# Tools for Assessment and Planning of Aquaculture Sustainability

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| SHORT TITLE: | **TAPAS** |
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| ORGANISATION: | **University of STIRLING, UK** |
| TOPIC: | **H2020- SFS-11b-2015** |
| PROJECT NUMBER: | **678396** |

## DELIVERABLE:

## D9.4 Development of TAPAS e-learning course materials

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**History of changes:**

| Ver | Date | Changes | Author |
|---|---|---|---|
| **1** | 05-Feb-19 | Initial Template | REC |
| **2** | 22-Feb-19 | First Draft | REC |
| **3** | 26-Feb-19 | Additional Revision | REC |
| **4** | 20-Mar-19 | Revision | SGP |
| **5** | 25-Feb-2020 | Final Revision | ZJF |
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**Refer to this document as:**

Fletcher et al. 2020. eLearning Platform Report for Aquaculture Sustainability Toolbox. TAPAS Deliverable 9.4. 16 pp.

# Summary

This document is to report about the e-learning materials produced for deliverable 9.4 of the TAPAS Toolbox, developed in the EU H2020 TAPAS (Tools for Assessment and Planning of Aquaculture Sustainability) project.

The module one introductory video was scripted and produced by the University of Stirling and provides information to users about the TAPAS project and the Toolbox.
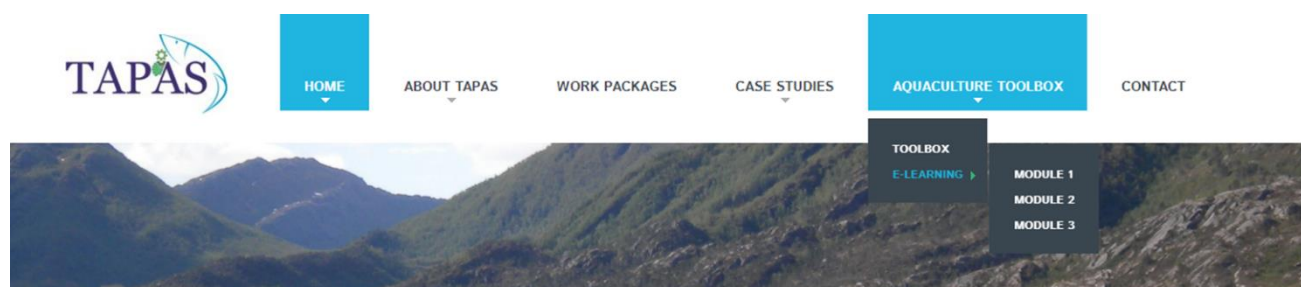
The module two Toolbox Video Guide was produced to guide Toolbox users through using the Toolbox and all of its features. The video was produced by AquaBioTech using OBS Studio screen capture and audio recording software, and edited using Adobe Premier Pro. The script and storyboard for the video was provided by the University of Stirling.

Finally, module three contains links for recommended additional reading and information for users. This module is designed to help to give users a better understanding of the TAPAS project and some of the Toolbox elements.

# Contents

# TAPAS e-learning



The e-learning materials are available on the TAPAS website under the Toolbox section, as shown in the image above. It consists of 3 modules, each with a distinct theme intended provide a broad range of users with the necessary information and competence to utilise the specific services and functions provided by the toolbox.

# Module One: Introductory Video



The video opens with Professor Trevor Telfer introducing himself and The University of Stirling's role in the TAPAS project.

It is then explained that as part of the TAPAS project, the Aquaculture Toolbox has been produced to assist decision-makers in the aquaculture licensing process, with a collection of modelling and guidance tools. The TAPAS project itself was developed to address the complexities of licensing processes that can contribute to limiting growth of the aquaculture industry in Europe.

