



Deliverable D6.1

Knowledge Base/WIKI

Work Package 6

GUIDE – Policy creation, recommendations and training

Version: Final



Deliverable Overview

The report provides an overview of the knowledge base/wiki of the Horizon Europe project, Evidence Driven Indoor Air Quality Improvement (EDIAQI). At the end of the project, the knowledge base/wiki will contain information that provides technical knowledge and experience in indoor air quality (IAQ). The information on the wiki will be based on existing literature from up-to-date publications on (IAQ) and the project's findings. In parallel to the wiki, the project team will also develop a simulation tool that assesses risks related to indoor air quality, based on location, surroundings, building type, and inhabitants for public use. This document outlines an action plan for implementing the knowledge base/wiki and simulation tool throughout the project.

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Statement of Originality

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1. Introduction

The EDIAQI project wiki aims to provide knowledge and experience on indoor air quality in buildings. The main objective is to raise awareness about the indoor environment among people. The information available on the wiki will be based on existing publications on the topic of indoor air quality (IAQ) and on project results. The consortium will synthesise the conditions and requirements for applying the EDIAQI solutions, how the solution is applied, and what is learned from that application. The wiki will also include policy recommendations for indoor air quality.

As part of the EDIAQI project, the partners will collaboratively revise the wiki. Each partner will contribute their prior experiences and project outcomes to the wiki content. The wiki page will also include a collection of "one-pagers" summarising the project deliverables. The main target audience of the wiki page consists of people who have little or no prior knowledge of indoor air quality, including homeowners, representatives of local municipalities, heads of schools and kindergartens, and commercial property owners.

Indoor air quality is often directly linked with the condition of the building.

The European Commission has published the strategy "A Renovation Wave for Europe"¹. This strategy aims to double annual energy renovation rates in the next 10 years, which will not only reduce emissions, but also improve the quality of life for residents. The principles of technical requirements for the buildings in the European Union have set in the Energy Performance of Buildings Directive (EPBD)² focuses also on the importance of good indoor air quality. To ensure healthy buildings, the requirement of installation of measuring and control devices for monitoring and regulating indoor air quality is proposed for new buildings and, where feasible, in existing buildings undergoing major renovations. The EDIAQI project wiki page will provide information for

¹ European Commission (2020). A Renovation Wave for Europe - greening our buildings, creating jobs, improving lives. <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1603122220757&uri=CELEX:52020DC0662>

² European Commission (2023). Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the energy performance of buildings (recast). <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52021PC0802>



property owners to understand the current situation and incorporate basic indoor climate principles into renovation plans.

The EDIAQI project has created a wiki and simulation tool for risk assessment. The simulation tool is introduced in Chapter 7 of this document.

- The EDIAQI project wiki page can be accessed here:
http://206.189.52.199/index.php/Main_Page
- The wiki includes a simulation tool that assesses IAQ risks which can be accessed here: <https://iaq-simulator.know-center.at/>

It should be highlighted that at the submission of this deliverable, we are currently only in month 10 of the project. While the structure of both the wiki and the simulation tool are present, they will be built on and revised throughout the remainder of the project, when all the project results can be incorporated.



2. Overview of wiki page

The wiki page provides easy-to-understand and useful information on various aspects of indoor air quality and guidelines on how to assess the indoor air quality situation in different building scenarios. One can use the information on the wiki page to identify and solve indoor climate issues.

Information on the project wiki page mirrors activities being carried out as part of the EDIAQI pilots:

- air quality parameters that can be measured.
- available low-cost sensors for measurements.
- methodology for conducting measurements.
- methodology for data analysis.
- identification of indoor air quality problems.
- recommendations on how to improve indoor air quality.

The EDIAQI project wiki is a comprehensive resource for indoor air quality information, offering expert perspectives and supplementing existing knowledge found on internet (e.g., Wikipedia pages) with specific knowledge about indoor air quality.

2.1 The EDIAQI Decision tree

The wiki content is based on information that people might need to understand indoor air quality. The diagram below showcases a variety of possible questions a user may have and the corresponding answers to these questions.

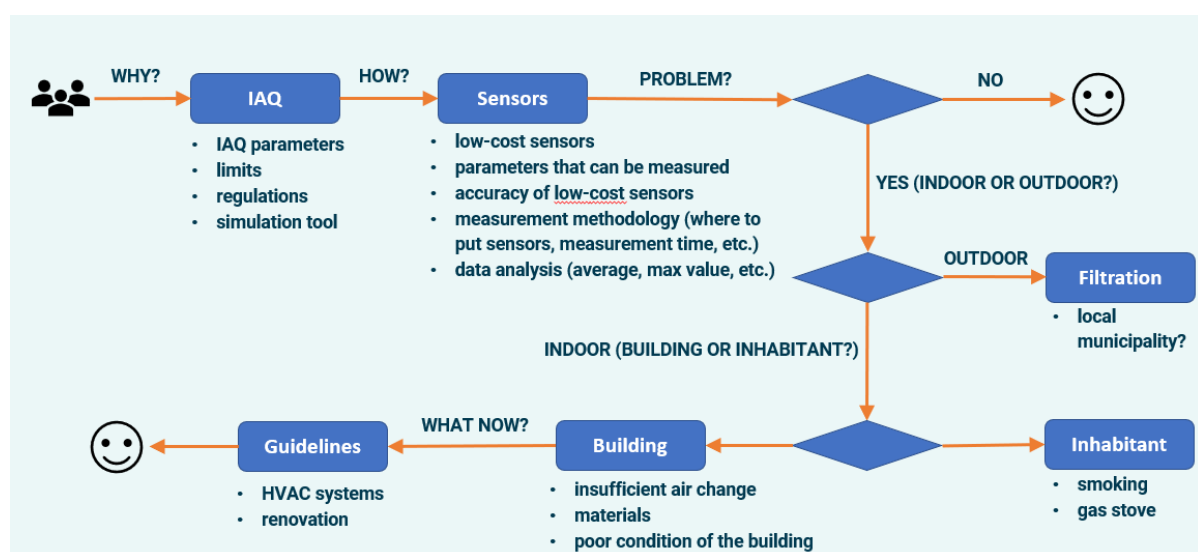


Figure 1 A decision tree for identifying indoor climate issues.



- **Why?** People usually seek information when they face problems or want to improve their knowledge on a certain subject. Therefore, the wiki page provides information on the key parameters of indoor air quality, the permissible limits of different parameters, the regulations regarding indoor air quality, and a link to a simulation tool for risk assessment.
- **How?** Instructions how to estimate indoor climate conditions on your own. This includes understanding what types of low-cost sensors are available, parameters that can be measured with these sensors, their level of accuracy, how to measure indoor climate parameters (including where to place the sensor and how long the measurement time should be), and the principles of data reading.
- **Indoor or outdoor?** After identifying the problems, the next step is to determine whether they are caused by indoor or outdoor air:
 - **Outdoor.** When it comes to outdoor air problems, property owners often have limited options for improvement. The main solution is to install a proper ventilation system with filtration. Depending on regulations, local municipalities may also have responsibilities to improve outdoor air quality.
 - **Indoor.** When it comes to indoor air quality, it is important to determine whether the problem is caused by occupant behaviour, such as smoking indoors, or by issues with the building itself. Occupant behaviour-related problems can only be solved by changing the behaviour that is causing them.
- **Building.** The condition of the buildings can cause various problems such as insufficient air circulation, high relative humidity, mould growth, etc. To improve the situation, the building may need renovation. The wiki page will provide basic knowledge about proper heating and ventilation systems.

2.2 Structure of the WIKI

Based on the information needed to understand IAQ parameters, estimate conditions and improve IAQ, the wiki page is organised into main categories:

- main indoor air pollutants.
- possibilities of low-cost sensors.
- health effects of indoor air quality.



- main principles of heating and ventilation systems.
- recommendations and guidelines for improving indoor air quality.
- results and experiences of the EDIAQI pilots.

