. Example – search by keyword “algae” and filter the results by document type “Research and Development”

#### d) Sort the results

You can sort the search results by using Alphabet order or date (see Figure 4-8 and 4-9).

### Search Document and Resources

Search documents on algae and AD technologies, etc.

Filter by - Document type: ☐ ALL ☒ Research and Development ☐ Technical Information ☐ Microalgae markets and economics  
☐ Microalgae policy, regulation and permitting ☐ Project reports and Case studies

Filter by - Language: ☒ ALL ☐ English ☐ French

Please type the keywords (optional):

Name (Z to A)

---- Order By ----

Name (A to Z)

Name (Z to A)

Date (From earliest date)

Date (From most recent date)

Number of document found: 11

[Using microalgae in the circular economy to valorise anaerobic digestate: challenges and opportunities](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Nov-18

Document Keywords: Microalgae,circular economy,digestate,Anaerobic Digestion,animal feed,organic ,biomass

[The use of microalgal biomass as a carbon source for nitrate removal in horizontal subsurface flow constructed wetlands](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Feb-19

Document Keywords: microalgae,Carbon Source,Denitrification,Constructed wetland,Alkali pretreatment

[Nutrient recycling in large-scale microalgal production: Mass and energy analysis of tworecovery strategies by process simulation](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Apr-18

Document Keywords: Chlorella Vulgaris,Biofuel,Anaerobic Digestion,Algae Residues,Flash hydrolysis,Process simulation

[Microalgal cultivation with biogas slurry for biofuel production](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Sep-16

Document Keywords: microalgae,Cultivation,Bio-slurry,Biogas,Bioproducts

[Microalgal bioremediation : Current practices and perspectives](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,2011

Document Keywords: Bioremediation,Heavy metal,Microalgae,Bioremediation,Toxicity

Figure 4-8. Example – sort the results by using alphabet order from Z to A.

### Search Document and Resources

Search documents on algae and AD technologies, etc.

Filter by - Document type: ☐ ALL ☒ Research and Development ☐ Technical Information ☐ Microalgae markets and economics  
☐ Microalgae policy, regulation and permitting ☐ Project reports and Case studies

Filter by - Language: ☒ ALL ☐ English ☐ French

Please type the keywords (optional):

Number of document found: 11

[Integration of anaerobic digestion and microalgal cultivation for digestate bioremediation and biogas upgrading](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Oct-19

Document Keywords: Biogas ,Microalgae,Carbon capture,CO<sub>2</sub> tolerance,Anaerobic Digestion

[The use of microalgal biomass as a carbon source for nitrate removal in horizontal subsurface flow constructed wetlands](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Feb-19

Document Keywords: microalgae,Carbon Source,Denitrification,Constructed wetland,Alkali pretreatment

[Different microalgae species as a substitutive protein feed for soyabean meal in grass silage based dairy cow diets](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,2019

Document Keywords: Microalgae,Spirulina platensis,Chlorella vulgaris,Nannochloropsis gaditana,Soya bean meal,Dairy cow

[Large-Scale Waste Bio-Remediation Using Microalgae Cultivation as a Platform](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,2019

Document Keywords: Algal biotechnology,Waste remediation,Environmental pollution,Waste management,Microalgae

[Using microalgae in the circular economy to valorise anaerobic digestate: challenges and opportunities](#)

Document Details: Research and Development,Peer Reviewed Publications,Publication,English,Nov-18

Document Keywords: Microalgae,circular economy,digestate,Anaerobic Digestion,animal feed,organic ,biomass

Figure 4-9. Example – Sort the results using Date (from most recent date).

#### e) Link to the document

By clicking on the document name from the result list, You will be redirected to the online source of this document (see Figure 4-10 and 4-11).

**Search Document and Resources**  
Search documents on algae and AD technologies, etc.

Filter by - Document type: ☐ ALL ☒ Research and Development ☐ Technical Information ☐ Microalgae markets and economics  
☐ Microalgae policy, regulation and permitting ☐ Project reports and Case studies

Filter by - Language: ☒ ALL ☐ English ☐ French

Please type the keywords (optional):

Number of document found: 11

[Using microalgae in the circular economy to valorise anaerobic digestate: challenges and opportunities](#)

Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Nov-18

Document Keywords: Microalgae, circular economy, digestate, Anaerobic Digestion, animal feed, organic, biomass

[The use of microalgal biomass as a carbon source for nitrate removal in horizontal subsurface flow constructed wetlands](#)

Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Feb-19

Document Keywords: microalgae, Carbon Source, Denitrification, Constructed wetland, Alkali pretreatment

[Nutrient recycling in large-scale microalgal production: Mass and energy analysis of tworecovery strategies by process simulation](#)

Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Apr-18

Document Keywords: Chlorella Vulgaris, Biofuel, Anaerobic Digestion, Algae Residues, Flash hydrolysis, Process simulation

Figure 4-10. Example – find the target document

ScienceDirect Journals & Books

**Outline**  
Highlights  
Abstract  
Graphical abstract  
Keywords  
1. Introduction  
2. Challenges  
3. Opportunities  
4. Conclusion  
Acknowledgements  
References  
Show full outline

**Cited By (100)**

**Figures (3)**

**Tables (4)**  
Table 1  
Table 2  
Table 3  
Table 4

**Bioresource Technology**  
Volume 267, November 2018, Pages 732-742

**Using microalgae in the circular economy to valorise anaerobic digestate: challenges and opportunities**

William A.V. Stiles <sup>a,\*</sup>, David Styles <sup>a</sup>, Stephen P. Chapman <sup>a</sup>, Sandra Esteves <sup>a</sup>, Angela Bywater <sup>a</sup>, Lynsey Melville <sup>a</sup>, Alla Silikina <sup>a</sup>, Ingrid Lugatch <sup>a</sup>, Claudio Fuentes Grinewald <sup>a</sup>, Robert Lovitt <sup>a</sup>, Tom Chaloner <sup>a</sup>, Andy Bull <sup>a</sup>, Chris Morris <sup>a</sup>, Carole A. Uweallijn <sup>a</sup>

[Show more](#)

[Add to Mendeley](#) [Share](#) [Cite](#)

<https://doi.org/10.1016/j.biortech.2018.07.100> [Get rights and content](#)

**Highlights**

- Managing organic waste streams is a major challenge for the agricultural industry.
- AD is an effective management option that produces energy & nutrient-rich digestate.
- Microalgae can be cultivated on this nutrient rich material.

**Part of special issue:**  
St: Nutrient Recycling Promoting the Circular Economy  
Edited by Fabricio Adani, Renjie Dang, Erik Meers, Fulvia Tambone, Wei Qiao

[Download special issue](#)

**Recommended articles**

Selection of microalgae intended for valorization...  
Waste Management, Volume 73, 2018, pp. 123-129  
[Purchase PDF](#) [View details](#)

Establishment of stable microalgal-bacterial co...  
Bioresource Technology, Volume 268, 2018, pp. 300-307  
[Purchase PDF](#) [View details](#)

Pre-treated digestate as culture media for prod...  
Ecological Engineering, Volume 105, 2017, pp. 335-340  
[Purchase PDF](#) [View details](#)

**Article Metrics**

**Citations**

Citation Indexes:	100
Policy Citations:	2

**Captures**

[FEEDBACK](#)

Figure 4-11. Example – guide the user to the online resource of the document

### 4.3 Other information

You can see brief information about the document from the search results in the document search tool, including the type of document, type of publication, year of publication, language and keywords, etc. (see Figure 4-12)

**Search Document and Resources**  
Search documents on algae and AD technologies, etc.

Filter by - Document type: ☐ ALL ☒ Research and Development ☐ Technical Information ☐ Microalgae markets and economics  
☐ Microalgae policy, regulation and permitting ☐ Project reports and Case studies

Filter by - Language: ☒ ALL ☐ English ☐ French

Please type the keywords (optional):

Number of document found: 11

[\*Using microalgae in the circular economy to valorise anaerobic digestate: challenges and opportunities\*](#)

Document Details: Research and Development, Peer Reviewed Publications, Publication, English, Nov-18

Document Keywords: Microalgae, circular economy, digestate, Anaerobic Digestion, animal feed, organic, biomass

Figure 4-12. Example – brief information of the document

## 5 DST – Stakeholder Search Tool

The “stakeholder search tool” can be found from the drop-down menu in the navigation bar (see Figure 5-1 and 5-2).

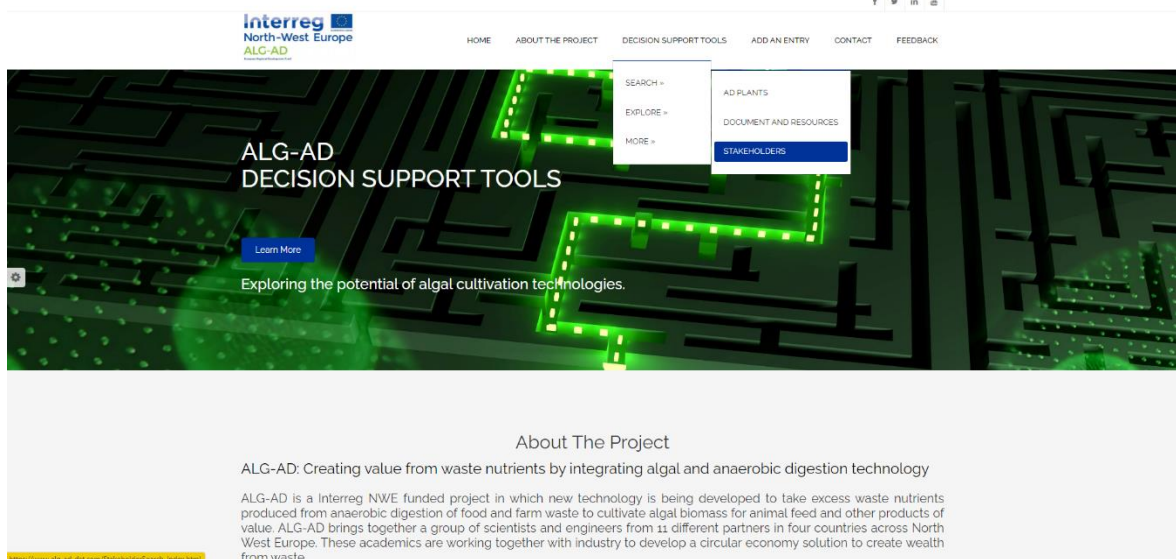


Figure 5-1. Find “Stakeholders” from the drop-down menu to open the Stakeholder Search Tool.

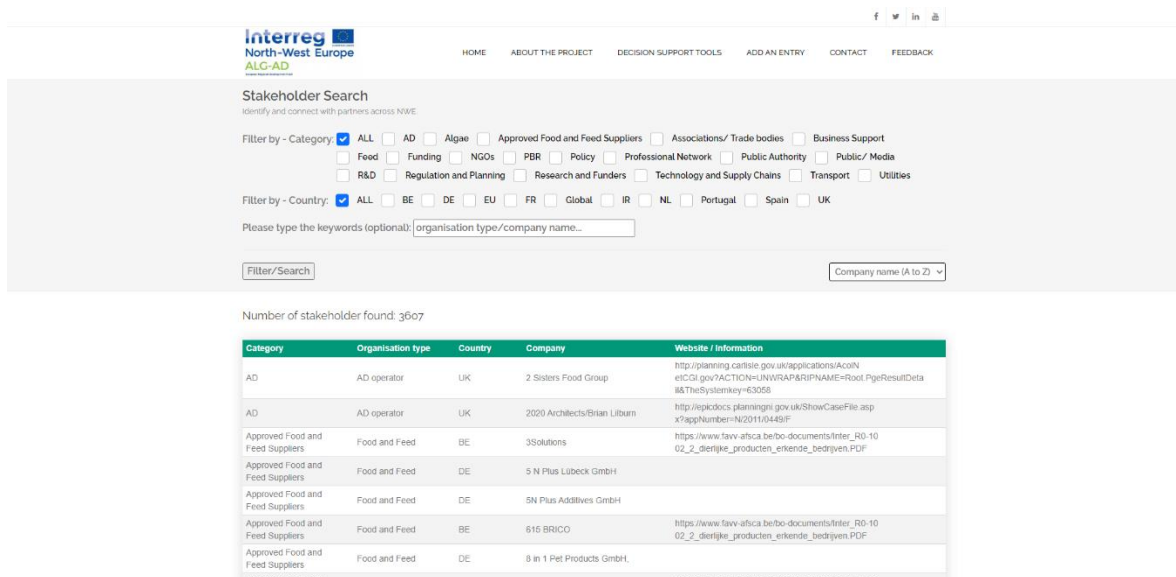


Figure 5-2. Stakeholder Search Tool interface

## 5.1 Data source

A comprehensive stakeholder analysis was conducted at the start of the project to identify relevant categories of organisations that may have an interest/ be a beneficiary of the research evolving from ALG-AD. The WP team collected data from relevant sources to populate this stakeholder data base which is representative of the whole value chain as well as institutions and organisations who can support the development of this technology integration, government, NGO and research. The data includes information about the category, organisation type, country, company name and website of the stakeholder, etc.