Turning focus back to the toolbox, it is clarified that for decision-making authorities the Toolbox addresses deficiencies and inconsistencies in the guiding policies, regulations and licensing process across and between European nations.
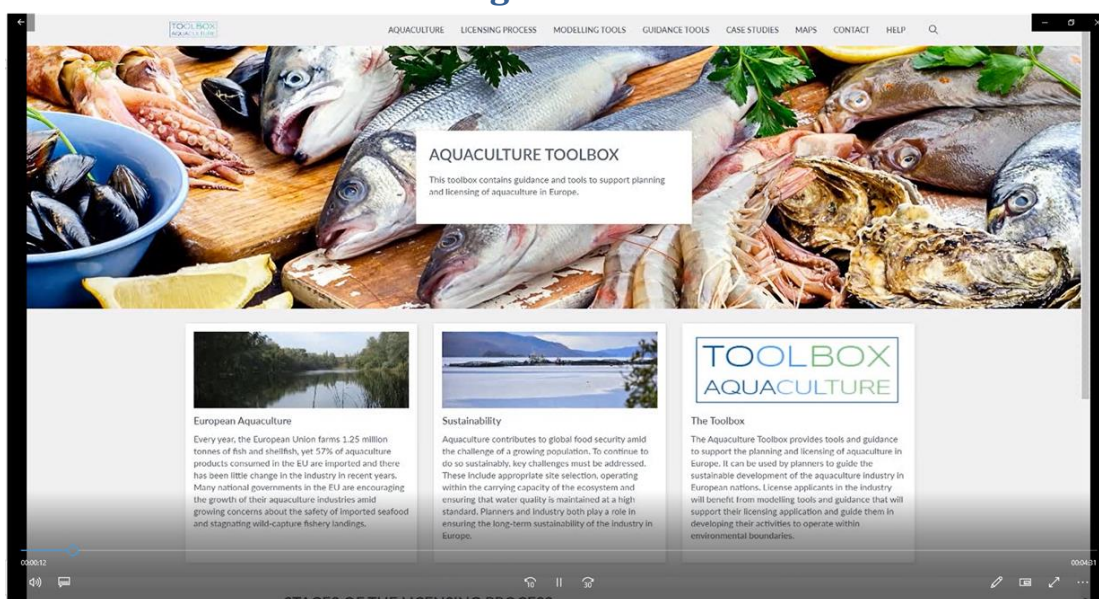
The Toolbox can support authorities in making improvements to licensing systems efficiency, supporting applicants with information availability and accessibility, as well in strategic planning for a more sustainable aquaculture industry.

