

Recommendation to the European Commission  
and the Sustainable Finance Platform

# Market feedback from testing the proposed EU Taxonomy Technical Screening Criteria for Buildings

Intermediate Project Report  
December 2020



## PUBLICATION DETAILS

### ABSTRACT

This intermediate project report is part of a study that provides market feedback of four European Green Building Councils by testing the proposed EU Taxonomy Technical Screening Criteria for Buildings. It aims to guide the transition of the screening criteria of the Taxonomy from a technical proposal into a functioning system at the very core of a future-proof European economy. A final report will be available as of February 2021.

### ON BEHALF OF

The European Commission and the Sustainable Finance Platform

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In this study, Europe's most renowned Green Building Councils of the Partnership Network G17, led by the German Sustainable Building Council (DGNB) and the Green Building Council España (GBCe) were joined by 24 financial market participants from Spain, Germany, Austria and Denmark. They provided relevant information on applying the proposed Taxonomy criteria to real case buildings and contributed with their expertise and market know-how. A final report will be available as of February 2021.

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## Table of Content

Tables and Figures .....	4
Executive Summary .....	5
Introduction .....	7
Summarized results of the application of criteria .....	10
Overarching topics .....	14
Topic: Rollout of the Taxonomy Delegated Act .....	14
Topic: Ambition and proposed instruments for climate change mitigation .....	15
Topic: Definition of benchmarks .....	16
Topic: Alignment with existing initiatives, recognition and reliability .....	16
Topic: Future risks, minimum safeguard criteria and other social aspects .....	17
Topic: The use of buildings and sizes .....	18
Activity: Construction of new buildings .....	19
Topic: Applicability of criteria and project stages .....	19
Topic: Climate change mitigation criterion .....	19
Topic: Climate change adaptation criterion .....	20
Topic: Water criterion .....	21
Topic: Circular Economy criterion .....	21
Topic: Pollution criterion .....	21
Topic: Ecosystems criterion .....	22
Activity: Renovation .....	24
Topic: Applicability of criteria and project stages .....	24
Topic: Climate change mitigation ambition .....	24
Activity: Single measures .....	25
General feedback .....	25
Activity: „Acquisition and Ownership“ .....	26
Topic: General .....	26
Topic: Climate change mitigation criterion .....	26
Topic: Climate change adaptation criterion .....	28
Topic: Pollution criterion .....	29
Topic: Ecosystems criterion .....	29

Annex I: Proposal for expanding the Climate Change Mitigation Criterion .....	30
Option 1 - Energy path (similar to current proposal) .....	30
Option 2 - Carbon path I: Equivalent ambition – Calculated GHG emissions equivalent to energy path .....	30
Option 3 - Carbon path II: Transition approach – Average or above average GHG emissions intensity plus Paris-aligned specific “climate action roadmap” in operation .....	30
Annex II: DGNB’s feasibility assessment of the requirements of the EU taxonomy for Construction of New Buildings and Renovation of the Do No Significant Harm criteria for "Pollution prevention and control" .....	33

## Tables and Figures

Table 1: Overview of assessed projects .....	10
Figure 1: Energy path for residential buildings (Option 1) .....	31
Figure 2: Proposed energy path for non-residential buildings for Germany (no energy classification available) (Option 1 – Non-residential buildings, e.g. Germany) .....	31
Figure 3: Proposed carbon paths I (equivalent) and II (transition path) for residential buildings (carbon metrics can be applied for Germany) (Options 2 and 3) .....	32
Figure 4: Proposed carbon paths I (equivalent) and II (transition path) for non-residential buildings (Options 2 and 3) .....	32

# Executive Summary

In July 2020, a consortium of EU-based Green Building Councils (Green Building Council España (GBCe), the German Sustainable Building Council (DGNB), the Danish Green Building Council (DK-GBC), and the Austrian Green Building Council (ÖGNI)) initiated a study on the **“Evaluation of the market-readiness of the proposed EU Taxonomy technical screening criteria for Buildings”**.

The consortium was joined by a group of **24 financial market participants** from Spain, Germany, Austria and Denmark, **representing different stakeholder groups directly impacted by the EU Taxonomy regulation**: mortgage lenders, financial service institutions, real estate developers, insurance companies, investment funds, pension funds, institutional investors and valuation firms.

These are, among others: ACCIONA INMOBILIARIA S.L.U, Allianz Real Estate GmbH, AP Pension, ATP Ejendomme A/S, Berlin Hyp AG, CORESTATE CAPITAL ADVISORS GMBH SUCURSAL EN ESPAÑA, Danica Pension, DEAS A/S, Deko Immobilien Investment GmbH, Dreyer Logar & Partner, ECE Projektmanagement GmbH & Co. KG, H.A.U.S. Healthy Buildings S.L., ING N.V., LaSalle Investment Management Kapitalverwaltungsgesellschaft mbH, Naussauische Heimstätte, NEINOR HOMES S.A., NREP, PensionDanmark A/S, PKA A/S, Strabag Real Estate GmbH, Teichmann & Compagnons Property Networks GmbH, UBM Development GmbH, value Development GmbH.

**The study tested 53 projects, covering the following three Taxonomy activities:**

- New Construction (20 projects)
- Renovation (3)
- Acquisition and Ownership (30).

The study initiators and its participants **welcome the initiative of the European Commission to create a common language for what constitutes a sustainable investment** through a reliable framework of reference that makes their efforts comparable, plannable and scalable to minimise economic risks associated with the impending climate crisis.

While unwaveringly supportive of the Taxonomy principles, this diverse project group **is concerned that the recently published technical screening criteria might not find the desired uptake by the market** if released in their current form, thereby lessening the real-world impact of the Taxonomy regulation in Europe and beyond.

**The need for ambition and changes to the scope and depth of the criteria are fully acknowledged**, however, the draft Delegated Act document for consultation, released at the end of November created a situation of uncertainty among the market participants.

**Therefore, any changes in ambition need to be proportional in relation to the overall objectives of the Taxonomy and need to be actively managed to ensure market buy-in.**

**Overarching recommendations:**

- **The development and communication of a clear and reliable transition roadmap** regarding higher ambition or changing metrics of and within the screening criteria to enable the market to start preparing for future requirements.
- **The establishment of of a clear and transparent procedure for setting benchmarks.**
- **The introduction of adequate impact assessments**, e.g. active steering of Taxonomy development, extension and adjustment processes with real case studies accompanying considered changes upfront to prepare market participants.
- **The immediate recognition of existing standards, certifications and labels:** data collection, especially regarding technical specifics of the building, is regarded as a significant barrier for those market participants who have not yet introduced standard data capture and

management procedures. Standardised information or information based on recognised labels or certifications pose fewer difficulties for market participants.

- **The timely development and roll-out of standardised building documentation tools and processes**, e.g. through building passports/logbooks or Level(s) reporting.

#### **Recommendations regarding New Construction and Renovation:**

- As an alternative to the primary energy demand requirement, **also allow proof of climate protection criterion via GHG metrics.**
- **Change metrics to GHG emissions as soon as possible** (coupled, if necessary with energy indicators).

#### **Recommendations regarding Individual Measures:**

- **Ensure that eligibility of individual measures depends on existence of renovation or climate roadmaps** to avoid future lock-in effects.