## 5.2 Functions in the tool

### a) Filter by category (multiple filter conditions)

This stakeholder search tool allows you to apply multiple filter conditions to search for the stakeholder. In the following example, “Technology and Supply Chains” is selected as the filtering condition, and the results are shown in Figure 5-3.

**Stakeholder Search**  
Identify and connect with partners across NWE.

Filter by - Category: ☐ ALL ☐ AD ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☐ R&D ☐ Regulation and Planning ☐ Research and Funders ☒ **Technology and Supply Chains** ☐ Transport ☐ Utilities

Filter by - Country: ☒ ALL ☐ BE ☐ DE ☐ EU ☐ FR ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☐ UK

Please type the keywords (optional):

Number of stakeholder found: 155

Category	Organisation type	Country	Company	Website / Information
Technology and Supply Chains	Company (Digestate Treatment / Processing)	DE	A3 Water Solutions GmbH	<a href="http://www.a3-gmbh.com/NewsBASE/content_a3/frame_english.php">http://www.a3-gmbh.com/NewsBASE/content_a3/frame_english.php</a>
Technology and Supply Chains	PBR/ Technology	FR	ABIMS Analysis and Bioinformatics for Marine Science	<a href="http://abims.sb-roscoff.fr/">http://abims.sb-roscoff.fr/</a>
Technology and Supply Chains	Animal Feed	UK	ABN (feed manufacturer supplier) 01733 871000	<a href="https://www.abn.co.uk">https://www.abn.co.uk</a>
AD, Technology and Supply Chains	AD consultant	UK	Advanced Anaerobics Ltd	<a href="https://www.advancedanaerobics.com/">https://www.advancedanaerobics.com/</a>
Technology and Supply Chains	Company (AD tech suppliers)	DE	Agraferm GmbH	<a href="https://www.agraferm.com/home.html">https://www.agraferm.com/home.html</a>
Technology and Supply Chains	Animal feed, algae	FR	AGRIAL	<a href="https://www.agrial.com/fr/page-daccueil">https://www.agrial.com/fr/page-daccueil</a>
AD, Technology and Supply Chains	Digestate processing	UK	AgriVert (biofertiliser supplier) +44(0)1608 677 700	<a href="https://www.agrivers.co.uk/services/digestate-and-biofertilisers">https://www.agrivers.co.uk/services/digestate-and-biofertilisers</a>
AD, Technology and Supply Chains	Waste Management	UK	AgriVert (biofertiliser supplier) +44(0)1608 677 700	<a href="https://www.agrivers.co.uk/">https://www.agrivers.co.uk/</a>
Algae, R&D, Technology and Supply Chains	Advisory; PBR/Technology	Spain	Algades Spin-off UCA	<a href="http://algades.com/">http://algades.com/</a>

Figure 5-3. Example – Filter the stakeholder by “Technology and Supply Chains”.

One stakeholder may fit with more than one category. Therefore, by applying another filtering condition, “AD”, you can find stakeholders in the category of “AD” and “Technology and Supply Chains” (shown in Figure 5-4).

**Stakeholder Search**  
Identify and connect with partners across NWE.

Filter by - Category: ☐ ALL ☒ **AD** ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☐ R&D ☐ Regulation and Planning ☐ Research and Funders ☒ **Technology and Supply Chains** ☐ Transport ☐ Utilities

Filter by - Country: ☒ ALL ☐ BE ☐ DE ☐ EU ☐ FR ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☐ UK

Please type the keywords (optional):

Number of stakeholder found: 672

Category	Organisation type	Country	Company	Website / Information
AD	AD operator	UK	2 Sisters Food Group	<a href="http://planning.carlisle.gov.uk/applications/AcolINetCGI.gov?ACTION=UNWRAP&amp;RIPNAME=Root.PgeResultDetail&amp;TheSystemkey=63058">http://planning.carlisle.gov.uk/applications/AcolINetCGI.gov?ACTION=UNWRAP&amp;RIPNAME=Root.PgeResultDetail&amp;TheSystemkey=63058</a>
AD	AD operator	UK	2020 Architects/Brian Lilburn	<a href="http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=N/2011/0449/F">http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=N/2011/0449/F</a>
AD	AD operator	UK	A Burnfield & Sons	
AD	AD operator	UK	A C Shropshire	
AD	AD operator	UK	A C Shropshire	<a href="http://www.acshropshire.co.uk/food-waste-to-biogas.html">http://www.acshropshire.co.uk/food-waste-to-biogas.html</a>
AD	AD operator	UK	A G & H Barnett & Son	
AD	AD operator	UK	A J Butler & Sons	15/07127/WCM
AD	AD operator	UK	A J M Eavis	
AD	AD operator	UK	A. V. Sheardown & Sons	Construction of an agricultural anaerobic digestion plant with three storage clamps two linear digester tanks a feed hopper a process building a gas holder and a dryer
Technology and Supply Chains	Company (Digestate Treatment / Processing)	DE	A3 Water Solutions GmbH	<a href="http://www.a3-gmbh.com/NewsBASE/content_a3/frame_english.php">http://www.a3-gmbh.com/NewsBASE/content_a3/frame_english.php</a>
AD	AD operator	UK	Aardvark EM	<a href="http://webapp1.somerset.gov.uk/ePlanning/tabPage3.jsp?apId=29885">http://webapp1.somerset.gov.uk/ePlanning/tabPage3.jsp?apId=29885</a>
				Demolition of the existing structures and

Figure 5-4. Example – Filter the stakeholder by “Technology and Supply Chains” and “AD”.

#### b) Filter by country (multiple filter conditions)

This stakeholder search tool also allows you to filter the stakeholders by country. This function works simultaneously with other filtering conditions from the category filter. Examples are shown in Figure 5-5 and 5-6.

**Stakeholder Search**  
Identify and connect with partners across NWE.

Filter by - Category: ☐ ALL ☒ **AD** ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☐ R&D ☐ Regulation and Planning ☐ Research and Funders ☒ **Technology and Supply Chains** ☐ Transport ☐ Utilities

Filter by - Country: ☐ ALL ☐ BE ☒ **DE** ☐ EU ☐ FR ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☐ UK

Please type the keywords (optional):

Number of stakeholder found: 13

Category	Organisation type	Country	Company	Website / Information
Technology and Supply Chains	Company (Digestate Treatment / Processing)	DE	A3 Water Solutions GmbH	<a href="http://www.a3-gmbh.com/NewsBASE/content_a3/frame_english.php">http://www.a3-gmbh.com/NewsBASE/content_a3/frame_english.php</a>
Technology and Supply Chains	Company (AD tech suppliers)	DE	Agraferm GmbH	<a href="https://www.agraferm.com/home.html">https://www.agraferm.com/home.html</a>
Technology and Supply Chains	Company (Algae Products)	DE	Algomed, Klötze – Produkte aus Algen	<a href="https://www.algomed.de/en/homepage/">https://www.algomed.de/en/homepage/</a>
Technology and Supply Chains	Company (AD tech suppliers & more)	DE	BayWa r.e. Bioenergy GmbH - Philipp Korkemeyer	<a href="https://www.baywa-re.com/en/">https://www.baywa-re.com/en/</a>
Technology and Supply Chains	Association	DE	Biogas register Germany (of dena)	<a href="https://www.biogasregister.de/en/main-page.html">https://www.biogasregister.de/en/main-page.html</a>
Technology and Supply Chains	Association	DE	Fachverband Biogas e.V. Dipl.-Ing. David Wilken	
Technology and Supply Chains	Company (AD tech suppliers)	DE	Fritz Paulmichl GmbH	<a href="https://www.paulmichl-gmbh.de/de/">https://www.paulmichl-gmbh.de/de/</a>
Technology and Supply Chains	Company Consulting	DE	IBBK - Das Biogas Netzwerk   Schulungen & Beratung	
Technology and Supply Chains	Company (Algae Biotech)	DE	Leiterin F&E Salata AG Forschung und Entwicklung: Algenbiotechnologie	<a href="https://www.salzbruecke.com/">https://www.salzbruecke.com/</a>

Figure 5-5. Example – Filter the stakeholder by “Technology and Supply Chains” and “AD” and country “DE (Germany)”.

**Stakeholder Search**  
Identify and connect with partners across NWE.

Filter by - Category: ☐ ALL ☒ **AD** ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☐ R&D ☐ Regulation and Planning ☐ Research and Funders ☒ **Technology and Supply Chains** ☐ Transport ☐ Utilities

Filter by - Country: ☐ ALL ☐ BE ☒ **DE** ☐ EU ☒ **FR** ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☐ UK

Please type the keywords (optional):

Number of stakeholder found: 81

Category	Organisation type	Country	Company	Website / Information
Technology and Supply Chains	Company (Digestate Treatment / Processing)	DE	A3 Water Solutions GmbH	<a href="http://www.a3-gmbh.com/NewsBASE/content_a3/frame_english.php">http://www.a3-gmbh.com/NewsBASE/content_a3/frame_english.php</a>
Technology and Supply Chains	PBR/ Technology	FR	ABIMS Analysis and Bioinformatics for Marine Science	<a href="http://abims.sb-roscoff.fr/">http://abims.sb-roscoff.fr/</a>
Technology and Supply Chains	Company (AD tech suppliers)	DE	Agraferm GmbH	<a href="https://www.agraferm.com/home.html">https://www.agraferm.com/home.html</a>
Technology and Supply Chains	Animal feed, algae	FR	AGRIAL	<a href="https://www.agrial.com/fr/page-daccueil">https://www.agrial.com/fr/page-daccueil</a>
Technology and Supply Chains	Algae Products	FR	ALGAIA	<a href="https://www.algaia.com/">https://www.algaia.com/</a>
Technology and Supply Chains	Company (Algae Products)	DE	Algomed, Klötze – Produkte aus Algen	<a href="https://www.algomed.de/en/homepage/">https://www.algomed.de/en/homepage/</a>
Algae, R&D, Technology and Supply Chains	PBR/ Technology; Algae	FR	Algosolis - Microalgae R&D Facility GEPEA / Université de Nantes / CNRS	<a href="http://algosolis.com/">http://algosolis.com/</a>
Algae, R&D, Technology and Supply Chains	Advisory; PBR/Technology; Algae	FR	AlgoSource Technologies	<a href="https://algosource.com/">https://algosource.com/</a>

Figure 5-6. Example – Filter by “Technology and Supply Chains”, “AD”, and country “DE” and “FR”.

### c) Search by keywords

Similar to the document search tool, you can search the stakeholder by typing keywords from the search box. The search function works together with the filtering function.

For example, you can search the stakeholder related to energy by inputting “energy” and then clicking the “Filter/Search” button (see Figure 5-7). You can further filter the results by selecting the “R&D” from the category filter (see Figure 5-8) and also by selecting “UK” from the country filter (see Figure 5-9).

### Stakeholder Search

Identify and connect with partners across NWE.