For applicants the toolbox provides tools and guidance to support environmental impact evaluations for use in proposal and operational stages. It also provides a site selection guide, to ensure facilities are located appropriately, and minimise conflict with other marine activities. This combined with good environmental management and sustainability practices will help reassure the public and improve perceptions and acceptance of aquaculture.
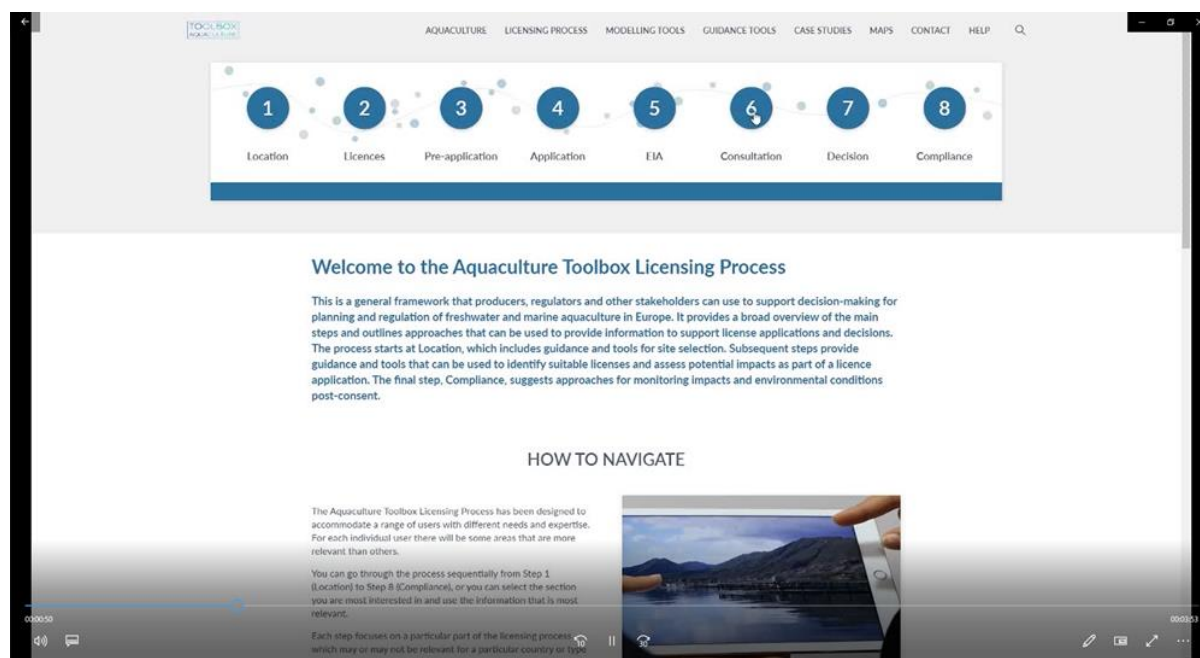
The video then explains that the toolbox was developed by a team of researchers and industry. The tools and guidance provided considers a range of species, environments, production systems and technologies making it representative of the aquaculture industry across Europe and useful to a broad range of stakeholders, who may access it online where it is publicly available. The video closes with the tapas logo, the web address of the toolbox and the logos of all the project partners.
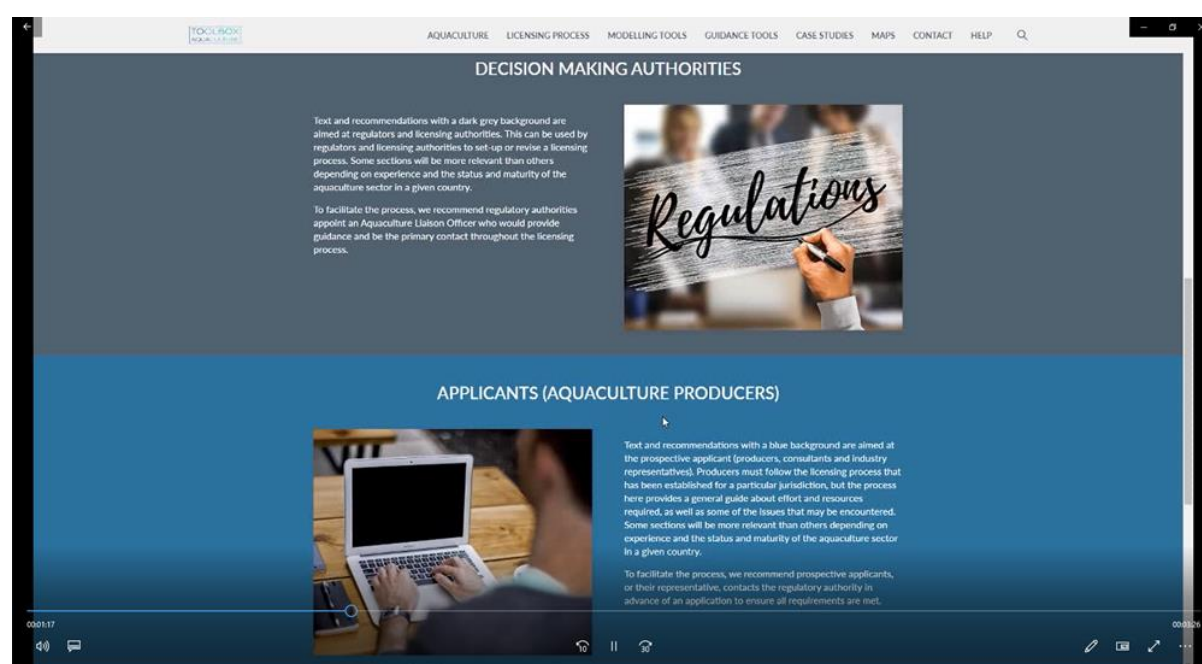
## Module Two: Toolbox video guide