#### **Recommendations regarding Acquisition and Ownership:**

- As an alternative to the primary energy demand requirement, **also allow proof of climate protection criterion via GHG metrics.**
- **Change metrics to GHG emissions as soon as possible** (coupled, if necessary with energy indicators).
- **Introduction of an additional “transition path” which defines medium-performing buildings for which an established Paris-compliant investment plan is available to increase Taxonomy impact beyond EPC class A rated buildings.**

#### **Recommendations regarding DNSH:**

- **Facilitation of appropriate instruments and processes**, allowing less rigid alternative evidence of achieving the defined targets, e.g. simplified evidence via tendering documents
- Inclusion of a development path with statements on both extent / topics of the DNSH criteria and ambition to ensure that DNSH criteria do not undermine climate mitigation and adaptation effort.
- **Development of more concrete criteria for the climate adaptation objective.**

# Introduction

**Real estate is crucial for the successful transition to a low-carbon economy, as it represents 40% of global energy consumption and emits about the same amount of greenhouse gas emissions. In order to stay on a global warming path below 2°C, buildings-related emissions need to decrease by nearly 80% from 2015 (Paris agreement) levels by 2050. This can only be achieved by consistently integrating the environmental externalities (“risks”) into financial decision making.**

The EU is examining how to support this integration, and released a “Sustainable Finance Action Plan” to mobilize finance for sustainable growth, Finance is a critical enabler of transformative improvements in existing industries, within Europe and globally. One aspect of the 2018 Action Plan was to establish a clear and detailed EU classification system (the so-called “Taxonomy”) for sustainable activities. In March 2020, the Technical Expert Group, TEG, proposed Taxonomy screening criteria for four associated economic activities: construction of new buildings, building renovations, individual measures and professional services, acquisition and ownership.

## About the study

In July 2020, Green Building Council España (GBCe), the German Sustainable Building Council (DGNB), the Danish Green Building Council (DK-GBC), and the Austrian Green Building Council (ÖGNI) initiated a study for the “Evaluation of the market-readiness of the proposed „EU Taxonomy Screening Criteria“ for construction and real estate activities”.

The study aims to guide the transition of the Taxonomy screening criteria from a technical proposal into a functioning system at the very core of a future-proof European economy. By practical application of the Taxonomy criteria to real buildings or projects, the study tests the strength of the planned criteria in delivering the envisaged impacts of the Taxonomy and identifies costs and benefits of the implementation of related processes for both the European Commission and to the financial market participants alike. The study participants moreover gained invaluable insights regarding data quality and verification in regards to the greening of their respective portfolios. These insights form the basis of capacity building within the participating organisations and foster the implementation of sustainability criteria into their processes.

In this study, Europe’s most renowned Green Building Councils of the Partnership Network G17, led by Green Building Council España (GBCe) and the German Sustainable Building Council (DGNB), were joined by 24 financial market participants. The market participants provided relevant information on applying the proposed Taxonomy criteria to real buildings and contributed with their expertise and market know-how. Together, the market participants from Spain, Germany, Austria and Denmark applied the Taxonomy criteria to a total of 53 buildings. Basis of the evaluation of the market-readiness of the Taxonomy criteria are the criteria as suggested by the Technical Expert Group in their Final Report to the European Commission in March 2020.

The 24 participating organisations represent different stakeholder groups that are directly impacted by the EU Taxonomy regulation. They are credit institutions, financial service institutions, real estate developers, insurance companies, investment funds, pension funds, institutional investors and valuation companies. Among the 24 organisations are: ACCIONA INMOBILIARIA S.L.U, Allianz Real Estate GmbH, AP Pension, ATP Ejendomme A/S, Berlin Hyp AG, CORESTATE CAPITAL ADVISORS GMBH SUCURSAL EN ESPAÑA, Danica Pension, DEAS A/S, Deka Immobilien Investment GmbH, Deka Immobilien Investment GmbH, Dreyer Logar & Partner, ECE Projektmanagement GmbH & Co. KG, H.A.U.S. Healthy Buildings S.L., ING N.V., LaSalle Investment Management Kapitalverwaltungsgesellschaft mbH, Naussaische Heimstätte, NEINOR HOMES S.A., NREP, PensionDanmark A/S, PKA A/S, Strabag Real Estate GmbH, Teichmann & Compagnons Property Networks GmbH, UBM Development GmbH.

As diverse as the participants are, they are unified by the intrinsic motivation to be at the forefront of the transition of the European economy to a risk resilient, carbon neutral and climate positive

market leader. Their motivation is fueled by their understanding of the significance of the risks associated with uninhibited climate change.

**The participants therefore welcome the initiative of the EC to create a reliable framework of reference that makes their efforts comparable, plannable and scalable to minimise economic risks associated with the impending climate crisis.**

At the same time, there is a sense of urgency among the different stakeholders regarding the opening of channels of communication between the more technically oriented partners and the more financially oriented participants.

The companies were motivated to participate in the study as the Taxonomy is regarded as a highly relevant and business-influencing topic. Participants were therefore eager to collect first-hand experience and use the opportunity to give feedback to current political developments.

Weekly Q&A sessions were seen as added value for exchanging experiences and know-how with other participants and discussing uncertainties in applying the Taxonomy criteria, e.g. providing the necessary evidence. The companies were motivated to evaluate their asset's non-financial value and regarded their participation in the study as information source for improving or further contributing to existing ESG and CSR reporting. Handling in Taxonomy criteria on few projects also helped participants in estimating time needed for data collection and serves as an eye-opener for optimising internal processes and structures in future.

Between the 24 participants, the study (which is still ongoing until Q1 2021) was able to test the technical screening criteria by applying them to 53 different construction related projects (see Table 1: Overview of assessed projects). These projects cover the three activities new construction, renovation, and acquisition and ownership. Most of the projects relate to the activities new construction (20 cases) and acquisition and ownership (30 cases). Three cases, all located in Germany, look at renovation projects. The real world case studies conducted in the context of this market-readiness study were all freely chosen by the market participants (and the respective property owners, where applicable). Among the 53 projects involved in the study, several received one or more certificates according to the DGNB system for sustainable buildings, one according to the BREEAM scheme and one according to the LEED system. There were no restrictions or conditions on the choice of project to be brought into the study by the accompanying GBCs.

## **Methodology**

The evaluation of the market-readiness of the proposed Taxonomy criteria was performed in two phases. Phase 1 was conducted over a period of two weeks in October 2020. Deliberately kept extremely short, the purpose of this initial phase of data collection was to generate insights into the current availability of data relevant to adhere to the Taxonomy regulation. During phase 2 of the evaluation, market participants or assigned consultants were given more time and more support in gathering relevant data to prove Taxonomy eligibility of their projects. At the time of writing this interim report, phase 2 is still being conducted. This report, as well as the recommendations within it, is thus based solely on the insights of phase 1.

While somewhat limited in scope and representativeness due to the number of projects evaluated, this study of the market-readiness of the proposed Taxonomy criteria gives valuable feedback from first-hand users of the criteria.

Focal point of the study is the provision of significant contributions to climate change mitigation, while not doing significant harm to the environmental goals of climate change adaptation, water, pollution, circular economy and ecosystems. This is in line with the status of the Technical Annex to the Final Report of the Technical Expert Group as published in March 2020.

To achieve this, participating organisations were given three questionnaires including all criteria for DNSH, one each for the activities construction of new buildings, renovation, acquisition and ownership. The questionnaires included proposals for evidence and an additional section on effort of data collection, data sourcing aspects, and on the evaluation of the reliability of the provided answers. The participants were also interviewed regarding their motivation to participate, the

respective organisation's current status and objectives with regards to sustainability, and the structure of sustainability related personnel and data flows within the organisation.