Filter by - Category: ☒ ALL ☐ AD ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☐ R&D ☐ Regulation and Planning ☐ Research and Funders ☐ Technology and Supply Chains ☐ Transport ☐ Utilities

Filter by - Country: ☒ ALL ☐ BE ☐ DE ☐ EU ☐ FR ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☐ UK

Please type the keywords (optional):

Number of stakeholder found: 100

Category	Organisation type	Country	Company	Website / Information
Business Support, Professional Network, R&D	Network	UK	AB-SIG - Algal Bioenergy Special Interest Group NERC - Natural Environment Research Council / Innovate UK	<a href="https://connect.innovateuk.org/web/algal-biotechnology-special-interest-group">https://connect.innovateuk.org/web/algal-biotechnology-special-interest-group</a>
Associations/ Trade bodies	Local Energy Agency	FR	AILE	<a href="https://www.aile.asso.fr/?lang=fr">https://www.aile.asso.fr/?lang=fr</a>
Associations/ Trade bodies	Local Energy Agency	FR	AILE	<a href="https://www.aile.asso.fr/?lang=fr">https://www.aile.asso.fr/?lang=fr</a>
R&D, Technology and Supply Chains	PBR/ Technology	Spain	AlgaEnergy	<a href="http://www.algaenergy.es/">http://www.algaenergy.es/</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://www.variablepitch.co.uk/stations/8086/output/">http://www.variablepitch.co.uk/stations/8086/output/</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://epicdocs.planningni.gov.uk/ViewDocument.aspx?uri=1083754&amp;ext=PDF">http://epicdocs.planningni.gov.uk/ViewDocument.aspx?uri=1083754&amp;ext=PDF</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=S/2011/0738/F">http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=S/2011/0738/F</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://www.geopii.com/planning/?app=O/2011/0363/F">http://www.geopii.com/planning/?app=O/2011/0363/F</a>
AD	AD operator	UK	B&D Property Services Ltd/James Cromie/Bridge	<a href="http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=S/2011/0738/F">http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=S/2011/0738/F</a>

Figure 5-7. Example – Search by keyword “energy”

**Stakeholder Search**  
Identify and connect with partners across NWE.

Filter by - Category: ☐ ALL ☐ AD ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☒ **R&D** ☐ Regulation and Planning ☐ Research and Funders ☐ Technology and Supply Chains ☐ Transport ☐ Utilities

Filter by - Country: ☒ ALL ☐ BE ☐ DE ☐ EU ☐ FR ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☐ UK

Please type the keywords (optional):

Number of stakeholder found: 9

Category	Organisation type	Country	Company	Website / Information
Business Support, Professional Network, R&D	Network	UK	AB-SIG - Algal Bioenergy Special Interest Group NERC - Natural Environment Research Council / Innovate UK	<a href="https://connect.innovateuk.org/web/algal-biotechnology-special-interest-group">https://connect.innovateuk.org/web/algal-biotechnology-special-interest-group</a>
R&D, Technology and Supply Chains	PBR/ Technology	Spain	AlgaEnergy	<a href="http://www.algaenergy.es/">http://www.algaenergy.es/</a>
R&D	R&D	UK	Bristol BioEnergy Centre University of the West of England (UWE Bristol) / University of Bristol	<a href="https://www.bristolroboticslab.com/bristol-bioenergy-centre">https://www.bristolroboticslab.com/bristol-bioenergy-centre</a>
Business Support, R&D	University	UK	European Bioenergy Research Institute Professor Patricia Thornley	<a href="https://www2.aston.ac.uk/eas/research/groups/ebri/about-ebri">https://www2.aston.ac.uk/eas/research/groups/ebri/about-ebri</a>
R&D	R&D	Portugal	LNEG - National Laboratory on Energy and Geology	<a href="https://www.lneg.pt/">https://www.lneg.pt/</a>
Policy, R&D, Regulation and Planning	Association	UK	Renewable Energy Association	
Policy, R&D, Regulation and Planning	Government Agency	UK	Renewable Energy Association	<a href="https://www.r-e-a.net/">https://www.r-e-a.net/</a>
R&D, Technology and Supply chains	PBR/ Technology; R&D; Algae	UK	Scottish Bioenergy Ltd.	<a href="https://scotbio.com/">https://scotbio.com/</a>

Figure 5-8. Example – Search by keyword “energy” and filter by category “R&D”.

**Stakeholder Search**  
Identify and connect with partners across NWE.

Filter by - Category: ☐ ALL ☐ AD ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☒ **R&D** ☐ Regulation and Planning ☐ Research and Funders ☐ Technology and Supply Chains ☐ Transport ☐ Utilities

Filter by - Country: ☐ ALL ☐ BE ☐ DE ☐ EU ☐ FR ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☒ **UK**

Please type the keywords (optional):

Number of stakeholder found: 6

Category	Organisation type	Country	Company	Website / Information
Business Support, Professional Network, R&D	Network	UK	AB-SIG - Algal Bioenergy Special Interest Group NERC - Natural Environment Research Council / Innovate UK	<a href="https://connect.innovateuk.org/web/algal-biotechnology-special-interest-group">https://connect.innovateuk.org/web/algal-biotechnology-special-interest-group</a>
R&D	R&D	UK	Bristol BioEnergy Centre University of the West of England (UWE Bristol) / University of Bristol	<a href="https://www.bristolroboticslab.com/bristol-bioenergy-centre">https://www.bristolroboticslab.com/bristol-bioenergy-centre</a>
Business Support, R&D	University	UK	European Bioenergy Research Institute Professor Patricia Thornley	<a href="https://www2.aston.ac.uk/eas/research/groups/ebri/about-ebri">https://www2.aston.ac.uk/eas/research/groups/ebri/about-ebri</a>
Policy, R&D, Regulation and Planning	Association	UK	Renewable Energy Association	
Policy, R&D, Regulation and Planning	Government Agency	UK	Renewable Energy Association	<a href="https://www.r-e-a.net/">https://www.r-e-a.net/</a>
R&D, Technology and Supply chains	PBR/ Technology; R&D; Algae	UK	Scottish Bioenergy Ltd.	<a href="https://scotbio.com/">https://scotbio.com/</a>

Figure 5-9. Example – Search by keyword “energy” and filter by category “R&D” and country “UK”.

#### d) Sort the results

You can sort the results by alphabet in the company or category name. An example of sorting the results by company name from A to Z is shown in Figure 5-10.

### Stakeholder Search

Identify and connect with partners across NWE.

Filter by - Category: ☒ ALL ☐ AD ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☐ R&D ☐ Regulation and Planning ☐ Research and Funders ☐ Technology and Supply Chains ☐ Transport ☐ Utilities

Filter by - Country: ☐ ALL ☐ BE ☐ DE ☐ EU ☐ FR ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☒ UK

Please type the keywords (optional):

Company name (A to Z) ▾

---- Order By ----

Company name (A to Z)

Company name (Z to A)

Category (A to Z)

Category (Z to A)

Number of stakeholder found: 84

Category	Organisation type	Country	Company	Website / Information
Business Support, Professional Network, R&D	Network	UK	AB-SIG - Algal Bioenergy Special Interest Group NERC - Natural Environment Research Council / Innovate UK	<a href="https://connect.innovateuk.org/web/algal-biotechnology-special-interest-group">https://connect.innovateuk.org/web/algal-biotechnology-special-interest-group</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://www.variablepitch.co.uk/stations/8086/output/">http://www.variablepitch.co.uk/stations/8086/output/</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://epicdocs.planningni.gov.uk/ViewDocument.aspx?uri=1083754&amp;ext=PDF">http://epicdocs.planningni.gov.uk/ViewDocument.aspx?uri=1083754&amp;ext=PDF</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=S/2011/0738/F">http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=S/2011/0738/F</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://www.geopii.com/planning/?app=O/2011/0363/F">K/2012/0044/F</a>
AD	AD operator	UK	Assured Energy LLP	<a href="http://www.geopii.com/planning/?app=O/2011/0363/F">http://www.geopii.com/planning/?app=O/2011/0363/F</a>
AD	AD operator	UK	B&D Property Services Ltd/James Cromie/Bridge Energy Biogas	<a href="http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=Q/2010/0585/F">http://epicdocs.planningni.gov.uk/ShowCaseFile.aspx?appNumber=Q/2010/0585/F</a>
AD	AD operator	UK	Ballydown Energy (Mr. S. Martin)	
AD	AD operator	UK	Barfoots (Barfoot Energy)	<a href="http://www.biogas.org.uk/plants/barfoot-energy-projects-ltd">http://www.biogas.org.uk/plants/barfoot-energy-projects-ltd</a>

Figure 5-10. Example – Results sorted by company name from A to Z

#### d) Link to the stakeholder website and other information

By clicking on the website link from the “Website/Information” column in the result list, you will be directed to the relevant stakeholder website. (See Figure 5-11 and 5-12).

### Stakeholder Search

Identify and connect with partners across NWE.

Filter by - Category: ☒ ALL ☐ AD ☐ Algae ☐ Approved Food and Feed Suppliers ☐ Associations/ Trade bodies ☐ Business Support ☐ Feed ☐ Funding ☐ NGOs ☐ PBR ☐ Policy ☐ Professional Network ☐ Public Authority ☐ Public/ Media ☐ R&D ☐ Regulation and Planning ☐ Research and Funders ☐ Technology and Supply Chains ☐ Transport ☐ Utilities

Filter by - Country: ☐ ALL ☐ BE ☐ DE ☐ EU ☐ FR ☐ Global ☐ IR ☐ NL ☐ Portugal ☐ Spain ☒ UK

Please type the keywords (optional):

Number of stakeholder found: 84

Category	Organisation type	Country	Company	Website / Information
AD	AD operator	UK	Y Energy Partnership	
AD	AD operator	UK	Works Farm (Merrivale Energy)	<a href="https://planningon-line.rushcliffe.gov.uk/online-applications/applicationDetails.do?activeTab=details&amp;keyVal=MT0KXNNL01000">https://planningon-line.rushcliffe.gov.uk/online-applications/applicationDetails.do?activeTab=details&amp;keyVal=MT0KXNNL01000</a>
AD	AD operator	UK	Wight Farm Energy LLP (Wight Farm Energy)	<a href="http://www.iwcp.co.uk/news/news/isle-of-wight-green-power-bid-backed-52075.aspx">http://www.iwcp.co.uk/news/news/isle-of-wight-green-power-bid-backed-52075.aspx</a>
AD	AD operator	UK	Warwick Energy Limited	Looks like it next to a farm
AD	AD operator	UK	Vale Green Energy / DW Thomas and Sons, of Llanmaes	<a href="http://www.mineralandwasteplanning.co.uk/news/1089806/biogas-plant">http://www.mineralandwasteplanning.co.uk/news/1089806/biogas-plant</a>
AD, Technology and Supply Chains	AD operator	UK	Vale Green Energy	<a href="https://www.valegreenenergy.co.uk/">https://www.valegreenenergy.co.uk/</a>
AD	AD operator	UK	Vale Green Energy	<a href="http://www.wlep.co.uk/assets/Evesham-Vale-Growers-Case-Study-NF.pdf">http://www.wlep.co.uk/assets/Evesham-Vale-Growers-Case-Study-NF.pdf</a>
AD	AD operator	UK	Vale Green Energy	<a href="http://www.haffmans.nl/EngineeredNewsArticle_PM_Biogas_UK.aspx">http://www.haffmans.nl/EngineeredNewsArticle_PM_Biogas_UK.aspx</a>
AD	AD operator	UK	TEG / Eamside Energy	<a href="http://www.investigate.co.uk/teg-group-the-plc-teg-rms/pre-close-trading-update-for-2013/201401310700129419Y/">http://www.investigate.co.uk/teg-group-the-plc-teg-rms/pre-close-trading-update-for-2013/201401310700129419Y/</a>
AD	AD operator	UK	Sustainable Energy Generation O & M	Construction of a 1MW on farm anaerobic digester plant

Figure 5-11. Example – select the target the stakeholder

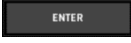


Figure 5-12. Example – Link to the stakeholder website

### **5.3 Other Information**

The stakeholder information that involves the category, organisation type, country, company name and website are provided in the result list. You can also add your company or organisation to our DST stakeholder database through the “Add An Entry” function (explained in Section 7.2) to share your information with others in the stakeholder search tool.

## 6 DST – Process Pathway Tool

The “process pathway tool” can be found in the drop-down menu “Decision Support Tool – Explore” in the navigation bar (see Figure 6-1). The process pathway tool will open and run in a new tab from the browser. Click “okay” in the alert box to proceed with the loading. It may take up to 2 mins to load for the first time, depending on the internet connection and PC performance. For a better user experience, it is recommended to run this program on a PC or laptop. The process pathway tool interface after loading is shown in Figure 6-2. Double click the interface to run it in “full screen” mode and press “ESC” to exit the “full screen” mode. Click  to use the process pathway tool.