The introduction of the video opens up with a still of the Toolbox homepage. The audio welcomes the viewers to the Aquaculture Toolbox and explains that the purpose of the video is to guide users on how to navigate the Aquaculture Toolbox and introduce them to the tools and guidance that it provides. It also informs users that Toolbox has been created to support both license applicants and aquaculture planners with tools, guidance and recommendations for the licensing process and the planning of aquaculture in Europe, and that the Aquaculture Toolbox has been produced by the EU Horizon 2020 project TAPAS.
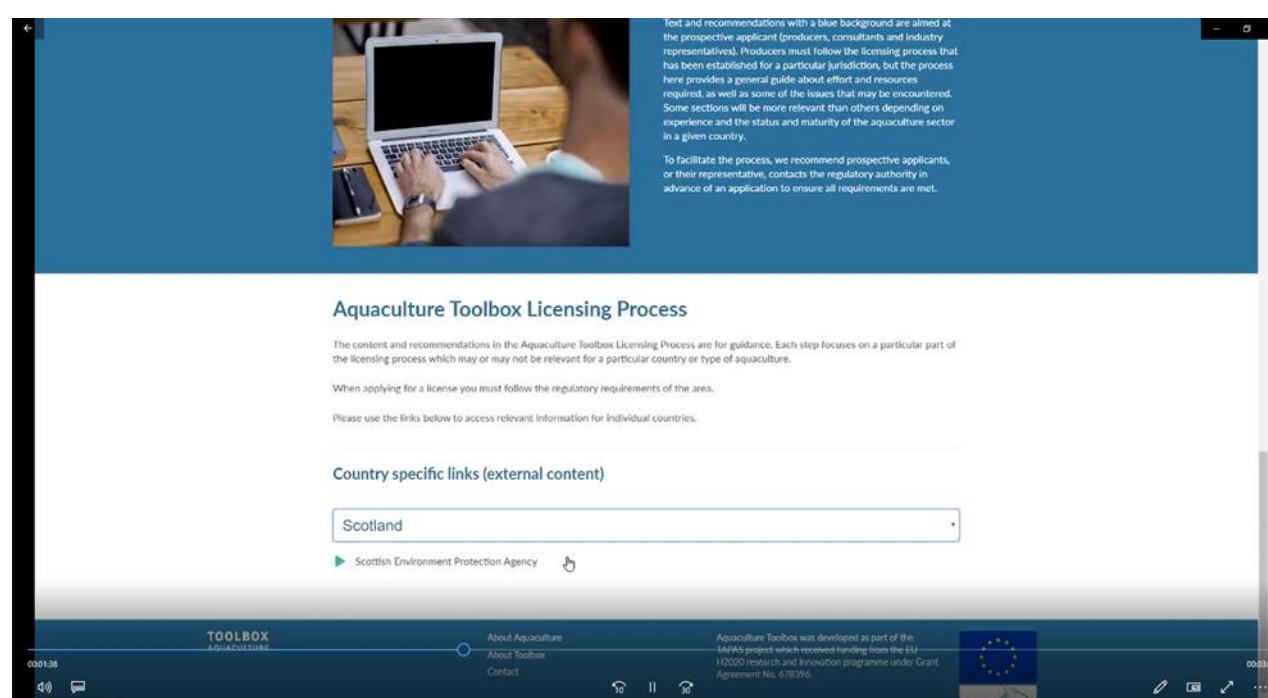


Next, the video guide navigates to demonstrate the Licensing Process portion of the toolbox. The audio voiceover explains that the tools and guidance in the Toolbox are framed around the 8 stages

of the licensing process. The lay out of this section of the Toolbox allows users to navigate through the licensing process step-by-step, or to view the select stages which are relevant to their needs.
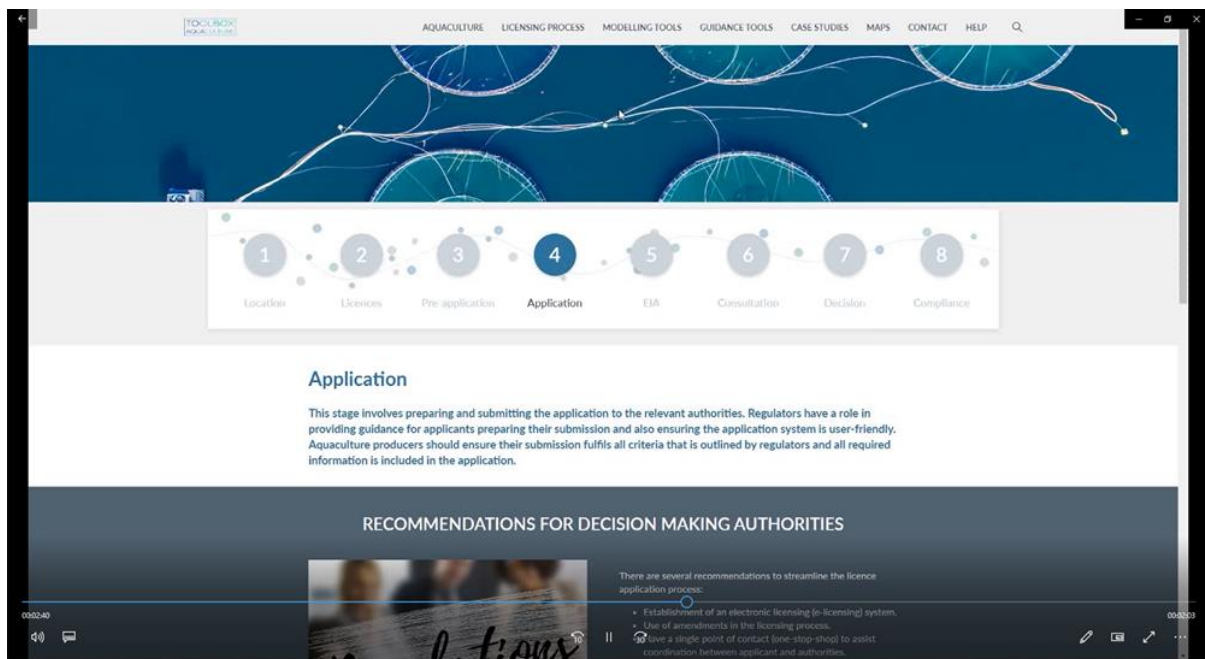