During the initiation phase and during phase 1 of data collection, participating organisations were given training on the proposed criteria. The GBCs also provided two-hourly Q&A sessions on a weekly basis that were well frequented by the market participants. During these sessions, there was frequent and insightful exchange between all participants, indicating once more the need for and willingness to exchange ideas and challenges related to the alignment of projects with the proposed taxonomy criteria.

The results published here are an initial summary of the current status of the market-readiness study.

As such, the findings presented are geared at helping the European Commission in the definition of the delegated acts that will flesh out Taxonomy regulation. Both, the study initiators (GBCs), as well as the study participants, sincerely hope that the Commission takes to heart the findings of the study. Being unwaveringly supportive of the Taxonomy, this diverse project group is concerned that the technical screening criteria might not find the desired uptake by the market if released in their current form, thereby lessening the real-world impact of the Taxonomy regulation in Europe and beyond.

In October 2020, the project team received a first document regarding the future Taxonomy regulation, outlining a new draft of the screening criteria to be included in the delegated acts in January 2021. The changes compared to the proposed criteria as released by the Technical Expert Group in March 2020 were discussed intensely during the subsequent weeks.

The Delegated Act document for consultation, released at the end of November, is also discussed in this recommendation report. The following recommendations also reflect on the Delegated Act document, partly from an abstract but market participants' position, partly from certification scheme operator perspective. As project group, both the initiators as well as the participants are aware of the need of the Taxonomy to include changes in the level of ambition, the scope, and the depth of the criteria. In light of this, we strongly suggest the introduction of testing of the flexibility of the market to react to changing criteria by means of appropriate instruments and bodies. Moreover, changes in ambition, depth and scope of criteria needs to be actively and well managed.

This feedback document is structured as follows, summarizing first the reflections of the market participants, the Advisory Board, and the GBCs, followed by specific recommendations derived from the reflections:

1. Summarised results of the application of criteria
2. Overarching topics
3. Construction of New Buildings
4. Renovation
5. Individual Measures
6. Acquisition & Ownership
7. Annex: Proposal for expanding the Climate Mitigation Criteria

We are happy to discuss the findings in person with representatives from the European Commission as well as the Sustainable Finance Platform.

**DISCLAIMER:** The observations and recommendations presented here are the results of an intensive consultation and feedback process spanning several months across a large number of different organisations. Regular Q&A meetings have been conducted to consolidate the feedback and recommendations. The data basis for this report are the experiences with the application of the proposed Taxonomy criteria of the different participants. We therefore would like to point out that not all observations presented here are shared by all study participants. In similar fashion, not all recommendations are shared by all participants.

# Summarized results of the application of criteria

## Overview of projects

Table 1: Overview of assessed projects

Activity	Building type	Number of buildings
New Construction	Retail, residential, office, non-residential	20
Renovation	Residential, non-residential	3
Acquisition and Ownership	Office, retail, mixed-use, residential, non-residential	30

## Assessment

### Evaluation of meeting of requirements

- Requirements met
- Requirements met by some participants
- Requirements not met
- Participants do not have any information available

### Evaluation of criteria according to data collection

- Evidence not available
- Simplified assessment (e.g. tender documents)
- Verifiable documentation available
- Part of building certification
- Not available by all participants

### Evaluation of the new criteria according to insights from interviews and Q&A sessions

- Evidence not available
- Simplified assessment
- Verifiable documentation available
- Part of building certification
- Evaluation based on insights from some participants

## Assessment results: Activity „Construction of new buildings“

	Meeting of requirements by participants	Evidences on short notice		Evidences with preparation time	
		simple	verifiable	simple	verifiable
<b>Minimum requirements</b> - Building use - Business and human rights		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Climate change mitigation</b> - Primary energy demand - 20% below NZEB standard		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>NEW Climate change mitigation</b> - Air tightness test* - Thermal integrity* - Global Warming Potential (LCA)*		<input type="checkbox"/>	<input type="checkbox"/> *	<input type="checkbox"/>	<input type="checkbox"/> *
<b>“DNSH” Climate change adaptation</b> - Climate risk analysis* - No impact of building and climate adaption measures		<input checked="" type="checkbox"/>	<input type="checkbox"/> *	<input checked="" type="checkbox"/>	<input type="checkbox"/> *
<b>“DNSH” Water</b> - Water appliances in top 2 (New: 1) classes of EU Water Label		<input type="checkbox"/> *	<input type="checkbox"/>	<input checked="" type="checkbox"/> *	<input type="checkbox"/>
<b>NEW “DNSH” Water</b> - Construction site water use		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>“DNSH” Circular economy</b> - Re-use/recycling or recovery of 80% / 70% of C&D waste		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>NEW “DNSH” Circular Economy</b> - Limited C&D waste amount - Circular building design*		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> *	<input type="checkbox"/>
<b>“DNSH” Pollution</b> - No asbestos or authorized SVHC - Soil investigation on brownfields - Compliance with NRMM Direct.		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> *
<b>NEW “DNSH” Pollution</b> - Limit values for formaldehyde and carcinogenic VOCs* - Onsite noise, dust, pollutants*		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> *
<b>“DNSH” Ecosystems</b> - Protection of valuable land - 80% recycled/sustainable timber*		<input type="checkbox"/>	<input type="checkbox"/> *	<input checked="" type="checkbox"/>	<input type="checkbox"/> *
<b>NEW “DNSH” Ecosystems</b> - Env. Impact Assessment (EIA)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Activity: Renovation

	Meeting of requirements by participants	Evidences on short notice simple   verifiable	Evidences with preparation time simple   verifiable
<b>Minimum requirements</b> <ul style="list-style-type: none"> <li>- Building use</li> <li>- Business and human rights</li> </ul>		<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
<b>Climate change mitigation</b> <ul style="list-style-type: none"> <li>- Primary energy demand</li> <li>- Major renovation/ relative improvement</li> </ul>		<input type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/>
<b>“DNSH” Climate change adaptation</b> <ul style="list-style-type: none"> <li>- Climate risk analysis*</li> <li>- No impact of building and climate adaption measures</li> <li>- Alignment with climate adaptation strategy</li> </ul>		<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
<b>“DNSH” Water</b> <ul style="list-style-type: none"> <li>- New water appliances in top 2 <b>(New: 1)</b> classes of EU Water Label</li> </ul>		<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> *
<b>“DNSH” Circular economy</b> <ul style="list-style-type: none"> <li>- Re-use/recycling or recovery of 80% / 70% of C&amp;D waste</li> </ul>		<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
<b>NEW “DNSH” Circular Economy</b> <ul style="list-style-type: none"> <li>- Limited C&amp;D waste amount</li> <li>- Circular building design*</li> </ul>		<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<b>“DNSH” Pollution</b> <ul style="list-style-type: none"> <li>- No asbestos or authorized SVHC</li> <li>- Asbestos survey</li> <li>- Compliance with NRMM Directive</li> </ul>		<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>
<b>NEW “DNSH” Pollution</b> <ul style="list-style-type: none"> <li>- Limit values for formaldehyde and carcinogenic VOCs*</li> <li>- Onsite noise, dust, pollutants*</li> </ul>		<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<b>“DNSH” Ecosystems</b> <ul style="list-style-type: none"> <li>- 80% recycled/sustainable timber*</li> </ul>		<input checked="" type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/>

## Activity: Acquisition and Ownership

	Meeting of requirements by participants	Evidences on short notice simple   verifiable	Evidences with preparation time simple   verifiable
<b>Minimum requirements</b> - Building use - Business and human rights		 	 
<b>Climate change mitigation</b> - PE demand within top 15 % - Energy & carbon management		 	 
<b>NEW Climate change mitigation</b> - EPC Class A - Energy monitoring & management		 	 
<b>"DNSH" Climate change adaptation</b> - Climate risk analysis* (with future climate) - No impact of building and climate adaption measures		 	 
<b>"DNSH" Pollution</b> - Site inspection for contaminants*		 	 
<b>"DNSH" Ecosystems</b> - Protection of valuable land		 	 
<b>NEW "DNSH" Ecosystems</b> - Environmental Impact Assessment (EIA)		 	 

# Overarching topics

## Topic: Rollout of the Taxonomy Delegated Act

During the project run, the new set of criteria were released. This created a situation of uncertainty among the market participants. As changes in the Taxonomy will be an ongoing and integral process, market participants are reluctant to install processes that will be outdated soon. Some of the participants fear attentive behaviour of market actors and their clients due to unclear developments. Similarly, participants stress the need for a clear and reliable roadmap regarding higher ambition or changing metrics of and within the Screening Criteria, in order to gain speed and to start preparing for future requirements.