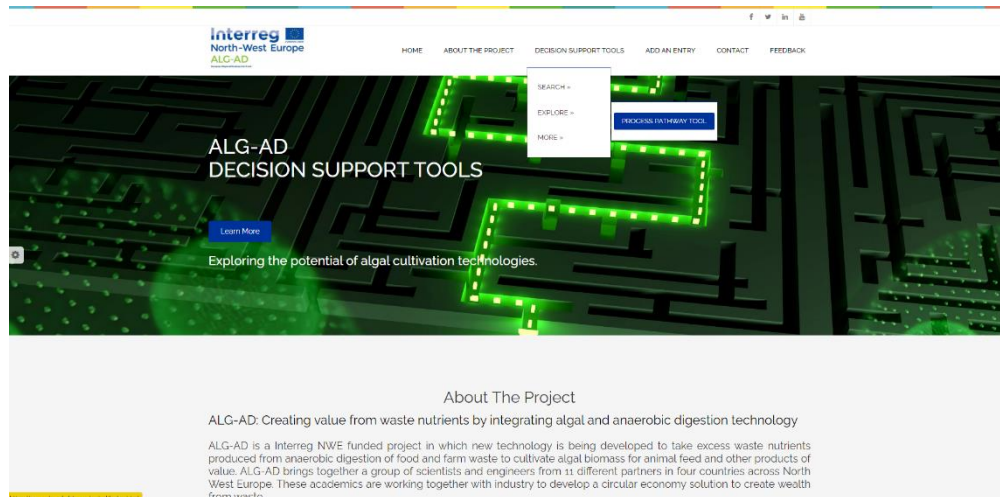


Figure 6-1. Find “Process Pathway Tool” from the drop-down menu “Decision Support Tool – Explore” in the navigation bar.



Figure 6-2. Process Pathway Tool interface after loading

## 6.1 Data source

The process pathway tool helps you to better understand algal cultivation and PBR implementation based on their AD process conditions and future requirements. A tailor-made PDF report will be generated from this tool with the recommendations on AD process conditions and PBR implementation. These recommendations are provided according to your input using the ALG-AD project's research results.

## 6.2 Tool interface

### 1) Read and accept the disclaimer to proceed

You should read the disclaimer before starting to use the process pathway tool (see Figure 6-3). If you are satisfied with the information provided here then click accept. While using our tool, we may ask you to provide us with certain identifiable information about your AD site or process. The data you input into the tool will only be used to understand your circumstances about AD process configuration and performance. The data will be erased automatically after you exit the tool. We will not collect, save, or share your data with others. The full disclaimer with the data privacy policy link is provided on page 3 of this user manual.

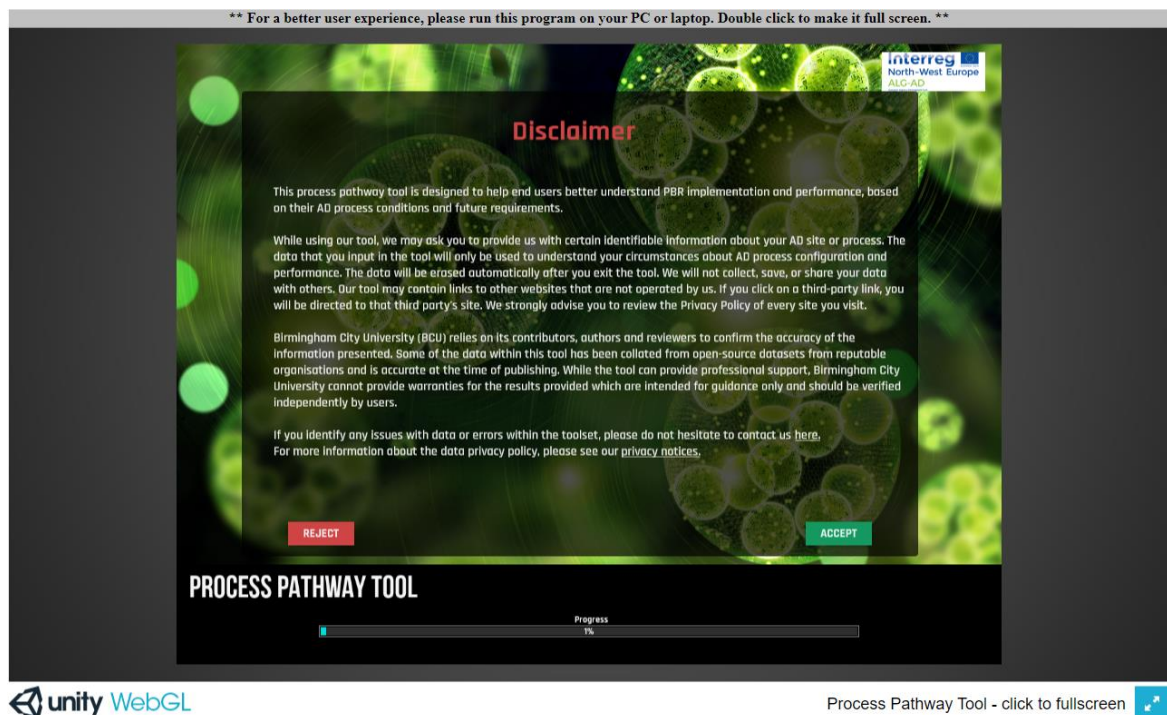


Figure 6-3. Process Pathway Tool Disclaimer

### 2) Enter a username and click “GO” to start

You can give a username to specify your final report (see Figure 6-4). This is not a compulsory step. You can proceed without providing a username however, it may be

helpful if you develop multiple reports to provide a username to identify different versions.

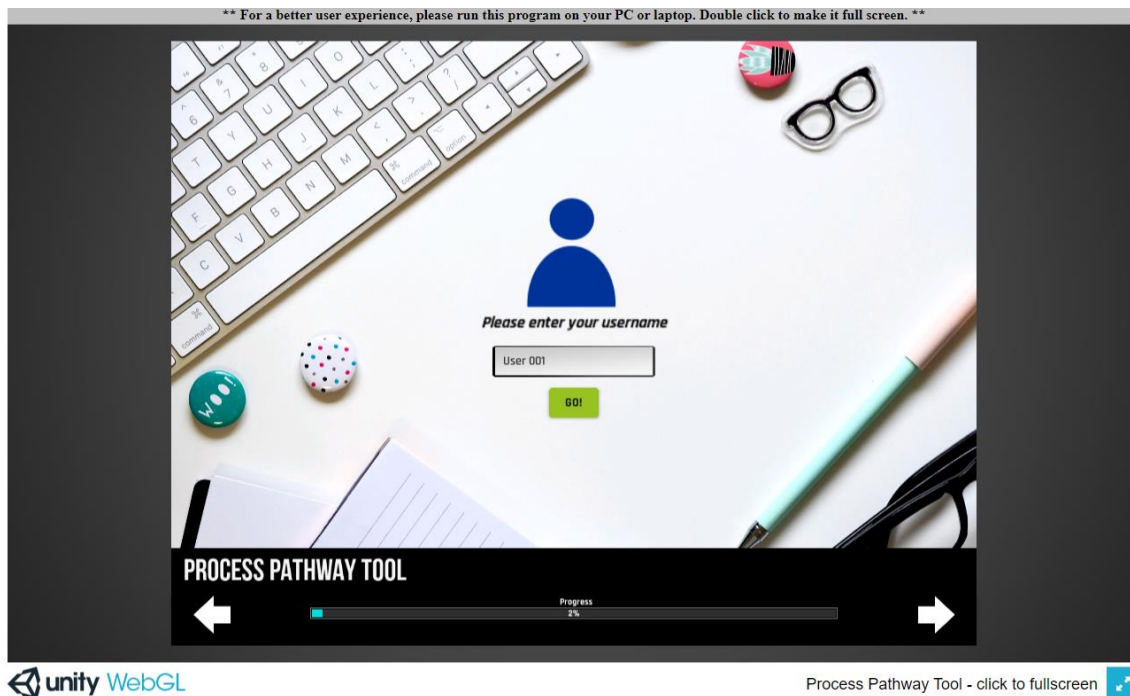



Figure 6-4. Username Input Interface

- 3) Answer the process pathway questions by selecting from the drop-down list, inputting the required data, and choosing the radio buttons or ticking boxes.

You may need to answer a few questions for the tool to understand their AD process conditions and requirements (see Figure 6-5, 6-6, 6-7 and 6-8). This is not a compulsory step. If you are unsure about the answer, you can leave it empty and proceed with the tool to get your report with general recommendations.

You can see the progress from the progression bar .

Click  to go back to the previous step and click  to go to the next step.

You can find additional information to help you understand the process by clicking the  button (see Figure 6-7).

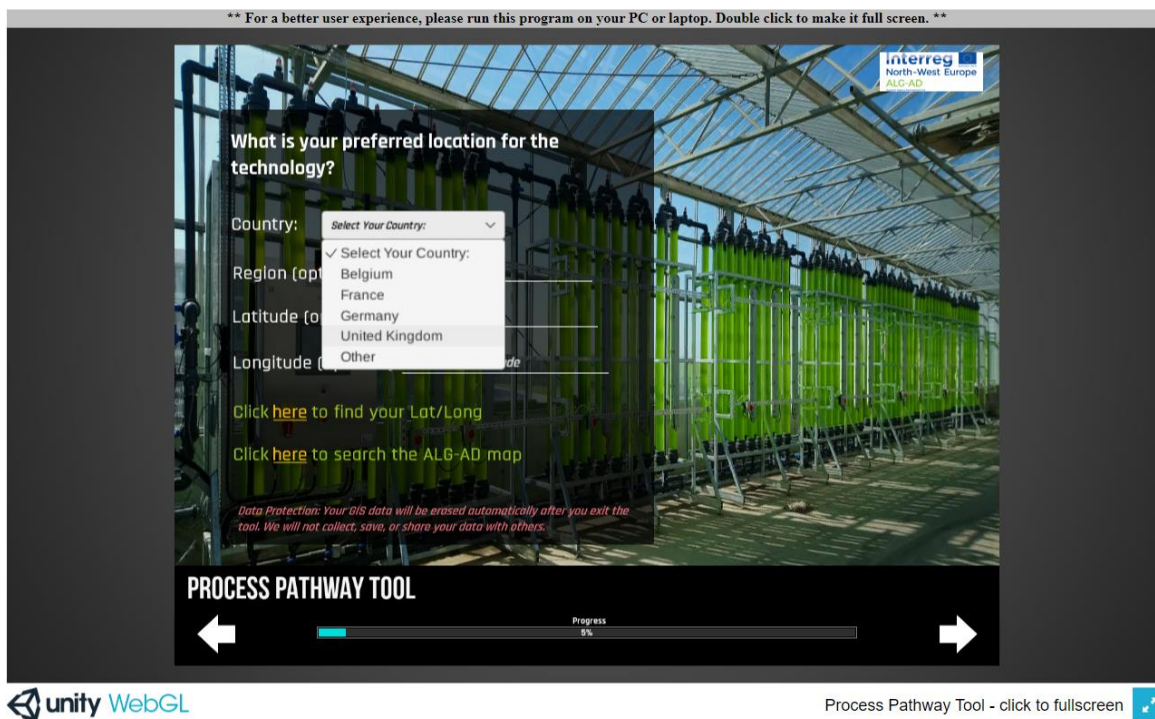


Figure 6-5. Example - Answering the process pathway questions (1)