Across the Toolbox, advice for applicants and regulators can be found against corresponding colour backgrounds. Whilst the video scrolls down to reveal the 'decision making authorities' and 'applicants' ribbons, the audio explains that these colours relate to who the text is aimed at. The text against a grey background is for decision-making authorities and text against a blue background is for license applicants.
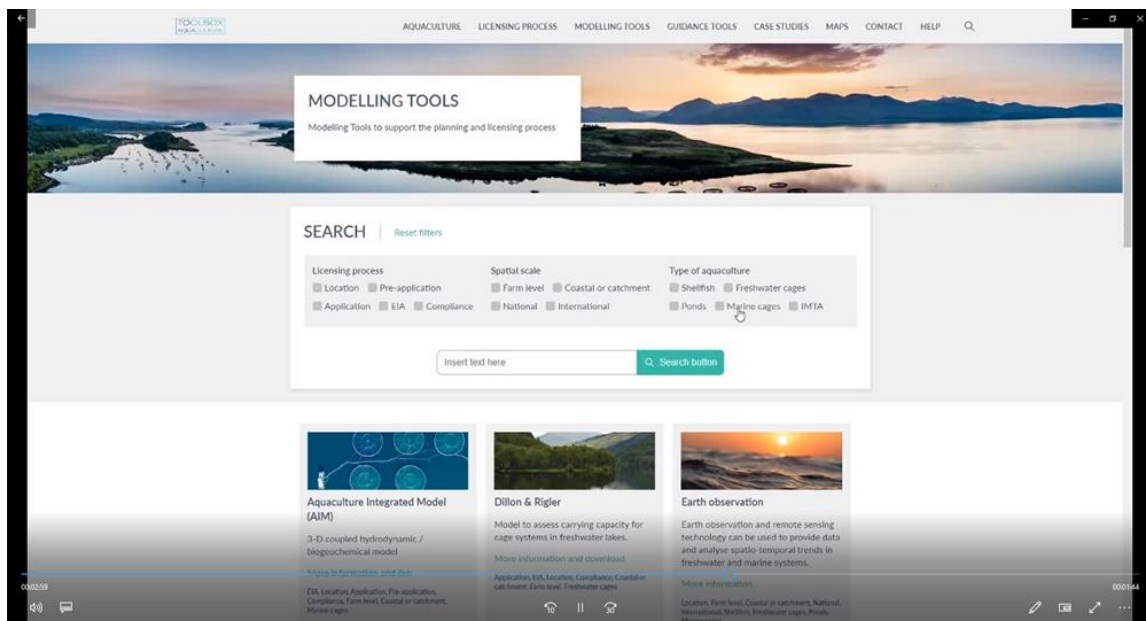


