



EU Taxonomy Check

Product Book

Content

The document contains a detailed product description for the greenpass EU Taxonomy Check.

What is the EU Taxonomy?	4	What is the greenpass editor?	16
What is the EU Taxonomy Check?	6	What is assessed at an EU Taxonomy Check?	18
Where can I use the EU Taxonomy Check?	8	What are the results?	20
What does an EU Taxonomy Check bring?	10	Can I extend my EU Taxonomy Check?	22
How does the EU Taxonomy Check work?	12	What is behind the EU Taxonomy Check?	24
What do I get from an EU Taxonomy Check?	14	Square One Vienna	26

EU Taxonomy

6 environmental objectives

- 1 Climate change mitigation
- 2 Climate change adaptation
- 3 Sustainable and protection of water and marine resources
- 4 Transition to a circular economy
- 5 Pollution prevention and control
- 6 Protection and restoration of biodiversity and ecosystems



What is the EU Taxonomy?

Science-based transparency instrument for companies & investors across Europe

The EU Taxonomy is a classification system of the European Commission for sustainable real estate investments, which primarily pursues 6 environmental objectives (see graphic on the right). The regulatory requirements of the EU Taxonomy were adopted by the EU Commission in 2020. The first two objectives - climate protection and climate change adaptation - came into force in 2020. The disclosure obligation for environmental objective 1 & 2 have been in effect since January 1st, 2022. The taxonomy sets limits ("technical screening criteria") for economic activities that

The performance thresholds help companies, project promoters and investors access green finance to improve their environmental performance and identify which activities are already green. The EU Taxonomy is one of the most significant developments in the field of sustainable finance and has far-reaching implications for investors and issuers operating in the EU.

EU Taxonomy (2020):
[Final report of the Technical Expert Group on Sustainable Finance](#)

- substantially contribute to at least one of the six environmental objectives as defined in the regulation
- do no significant harm ("DNSH") to any of the other five environmental objectives as defined in the proposed regulation
- comply with minimum safeguards (e.g. OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights)

Abb. 1: © EU Commission, 2020



EU Taxonomy Check

What is the EU Taxonomy Check?

Conformity according to EU Taxonomy for green and sustainable financing of real estate

The greenpass EU Taxonomy Check is part of the Environmental Impact Kit and enables real estate and open spaces to be checked and designed in accordance with the regulatory requirements of the EU Taxonomy. The software-based and scientifically developed EU Taxonomy Check analyzes real estate and open spaces as a whole with a risk analysis with regard to 4 risk areas:

- Temperature
- Wind
- Water
- Soil-mass



Conformity check & climate risk analysis according to EU Taxonomy environmental objective #2



Digital twin as single source of truth (SSOT) for Environmental Impact Kit & expert simulations



Scientific KPIs & effective measures for optimization including confirmation of the effectiveness of adaptation measures

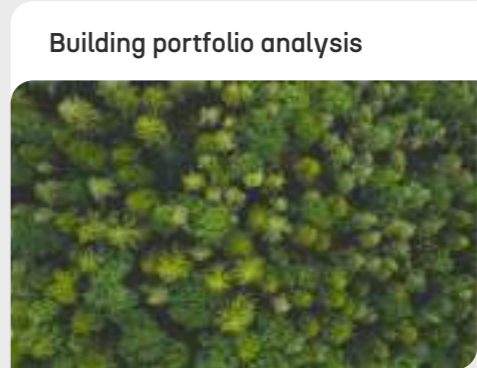


environmental
impact
kit



Find your use case

EU Taxonomy Check use cases



Where can I use the EU Taxonomy Check?

EU Taxonomy compliance with the EU Taxonomy Check for real estate across Europe

The EU Taxonomy Check applies to existing buildings and newly planned properties. For environmental objective 2 - climate change adaptation - you can choose between "do no significant harm" and 'substantial contribution' approval. In cooperation with our partners, we can provide full approval of all the environmental objectives required for your property.