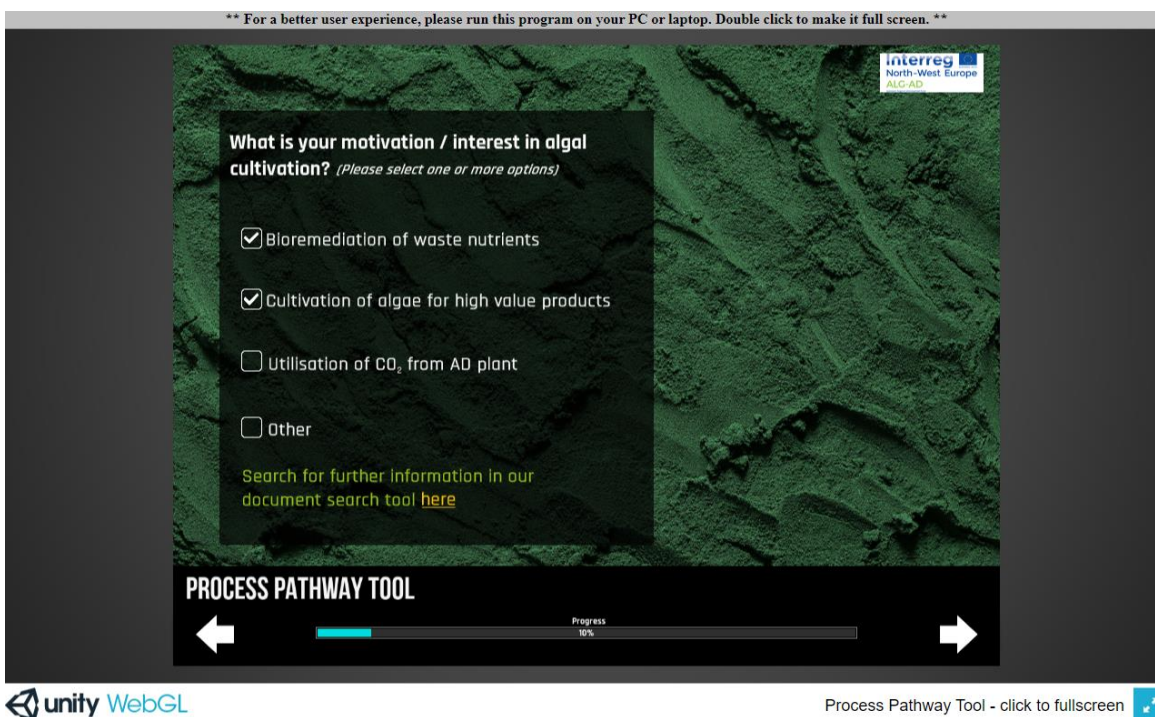


Figure 6-6. Example - Answering the process pathway questions (2)

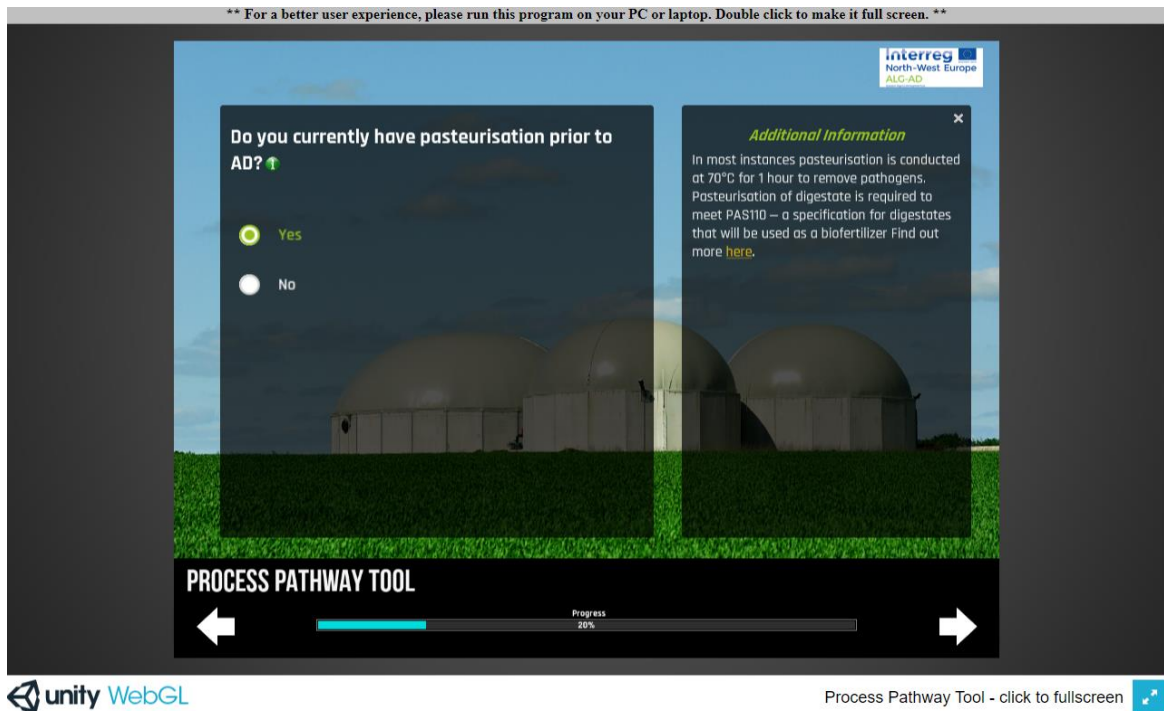


Figure 6-7. Example - Answering the process pathway questions (3)

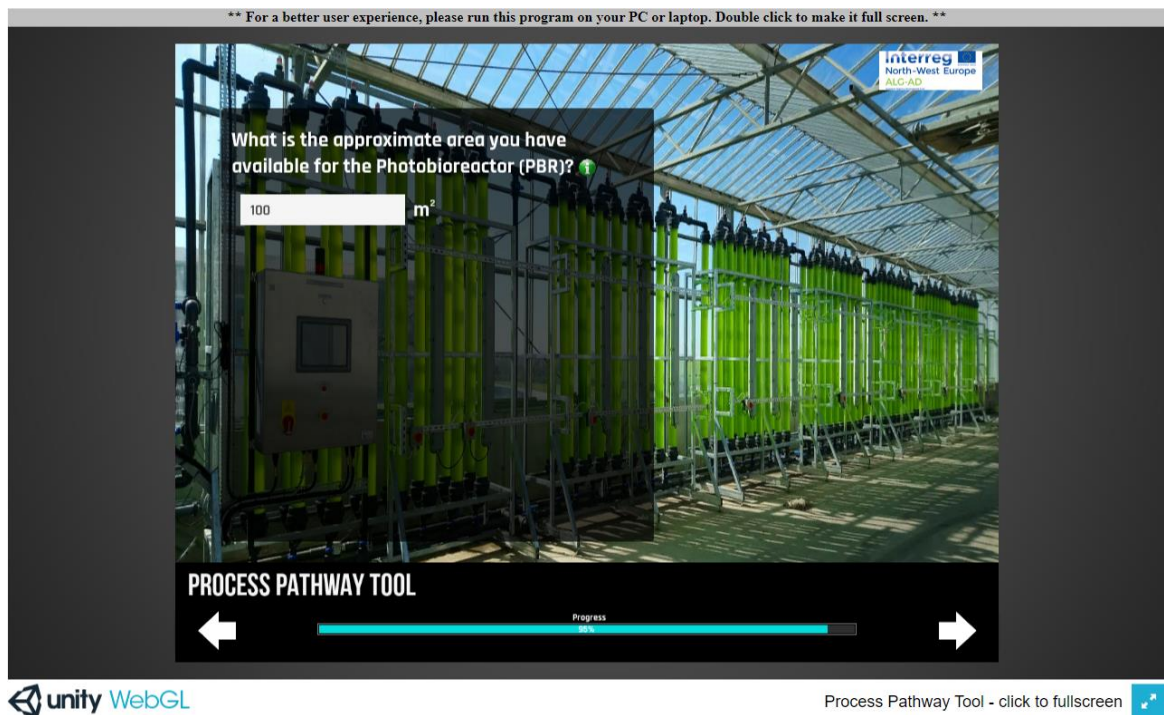


Figure 6-8. Example - Answering the process pathway questions (4)

#### 4) Submit input data and options

You need to click **SUBMIT** to submit the input data and options to generate the final process pathway report (see Figure 6-9). Please note that you will not be able to edit or change your answers after submission. However, your answers to each question will be provided in the Appendix of the report, and you can still relaunch the tool to explore alternative scenarios.

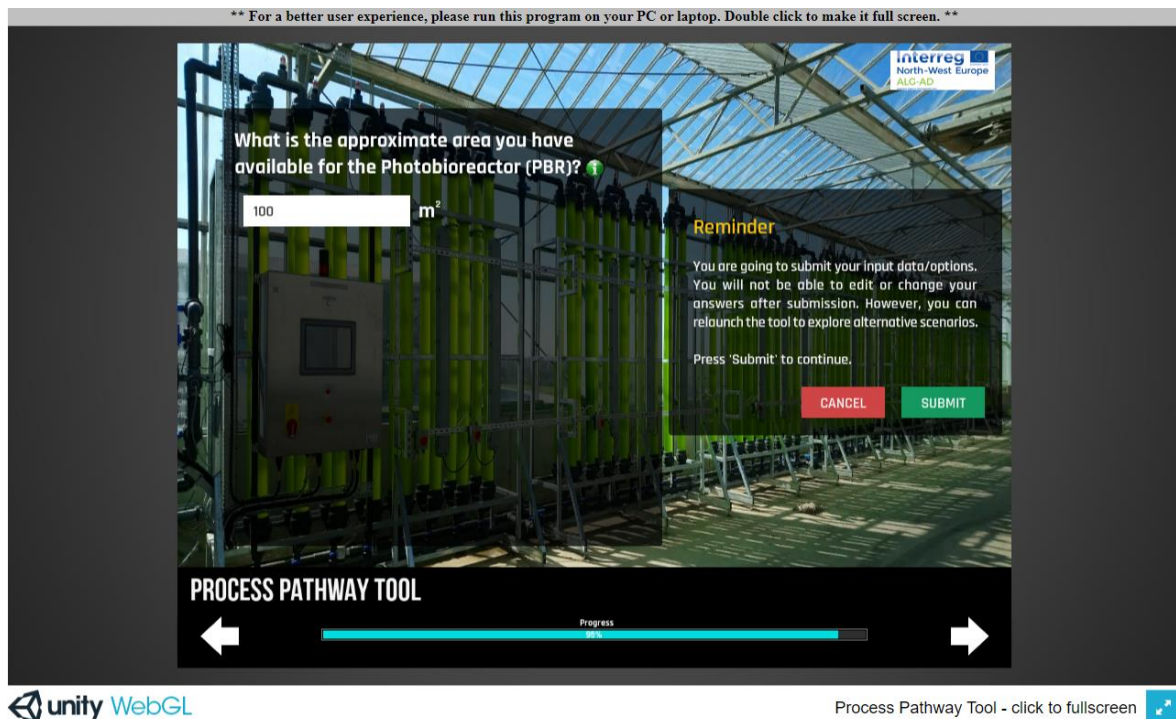


Figure 6-9. Example – submit input data and options

#### 5) Generate and download the pdf report

You can generate the pdf report by clicking **Create Report** button (see Figure 6-10). It may take about 10 - 15 seconds for the report to be ready (see Figure 6-11).