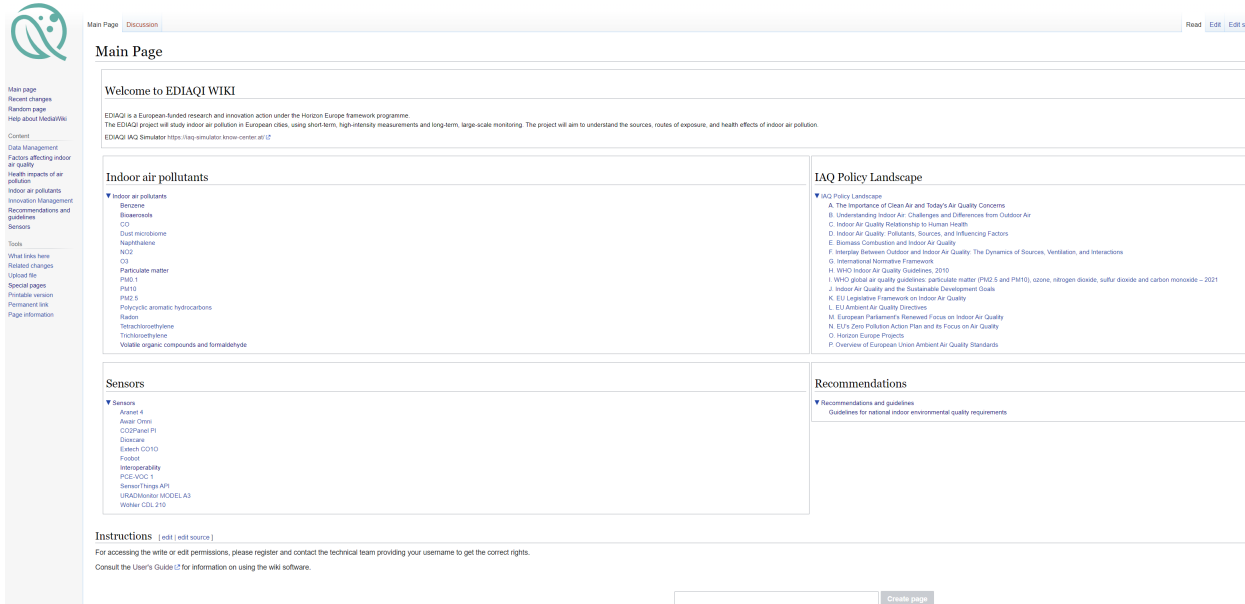


Figure 2 Home page on the EDIAQI wiki page

On the left-hand side of the page, you will find a sidebar with comprehensive list of information categories. This makes it easy for users to locate the specific information they need. At present, only the categories that have available information are included on the wiki page. However, new categories, such as project results and lessons learned, will be added to the page as the project progresses.

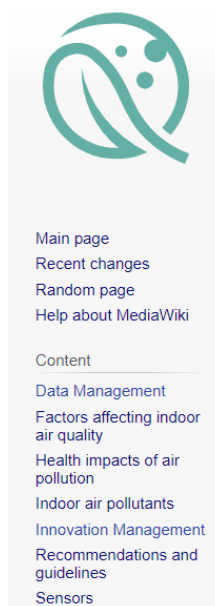


Figure 3 Information and content of the wiki page



This project has received funding from the European Union's Horizon Europe Framework Programme under grant agreement N° 101057497.

On the main page, blocks for categories of higher interest to the public, such as indoor air parameters, regulations, and recommendations, are featured.

<p>Indoor air pollutants</p> <ul style="list-style-type: none"> ▼ Indoor air pollutants Benzene Bioaerosols CO Dust microbiome Naphthalene NO₂ O₃ Particulate matter PM_{0.1} PM₁₀ PM_{2.5} Polycyclic aromatic hydrocarbons Radon Tetrachloroethylene Trichloroethylene Volatile organic compounds and formaldehyde 	<p>IAQ Policy Landscape</p> <ul style="list-style-type: none"> ▼ IAQ Policy Landscape A. The Importance of Clean Air and Today's Air Quality Concerns B. Understanding Indoor Air: Challenges and Differences from Outdoor Air C. Indoor Air Quality Relationship to Human Health D. Indoor Air Quality: Pollutants, Sources, and Influencing Factors E. Biomass Combustion and Indoor Air Quality F. Interplay Between Outdoor and Indoor Air Quality: The Dynamics of Sources, Ventilation, and Interactions G. International Normative Framework H. WHO Indoor Air Quality Guidelines, 2010 I. WHO global air quality guidelines: particulate matter (PM_{2.5} and PM₁₀), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide – 2021 J. Indoor Air Quality and the Sustainable Development Goals K. EU Legislative Framework on Indoor Air Quality L. EU Ambient Air Quality Directives M. European Parliament's Renewed Focus on Indoor Air Quality N. EU's Zero Pollution Action Plan and its Focus on Air Quality O. Horizon Europe Projects P. Overview of European Union Ambient Air Quality Standards
<p>Sensors</p> <ul style="list-style-type: none"> ▼ Sensors Aranet 4 Axair Omni CO2Panel FI Dioxcare Extech CO10 Foobot Interoperability PCE-VOC 1 SensorThings API URADMonitor MODEL A3 Wöhler CDL 210 	<p>Recommendations</p> <ul style="list-style-type: none"> ▼ Recommendations and guidelines Guidelines for national indoor environmental quality requirements

Figure 4 Main categories on the home page

At the bottom of the main page, you can find instructions on how to create new user accounts and pages.

Instructions [[edit](#) | [edit source](#)]

For accessing the write or edit permissions, please register and contact the technical team providing your username to get the correct rights.
Consult the [User's Guide](#) for information on using the wiki software.

Figure 5 Instructions for user accounts and creation of new pages



3. Technical solution

The EDIAQI project wiki platform is built on the foundation of MediaWiki. MediaWiki is an open-source software that is free to use and widely popular. It has many configuration settings and extensions that allow users to add or modify various features. The user interface of MediaWiki is similar to that of Wikipedia, which is commonly known as a "wiki".

Main advantages of the MediaWiki platform:

- It is an easy-to-use platform that provides a simple and intuitive interface for navigation.
- Users can customise the appearance and functionality of the platform to meet their specific needs.
- Scalability - it can handle large amounts of data and users.
- Large community of developers and users who contribute to the platform's development and provide support and resources for new users.
- MediaWiki supports multiple languages, making it accessible to users from around the world.
- The platform can also be integrated with other tools, such as discussion boards, blogs, and social media platforms, making it a versatile platform for creating and sharing information.

The EDIAQI WIKI page is managed by Taltech. To maintain accuracy and prevent vandalism, users are required to create an account and log in before making any entries. Taltech is responsible for creating and managing user accounts. You can find instructions for creating a user account on the main page. There are three types of user rights:

- general users can insert and edit their articles.
- bureaucrats can edit all articles and allow articles to be published.
- admins can configure wiki page and manage user rights.

To ensure information security and prevent losses, the EDIAQI project wiki page is hosted on a DigitalOcean server with daily backups of its content.



4. Consortium roles

All project partners will contribute to the wiki page with their respective input, knowledge and outcomes from the project. Below, is an overview of the roles of consortium partners in developing the knowledge base/wiki.

Partners	Role
Wiki manager (Taltech)	<ul style="list-style-type: none"> • Lead development of the EDIAQI project wiki page. • Responsible for the quality of the information included on the wiki page. • Plan and organise content creation. • Communicate with work package and task leaders to ensure that the results from the project are included on the wiki page. • Ensure the sustainability of the information contained in the wiki.
Work Package and task leaders	<ul style="list-style-type: none"> • Ensure that the results from the project are included to the wiki page. • Review technical and scientific results and identify useful information for target audiences. • Create a summary of the main findings and conclusions in the form of "one-pagers". • Help to promote and disseminate the EDIAQI project wiki page at a national and local level in their respective countries.
Simulation tool manager (KNOW)	<ul style="list-style-type: none"> • Lead the development of a simulation tool to provide the public with an easy-to-use risk assessment tool.
Other partners	<ul style="list-style-type: none"> • Help to promote and disseminate the EDIAQI project wiki page at a national and local level in their respective countries. • Assist in identifying the information useful for target audiences in their respective countries.