Data collection, especially of technical specifics of the building, is regarded a big barrier for those market participants who have not installed standard procedures yet or by those who do not have well documented the performance of their projects yet, e.g. by means of a sustainability certification. Standardized information or information based on recognized labels pose less difficulties. Therefore, all criteria should be regarded from a perspective whether respective standards or labels exist. This holds especially true for the newly introduced criteria e.g. for circular design and emissions from building products (new buildings and renovation). In order to speed up the rollout and increase the ambition, the Taxonomy criteria should be asked (mandatory) by any project upfront. This will trigger the whole value chain to provide required information very fast and without additional effort. Automated and digitalized data processing would also be very helpful to scale and speed up.

Some participants with main activities in Eastern Europe remark, that all criteria seem applicable for many European countries but that fulfilment in Eastern European countries will be very difficult. A special situation in Germany is the low availability of demand based EPCs for investors. The more sustainability driven measures are applied on existing buildings, the faster the EPCs are outdated.

### OUR RECOMMENDATIONS ON THE TAXONOMY ROLLOUT:

1. Active steering of taxonomy development, expansion and adjustment processes with real case studies accompanying considered changes upfront (such as our study).
2. Active and early communication of planned developments in form of a transition path (roadmap), especially for climate change mitigation criteria to prepare market participants. Define a fixed “calendar” defining planned developments according to the planned regulation (“every three years”), and provide an outlook for benchmarks development or a midterm target (“2030 target”).
3. For the DNSH criteria allow fewer rigid proofs (e.g. alternative evidences fulfilling the defined targets, simplified proofs via tendering documents) and include a development path with statements on both extent / topics of the DNSH criteria and ambition.
4. Support the definition of standardized building documentations and implement taxonomy criteria into such documentations (e.g. building passports, Level(s) reporting and a standardized according to precision and presentation of results “European EPC”), so that developments already document this information that will be required later on. Support of respective initiatives to standardize and digitalize required data is very much recommended.

## Topic: Ambition and proposed instruments for climate change mitigation

In the light of the climate crisis, the climate change mitigation criteria and the DNSH criteria should be very well balanced against each other, with a clearer focus on the climate change mitigation topic. The ambition for climate change mitigation is considered for new buildings and renovation too low by several participants and by all Green Building Councils, for Acquisition and Ownership the criteria as proposed by the TEG are considered difficult to be specifically defined but understandable from the ambition level, whereas the criteria as defined in the delegated act document are considered for many countries too ambitious which would lead to a too small market uptake.

Primary energy demand is not deemed an adequate metric to reduce greenhouse gas emissions and the current ambition for all three regarded activities is not at all in line with a “Paris-Agreement-Path”. Participants fear that selecting only the few very best buildings will result from defining only one class of performance. The “best in class” approach embracing more buildings, makes more sense. Moreover, participating banks, setting up financial products to transform promising buildings into “Paris-aligned” buildings, don’t see their efforts reflected in the current criteria.

If the taxonomy switches to carbon intensity only by 2025 as proposed by the TEG, it is deemed too late and investments go into wrong measures (primary energy reduction measures instead of carbon reduction measures). Primary energy should therefore be communicated as a phase out model to assess climate change mitigation. If it is feared that a sole focus on greenhouse gas emissions could lead to an undesirable path, additional and supportive energy benchmarks e.g. on final energy or useful energy could be introduced during a transitional period before switching completely to greenhouse gas emissions.

Participants argued that standard energy management systems do not have the desired effect on the necessary reduction of carbon emissions. Energy monitoring and management should always be accompanied by monitoring the greenhouse gas emissions and by setting target values. Best would be to set and monitor the achievement of intermediate target values in line with a “Paris-Agreement-compatible” path. And in order to prevent greenwashing, minimum energy and carbon reduction values p.a. should be defined, to specify that a building is “efficiently operated” (as defined in the Acquisition & Ownership section for larger buildings). In order to support the European energy transition, “energy grid supportive” indicators should be introduced in future Taxonomy developments.

### OUR RECOMMENDATIONS FOR THE CLIMATE CHANGE MITIGATION CRITERION:

1. Allow alternative greenhouse gas (GHG / carbon) eligibility path immediately for all building related activities, on an equivalent ambition level as the current primary energy level
2. Completely switch from primary energy metric to a carbon metric as soon as possible (in accordance with market readiness in different countries) and announce date of switch already now.
3. Energy management and monitoring should use energy metrics to improve efficiency, should be accompanied by carbon monitoring and by setting intermediate target values that are derived from a maximum budget approach, compatible with the Paris Agreement.
4. In order to prevent that market participants select only the few very best, already low carbon intensive existing buildings without further investments into improvements (especially with low capital intensive greenhouse gas reduction measures) it is recommended to introduce a second class within A&O for „transitional“ financial products, with a weaker requirement for current carbon performance (e.g. „GHG intensity better than average“), complemented by an introduced and managed valid improvement roadmap („building specific climate action roadmap“), which is in line with 1.5°C or 2°C limit carbon budget mechanisms

## **Topic: Definition of benchmarks**

The rationale for setting benchmarks, especially for the A&O climate change mitigation benchmark, is not explained sufficiently. Market participants could not answer whether or not their buildings comply. Even after intensive research by the GBCs, no robust database could be proposed to be used by the participants.

The large differences in defining the NZEB standards amongst European countries makes it very difficult for the market participants to understand and translate the overall rationale into their company specific processes.

A general feedback on benchmarking from participating banks is that if benchmarks are not clearly defined, the risk that market participants will go for the lowest possible option is high. Therefore, all benchmarks / taxonomy criteria should follow defined rules and should best be aligned with valuers' standards. Benchmarks should reflect the countries' and markets' current situations, in order to avoid ambitious but not applicable benchmarks.

Benchmarks should also be validated by official or competent bodies and not set by individual companies. As soon as the taxonomy criteria will affect the value of a building, they will have to be part of the valuation of the building and then valuers' standards would have to be applied anyways.

### **OUR RECOMMENDATIONS FOR SETTING BENCHMARKS:**

1. Define all benchmarks for substantial contribution criteria clearly without leaving too much room for interpretation. Where benchmarks are applicable and useful, define methodologies to verify the compliance. In some cases, when there is no evidence in the form of quantified data, a qualified expert declaration should be demanded.
2. If setting strict benchmarks or rules is not possible, the intent should clearly be defined in order to also allow for going alternative paths towards the same targets. The "best in class" approach should be based on a specific market share; if e.g. energy classes are then used as a simplified verification instrument, these classes should be in line with the "best in class" market share, if necessary different in the different member states.
3. All settings of benchmarks should follow clearly defined, transparent rules and this procedure should best be aligned with valuers' rules / standards / laws. Companies should not be allowed to set individual benchmarks for substantial contribution criteria.
4. If EU benchmarks are not applicable, country specific benchmarks should be validated by official or by competent bodies and updated regularly.
5. For DNSH criteria, more openness to achieve the objectives of the criteria should be introduced and alternative routes. If specific measures are defined to assess DNSH criteria, the objective of these measures needs to be clearly specified and alternative proofs of eligibility of the objectives should be allowed in the DNSH sections.