New



Stock

The EU Taxonomy Check can be modularly combined with other checks from the Environmental Impact Kit. Projects can be optimized with Climate Check and Wind Check. With a (Pre-)Certification Check, projects can be optimized in terms of cost/benefit and also officially certified, thus providing proof of effectiveness.



What does an EU Taxonomy Check bring?

Official confirmation of conformity according to the EU Taxonomy for future-proof & climate-fit real estate

The greenpass EU Taxonomy Check has many advantages and enables a conformity check according to the regulatory requirements of the EU Taxonomy. A comprehensive climate risk analysis & optimization with confirmation of the effectiveness of the measures enables a successful adaptation of real estate & open spaces with regard to future climate conditions. Green assets appreciate in value and receive better financing terms, while non-green assets are at risk of declining value and higher financing costs. Compliance with the EU Taxonomy is also a key element of ESG reporting.

The EU Taxonomy Check provides official proof of green & sustainable investments and thus clear economic added value for future-proof investments, real estate & open spaces.

EU Taxonomy Check benefits



Conformity check according to the specifications of the EU Taxonomy



Comprehensive climate risk analysis & optimization



Confirmation of the effectiveness of climate change adaptation measures



Adaptation to future climate conditions



Green financing & ESG



Impact Data for ESG reporting



Climate-fit real estate & open spaces



Future & investment security



Higher climate resilience & quality of life



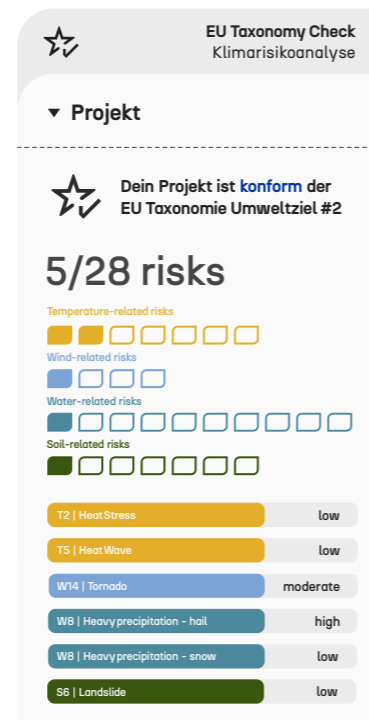
How does the EU Taxonomy Check work?

Comprehensive climate risk analysis & assessment for EU Taxonomy compliant real estate

The EU Taxonomy Check includes a data-driven & holistic climate risk analysis with meaningful KPIs. The check is based on a digital twin from the greenpass editor software, a microclimate simulation (powered by ENVI-met) and the latest risk assessment methods.