Table 1 Consortium partners and roles



5. Knowledge base/wiki development plan

The information presented on the wiki page will be based on the literature available on indoor air quality and the findings of the EDIAQI project. The development of the wiki page will follow the same timeline as the project itself. The wiki page will be regularly updated to reflect the latest project results.

The EDIAQI project will publish all its public deliverables on its official website. The Wiki page will include one-pagers from deliverables that are easier to read and provide a summary of the key findings and conclusions, which may be of interest to the public. The partner responsible for the deliverable will prepare the one-pager, and TalTech will add it to the project wiki page.

Below is an overview of the knowledge base/wiki development timeline. As the project moves forward, the wiki page will be updated accordingly.

Timeline	Developments on wiki page	Comments
M10	<ol style="list-style-type: none"> 1. Technical solution of the wiki 2. Information about the IAQ parameters, regulations and sensors 3. IAQ simulation tool 	<ol style="list-style-type: none"> 1. Technical solution has been set up. 2. IAQ parameters, regulations and sensors are on the wiki page 3. Demo version is online
M18	<ol style="list-style-type: none"> 1. Connection of heating and ventilation systems with IAQ 2. Indoor air pollution observation toolkit 3. Guidelines for set-up indoor pollutant monitoring stations 4. Privacy and IoT security report 5. Findings from the severe asthma cohort 	<ol style="list-style-type: none"> 1. Based on previous research 2. Based on D3.1 3. Based on D3.2 4. Based on D4.6 5. Based on D5.3 (sensitive deliverable)
M32	<ol style="list-style-type: none"> 1. Pilot reports and findings 2. Findings from the EDIAQI prospective cohort 3. Assessing air pollution and building related health risk awareness 	<ol style="list-style-type: none"> 1. Based on D4.2 2. Based on D5.2 (sensitive deliverable) 3. Based on D5.5 (sensitive deliverable)
M36	<ol style="list-style-type: none"> 1. Air quality monitoring solutions handbook 	<ol style="list-style-type: none"> 1. Based on D3.3



M48	<ol style="list-style-type: none"> 1. Market, Innovation and Applicability 2. EDIAQI Clean Air Act 2050 Roadmap 3. Final version of the wiki 4. Final version of the simulation tool 	<ol style="list-style-type: none"> 1. Based on D7.4 2. Based on D6.3
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Table 2 Development plan of the wiki page



6. Dissemination of the knowledge base/wiki

The main target group of the wiki page consists of people who have little or no prior knowledge of indoor air quality, including homeowners, commercial property owners, representatives of local municipalities, and heads of schools and kindergartens.

Target Audience	Channel
Homeowners	The project website, dedicated social media channels, articles on national and local media.
Commercial property owners	The project website, dedicated social media channels, seminars, articles on national and local media.
Local municipalities	The project website, articles on national and local media, seminars.
Schools, Kindergartens	The project website, articles on national and local media, seminars.

Collaboration with project communication and dissemination activities (D7.2) will facilitate knowledge base/wiki dissemination, using the same channels as the EDIAQI project.

- Website - link with the official [EDIAQI project website](#).
- Social media – particularly project LinkedIn, Twitter and YouTube pages to reach users outside of the research community.
- Events and meetings.



7. Simulation tool

The IAQ Simulator is a fast and easy-to-access tool for simulating indoor air quality. The main idea is to use quality data to infer the air quality index for users who don't have access to monitors or don't want to share the data. The tool introduces area or country-specific sources quickly and is implemented at no cost or need for proprietary software. Currently, the demo version of the tool is based on Danish data and addresses. This will be further developed as new data enters the project from the pilots.

The IAQ Simulator consists of three components:

1. A machine learning pre-trained model.
2. Streamlit backend to assess user information.
3. Front-end using CSS and HTML to provide the user interface.

Benefits of this tools are both to individuals, public organisations and businesses who can improve indoor air quality, and use promoting of it in their marketing strategies and raise awareness.

The simulation tool provides:

- tailored predictions: predictions based on the information from the individual location.
- practical use for improvement of living conditions: freedom of checking how different settings affect indoor air pollution (e.g., type of heating, frequency of smoking etc.) and compare, decide and take measures based on the best setting.
- free tool with user-friendly interface.

7.1 The machine learning component of the IAQ Simulator

The model is built on four types of data: indoor sink and sources, outdoor sink and sources, home properties, and air pollution measurements (NO_2 , $\text{PM}_{2.5}$, and NO_x). The data set that provides the foundation is drawn from the COPSAC 2000 cohort, one of the retrospective project cohorts (as described in the Grant Agreement and Deliverable 5.1).



7.1.1 Indoor sinks and sources

The indoor sinks and sources are leveraged from questionnaires the families in the data set were asked during the observation. These are based on how many days a year a child is exposed to specific sources and sinks since it is the kid's exposure to the sources. The exposures chosen for this study were the presence of gas stoves, cooker hoods, fireplaces, passive smoke, and carpets. The home properties were extracted from the Danish building registry. This included the construction year and total area of the home. This must be measured to use the tool for other countries or their registries. Air pollution data was taken in the homes, i.e., two to three measurements of air pollutants: PM_{2.5}, NO₂, and NO_x. PM_{2.5} was measured over a week. NO_x and NO₂ samplers were given to the parents, with comprehensive instructions on how to start and stop the measurements. After ten weeks, the samples were sent to the clinical research unit by ordinary mail and analysed. Each household was measured three times, adding up to 1020 measurements of PM_{2.5}, 772 of NO_x, and 772 of NO₂.

7.1.2 Outdoor sink and sources

The open-source gis-map open street map estimated the outdoor sinks and sources³. Based on how fast they transition to the baseline, there are two categories - 1km and 5km area of sources. To access the map, the Python package OSXM⁴ was used. Then, the area of the sources was scaled with the distance to the sources for all the sources. Here the sources were surface areas of roads, forests, airports, powerplants, industrial buildings, highways coastline, water inside the country, and agriculture.

7.1.3 Machine learning algorithms

CatBoost⁵ is an open-source, high-performance machine learning library. It stands for "Category Boosting" and is mainly known for its ability to handle categorical features

³ OpenStreetMap <https://www.openstreetmap.org/>

⁴ Python package OSXM <https://pypi.org/project/osmx/>

⁵ Prokhorenkova, L., Gusev, G., Vorobev, A., Dorogush, A. V., & Gulin, A. (2017). CatBoost: Unbiased boosting with categorical features. <https://doi.org/10.48550/arXiv.1706.09516>



directly. CatBoost Regression aims to predict a continuous target variable based on input features in the context of regression. The algorithm leverages gradient boosting techniques on decision trees, with optimisations that make it efficient and accurate. One of its key advantages is its robustness to overfitting, especially when dealing with a small amount of data. Additionally, CatBoost provides excellent tools for model interpretation, making it a popular choice among data scientists and researchers. The models were trained using the sinks, sources, house and family questionnaire data as features, while the pollutant concentrations were the target variables. The modelling pipeline is as follows:

1. Import data from the cohort and the Danish registry.
2. Simulate outdoor sources using OXMs.
3. Use Kennard Stone to do cross-validation⁶.
4. Train the catboost regressor⁷ on the N fold cross-validations.
5. Take the mean of the prediction of all the N-fold models.

7.2 Limitations of the tool

The pollution data is an average over a week of measurements, not a time series. The estimate of ventilation is missing, and the primary contributor cooking was relatively neglected in the old data. The prediction will have a limited accuracy, especially given low-cost monitoring possibilities in households, and should be used as an indication of the household IAQ. The current tool is country-specific and indoor pollution data are needed for other uses. As the project progresses, we will take steps to address its current limitations and improve the tool.

7.3 Future applications

The simulation tool will be further extended and improved with the indoor air quality data generated within the project. With a focus on the children, this simulation tool could be used by kindergarten and school teachers who would easily access approximate

⁶ Kennard-stone 2.1.5 <https://pypi.org/project/kennard-stone/>

⁷ CatBoost open source library <https://catboost.ai/>



concentration of PM_{2.5} and NO₂ and in case of high levels take some measures (increase ventilation or purification if available, open/close windows based on the outside concentrations if available). Two developments are planned:

- implementation of graphical interpretation of level of concentration (e.g., red (too high concentration, orange, green) based on WHO/EU standards and scientific publications.
- connect public monitoring of outdoor air pollution of the nearest location, and state how far away is monitoring location from the address.