## **Topic: Alignment with existing initiatives, recognition and reliability**

The taxonomy criteria should be well aligned (as minimum ambition) with large recognized public funding schemes, such as KfW in Germany, or should officially recognize existing initiatives / public funding products that are in accordance with the defined targets of the Taxonomy or go further. Additionally, alignment with the non-financial reporting requirements is very much recommended.

Existing and recognized building sustainability certification organisations should get the opportunity to get a formal recognition by the European Commission, if a proof of conformity with Taxonomy criteria is provided by the certification organisations and the proof is verified by competent bodies. Certification provides highly reliable results, which lowers the risks for the

European Commission that the Taxonomy is misused for marketing purposes only without real effects.

Reliability of taxonomy evaluation is considered an important aspect by all participants. Therefore, the criteria should be described as clear as possible to enhance reliability of valuation. Participating banks are planning to (externally) validate all information in order to reduce risks of false allocation of capital to green product lines.

The project team has developed a reliability rating assessment in order to provide transparency on the quality of the assessed project information. Most participants consider the proposed approach, which is derived from the data quality definition of the EU Level(s) framework, very useful for internal purposes.

## OUR RECOMMENDATIONS REGARDING ALIGNMENTS AND RELIABILITY

1. Align Taxonomy Criteria more with already well functioning recognized public funding schemes that even go further.
2. Align Taxonomy Criteria with EU non-financial reporting requirements.
3. Allow building certification bodies to apply for recognition of sustainable building certificates inside and outside Europe.
4. Introduce instruments such as random checks to enhance reliability of Taxonomy assessments and introduce incentives to evaluate data quality and reliability of the assessment results.

## Topic: Future risks, minimum safeguard criteria and other social aspects

Important future risks - especially social and governance risks - are not reflected in the proposed criteria. A "city perspective" is missing. E.g. realizing office or retail buildings in areas, where buildings with social purpose (e.g. kindergarten, social housing) are needed much more should be Taxonomy-relevant, as well. The development of additional social criteria is regarded urgent.

As for the minimum safeguard criteria, participants demand clarification whether or not, or in which cases, tenants have to be part of the evaluation if they comply with the specified guidelines. If the tenants are considered to fall under the minimum safeguard criteria, residential buildings respectively the tenants should be exempted from these requirements. Moreover, it is as yet unclear if general guidelines as part of company policies or ethical codices would be sufficient. Additionally, it was discussed whether adherence to national labour laws can be considered sufficient as proof. In general, the scope of adherence to these guidelines is unclear. Participants are uncertain, if e.g. only contracting authorities for the construction of new buildings (or renovation) have to adhere to the guidelines, or if all contractors involved in the project have to provide documentation of adherence. Feedback from participating banks on the minimum safeguard criteria includes that the assessment can be very difficult for buildings outside EU.

For participants from the financial sector, the minimum safeguard criteria are typically being answered during standard customer acquaintance processes or reputational risk processes, where aspects such as money laundry or appearance on sanction lists is part of the evaluation. Information on owners or tenants can also be taken from sustainability ratings.

## OUR RECOMMENDATIONS REGARDING FUTURE RISKS, MINIMUM SAFEGUARD AND OTHER SOCIAL ASPECTS

1. Introduce social aspects to the Taxonomy criteria rather sooner than later in order to avoid social pressure in cities triggered by energetic renovation without affordable housing criteria.

2. Clarify application of the minimum safeguard criteria for all building related activities more specifically. For the acquisition and ownership section define the actors specifically and for the scope of the assessment for the construction / renovation process define all relevant actors of the value chain in the real estate and / or construction sector, for which the minimum safeguard criteria have to be applied.
3. Introduce simplified methods and models for SMEs e.g. self-declarations, commitments to OECD and UN guidelines and clarify whether companies located and operating within the EU have to declare conformity. Reconcile OECD principles and UN Guidelines more specifically or allow committing to specific Sustainable Development Goals. Clarify whether CSR reports comply with minimum safeguard criteria, and if, under which conditions (minimum content, formats, availability, external verification...).
4. Define countries for which the existing social and labour laws as well as commonly applied practices on governance can be regarded as to fulfil the safeguard criteria (e.g. EU).

### **Topic: The use of buildings and sizes**

The usage of buildings is becoming more and more often mixed uses of residential and non-residential. Participants in those cases are not sure how to specify the buildings. Additionally, the calculation of gross floor areas (GFA) according to international standards (IPMS 1) is often not available.

#### **OUR RECOMMENDATIONS REGARDING USAGE AND SIZES:**

1. Insert rules for applying the Taxonomy Criteria for mixed-use buildings.
2. If floor areas are required: Allow using (locally) validated generic conversion factors for floor areas (e.g. from gross to net useful area) and allow declaring alternative area metrics as an option, in a harmonized and locally validated way. The derivation from the standard method has to be transparently communicated.

# Activity: Construction of new buildings

## Topic: Applicability of criteria and project stages

An observation of the participants is that most of the criteria do not match the availability of information at the project stage at which the criteria will typically be applied for loans by the financing organisation.

A typical application of the criteria is after the preparation stage, when project specification and agreement on objectives is available. If the criteria are used as a condition for green loans, they should rather be defined in such a way, that the criteria and the information basis is in line with the project stage preparation. Some financial products (e.g. sustainability linked loans) already use declarations from the planning stages and provide better conditions (interest rate reduction) at the end if the target is met. If the target is failed, sanctions (interest rate increase) apply. Declarations of intends – and a demand-based EPC could also be considered as a declaration of intend for the energy consumption – should be eligible for the respective Do No Significant Harm criteria. Payback mechanism of green loans can be introduced to secure the implementation during the construction process. Level(s), the EU framework for reporting of sustainability indicators, is taking this aspect of information availability at different project stages into account. The taxonomy criteria for loans could be aligned with the metrics defined in Level(s) “Level 1”. The same observation holds true for renovation. Some participants are unsure whether they would have to use the criteria for new construction or for acquisition & ownership if they acquire ready-for-use buildings.

The minimum safeguard criteria cannot be applied for (main) tenants, if the tenants or future use of buildings are not known at the stage of applying the Taxonomy criteria. Also, as explained before, for residential buildings this criterion should not be required from tenants.

### OUR RECOMMENDATIONS REGARDING APPLICABILITY:

1. Support developing guiding principles for banks to implement Taxonomy criteria into early project stages
2. Align Taxonomy criteria more with other relevant EC initiatives, such as the Level(s) framework, especially with regards to the life cycle perspective
3. Clearly specify application of all technical criteria set for both, construction of new buildings and acquisition
4. See recommendations in the overarching section above on the safeguard criteria and define the scope of application of the safeguard criteria for new buildings more specific (especially with regards to future unknown tenants) to prevent using speculative answers.