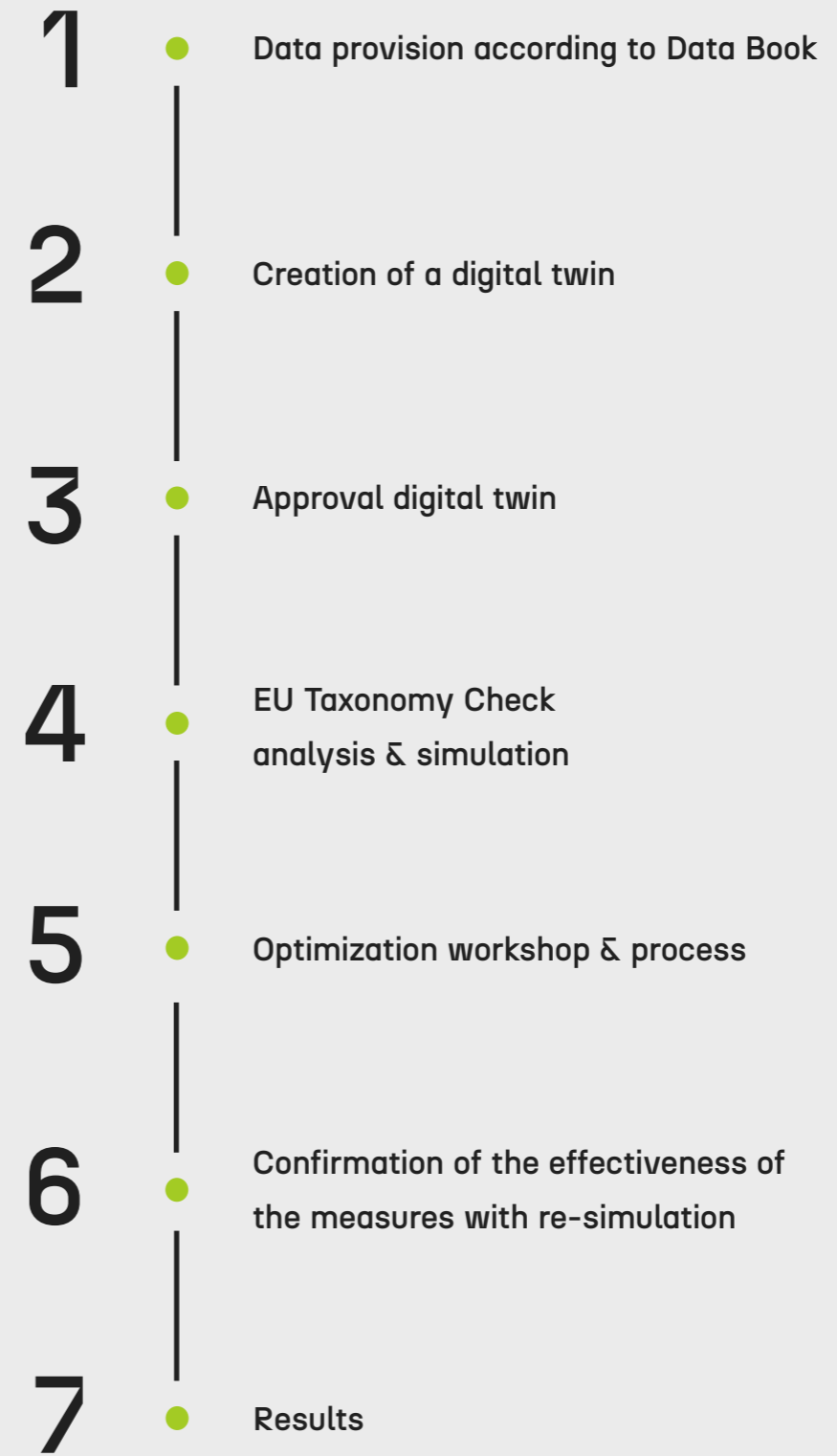
Based on a standardized process, the EU Taxonomy Check enables:

- a high-resolution simulation of the heat-related risk projection/climate scenarios
- a detailed risk assessment according to real estate elements
- the identification of climate adaptation measures
- proposing climate adaptation measures
- evaluating the impact of climate adaptation measures
- a conformity check according to EU taxonomy requirements



You can find more information and examples of how to use the EU Taxonomy Check in the Use Case Book and the Reference Book.

EU Taxonomy Check process





What do I get from an EU Taxonomy Check?

Risk analysis & conformity check for real estate according to EU Taxonomy

The EU Taxonomy Check provides official confirmation of compliance with the risks & criteria set out in the EU Taxonomy and its annexes. It fully complies with the requirements mentioned in the official documents and is scientifically based & validated.

The analysis is based on the most modern methods for risk assessment and effectiveness assessment of adaptation measures as well as on a high-resolution microclimate simulation (ENVI-met) with 3 future scenarios (SSP) and LOD 1.

The check includes a comprehensive list of identified risks, adaptation measures and evaluation of their effectiveness including impact figures, graphics and optimization recommendations.