By doing this, not only indoor air pollution could be improved in kindergartens and school, but also in children's home where parents could easily use simulation tool. The tool can also be used in real estate field where seller/buyer can easily access approximate levels based on estate's metadata (floor level, year of building) and habits of future tenants. Multiple properties can be compared which could help on decision making.

7.4 A short guide for online simulation tool IAQ Simulator

The simulation tool has been developed with Streamlit⁸ and Docker⁹. Streamlit is a Python library designed to easily create interactive web applications and dashboards. It streamlines the process of turning data scripts into shareable web apps, making it an excellent choice for data scientists and developers. With Streamlit, one can quickly add interactive widgets and visualisations to your apps, simplifying the development of data-driven web applications. Docker is a platform that simplifies developing, packaging, and deploying applications inside containers, providing consistency across different environments. Containers encapsulate an application and its dependencies, enabling developers to create, test, and deploy applications in a predictable and isolated manner. Docker has become a cornerstone of modern application development, making building and deploying applications seamlessly across diverse computing environments easier.

⁸ Streamlit Python library <https://streamlit.io/>

⁹ Docker platform <https://www.docker.com/>



To access the tool, visit <https://iaq-simulator.know-center.at> in your web browser. No installation or downloads are required, and it is accessible from any device with internet connectivity. The user interface is designed to be intuitive and user-friendly, and you will find various input fields and sliders to answer the questions. Your data is treated with confidentiality and not shared with third parties. Finally, there is a “PREDICT” button for activating calculations and getting results of your household's PM2.5 and NO2 levels.

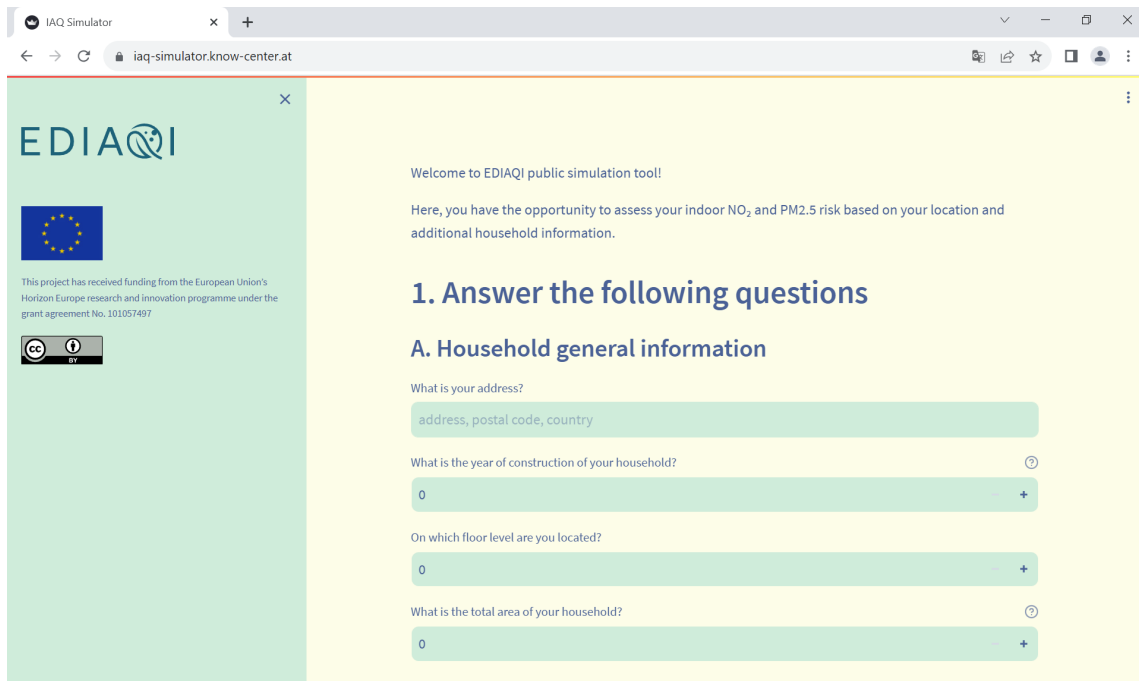


Figure 6 Main page of the IAQ simulation tool

The first section, "Answer the following questions," has different subsections, A - E, where answers are needed. In subsection A, a valid address needs to be inserted. Only valid address calculations with the “PREDICT” button will work; otherwise, an error message “Please input your valid address.” will be shown. The address is not case-sensitive.

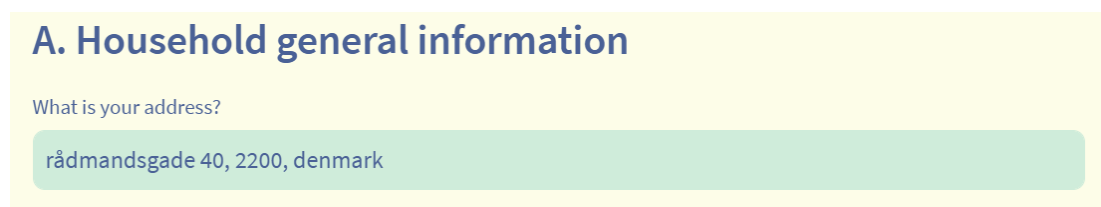
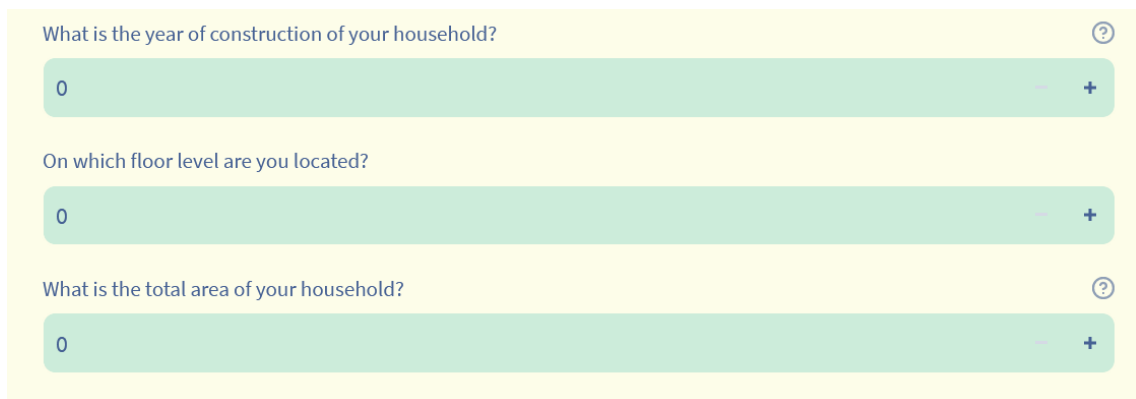


Figure 7 Subsection A of the IAQ simulation tool

Other questions in subsection A are regarding construction year, floor level, and total household area. Answers can be manually inserted or with the help of a plus sign. The

question mark sign shows the needed format for the construction year (YYYY), and the total area should be in square meters.



What is the year of construction of your household? ⓘ

0 - +

On which floor level are you located?

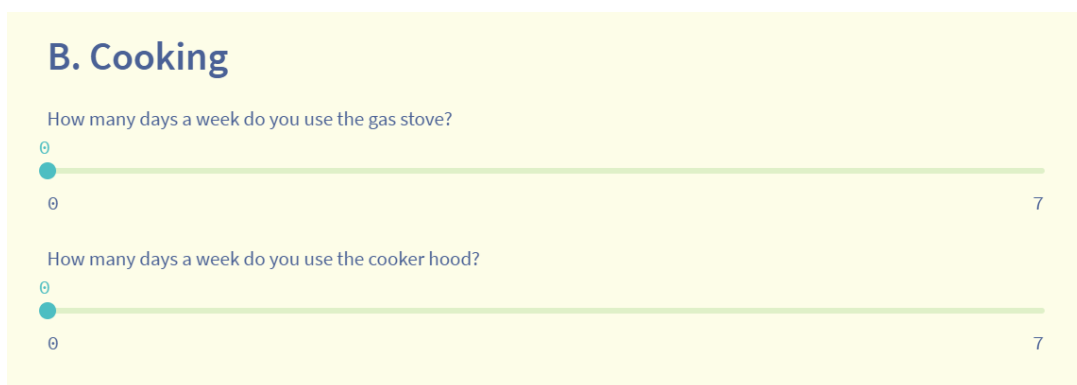
0 - +

What is the total area of your household? ⓘ

0 - +

Figure 8 Subsection A questionnaire of the IAQ simulation tool

In subsections B and C, the slider needs to be pulled to the right up to a desired number of days of use.