## Topic: Climate change mitigation criterion

As for the climate change mitigation criterion, please also see the remarks and reflections in the above section regarding the issue to switch to carbon metrics as soon as possible and a necessary communication of a “Taxonomy roadmap” or “next development steps of the Taxonomy”. Apart from this, participants are doubtful that benchmarks on primary energy demand fulfil their goal of future-proofing buildings. It was discussed, whether or not new buildings should also provide a “Paris-aligned climate action roadmap”, ensuring that buildings with such specific roadmaps can be upgraded to net-zero carbon building operations.

In order to find out how well the participants are prepared to report on greenhouse gas intensity of the building operation figures, the project team included this metric in its’ questionnaire, as well. Participants with building certificates were able to report this figure. Parts of the remaining participants claimed to be able to report it. Of course, clarity or better standardisation on the calculation methods (if it is not defined yet in the energy regulation) is needed. A carbon-based

benchmark, compared to nationally specified benchmarks, should be introduced, at least as alternative to NZEB undershooting.

The project team evaluates with the questionnaire the availability of life cycle assessment based whole life carbon intensity figures for new buildings, as proposed in the delegated act document. The projects with sustainability certificates were able to report the figures, the other projects did not have this information. It is stated, that in many European countries neither required data, nor tools are available to carry out such calculations. A simplified approach, or as defined in the Level(s) framework for level 1 could be a solution.

Regarding the newly introduced criteria on air tightness testing and thermal integrity, the testing organisations replied, that in Northern EU countries, air tightness is standard whereas in Southern countries it is not. Thermal integrity testing is usually carried out for existing buildings, and not for new buildings. Also, the temporal aspect (when does the testing takes place?) is seen very critical. Most financial institutions stated that they have never asked for such information.

#### **OUR RECOMMENDATIONS FOR THE CLIMATE CHANGE MITIGATION CRITERION:**

1. Allow alternative eligibility proof, based on equivalent carbon metrics.
2. Consider introducing carbon and / or energy management for (large) new buildings and consider introducing an additional building-specific climate action roadmap for (large or a defined group of) new buildings
3. Introduce a comprehensible “Taxonomy roadmap” to prepare the market for (possible) future developments.
4. Include – as proposed – the whole life carbon perspective. Either as whole life carbon intensity declaration, or alternatively require a “level 1” declaration (design stage consideration of low carbon solutions) of Level(s) GWP reporting requirement.

#### **Topic: Climate change adaptation criterion**

Many of the participants (owners, developers, constructors, banks) could not answer the criterion to the full extent. The risk evaluation section is new to many but with additional explanations, participants were able to perform own evaluations, based on risk maps or similar tools. As for the evaluation what adaptation measures would be eligible, a lot of questions came up. Those participants with buildings certified, e.g. according to DGNB, had fewer problems, since this criterion is part of the certification systems for new buildings and for buildings in operation. With regards to future climate conditions, the project team is not aware of data that can be used for this. Usually only look at past occurrences of physical risks.

For the participants it is unclear what qualification is needed to decide whether a building and its (planned) climate adaptation measures have no negative impact on other people's climate adaptation efforts, nature and other assets. Participants from the different countries report that national climate adaptation strategies are not widely available.

#### **OUR RECOMMENDATIONS FOR THE CLIMATE CHANGE ADAPTATION CRITERION:**

1. Describe much more specific for the building activities, what instruments – respectively how to qualify instruments – to use for the climate change risk assessments.
2. Predefine or reference to generic eligible climate change adaptation measures for the building activities, that fulfil the defined criteria by default and additionally allow applying measures with a qualified assessment or proof a positive effect without negative impact on other people's adaptation efforts and nature.
3. Define required qualification of people assessing the criterion.
4. Insert rules how to act if national or regional adaptation strategies are unavailable.

## **Topic: Water criterion**

In cases where grey water or rainwater or similar recycling techniques are applied, the water flow rates can be higher. Allow for alternative water assessments, which regard the whole water and waste water balances and provide evidence of a relevant reduction compared to standard values. This holds especially true for several building types such as hotels. The evidences for the criterion are available only with high effort. Simplified evidences would be appropriate. In buildings where tenants decide about the appliances, it is very difficult / unfeasible to provide the evidence.

With regards to the new criterion for water management on the construction site, it is stated, that this is very often locally regulated.

### **OUR RECOMMENDATIONS FOR THE WATER CRITERION:**

1. Allow using alternative, more holistic water assessments, supporting the objective.
2. Allow using simplified evidences, e.g. tendering documents or declarations.

## **Topic: Circular Economy criterion**

Participants report that the underlying data on construction and demolition waste and their respective rates is very often unavailable in a form that allows assessment according to the criterion, so that the meeting of the requirement is unclear. In all countries the 80% or 70% rate is considered too ambitious, either due to missing recycling / preparation capacities or due to missing enforcement of respective laws. Even in northern countries a lower value would assure better than average results.

The new "limitation of waste amounts" criteria is considered by the participants to be applicable. A flexible approach of providing evidence would be very welcomed or examples for eligible techniques. The new circular economy criteria on the application of circular design principles are welcomed in general, since it is forward looking and will have an impact in future. Buildings with certificates could provide evidences, targeting at the objective. If these alternative approaches are accepted is unclear. The referenced ISO standard (ISO 20887) is new to nearly all participants.

### **OUR RECOMMENDATIONS FOR THE CIRCULAR ECONOMY CRITERION:**

1. Define criteria in a more flexible way, that country specific laws are enforced, or common practice is overachieved, without referencing to a specific recycling rate. An announcement of using and raising this benchmark later helps the construction and waste sector actors to get prepared.
2. Define circular design principles either more precisely or reference to level 1 reporting of the respective Level(s) framework section or allow for alternative assessment methods, e.g. as specified in several building certification schemes.

## **Topic: Pollution criterion**

Checking all building products and materials for substances on the SVHC Authorisation list (100% of all products and materials) and implement adequate quality assurance processes on construction sites to prevent any misuse is considered very time and cost intensive. In buildings where the tenants carry out the fit-out, it is considered nearly impossible to get verification on this criterion. In buildings where green leases with respective requirements are applied, verification is considered very difficult. Although declaration is required by the manufacturers, a proper substances management during planning and construction is indispensable for verifiable results.

Some participants posed the question if REACH confirmation of all materials would confirm the criteria.

Some participants are irritated that no other recognized harmful substances and products would still be allowed (e.g. substances on REACH Candidate List, formaldehyde or VOCs). Remark: The inclusion of formaldehyde and VOCs in the Delegated Act document could not be evaluated by this project until now for all buildings. Only the certified buildings could provide eligibility proofs for these criteria.

Reference to the Non Road Mobile Machines (NRMM) Directive is very new to most of the participants applying the new construction (and renovation) criteria. Apart from one participant, no one has done such an assessment. The result is, that data was not available by any of the participants. The delegated act document does not contain this criterion anymore, but measures on dust and noise reduction on construction sites. More details on eligible methods would be very helpful and as well if local requirements can be considered eligible.

The pollution criteria on construction site impacts needs further orientation such as “noise from construction sites must be reduced to ensure minimal discomfort with neighbours and must be in compliance with local regulation, noisy site works must be planned between x am and x pm and neighbours must be warned advance if noisy site works are absolutely necessary outside these hours”. For dust a more specific list of measures on the use of techniques such as “equipment is provided with vacuum machines to reduce the amount of dust emitted to the working environment” or “working stations are swept at least once a day”. All this can be defined in tendering documents.

#### **OUR RECOMMENDATIONS FOR THE POLLUTION CRITERION:**

1. Support and incentivise providing clear and apparent declaration of all products used in buildings, readable and manageable by planners / architects / constructors.
2. Focus on relevant building elements with known issues, for which a qualified hazardous and risk related substance management has to take place.
3. Allow for simplified evidences such as tendering documents and consider tenants' fit-out situations.
4. Risk and hazardous substance reducing instruments such as defined in building certification schemes should be defined eligible.
5. Refer to a (expandable) list of eligible measures for construction site noise, dust and emission reductions.