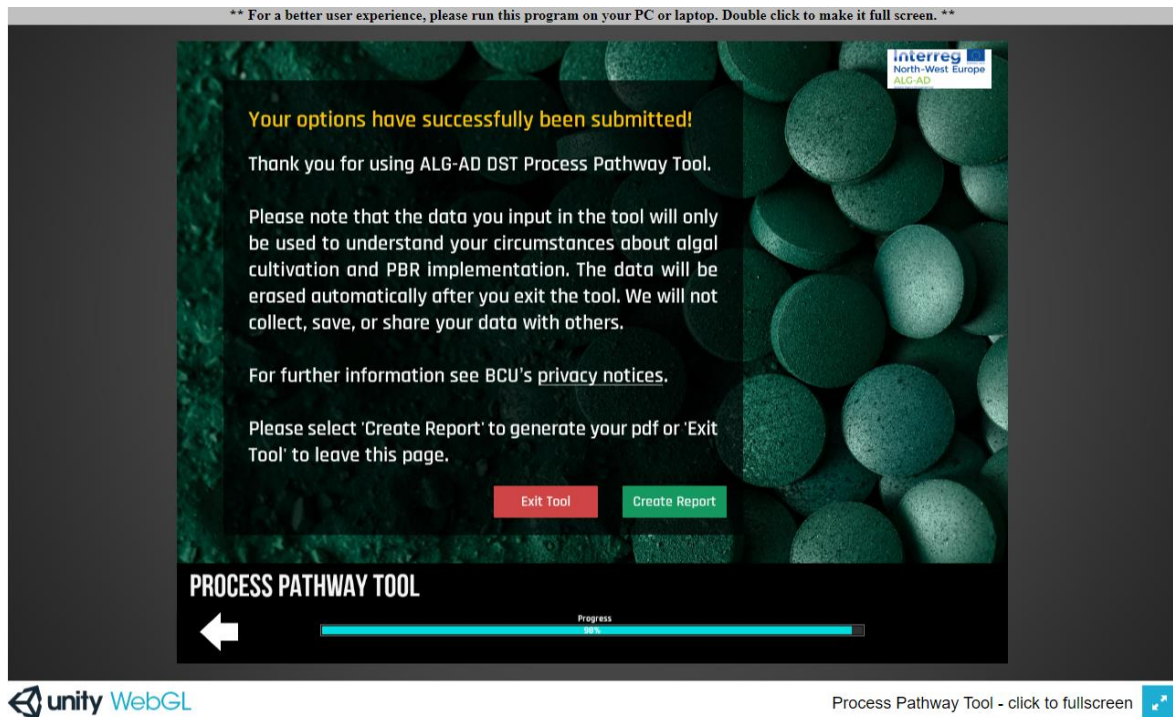


Figure 6-10. Example – Create report

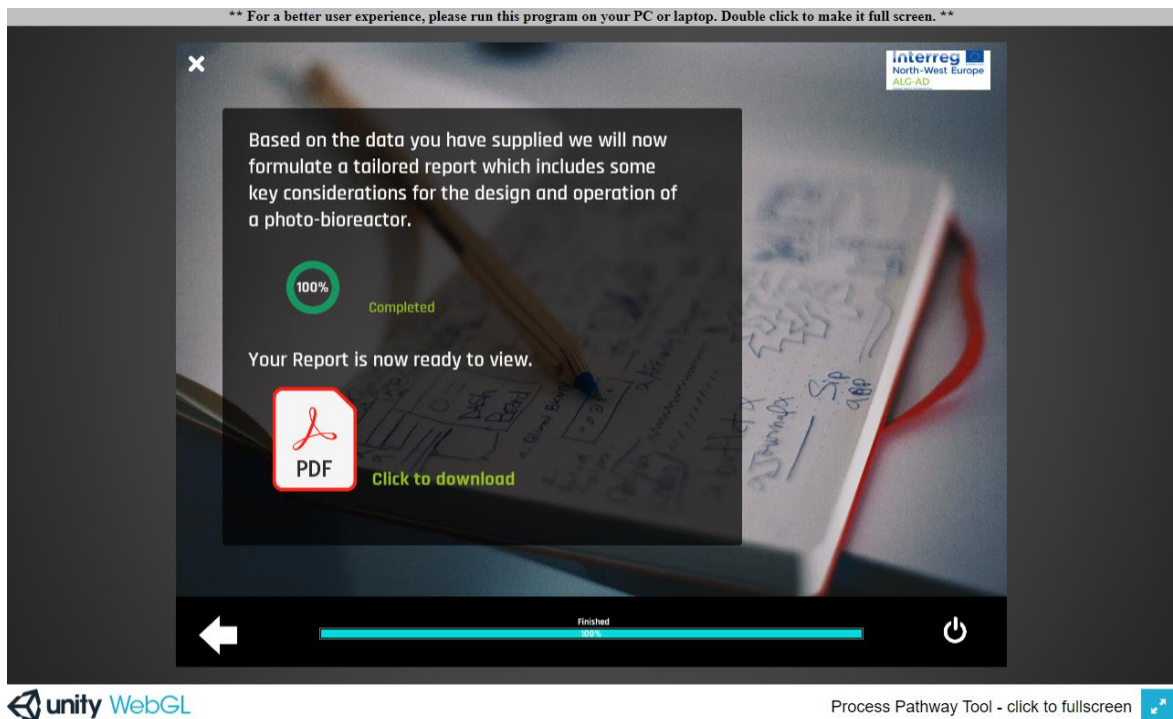




Figure 6-11. Example – Download report

6) Read and save the pdf report to the local disk

You can read the pdf report by clicking the pdf icon . The report will be open in a new tab in the browser. Please save your pdf report from the browser as needed by using the “download” function  provided in the browser (see Figure 6-12). Once you exit the tool, the data (including the pdf file) will be erased.

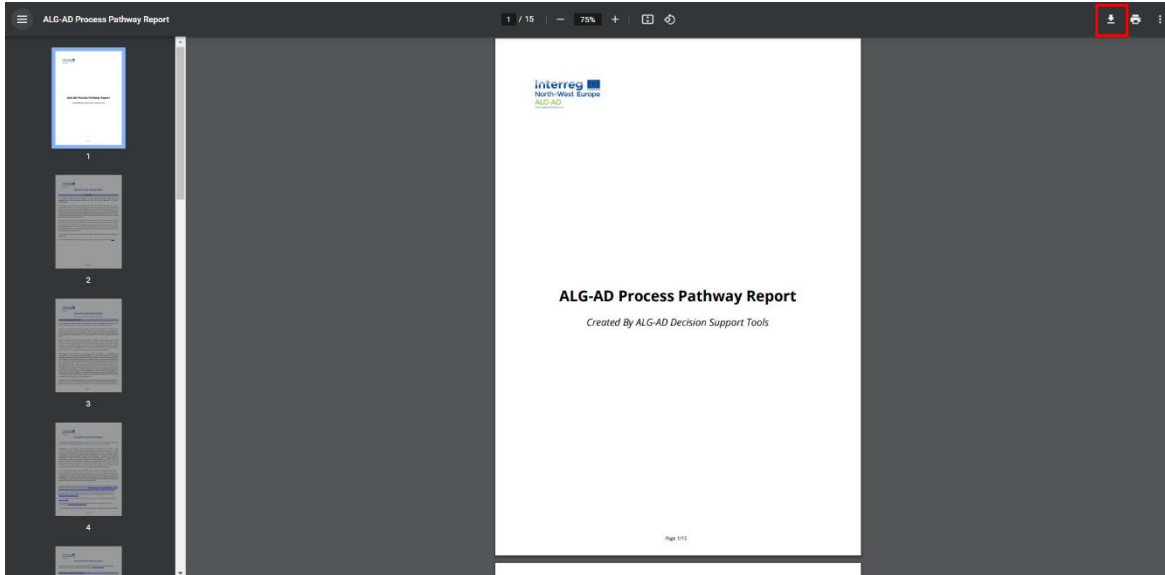






Figure 6-11. Example – download the report from the server and save it to local disk (Browser: Chrome).

7) Exit the tool or relaunch

It is recommended to click **EXIT** button or press  or  to return to the home page of the interface and then close the browser tab to exit the tool to ensure the data is cleaned (see Figure 6-12 and 6-13).

For relaunching the tool, similarly, it is recommended to click **EXIT** button or press  or  to return to the initial scene of the tool with a clean start.

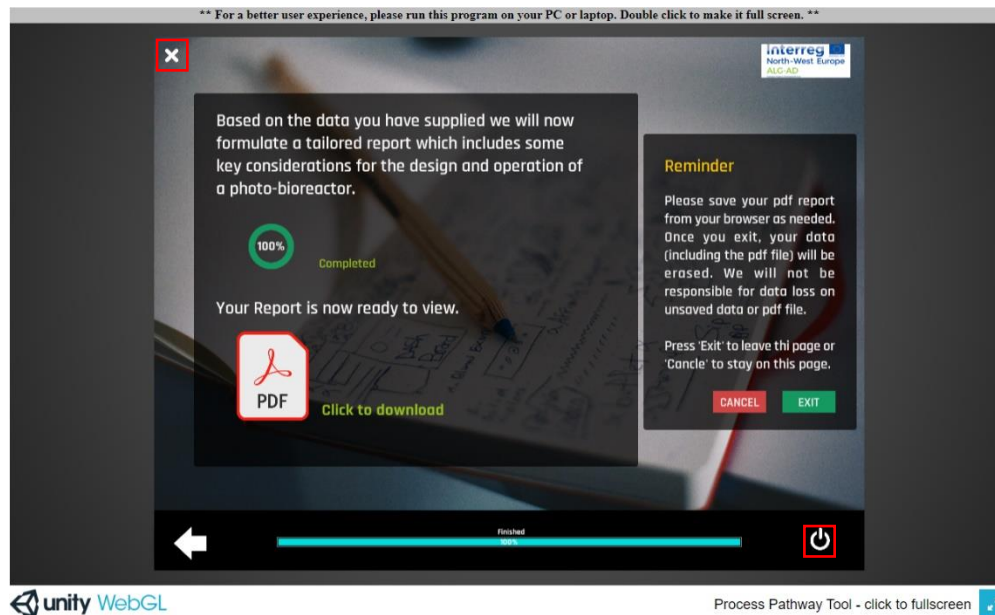


Figure 6-12. Example – Exit and return to the home page of the process pathway tool

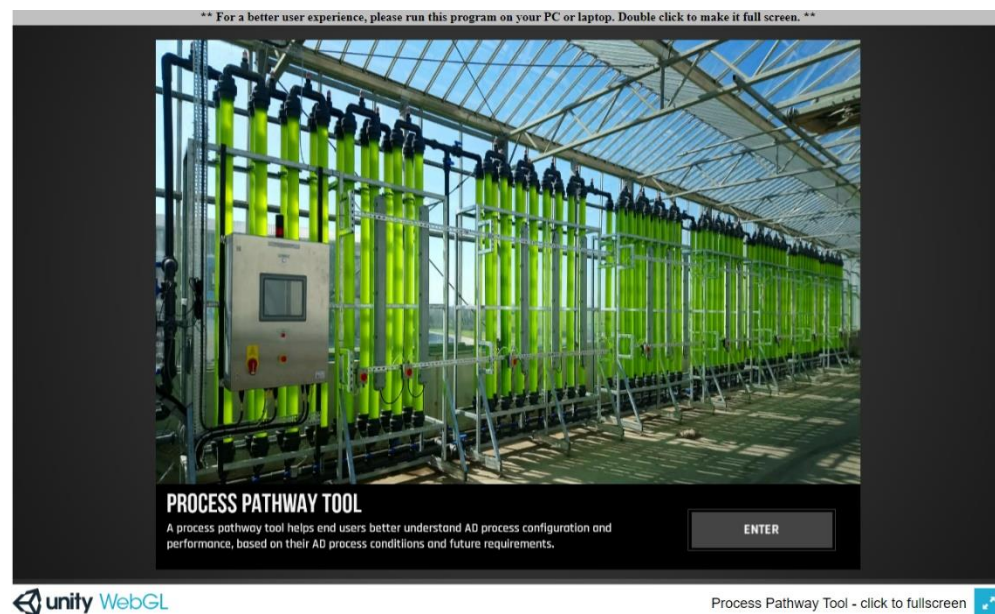
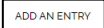


Figure 6-13. Example –Return to the home page with a clean start (for relaunching)

## 7 DST – Add An Entry

You can share your data with our ALG-AD DST team using the “Add An Entry” function. It can be found from  in the navigation bar (see Figure 7-1). Our expert will validate the information that you provide. After we have validated and added your data in the DST database, you will receive an email.

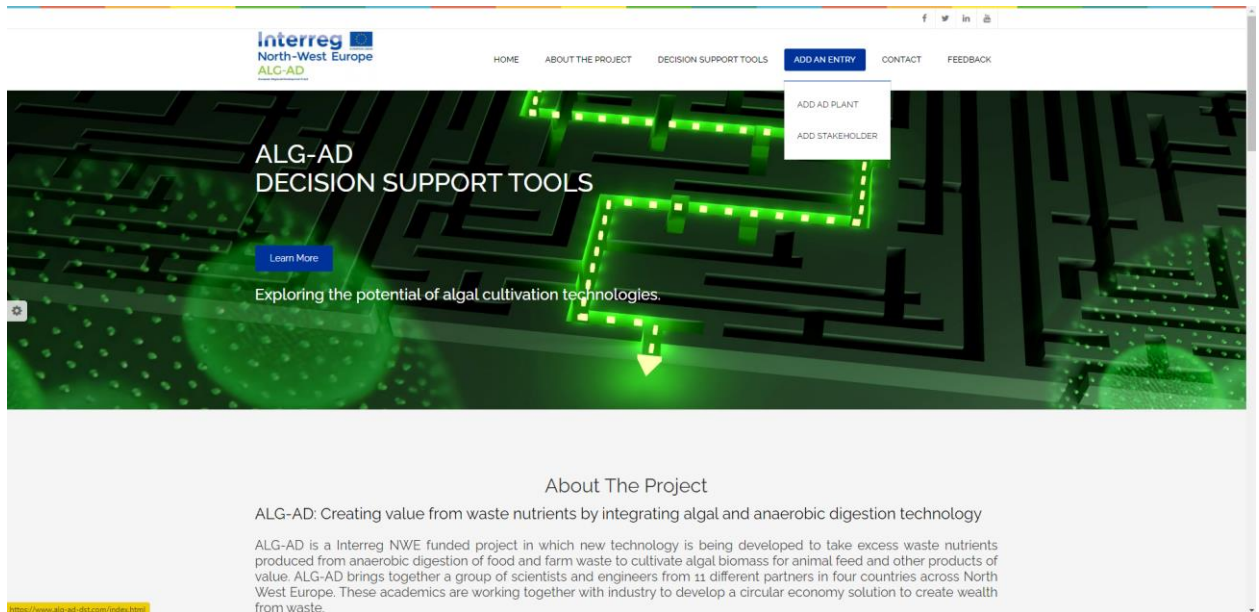


Figure 7-1. Find the “Add An Entry” function from the drop-down menu in the navigation bar

### 7.1 Add AD Plant

You can share your AD plant data with us by using this function. After validation by our DST team, your AD plant will be added to our existing AD plant map. By selecting “Add AD plant” under the “Add An Entry” drop-down menu, you will be directed to a form that asks you to provide information about your AD plant (see Figure 7-2).