B. Cooking

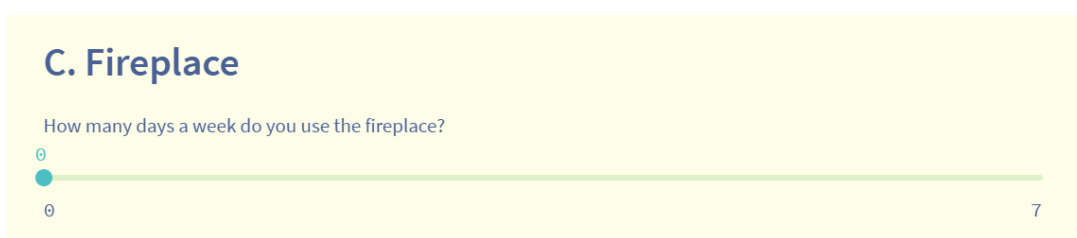
How many days a week do you use the gas stove?

0 7

How many days a week do you use the cooker hood?

0 7

Figure 9 Subsection B of the IAQ simulation tool



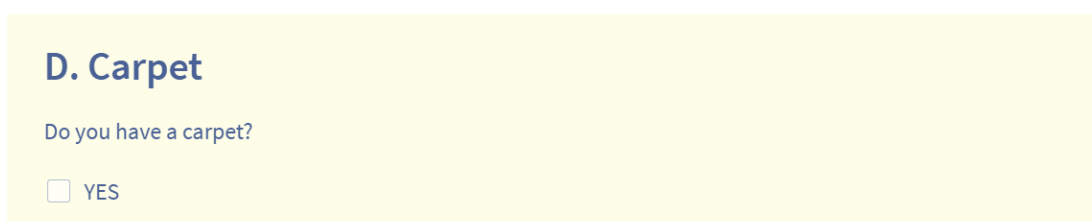
C. Fireplace

How many days a week do you use the fireplace?

0 7

Figure 10 Subsection C of the IAQ simulation tool

In subsection C, the checkbox must be checked if carpet is present in the household. Otherwise, it stays empty.



D. Carpet

Do you have a carpet?

YES



Figure 11 Subsection D of the IAQ simulation tool

In subsection E, the slider must be pulled to the right up to a wished number of smoking days.

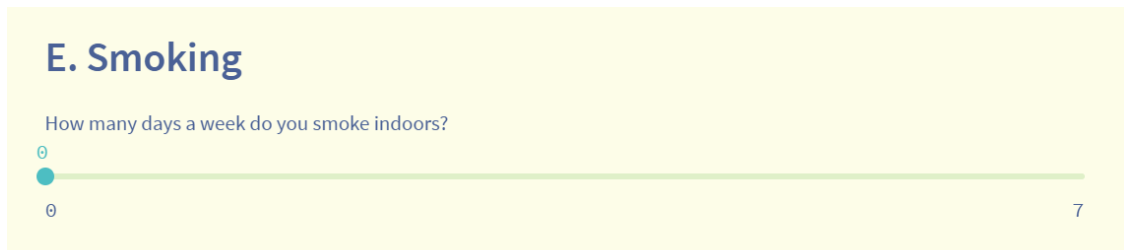


Figure 12 Subsection E of the IAQ simulation tool

In the second section, called “Predict NO₂ and PM_{2.5} concentration in your household,” the button “PREDICT” needs to be pressed to start the calculations.

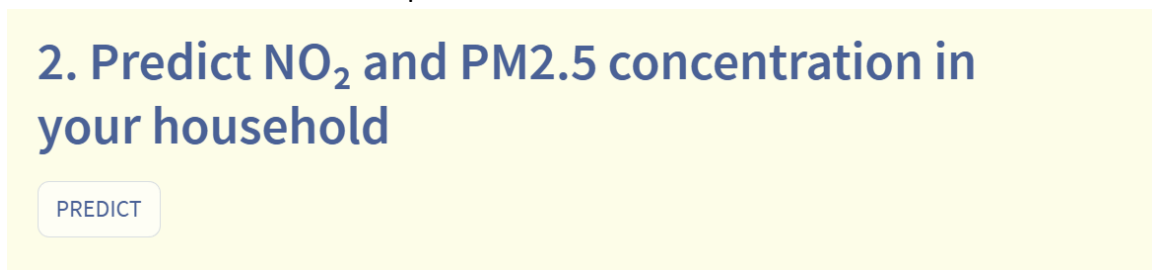


Figure 13 Prediction sector of the IAQ simulation tool

If a valid address is inserted, the concentration of NO₂ and PM_{2.5} will be shown below. These are only indications as given by the model and should be taken with care.

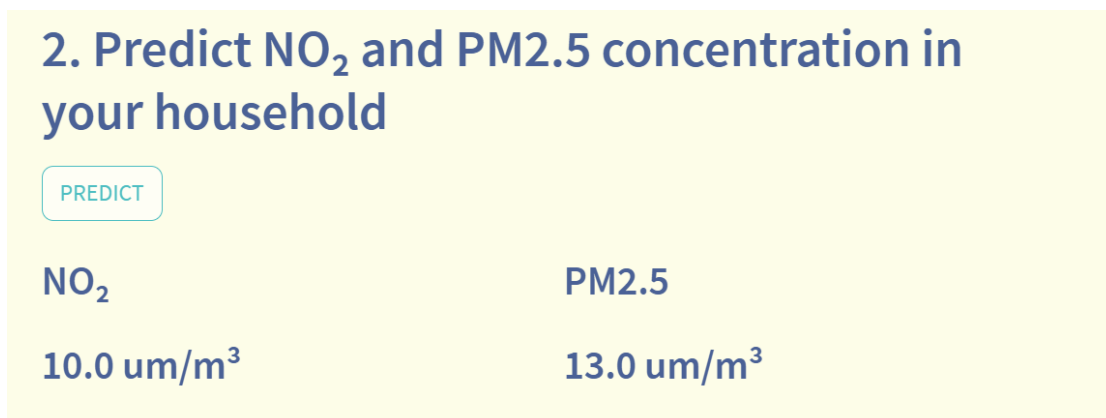


Figure 14 Results of the IAQ simulation tool

8. Sustainability

One of the main concerns of the project team is the sustainability of the project results in time. Whilst this topic will be explored in depth in Task 7.4 Project Legacy and the subsequent Deliverable 7.4 – Market, Innovation and Applicability Analysis Report, the team managing the development of each key result must take this into account from the beginning of the development process.

Regarding the EDIAQI project wiki and simulation tool, initial ideas to guarantee sustainability in the future include, but are not limited to, the following:

- Linking the page to Wikipedia as a reliable source of information on indoor air quality.
- Creating an independent page available long after the project ends and containing a link to the simulation tool.
- Use of the EDIAQI project wiki page as teaching material for indoor air quality.
- Use of the simulation tool by local authorities for preliminary risk assessment of their buildings.

As the development of the wiki and simulation tool progress, these options and others will be further explored.



9. Conclusions

The knowledge base/wiki and the simulation tool are scheduled to be delivered in month 10 of the project. However, we cannot present the final versions of these tools by month 10 as the results of the project have not yet been developed. Therefore, the development of the knowledge base/wiki and simulation tool will continue throughout the project and this report provides an overview of the development plan and how the project team intends to reach their goals. Throughout the project's duration, a set of actions will be carried out to ensure that the knowledge base/wiki is regularly updated with the latest project results. The project results will be presented in a way that is easily understood by people who have little or no prior knowledge of indoor air quality, thus making the project knowledge base/wiki more beneficial to them.