At the bottom of the Licensing Process page, there is a drop-down list that displays countries. The video shows that when you select Scotland it shows a link to the external SEPA website, and England
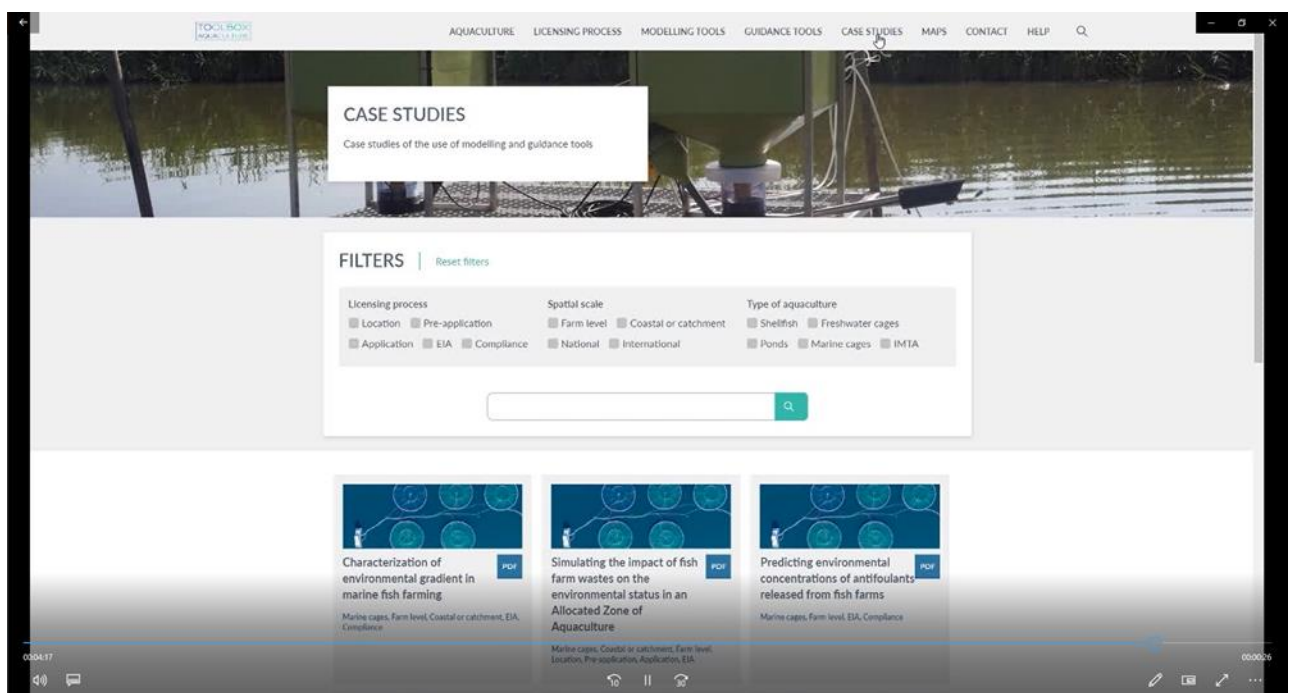
will display the Seafish link. The audio explains this allows users to access the relevant regulatory authority, or other country-specific tools and guidance.
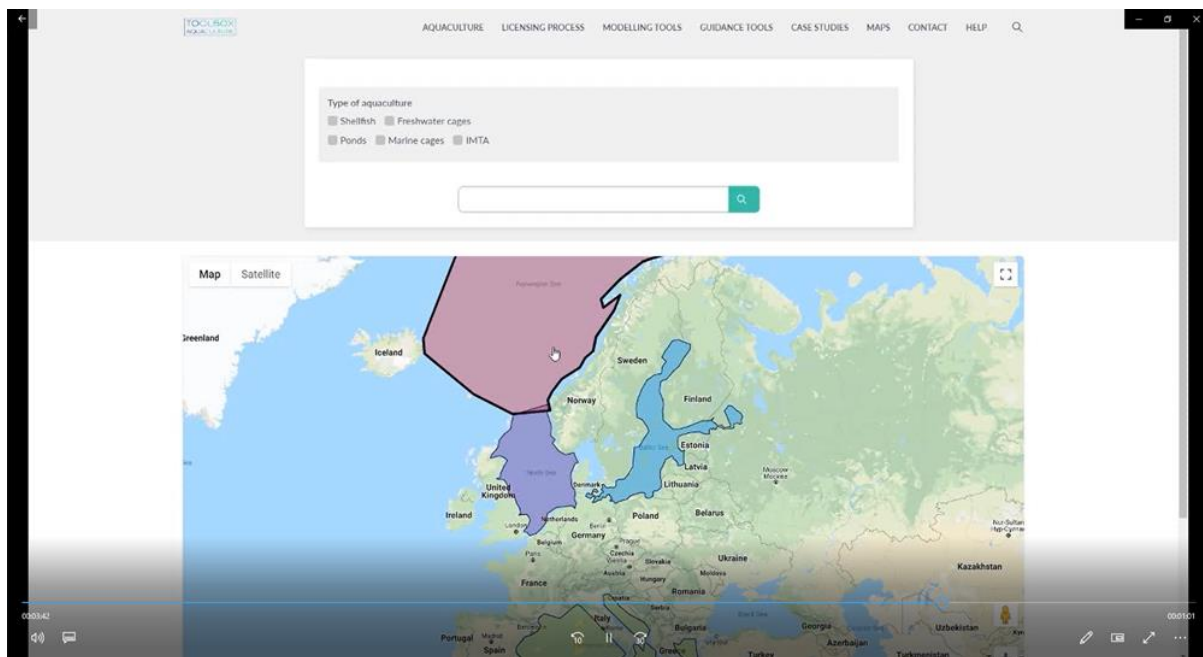


Next, the video navigates to the Location section as an example of a stage of the licensing process. The audio talks the user through what they're seeing in this stage. The advice for decision-making authorities and for license applicants appears first. It highlights that these sections of text often include links to further relevant information and provides the example of the site selection tools access, aimed at license applicants choosing where to position their planned development. The video continues to scroll down the page to show additional information and tools below these sections. It then navigates over a couple of Licensing Process stages and the accompanying audio explains that the same structure is repeated for each stage.