In addition to these observations and recommendations, DGNB has further assessed the Pollution criterion within their DGNB's advisory committee for hazardous and risk related substances. The results of the assessment are presented in Annex II.

#### **Topic: Ecosystems criterion**

Participants are experiencing difficulties in proving adherence to the criterion if it is national law not to build in nature reserves (etc.). In many countries, compensation measures are allowed. The participants ask for acceptance of such compensation measures (Note: This is now foreseen according to the leaked delegated act document). Additionally, a clear definition of arable and green land of high biodiversity value is desired in order to unambiguously check whether or not the criterion applies. Transparency and objectivity in the evaluation seems to be missing or unclear for participants. Rules for re-zoning lots prior to permitting might be necessary as well. The newly introduced Environmental Impact Assessment is not covering all building types and is usually covered by the public authorities in advance of providing permits. This should be considered eligible without further evidence.

The criteria for using certified wood was not regarded as a very high barrier for those participants assessing buildings with DGNB certifications, since the DGNB certification incentivises achieving

specific ratios of certified / recycled wood or wood products. Nonetheless even not all certified buildings achieved the 80% benchmark. The non-certified buildings could not provide information on the rate. The majority of participants opt for keeping this criterion but with a lower minimum value, such as 50% of all timber products, which is considered very feasible.

#### **OUR RECOMMENDATIONS FOR THE ECOSYSTEMS CRITERION:**

1. Allow using the evidence that local authorities have given the permit and allow referring to national laws, including acceptance of applying respective compensation measures
2. Add a more specific description for identifying land with a “high biodiversity value”
3. Keep use of a minimum ratio (e.g. 50 %) of certified or recycled wood as Taxonomy criterion to foster the further uptake of sustainable management of forests or circular value chains in the wood products sector

## **Activity: Renovation**

For the project team, it is unclear how the renovation and the acquisition and ownership section relates. A renovated building should be considered eligible in the A&O section.

In general, most feedback is similar to new buildings criteria. Please refer to the section above.

### **Topic: Applicability of criteria and project stages**

Same feedback as for “Construction of new buildings”.

### **Topic: Climate change mitigation ambition**

In order to achieve climate neutrality by no later than 2050, from a risk perspective of some participants (banks, pension funds) the current ambition seems too low. Typical renovation cycles are 30 years which in turn means that renovation today should be climate friendly or at least would not hinder further improvements (avoid lock-in effects). However, other participants from the banking industry have stressed that it is an appropriate level of ambition, which helps to activate investors otherwise reluctant to update their buildings. A balanced approach, with announced more ambitious future benchmarks are considered very helpful to prepare the market respectively.

Secondly, from a whole life carbon perspective, renovation is in almost any case the preferable solution compared to deconstruction and building new. This aspect is not considered in the Taxonomy so far at all. There are no incentives at place that make it “easier” for renovations to become eligible projects.

And lastly, in the sense of the renovation wave and achieving climate action targets, participants wish that it should be rewarded somehow to renovate buildings instead of acquiring new buildings.

#### **OUR RECOMMENDATIONS REGARDING CLIMATE CHANGE MITIGATION AMBITION:**

1. Consider more ambitious benchmarks and include renovation quality assurance and planning of next steps instruments like a Paris-aligned “climate action roadmap”, preventing from investments into lock-in solutions.
2. Insert or announce future requirements which give preferences to perform renovations instead of new constructions.
3. Implement a reward system, which promotes the renovation activities higher than acquisition & ownership activities. This shall prevent that acquisitions of new buildings are more preferred compared to renovations.

## **Activity: Single measures**

### **General feedback**

Listing of measures is very simplified, and undermines a holistic improvement approach. In many cases, it can be contradictory to achieving ambitious targets. To assure future-proofness of measures, the eligibility should only be provided, if its selection is embedded into overarching (building specific) renovation passports or climate action roadmaps.

# Activity: „Acquisition and Ownership“

## Topic: General

Among most of the participants, there was agreement that the applicability of the proposed criteria was low for older assets, due to data constraints. While current building laws in many countries ensure the availability of data needed to prove eligibility, this has not been the case at the time of construction of older assets.

### OUR RECOMMENDATIONS:

1. The specification of the criteria that relate to points of time, when the building was built, should also apply to the point of time, when the last renovation took place
2. Criteria which are fulfilled by applying the laws should be treated differently from an evidence perspective: If building specific evidence cannot be provided, eligibility should be considered anyways if respective laws were in force.

## Topic: Climate change mitigation criterion

For all regarded buildings, Energy performance certificates (EPCs) were available. For the buildings located in Germany, many of the available EPCs are consumption based, not demand based as required by the proposed Taxonomy criterion. It is unclear how to deal with listed buildings, as there are different requirements on EPCs. Participating financing institutions stated, they are currently collecting both types (whatever is available), although they consider demand based EPCs more stable and more valuable for buildings quality assessments. On the other hand, participants with more technical background regard consumption based data on energy and carbon emissions as a better source of information for identifying effective improvements, especially if the monitoring or measurement system of consumption data allows disaggregated consumption data and user specific real-values are recorded. Some of the Danish participants stated, that they focus on collecting measured energy and carbon data, in order to identify effective improvements.

The Delegated Act show a substantial change from the TEG recommendation: from top 15 % to EPC class A. This will – at first – substantially reduce the amount of buildings that are eligible as green and thereby reduce the desired effect of greening the finance sector. The project team sees a risk in limiting the power of the Taxonomy, if the effect of renovating or building “EPC Class A” buildings is not happening fast enough. This can be considered as a threat or even a negative impact on the desired green transition – both regarding the incentive to buy more energy efficient buildings and building renovation. The incentive to renovate at all, which is crucial for reducing climate change impacts, is likely to be suppressed, as renovated older properties will likely still not meet the criteria of Class A EPC. During the first e.g. 2 years after introducing the Taxonomy, the benchmarks should be very well monitored and then balanced to achieve the desired outcome.

Regarding the usage of the Taxonomy by banks, buildings are often financed with mortgage loans: When only the amount financing the specific renovation is considered eligible, mortgage loans would be considered “separated”. From both the perspective of the borrower and the bank, a “separation” of green and “traditional” financing relating to the same property is not feasible. The incentive for property owners to do major energy renovations of the entire property would - at least to some extent - be accommodated with the TEG best in class 15% proposal.

Participants discussed the instrument of Paris-aligned “Climate action roadmaps” (building individual improvement and renovation roadmaps targeted at reducing carbon emissions to zero by latest 2050 and within a defined carbon budget). Some participants have experiences in defining and managing such roadmaps and confirmed the value and practicability of this

instrument. For such “Climate action roadmaps”, it is best to use a complete energy balance (including user / tenants’ energy) and to use measured data.

For the activity ‘Acquisition and Ownership’, the project team also included the metric of greenhouse gas intensity of the building operation, in order to find out how well the participants are prepared to report on this possible future metric. Some, but not all participants could report this figure. Clarity on the calculation methods (if it is not defined in the energy regulation) would be needed.

Some participants have asked for evaluating “embodied carbon emissions” of planned measures. They would find it very useful and in line with their company climate strategy, especially when in line with Paris-aligned, building-specific climate action roadmaps.