### Add An Entry - AD Plant

Share your AD plant data in the Map

Please provide the following information:

Plant Name

AD plant name... \*

Plant Address

AD plant address... \*

GIS Coordinate - Latitude

Latitude... \*

GIS Coordinate - Longitude

Longitude... \*

Type of AD

Type 0 - Unknown or Unverified

Specify

If you select 'Others', please specify...

Feedstock Type

Agricultural residues

Specify

If you select 'Others', please specify...

Contact Person

Your Name... \*

Contact Email

E-mail address... \*

Specify The Plant Information

Message...

Reset

Submit

### AD Plant Type Explanation

Type 0 - Unknown or Unverified. This includes mixed feedstocks that cannot be validated.

Type 1 - Predominantly plant based. This includes food wastes, energy crop, grass clippings, wood wastes, green waste, paper etc. including organic waste from food processing which we assume fit for human consumption.

Type 2 - Mixed Feedstocks containing plant based material and animal wastes (including slurries and manures)

Type 3 - Mixed Feedstocks containing Human wastes (Sewage and wastewater effluents)

### Feedstock Type Explanation

Agricultural residues - e.g., corn stover

Dedicated energy crops - e.g., switchgrass, miscanthus, energy cane, sweet sorghum, high biomass sorghum, hybrid poplars, and shrub willows

Forestry residues - e.g., logging residues and forest thinning

Waste streams and re-useable carbon sources - e.g., the non-recyclable organic portion of municipal solid waste, waste food, plastics, CO<sub>2</sub>, and manure slurries

Figure 7-2. Add AD Plant function

a) Required information (with\* in the form)

You need to provide the following information about your AD plant for us to validate and then add to the map:

- Plant name
- Plant address
- Latitude (GIS Coordinate)
- Longitude (GIS Coordinate)
- Type of AD (from the drop-down list, specify if “others” is selected)
- Feedstock type (from the drop-down list, specify if “others” is selected)
- Contact person name
- Contact Email

(AD plant type explanation and feedstock type explanation can be found on the right side of the webpage.)

*Please be aware that you must fill all the required fields (\*) before submitting the form to the ALG-AD DST team.*

b) Other information (optional)

You can also provide additional information to specify the AD plant as supplementary information.

c) Submit the data form

You need to accept the “Data Privacy Agreement” before submitting the data to our DST team (see Figure 7-3). If the data has been submitted successfully, the following page will show (see Figure 7-4), and the ALG-AD DST team will receive an email notification with your input data.

The screenshot shows a web form titled "Add An Entry - AD Plant" with the subtitle "Share your AD plant data in the Map". The form is divided into two main sections: "Please provide the following information:" on the left and "AD Plant Type Explanation" on the right. The left section contains input fields for "Plant Name", "Plant Address", "GIS Coordinate" (with a "Latitude..." label), "Type of AD" (with a dropdown menu showing "Type o - Unk"), "Feedstock Type" (with a dropdown menu showing "Agricultural r"), and "Contact Person" (with a label "Your Name..."). Below these fields is a "Specify The Plant Information" section with a "Message..." text area. At the bottom of the form are "Reset" and "Submit" buttons. The right section, "AD Plant Type Explanation", contains text explaining the types of AD plants, including "Type o - Unknown or Unverified. This includes mixed" and "includes food d wastes, green pm food consumption". Below this is a "Feedstock Type Explanation" section with text explaining different feedstock types: "Agricultural residues - e.g., corn stover", "Dedicated energy crops - e.g., switchgrass, miscanthus, energy cane, sweet sorghum, high biomass sorghum, hybrid poplars, and shrub willowsr", "Forestry residues - e.g., logging residues and forest thinning", and "Waste streams and re-useable carbon sources - e.g., the non-recyclable organic portion of municipal solid waste, waste food, plastics, CO2, and manure slurries". A green modal window titled "Data Privacy Agreement" is overlaid on the form, containing text about data sharing and a link to privacy notes, with "Reject" and "Agree and Submit" buttons at the bottom.

Figure 7-3. Data Privacy Agreement

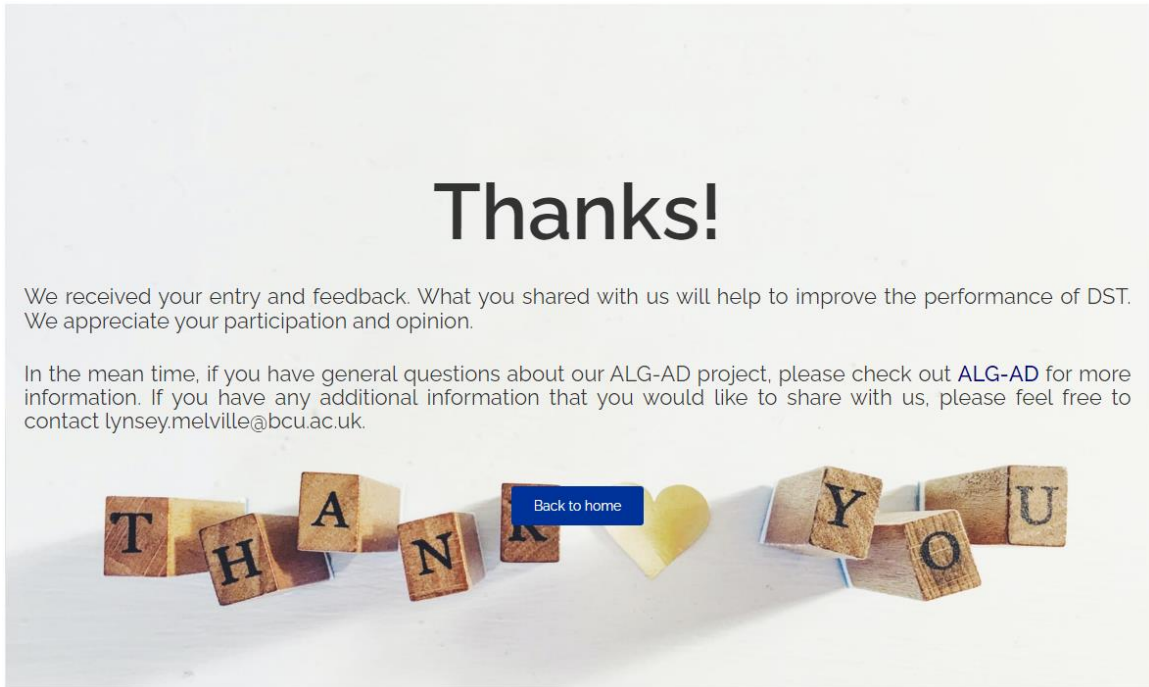


Figure 7-4. Data submitted notice page.

## 7.2 Add stakeholder

As a stakeholder, you can also share your information with us. Your data will be added to our existing stakeholder database after our DST team's validation. In this case, users can find your information using our DST stakeholder search tool. By selecting "Add Stakeholder" under the "Add An Entry" drop-down menu, you will be directed to a form that asks you to provide the stakeholder information (see Figure 7-5).

### Add An Entry - Stakeholder

Share your data in our stakeholder database

Please provide the following information:

Company Name

Company name... \*

Address

Company address... \*

Country/Region

Select A Country/Region

Specify Country/Region

If you select 'Others', please specify...

Contact Person

Your Name... \*

Contact Email

E-mail address... \*

Stakeholder Type (please select one or more options):

☐ AD
☐ Algae
☐ Approved Food and Feed Suppliers
☐ Associations/ Trade bodies
☐ Business Support
☐ Feed
☐ Funding
☐ NGOs
☐ PBR
☐ Policy
☐ Professional Network
☐ Public Authority
☐ Public/ Media
☐ R&D
☐ Regulation and Planning
☐ Research and Funders
☐ Technology and Supply Chains
☐ Transport
☐ Utilities
☐ Others

Specify The Company Information

For example, you can provide us with some brief company introduction and link to the website, etc.

Reset

Submit

### Stakeholder Type Explanation

NGOs: Non-government organizations

R&D: Research and Development

Figure 7-5. Add stakeholder function

a) Required information (with\* in the form)

You need to provide the following stakeholder information for us to validate and then add to the stakeholder database:

- Company name
- Address
- Country/Region (from the drop-down list, specify if “others” is selected)
- Contact person name
- Contact Email
- Stakeholder type (multiple choice)

(Stakeholder type explanation can be found on the right side of the webpage.)

*Please be aware that you must fill all the required fields (\*) before submitting the form to the ALG-AD DST team.*

b) Other information (optional)

You can provide the additional information to specify the company as supplementary information.

c) Submit the data form

You need to accept the “Data Privacy Agreement” before submitting the data to the DST team (see Figure 7-6). You will see the following page if the data has been submitted successfully (see Figure 7-7). Our ALG-AD DST team will receive an email notification with the data that you have input.

The screenshot shows a web form titled "Add An Entry - Stakeholder" with the subtitle "Share your data in our stakeholder database". The form is divided into two main sections: "Please provide the following information:" and "Stakeholder Type Explanation".

The "Please provide the following information:" section includes input fields for "Company Name", "Address", "Country/Region", "Contact Person", and "Stakeholder Type". The "Stakeholder Type" section has checkboxes for "AD", "Algo", "Feed", "Public/Media", and "Technology".

A modal window titled "Data Privacy Agreement" is overlaid on the form. It contains the following text:

When using the "Add An Entry" function in the DST, you voluntarily share certain information including your company name, address, stakeholder type, contact name, email address, specified information, and any other information you give us. Your data will be shared within the team who are undertaking the project that you are involved in, however any data from the study that is published, will not be able to identify you.

All of the research undertaken at BCU is underpinned by policies and procedures that ensure we comply with all of the regulations and legislation that govern the conduct of research. This includes data protection legislation: the General Data Protection Regulation (GDPR) and the Data Protection Act (DPA) 2018, which cover how we must handle your personal data.

For more information about the data privacy policy, please check our [privacy notes here](#).

At the bottom of the modal are two buttons: "Reject" (red) and "Agree and Submit" (green).

Below the modal, the "Specify The Company Information" section has a text area with the placeholder text: "For example, you can provide us with some brief company introduction and link to the website, etc." At the bottom of the form are "Reset" and "Submit" buttons.