EU Taxonomy Check product features



EU Taxonomy Check for buildings & open spaces



4 risk areas Temperature, wind, water, soil-mass



Risk identification & assessment for 30 climate risks incl. KPIs for successful climate change adaptation



Digital twin as single source of truth (SSOT) for expert simulation & area analysis



Level of Detail (LOD) 1 for digital twin & assessment



High-resolution microclimate expert simulation for 3 climate scenarios (SSP) with ENVI-met



Clear optimization recommendations & confirmation of effectiveness for successful climate change adaptation



Clear graphics & heatmaps for a targeted optimization of the effectiveness



Easy to understand & transparent report with all results incl. executive summary & confirmation of conformity



Get your kit

editor

What is the greenpass editor?

The greenpass Editor (GP.e) software is the basis for the Environmental Impact Kit & digital twin

The greenpass editor is a 3D & GIS-based software for a digital twin of real estate & open spaces. The digital twin serves as a uniform basis and single source of truth (SSOT) for the greenpass Environmental Impact Kit and the Impact Checks & allows a holistic and valid assessment of the environmental impact of real estate & open spaces around the world.

You can find more information and specifications for the necessary data basis for the EU Taxonomy Check in the Data Book.



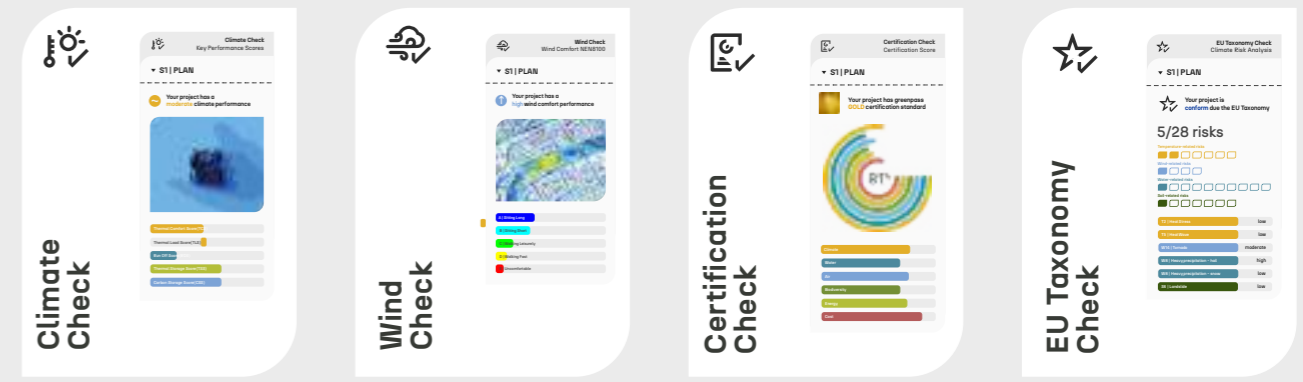
3D & GIS-based modeling software for real estate & open spaces with import of common planning data (e.g. CAD, GIS)



Easy & fast modeling of projects with comprehensive database of 100+ materials & all types of vegetation



Digital twin as a single source of truth (SSOT) for environmental impact checks & high-resolution expert simulations





What is assessed at an EU Taxonomy Check?

Climate risk & effectiveness assessment for people, building envelope, basement, open space & vegetation

The standard scope of the EU Taxonomy Check includes an assessment of a selected scenario (planning draft or status quo situation) for 3 climate scenarios or future projections. The EU Taxonomy Check identifies & evaluates 30 climate risks from 4 risk areas as well as the effectiveness of the adaptation measures for the areas of people, building envelope, basement, open space & vegetation.

Additional add-ons can be used to tailor the standard scope of the EU Taxonomy Check to individual requirements and needs.