The project results will also be fed into the EDIAQI simulation tool, providing more accurate and informative guidance to users.

The management team of the wiki and the simulation tool will work with WP and task leaders to ensure the development of the wiki page and the implementation of actions based on the project's strategy. The management team of the wiki and simulation tool will also collaborate with the dissemination team to promote the EDIAQI project wiki page beyond the research community.



10. Annex 1 - WIKI User Guide

10.1 Starting a new page

For a new page, use the box at the bottom of the main page, type the article title and generate a page with that name.

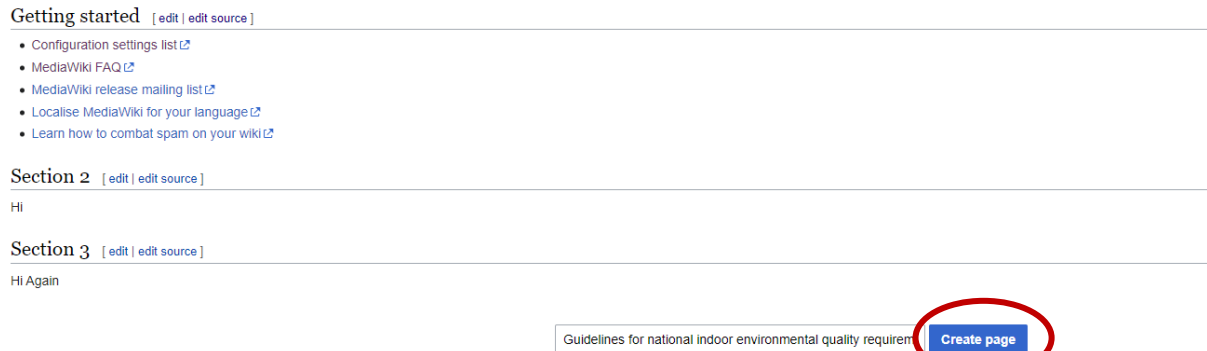


Figure 15 Creation of new wiki page

Insert the text and “Save changes”.

To edit a page using the visual editor, press on the "Edit" tab at the top of the page. Visual editor allows text editing, inserting images, etc.

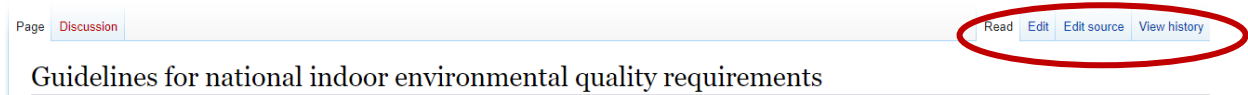


Figure 16 Editing of the wiki page

When the article is ready, then “Save changes” and again “Save changes”.

person plus 0.7 L/s per m² floor area, or alternatively CO₂ concentrations of 900-1200

✕
Save your changes
Save changes

Summary:

Describe what you changed

This is a minor edit
 Watch this page

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You are also promising us that you wrote this yourself, or copied it from a public domain or similar free resource (see [Ediaqi Wiki:Copyrights](#) for details). Do not submit copyrighted work without permission!

Review your changes

Figure 17 Saving changes of the wiki page

10.2 Adding a page to a category

To add a page to a category, use “Edit source” on the top right of the page and add the following text (where Name is the name of the category you want to add it to).

[[Category: Name]]

Important: double square brackets.

Categories already created:

- Factors affecting indoor air quality
- Indoor air pollutants
- Sensors
- Recommendations and guidelines

Page Discussion

[Read](#)
[Edit](#)
[Edit source](#)

Editing Guidelines for national indoor environmental quality requirements

Summary of key guidelines for national indoor environmental quality regulatory requirements:

- * Minimum requirements for indoor air quality, thermal comfort, lighting, and acoustic are to be set in the regulation for new buildings and major renovations;
- * Indoor air quality, ventilation and thermal comfort requirements can be specified separately for residential and non-residential buildings;
- * In non-residential occupied buildings, ventilation capacity must be 7 L/s per person plus 0.7 L/s per m² floor area, or alternatively CO₂ concentrations of 900-1200 ppm fulfilled;
- * In residential buildings an average ventilation capacity of a whole residence shall be 0.42 L/s per m² floor area and 7 L/s supply air per person which requirements;
- * Room temperature ranges in residential and non-residential buildings must be specified for heating and cooling seasons;
- * Establishing a requirement on the lower limit of relative humidity in cold climates and upper limit in southern humid climates can be considered;
- * Requirements shall be specified so that it is possible to assess the compliance based on monitoring, measurements or simulations, therefore it is important to specify application of measuring and control devices for the monitoring and regulation of indoor environmental quality shall be required at relevant unit level;
- * Conducting continuous measurement of main indoor environmental quality indicators shall be required from continuously occupied spaces;
- * It is good to support regulatory requirements with technical guidelines for the design and operation.

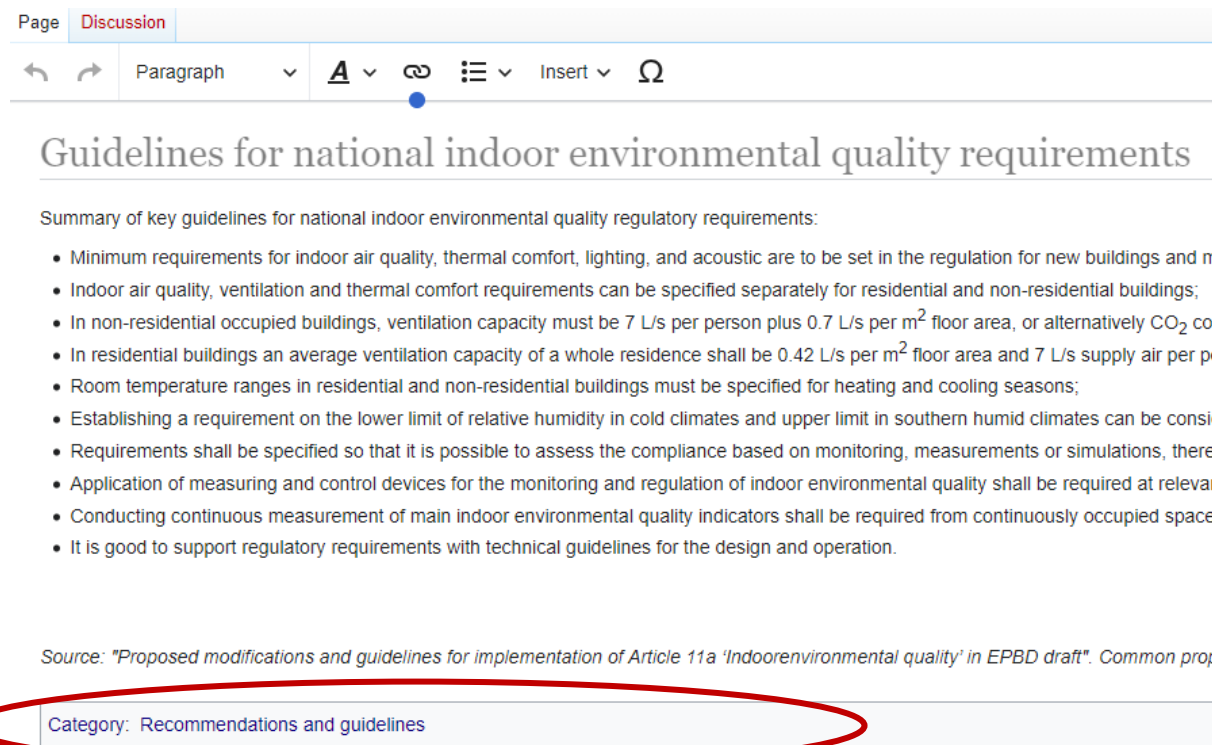
```
'''Source: "Proposed modifications and guidelines for implementation of Article 11a 'Indoorenvironmental quality' in EPBD draft". Common proposal by REHVA, Nordic Ven
[[Category:Recommendations and guidelines]]
```

Figure 18 Adding page to category



“Save changes”

Categories can be changed, or the page can also be linked to several categories. Open the page and select “Edit”. Click on the category box on the bottom of the page.