The Modelling tools and Guidance tools tabs are located on the menu bar at the top of the Toolbox. Although many of the modelling and guidance tools have been linked to throughout the stages of the licensing process, users can also access all of these tools by clicking on the 'modelling tools' and 'guidance tools' tabs. The video and audio explain that within each of these pages, the tools can be filtered by licensing process, spatial scale and type of aquaculture.



The Case studies page is laid out similar to the modelling and guidance tools pages. On this page the user can access documents demonstrating why and how the tools have been used, and what results were achieved. These can also be filtered by licensing process, spatial scale and type of aquaculture.

The maps page allows users to navigate the contents of the Toolbox by geographic area. The video uses the mouse to highlight different areas on the map whilst the audio explains that results can be filtered by selecting the relevant area in Europe, on the map.

The summary and conclusion of the video shows the cursor hovering over the different tabs on the menu bar at the top of the Toolbox pages. The audio briefly recaps the contents of each of these tabs. The video ends on another still of the home page, with the cursor hovering over the contacts tab. Users are informed that the Aquaculture Toolbox has been designed for ease of use, however if they should have any questions about the Toolbox or how to use it, the developers can be contacted for more information.

# Module Three: Recommended Reading



MODELLING

If you are using modelling tools from the toolbox, or you are interested in learning more the tools featured in the toolbox, the links below provide additional resources for modelling plankton communities, the use of GIS and modelling veterinary medicines.



Find out more about modelling plankton communities in 'Assimilation of Ocean-Colour Plankton Functional Types to Improve Marine Ecosystem Simulations' available at: https://agupubs. onlinelibrary.wiley.com/doi/full/10.1002/2017JC013490

Find out more about the application of GIS and it's use in aquaculture in 'Use of geographic information systems for aquaculture and recommendations for development of spatial tools' available at: https://onlinelibrary. wiley.com/doi/abs/10.1111/raq.12345

Find out more about the use of models to assess the fate and impacts of veterinary medicines in 'Use of models for the environmental risk assessment of veterinary medicines in European aquaculture: current situation and future perspectives' available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/raq.12274

This module introduces users to some additional external resources, to help further their understanding of the research and outcomes of the TAPAS project, and the background and features of the toolbox.

For ease of use, the module has been broken down into four main categories. The 'modelling' category offers links to scientific publications from the TAPAS project, relevant to the tools featured in the toolbox including GIS and modelling the fate of veterinary medicines in the environment.
The 'monitoring' category features links to articles about new monitoring technologies developed during the TAPAS project and their applications in aquaculture.
The 'guidance' category offers links to the websites of regulatory authorities and relevant organisations, whilst the 'other' category contains links to articles published, and websites created in the TAPAS project. This e-learning module can be continuously expanded and updated to include other new and up-to-date links and resources as they become available.



OTHER

If you are interested in finding out more about other work carried out in the TAPAS project, some interesting and helpful links are included below.



Find out 'What does 'beyond compliance' look like for the Scottish salmon aquaculture industry?' available at: https://www. scencedirect.com/science/article/pii/S0308597X1830798X-?via%3Dihub

Other deliverables from the TAPAS H2020 project, including more information on the use of models in coastal and freshwater systems can be found under 'Deliverables' available at: https://cordis.europa.eu/project/id/678396/results

More information about the TAPAS project including partners and objectives can be found at: http://tapas-h2020.eu/#

For help with the licensing process and modelling tools, The Aquaculture Toolbox is available at: https://toolbox-tapas.s1.umbraco.io/?fb-clid=IwAR36UiR8-M2iTkcAXXPFnk4qFJw-WBMWWnfmV8jjPpISE-JPcflZo3s3bKKcl0