EU Taxonomy Check 30 climate risks & indicators

Temperature

- Changing Temperature (Air, freshwater, marine water)
- Heat stress
- Temperature variability
- Permafrost thawing
- Heat wave
- Cold wave/frost
- Wildfire
- Thermal Comfort
- Heat wave days
- Tropical nights

Water

- Changing precipitation patterns and types (rain, hail, snow/ice)
- Precipitation or hydrological variability
- Ocean acidification
- Saline intrusion
- Sea level rise
- Water stress
- Drought
- Heavy precipitation (rain, hail, snow/ice)
- Flood (coastal, fluvial, pluvial, ground water)
- Glacial lake outburst

Wind

- Changing wind patterns
- Cyclone, hurricane, typhoon
- Storm (including blizzards, dust and sandstorms)
- Tornado

Soil-mass

- Coastal erosion
- Soil degradation
- Soil erosion
- Solifluction
- Avalanche
- Landslide
- Subsidence

greenpass EU Taxonomy Check

Risk identification

		2022	2021-2050 Shared Socioeconomic Pathways (SSP)		
			2.6	4.5	8.5
Temperature	Heat stress	2	2	2	2
	Heat wave	1	1	1	1
Wind	Storm	1	3	3	3
	Tornado	1	3	3	3
Water	Heavy precipitation	1	1	1	1
	Hail	1	3	3	3
	Snow/Ice	1	3	3	3
Soil-mass	Landslide	1	3	3	3

Legend

- low risk
- moderate risk
- high risk
- no risk

1 Database query & analysis
2 Simulation-based
3 Assessment based on expert knowledge

Measures selection

Measure	Implementation grade	Risks					Legend		
		Heat wave	Storm	Tornado	Heavy precipitation	Hail			
Open Space	Tree	17 pcs.	22%	High	High	High	High	High	High
	Meadow	281 m ²	100%	High	Moderate	High	Moderate	High	High
	Desealing surface	864 m ²	95%	High	High	High	High	High	High
Building	Green roof extensive	1,904 m ²	105%	High	Moderate	Moderate	Moderate	Moderate	Moderate
	Facade greenery ground-based	450 m ²	19%	High	Moderate	Moderate	Moderate	Moderate	Moderate
	Building isolation	yes	100%	High	High	High	High	High	High



The project <<project name supersuperlong>> meets the requirements of the EU Taxonomy according to Annex 1 for the environmental objective 2 - climate change adaptation "Do No Significant Harm".

The project implements targeted adaptation measures such as roof and facade greening to reduce the climate risks identified for the location.



EU Taxonomy Check reporting

What are the results?

Briefly & comprehensibly summarized and all information at a glance

The results of the EU Taxonomy Check are transparently summarized and documented in the form of a clear and readable digital report. The length of the EU Taxonomy Check Report is typically around 30-100 pages.

The report contains the following chapters or summarizes the following content in an overview:

- **Intro**
- **Project information**
- **Scenarios** including climate projections
- **Results in form of**
 - Numbers
 - Heat maps
 - Graphics
- **Detailed risk assessment** according to real estate elements
- **Identification of measures** for climate change adaptation
- **Impact assessment** of the measures
- **Comparison graphs**
- **Executive summary**
- **Annex**
 - Wiki





Choose your add-ons

Can I extend my EU Taxonomy Check?

One kit with add-ons for all your needs & requirements

In addition to the combination with other checks of the Environmental Impact Kit, the standard scope of the EU Taxonomy Check can be expanded with add-ons as required - e.g. an optimization round, one or more reference scenarios (status quo - before/after comparison), further planning & Climate scenarios, additional evaluations such as environmental objective #1 climate change mitigation (powered by partners) and more.

Simply select your add-ons & assemble your Environmental Impact Kit modularly & tailor-made for your situation.