The screenshot shows a document editor interface. At the top, there is a 'Page' tab with 'Discussion' selected. Below the tab is a toolbar with icons for undo, redo, paragraph style (set to 'Paragraph'), text color, link, list, insert, and a search icon. The main content area has a title 'Guidelines for national indoor environmental quality requirements' and a summary of key guidelines. A source note is provided below the summary. At the bottom, a category box is highlighted with a red oval, containing the text 'Category: Recommendations and guidelines'.

Page **Discussion**

← → Paragraph ▼ **A** ▼ 🔗 ☰ ▼ Insert ▼ Ω

Guidelines for national indoor environmental quality requirements

Summary of key guidelines for national indoor environmental quality regulatory requirements:

- Minimum requirements for indoor air quality, thermal comfort, lighting, and acoustic are to be set in the regulation for new buildings and r
- Indoor air quality, ventilation and thermal comfort requirements can be specified separately for residential and non-residential buildings;
- In non-residential occupied buildings, ventilation capacity must be 7 L/s per person plus 0.7 L/s per m² floor area, or alternatively CO₂ co
- In residential buildings an average ventilation capacity of a whole residence shall be 0.42 L/s per m² floor area and 7 L/s supply air per pe
- Room temperature ranges in residential and non-residential buildings must be specified for heating and cooling seasons;
- Establishing a requirement on the lower limit of relative humidity in cold climates and upper limit in southern humid climates can be consi
- Requirements shall be specified so that it is possible to assess the compliance based on monitoring, measurements or simulations, there
- Application of measuring and control devices for the monitoring and regulation of indoor environmental quality shall be required at releva
- Conducting continuous measurement of main indoor environmental quality indicators shall be required from continuously occupied space
- It is good to support regulatory requirements with technical guidelines for the design and operation.

Source: "Proposed modifications and guidelines for implementation of Article 11a 'Indoorenvironmental quality' in EPBD draft". Common prop

Category: Recommendations and guidelines

Figure 19 Modifying and adjusting categories

Make necessary adjustments and “Apply changes”



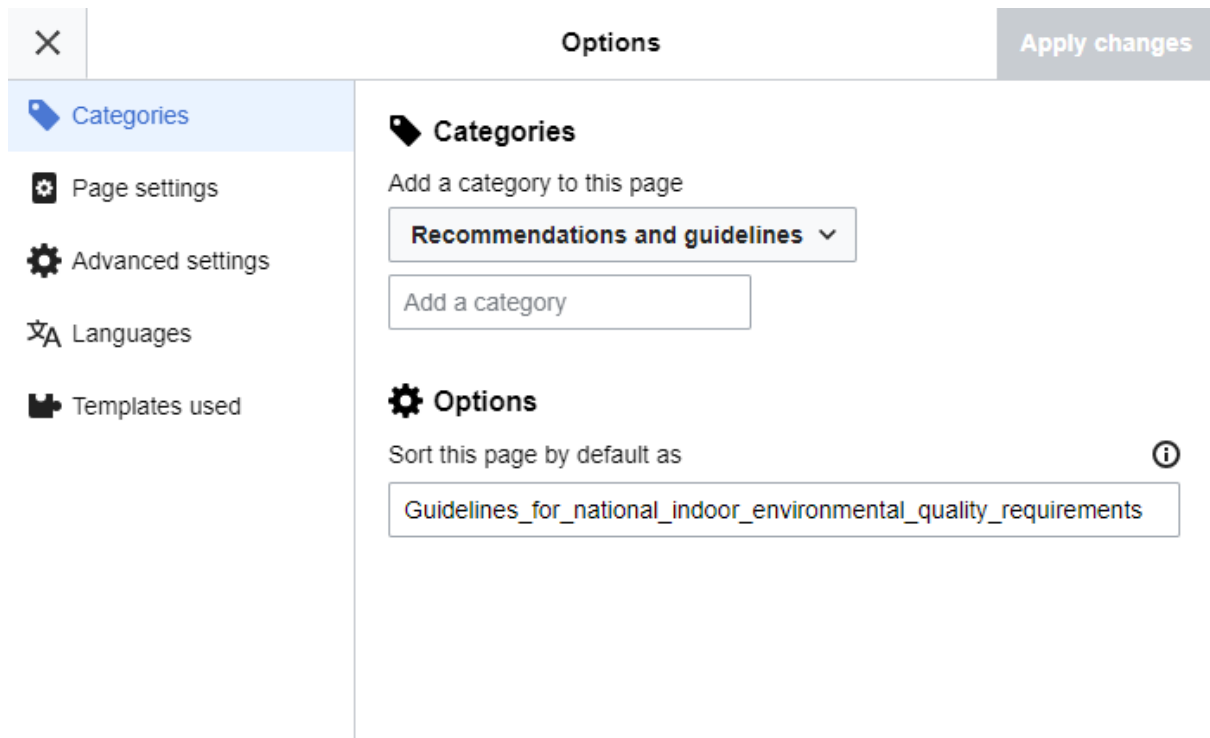


Figure 20 Adjusting categories

10.3 Updating the main page

At first, the new article is not visible on the main page.



Main Page

MediaWiki has been installed.

For accessing the write or edit permissions, please register, and contact technical team providing your username to get correct rights.

Consult the [User's Guide](#) for information on using the wiki software.

Contents [\[hide\]](#)

- 1 Categories
- 2 Getting started
- 3 Section 2
- 4 Section 3

Categories [\[edit\]](#) [\[edit source\]](#)

- ▶ Factors affecting indoor air quality
no pages or subcategories
- ▼ Indoor air pollutants
 - Bioaerosols
 - Particulate matter
 - Volatile organic compounds and formaldehyde
- ▶ Sensors
no pages or subcategories
- ▶ Recommendations and guidelines
no pages or subcategories

Figure 21 Changes on the main page

To update the main page, select “Edit source” and then “Save changes”.

Main Page **Discussion** [Read](#) [Edit](#) [Edit source](#) [View history](#)

Editing Main Page

```

<strong>MediaWiki has been installed.</strong>

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Consult the [https://www.mediawiki.org/wiki/Special:MyLanguage/Help:Contents User's Guide] for information on using the wiki software.

== Categories ==
<categorytree mode="pages">Factors affecting indoor air quality</categorytree>
<categorytree mode="pages">Indoor air pollutants</categorytree>
<categorytree mode="pages">Sensors</categorytree>
<categorytree mode="pages">Recommendations and guidelines</categorytree>

== Getting started ==
* [https://www.mediawiki.org/wiki/Special:MyLanguage/Manual:Configuration_settings Configuration settings list]
* [https://www.mediawiki.org/wiki/Special:MyLanguage/Manual:FAQ_MediaWiki_FAQ]
* [https://lists.wikimedia.org/postorius/lists/mediawiki-announce.lists.wikimedia.org/ MediaWiki release mailing list]
* [https://www.mediawiki.org/wiki/Special:MyLanguage/Localisation#Translation_resources Localise MediaWiki for your language]
* [https://www.mediawiki.org/wiki/Special:MyLanguage/Manual:Combating_spam Learn how to combat spam on your wiki]

== Section 2 ==
Hi

== Section 3 ==
Hi Again
    
```

Summary:

This is a minor edit Watch this page

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[Save changes](#) [Show preview](#) [Show changes](#) [Cancel](#) [Editing help](#) (opens in new window)

Figure 22 Update the main page



The article appears also on the main page.

Main Page [Discussion](#)

Main Page

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Contents [\[hide\]](#)

- 1 [Categories](#)
- 2 [Getting started](#)
- 3 [Section 2](#)
- 4 [Section 3](#)

Categories

[\[edit\]](#) [\[edit source\]](#)

- ▶ [Factors affecting indoor air quality](#)
no pages or subcategories
- ▼ [Indoor air pollutants](#)
 - [Bioaerosols](#)
 - [Particulate matter](#)
 - [Volatile organic compounds and formaldehyde](#)
- ▶ [Sensors](#)
no pages or subcategories
- ▼ [Recommendations and guidelines](#)
 - [Guidelines for national indoor environmental quality requirements](#)

Figure 23 Updates on the main page

10.4 Creating a category

If the existing categories are not suitable, a new category can be created.