Figure 7-6. Data privacy agreement for adding stakeholder

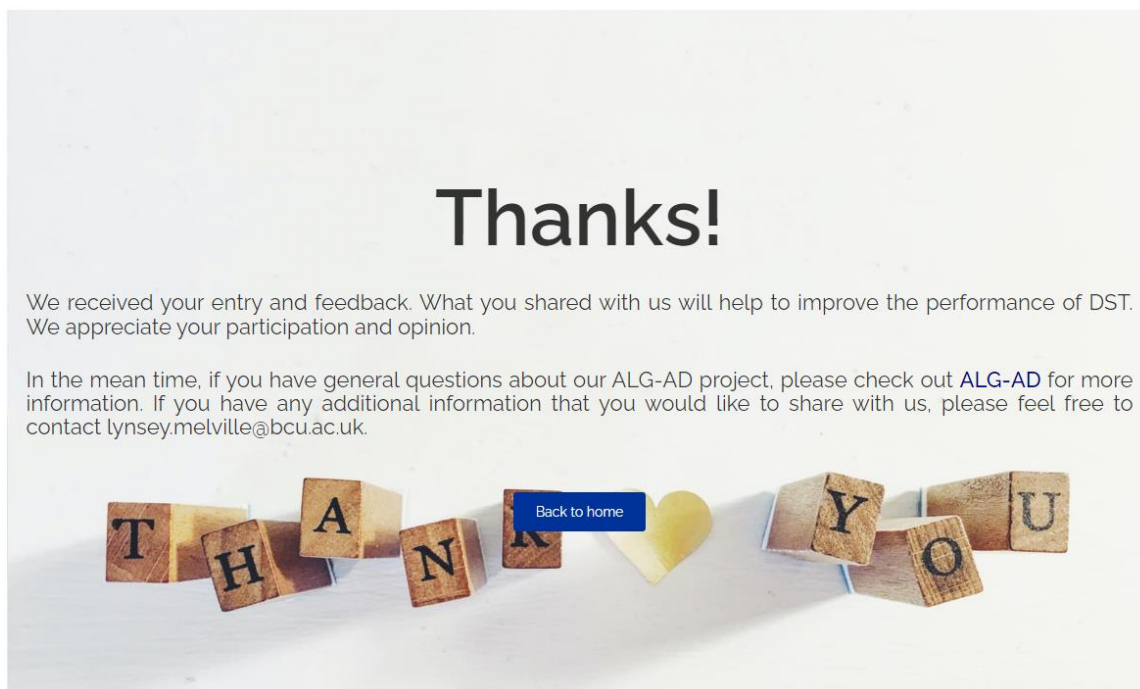


Figure 7-7. Data submitted notice page for adding stakeholder.

## 8 DST – Feedback Rating Form

Your feedback helps us to learn and to improve the support that we offer to our stakeholders. You are welcome to provide your feedback about the DST by using the “Feedback” function. It can be found from FEEDBACK in the navigation bar (see Figure 8-1 and 8-2).

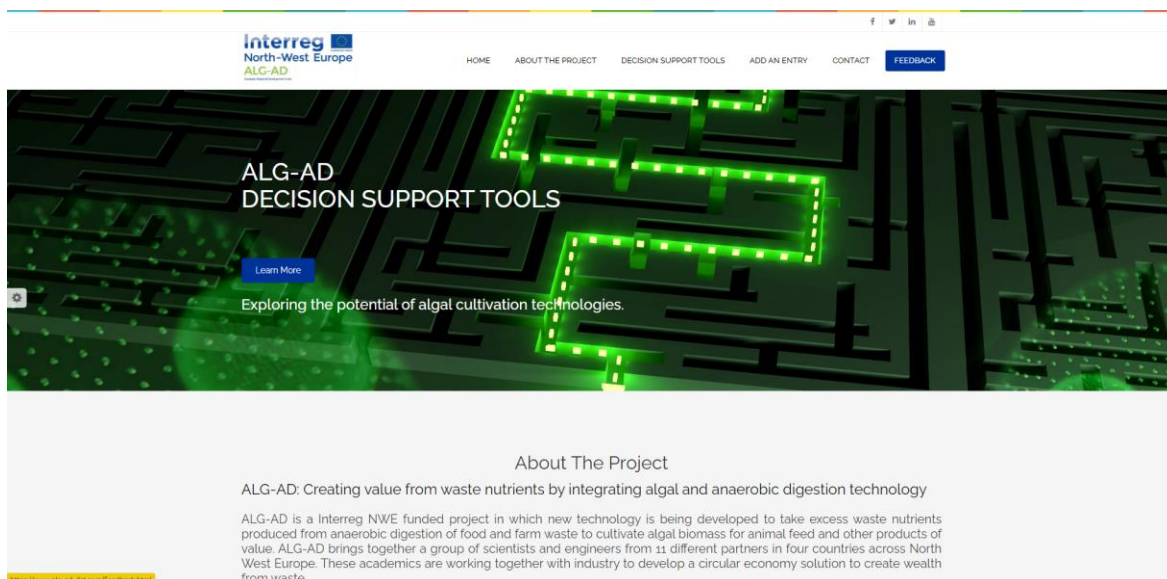


Figure 8-1. Find “Feedback” function from the navigation bar

## Feedback

Help us to improve

Your feedback is very valuable to us! It helps us to learn and to improve the support that we offer to our stakeholders. If you would be so kind as to take a few moments to provide feedback we would be most grateful.

1. On scale of 1-5, how would you rate the AlgAD tool sets ? (1 being poor - 5 being excellent)

	1 Poor	2	3	4	5 Excellent
AD Search Tool	★	★	★	★	★
Document and Resource Search Tool	★	★	★	★	★
Stakeholder Search Tool	★	★	★	★	★
Feasibility Tool and Report	★	★	★	★	★

2. How likely is it that you would use these tools to support your business decision making (e.g. providing technical guidance and information, connecting to others) ? (1 being Highly Unlikely - 5 being Highly Likely)

	1	2	3	4	5
AD Search Tool	★	★	★	★	★
Document and Resource Search Tool	★	★	★	★	★
Stakeholder Search Tool	★	★	★	★	★
Feasibility Tool and Report	★	★	★	★	★

3. On a scale of 1-5, how likely is it that you would recommend our tool to others? (1 being Highly Unlikely - 5 being Highly Likely)

	1	2	3	4	5
Recommend our tool to others	★	★	★	★	★

Additional Comments / Feedback:

Message...

Reset

Submit

Figure 8-2. Feedback rating form

## 8.1 Rate the DST

You can rate the DST by giving stars (1 being poor - 5 being excellent) to each tool (see Figure 8-3).

1. On scale of 1-5, how would you rate the AlgAD tool sets ? (1 being poor - 5 being excellent)

	1 Poor	2	3	4	5 Excellent
AD Search Tool	★	★	★	★	★
Document and Resource Search Tool	★	★	★	★	★
Stakeholder Search Tool	★	★	★	★	★
Feasibility Tool and Report	★	★	★	★	★

Figure 8-3. Example - Rate the DST by giving stars.

## 8.2 Additional Comments / Feedback

You can also provide additional comments/feedback by using the comment box (see Figure 8-4).

Additional Comments / Feedback:

Message...

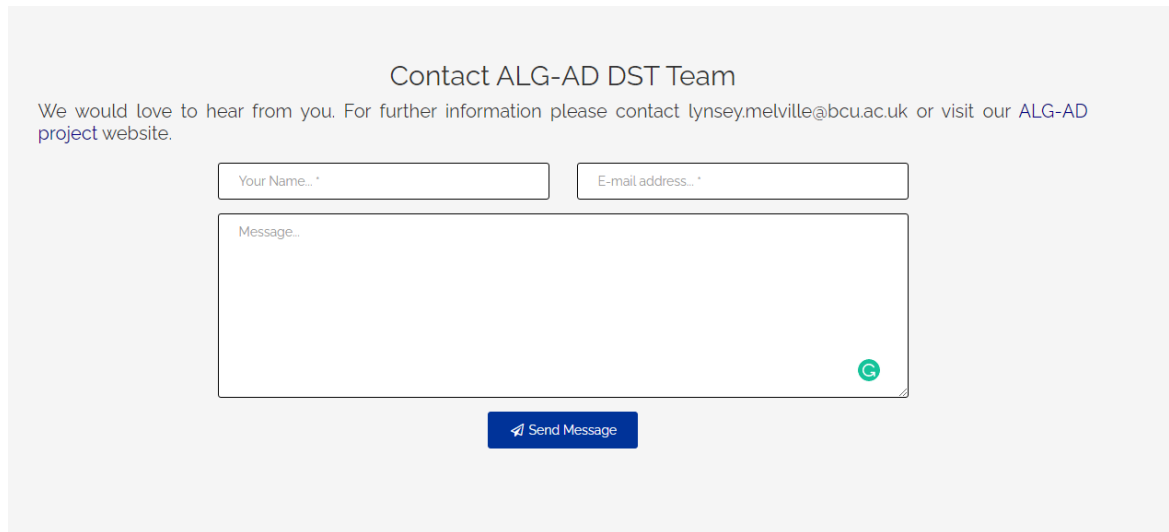
Reset

Submit

Figure 8-4. Comment box for providing additional feedback about the DST.

## 9 DST – Contact Form

For general enquiries and contact with the DST team, you can use the contact form in the home page of DST website to contact the ALG-AD DST team (see Figure 9-1).



The image shows a web form titled "Contact ALG-AD DST Team". Below the title is a paragraph: "We would love to hear from you. For further information please contact [lynsey.melville@bcu.ac.uk](mailto:lynsey.melville@bcu.ac.uk) or visit our [ALG-AD project](#) website." The form consists of three input fields: "Your Name..." and "E-mail address..." are small rectangular boxes, and "Message..." is a larger text area. A green circular icon with a white 'G' is located in the bottom right corner of the message text area. Below the input fields is a blue button with a white paper plane icon and the text "Send Message".

Figure 9-1. Contact form.

## 10 FAQs

*Question 1: What should I do if I want my AD plants to be added on the map?*

*Answer: You can use the “Add An Entry – Add AD plant” function to share your AD plant data with us. Our expert will validate the information of your AD. You will receive an email when we have validated and added your AD plant on our map.*

*Question 2: What should I do if I want to be in the stakeholder database so that others can find my information?*

*Answer: You can use the “Add An Entry – Add stakeholder” function to share your stakeholder data with us. Our expert will validate the information that you have provided. You will receive an email when we have validated and added you into our stakeholder database.*

*Question 3: I had a problem of loading the Process Pathway Tool, what should I do?*

*Answer: It may take up to 2 mins to load the Process Pathway Tool for the first time, depending on the internet connection and PC performance.*

*WebGL (in browser) has not been fully supported by the iPad, iPhone or other Android phones. For a better user experience, it is recommended to run this program on a PC or laptop. We have tested our tool with Windows PC and laptop, and macOS PC and laptop. It works correctly with Chrome, Safari, and Microsoft Edge browsers.*

*Question 4: I was able to read my pdf report in the browser, but after I refresh the webpage, it says the file was not found from the server. What should I do?*

*Answer: Since we are not collecting and storing your input data, the pdf that generated by the tool will be erased automatically after you exit the process pathway tool. You should save your pdf to local disk before you exit the tool. However, you can use the tool to create a new report again in a short time if all the answers are known.*

## Appendix A: ALG-AD DST User Manual Approval

The undersigned acknowledge they have reviewed the [<ALG-AD> Decision Support Tools User Manual](#) and agree with the approach it presents. Changes to this **Decision Support Tools User Manual** will be coordinated with and approved by the undersigned or their designated representatives.

*[List the individuals whose signatures are desired. Examples of such individuals are Business Steward, Implementation Manager or Project Sponsor. Add additional lines for signature as necessary. Although signatures are desired, they are not always required to move forward with the practices outlined within this document.]*

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Role: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Role: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Role: \_\_\_\_\_

## APPENDIX B: REFERENCES

The following table summarizes the documents referenced in this document.

Document Name and Version	Description	Link
<a href="#">Data privacy and policy (2022)</a>	Birmingham City University Policies and Procedures about cookies	<a href="https://www.bcu.ac.uk/about-us/corporate-information/policies-and-procedures/cookies">https://www.bcu.ac.uk/about-us/corporate-information/policies-and-procedures/cookies</a>
<a href="#">European Commission's report (2011)</a>	European Commission's report about Nitrate vulnerable zones (NVZ)	<a href="https://eur-lex.europa.eu/procedure/EN/199019">https://eur-lex.europa.eu/procedure/EN/199019</a>
<a href="#">Nitrate vulnerable zone designations and appeals 2021 to 2024</a>	Nitrate vulnerable zones	<a href="https://www.gov.uk/government/collections/nitrate-vulnerable-zones">https://www.gov.uk/government/collections/nitrate-vulnerable-zones</a>
<a href="#">ADBA AD Plants Data (2022)</a>	UK AD Plant Data from ADBA	<a href="https://adbioresources.org/resources/ad-plant-map/">https://adbioresources.org/resources/ad-plant-map/</a>