The add-ons for the EU Taxonomy Check are divided into the following categories:

- **Scenarios**
additional scenarios & variants such as optimization, planning, status quo, worst, moderate or maximum
- **Conditions**
expanding analysis conditions or future climate scenarios
- **Analysis**
additional analysis evaluations such as Environmental objective #1 (powered by Partners)
- **Services**
additional services such as processing time

Our trained greenpass partners and the sales team will be happy to support you in finding your ideal environmental impact kit for your situation and requirements.
contact@greenpass.io

EU Taxonomy Check add-ons

Scenarios

- Add-On: Optimization - normal size (<=10.000m2)
- Add-On: Optimization - large size
- Add-On: Planning scenario extra - normal size (<=10.000m2)
- Add-On: Planning scenario extra - large size
- Add-On: Reference scenario Status Quo - normal size (<=10.000m2)
- Add-On: Reference scenario Status Quo - large size

Analysis

- Add-On: Environmental objective #1 climate change mitigation (powered by partners)

Conditions

- Add-On: Future climate scenario extra

Service

- Add-On: Time-of-Service - Priority (within 4-5 weeks)
- Add-On: Time-of-Service - High Priority (within 1-3 weeks)



What is behind the EU Taxonomy Check?

Scientifically valid & state-of-the-art methods for risk & efficacy assessment

The greenpass EU Taxonomy Check was developed in several years of research and development in a practice-oriented manner and according to the defined requirements of the EU Taxonomy. Behind the greenpass technology are more than 16 national & international research projects as well as more than € 6 million in investments & funding.

Find out more information about the development of greenpass in the official Validation Book.

12+

years of research & development

16+

R&D projects

€6.0m

investment & fundings

Technology Development Partner



Network Partner





Abb. 2: Courtyard Square One Vienna

Square One Vienna

EU Taxonomy conform real estate

Project type
Building

Area
approx. 0.7 ha

Location
Vienna
Austria

Customer
ÖGNI/
Strabag Real Estate

Completion
2017

Use Cases
Status quo & retrofit
Official certification
Regulation fulfillment

Cutting edge with a sustainable office building in Vienna

The Square One is a multifunctional office building in the up-and-coming Muthgasse/Heiligenstadt urban development area in Vienna and one of the first EU taxonomy-compliant buildings in Vienna. A number of effective measures to mitigate and adapt to climate change and the associated risks have been successfully implemented. The DGNB platinum-certified property was comprehensively checked for all environmental goals of the EU taxonomy in cooperation with the Austrian Sustainable Building Council (ÖGNI), PricewaterhouseCoopers (PwC) and greenpass. And confirms the pioneering role of one of the most modern office buildings with future-proofness and high investment security.

‘The Square One shows how sustainability can be reconciled with the requirements of the EU Taxonomy. Together with PwC and greenpass, we were able to successfully confirm the building's conformity with the requirements of the EU Taxonomy.’

Peter Engert
CEO ÖGNI



- Customer**
 - ÖGNI/Strabag Real Estate
- Architecture**
 - HNP architects
- EU Taxonomy**
 - ÖGNI
 - PwC
 - greenpass





Book
a demo



Greenpass is a Viennese ClimateTech company founded in 2018 for climate-fit and sustainable real estate & open spaces. We are an interdisciplinary team of highly qualified & passionate climate resilience experts.

Get in touch & find your local Urban Climate Architect (UCA)

<p>220+</p> <p>climate-fit developments</p>	<p>180+</p> <p>happy customers</p>	<p>50+</p> <p>trained UCA partners</p>
--------------------------------------------------------	-----------------------------------------------	---------------------------------------------------

-  contact@greenpass.io
-  Leopold-Ungar-Platz 2/4/423
1190 Vienna, Austria

awarded by

Presented by BUILT WORLD in cooperation with PwC. More info at www.proptechmap.com

www.greenpass.io [in](#) [f](#) [▶](#)  urban
climate
architect



design **climate-fit real
estate & open spaces**
for the future now!



contact@greenpass.io



Leopold-Ungar-Platz 2/4/423
1190 Vienna | Austria



www.greenpass.io