# Appendix

Aquaculture Toolbox – screencast video brief

Length: approx.. 5 minutes

| Section name | Voiceover script | Screen view |
|---|---|---|
| Introduction | Welcome to the Aquaculture Toolbox. The Toolbox has been created to support both license applicants and aquaculture planners with tools, guidance and recommendations for the licensing process and the planning of aquaculture in Europe. The Aquaculture Toolbox has been produced by the EU Horizon 2020 project TAPAS, a collaborative research project involving 15 European institutions.<br><br>This video will guide users on how to navigate the Aquaculture Toolbox and introduce the tools and guidance that it provides. | Homepage - still |
| The Licensing Process | The tools and guidance in the Toolbox are framed around the 8 stages of the licensing process.<br><br>The Toolbox allows users to navigate through the licensing process step-by-step…<br><br>Or to view only select stages relevant to their needs. | Click on 'licensing process' on menu bar<br><br>Move cursor sequentially across stages<br><br>Move cursor randomly between 3 or 4 stages |
| Advice for applicants and regulators | Within each stage of the licensing process, users will find **some** text against grey and blue backgrounds. These colours relate to who the text is aimed at – text against a grey background is for decision-making authorities, while text against a blue background is for license applicants. | Scroll down to the 'decision making authorities' and 'applicants' ribbons – scroll twice to each is visible in turn |
| External links | At the bottom of some pages you will find links to external websites and content that are relevant to each page. For example, here you can access the | Scroll to the bottom of the page, select the drop-down list to display countries. Select Scotland to show SEPA link, and then England |

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| | relevant regulatory authority, or other country-specific tools and guidance. | to display the Seafish link (don't click on links) |
| Example of a stage of the licensing process | Going back to the licensing process stages, we'll take the first stage – Location – as an example. | Skip (or scroll) back top top of page, click on 'Location'. |
| | You'll find advice for decision-making authorities and for license applicants first. These often include links to further relevant information – for example, here we can access site selection tools aimed at license applicants choosing where to position their planned development. | Scroll down, pause on 'recommendations for decision-making authorities', scroll again and stop on 'recommendations for applicants'. Hover cursor over (but don't click on) 'Guidance on site selection' link when saying 'here we can access...' |
| | There may be additional information and tools below these sections, against a white or grey background. These may be aimed at license applicants or decision-making authorities, and often provide more links and information relating to the text above. | Scroll down, pause over 'aquaculture site selection tool' and then 'Site selection framework'. |
| | (no voiceover) | Scroll to the top of the page |
| | This structure is repeated in each of the licencing stages. | Click on the next 3 or so stages (don't scroll on each page- click one after another) |
| Modelling tools and guidance tools | Many of the modelling and guidance tools have been linked to throughout the stages of the licensing process. However, users can also access all of these tools by clicking on the 'modelling tools' and 'guidance tools' tabs on the menu bar. | Hover cursor over 'modelling tools' tab and then 'guidance tools' tab |
| | (no voiceover) | Click on 'modelling tools' tab |
| | Within each of these pages, the tools can be filtered by licensing process, spatial scale and type of aquaculture. | Scroll down so that the 'search' ribbon displays in the centre of the page |

|  | All of the tools are available below.<br><br>Guidance tools can be accessed in the same way from the main menu. | Scroll to display modelling tools<br><br>Scroll back up, click on 'guidance tools' on the main menu, scroll down slowly |
|---|---|---|
| Examples | Examples of how these tools have been applied and used are available through the 'examples' tab on the main menu.<br><br>Through here, you can access documents demonstrating why and how the tools have been used, and with what results. These can also be filtered by licensing process, spatial scale and type of aquaculture. | Click on 'examples' tab<br><br>Scroll down to display both the filter ribbon and the PDFs (first line of them) |
| Maps | The contents of the Toolbox can also be navigated by geographic area. Click on 'maps' on the menu bar and you can filter results by selecting on the relevant area in Europe. | Click on 'maps' in the menu bar, scroll down to the map and move cursor between the different areas that can be selected (don't click on them) |
| Summary | (no voiceover)<br><br>To recap, tools and guidance for each of the stages of the licensing process can be accessed through the 'licensing process' tab.<br><br>Embedded in these stages are some of the modelling and guidance tools that are all available through the 'modelling tools' and 'guidance tools' tabs.<br><br>Examples of how these tools can and have been used can be accessed through the 'examples' tab. | Scroll to top of page, click on the Toolbox logo in the top left to get back to the homepage<br><br>Hover cursor over 'licensing process' tab<br><br>Hover cursor over 'modelling tools' and 'guidance tools' in turn<br><br>Hover cursor over 'examples' tab<br><br>Hover cursor over 'maps' tab |

| | The Toolbox contents can also be filtered by geographic area though the 'maps' tab. | |
|---|---|---|
| Conclusion | The Aquaculture Toolbox has been designed for ease of use by a range of users. If you have any questions about the Toolbox or how to use it, you can contact the developers for more information. | Still screenshot of homepage, hover cursor over 'contact' tab when mentioning this. |