Categories

[\[edit\]](#) [\[edit source\]](#)

- ▶ [Factors affecting indoor air quality](#)
no pages or subcategories
- ▼ [Indoor air pollutants](#)
 - [Bioaerosols](#)
 - [Particulate matter](#)
 - [Volatile organic compounds and formaldehyde](#)
- ▶ [Sensors](#)
no pages or subcategories
- ▼ [Recommendations and guidelines](#)
 - [Guidelines for national indoor environmental quality requirements](#)

Figure 24 Categoric



A category is created by creating a page in the Category: namespace. A category page can be created the same way as other wiki pages; just add "Category:" before the page title.

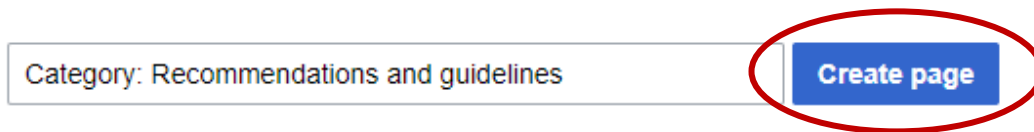


Figure 25 Creating new categories

“Create page” then “Save page” and “Save page” again.

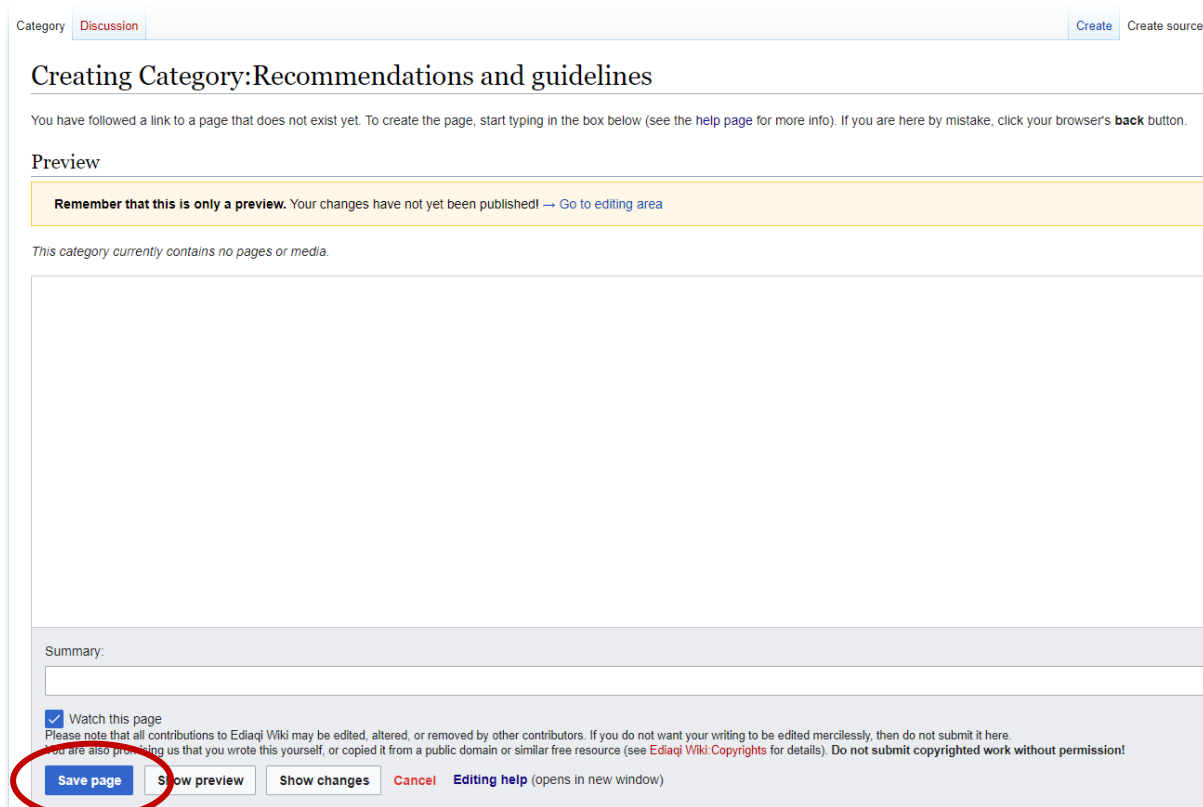


Figure 26 Save new category page



Category [Discussion](#) [Create](#) [Create source](#)

Creating Category:Recommendations and guidelines

Warning: The page you are creating is blank. If you click "Save page" again, the page will be created without any content.

Summary:

Watch this page
 Please note that all contributions to Ediaqi Wiki may be edited, altered, or removed by other contributors. If you do not want your writing to be edited mercilessly, then do not submit it here.
 You are also promising us that you wrote this yourself, or copied it from a public domain or similar free resource (see [Ediaqi Wiki Copyrights](#) for details). Do not submit copyrighted work without permission!

[Editing help](#) (opens in new window)

Figure 27 Confirmation of the new category page

Category [Discussion](#) [Read](#) [Edit](#) [Edit source](#)

Category:Recommendations and guidelines

This category currently contains no pages or media.

Figure 28 New category page

10.5 Make the category page visible on the main page

Select "Edit source" on the main page.



This project has received funding from the European Union's Horizon Europe Framework Programme under grant agreement N° 101057497.

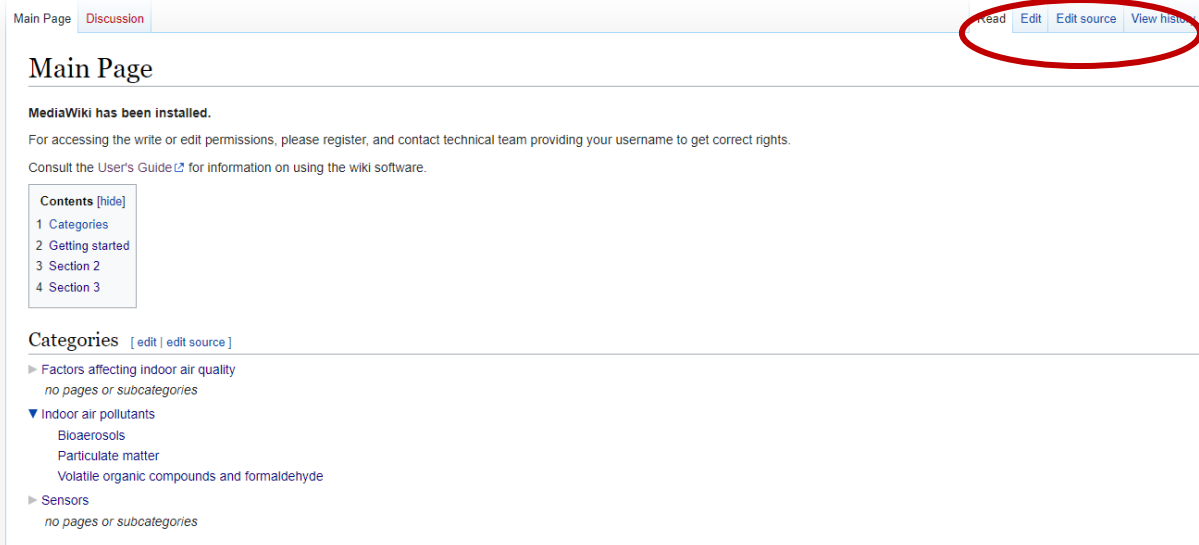


Figure 29 Edit source on the main page

Create a new category tree row by copy-paste the previous category tree mode row and replacing the name with the new category name.

Editing Main Page

```
<strong>MediaWiki has been installed.</strong>

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== Categories ==
<categorytree mode="pages">Factors affecting indoor air quality</categorytree>
<categorytree mode="pages">Indoor air pollutants</categorytree>
<categorytree mode="pages">Sensors</categorytree>
<categorytree mode="pages">Recommendations and guidelines</categorytree>
```

Figure 30 Save changes on the main page

“Save changes”





Deliverable D6.1

Knowledge Base/WIKI

Work Package 6

GUIDE – Policy creation, recommendations and training

Version: Final