Although an adequate source of information for defining the “15% Best in class” benchmark is not available in Germany, Austria and Spain, the project team sees many advantages of reintroducing the “best in class” (15 %) approach. The different countries are applying the NZEB status too diversely, class A is very ambitious and in many countries only a very small market share will be able to be classified eligible. Using EPC classes as a simplified verification of eligibility of the best in class approach can be done, but only if underlying assessments / studies validate this approach. For Denmark a study<sup>1</sup> shows, that buildings with label A and B (most property types) belong to the top 15% percent of all labelled buildings. Even after intense research, only proxy values, with low robustness and low to zero transparency on how potential benchmarks were calculated, could be identified. For residential buildings, the new proposed benchmark referring to the EPC “class A” could (at least) be answered by the participants, but in most cases with a negative result. For non-residential buildings it still offers no practical solution for German participants, since classes are not defined in German EPCs for non-residential buildings.

Most participants confirmed, that they use or plan to use – in order to identify and mitigate risks – carbon metrics (intensity or total figures) for building assessments for their climate management goals.

The project team therefore proposes the following approach: The Taxonomy should provide an “Energy path” (as already defined but referring to the best in class approach) and two alternative “Carbon paths” (new). The annex provides more details.

- **Option 1 - Energy path:** Primary energy value (demand based) 20% below NZEB requirements OR best in class (e.g. proven over EPC classes where evidence exists that certain classes comply with the best in class definition), for large buildings with an additional installed final energy monitoring and management using minimum reduction rates of final energy per year and monitoring of operational carbon emissions. Where energy classes for EPCs or the best in class benchmarks are not available, benchmarks derived from requirements for buildings built after 2021 can alternatively be applied (e.g. in Germany the current NZEB standard was introduced in 2016, between 2009 and 2016 an applied factor of 0,75 on the reference value is regarded equivalent to current NZEB standard in Germany).
- **Options 2 and 3 - Carbon paths:**
  - o “Equivalent carbon path I” (cf. Annex) and
  - o “Carbon based transformational path II” (cf. Annex)

Some participants asked for acknowledgement of procured green energy and proper reflection of onsite “green” energy generation. Some energy calculation methods do not appropriately reflect onsite energy calculation by allowing for using lower primary energy factors or by extracting the generated amount from the demand.

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<sup>1</sup> [https://www.nykredit.com/siteassets/ir/files/debt/green-bonds/moe\\_report\\_energy\\_labels\\_and\\_energy\\_efficient\\_properties\\_2019-01-25.pdf](https://www.nykredit.com/siteassets/ir/files/debt/green-bonds/moe_report_energy_labels_and_energy_efficient_properties_2019-01-25.pdf)

## OUR RECOMMENDATIONS FOR THE CLIMATE CHANGE MITIGATION CRITERION:

1. In cases where energy classes or best in class benchmarks do not exist, the Taxonomy primary energy requirement for buildings built after 31.12.2020 (20% below NZEB standard) should also apply for buildings built before 2021
2. Make sure in all member states, that consistent primary energy demand calculations are basis of the taxonomy evaluation and that valid EPCs are available
3. Specify energy management and monitoring more clearly: introduce setting final energy and carbon reduction (e.g. defined as in % per year), require additional operational carbon monitoring require setting of a specific and appropriate improvement measurement plan – according to “Plan Do Check Act” management instruments, all based on Paris-compatible path
4. Introduce requirement to provide calculated operational carbon emissions
5. Introduce I) alternative “equivalent carbon path” using a carbon metric, derived from equivalent energy benchmarks (see proposal above)
6. Introduce II) alternative “carbon based transformational path” for A&O for buildings with assuring minimum actual carbon performance (e.g. below average) AND an ambitious and actively managed Paris-aligned climate action roadmaps installed
7. Define future benchmarks and roadmap for benchmarks for the A&O activity clearly so that the market can react and invest into carbon reduction
8. Onsite energy calculation should be reflected accordingly in the taxonomy criteria and underlying calculation rules.
9. Clarify how energy classes / reductions compared to NZEB standard should be calculated, if the national NZEB standard changes over time

### Topic: Climate change adaptation criterion

Participants applying the A&O questionnaire had quite some trouble to answer accordingly to the criterion. It is a very time-intensive criterion for existing buildings. The availability of data and supportive tools is often limited or access to tools is considered costly. For many cities and regions, accessible data seems not available.

Some participants questioned whether it would be more useful to focus only on future weather conditions and not so much on current weather / climate, at the same time, it was found that instruments with future projections are not available.

As for the definition of climate change adaptation measures, a lot of uncertainty was reported, which measures will be regarded sufficient and if no measures are needed, what evidence is applicable. The criterion is not deemed specific enough to avoid greenwashing of applying non-effective measures. “Do no harm to other peoples’ climate adaptation efforts” is very vague and needs better explanation or rules.

In some cities / regions, values for paved or permeable surfaces or green roofs are prescriptive. Participants ask, if this would count as a regional strategy.

## OUR RECOMMENDATIONS REGARDING CLIMATE CHANGE ADAPTATION:

1. Support the development of instruments and data that is accessible for many. Consider a stronger focus on future weather conditions (2030, 2040, 2050 simulations), and less on current conditions.
2. Specify eligible adaptation measures for buildings. If no expert judgement is available, minimum requirements on meaningful (no greenwashing measures) should be given by the Commission. Alternatively, a list of specific measures with their impact on climate change adaptation (to allow combining the measures with the risk analysis results) should be provided. Provide examples, applicable for many contexts.

3. Define qualification of people performing climate risk analyses and proposing adaptation measures.

### **Topic: Pollution criterion**

As soil pollution analysis is legally required in some Member States, participants asked if it can be assumed that no further proof is required for eligibility when the asset is located in one of these member states.

On the other hand, for buildings older than e.g. 30 years, the information is often not available. For buildings even older, it is questioned, whether available information would be regarded fulfilling the sense of the Taxonomy, since testing and knowledge have changed and increased over time a lot. (Note: The criteria is not part of the delegated act anymore)

#### **OUR RECOMMENDATIONS REGARDING POLLUTION:**

1. Define countries, in which soil pollution analysis and consequent measures are required by law anyways and don't require further documentation.
2. Recent assessments should be eligible as well.

### **Topic: Ecosystems criterion**

For buildings older than e.g. 30 years, the information is often not available. For buildings even older, it is questioned, whether available information would be regarded in the sense of the Taxonomy, since definitions of areas have changed over time a lot.

As in the case of soil pollution analysis, some Member States include analysis of ecosystems in the processes of obtaining building permits. Participants asked if it can be assumed that no proof is required for eligibility when the asset is located in one of these member states. Participants were unsure, whether compensation measures can be accounted for as well.

#### **OUR RECOMMENDATIONS REGARDING ECOSYSTEMS:**

1. Recent assessments should be eligible as well.
2. Define countries, in which ecosystem assessments and consequent measures are required by law anyways and don't require further documentation.
3. Compensation measures should be accounted for.
4. Define very specific, how this criterion should be justified and how areas of high biodiversity value is defined specifically (e.g. by referring to databases). Furthermore, such areas like nature reserve, / green areas should be clearly and also locally defined. Since these areas become narrower over time, a precise definition is needed.

# Annex I: Proposal for expanding the Climate Change Mitigation Criterion

## Option 1 - Energy path (similar to current proposal)

- PED below NZEB (new buildings), PED according to NZEB (renovation), PED within specified classes / limits (A&O)

## Option 2 - Carbon path I: Equivalent ambition – Calculated GHG emissions equivalent to energy path

- GHG emission intensity calculation based on final energy demands of realized building and reference building multiplied with GHG emission factors, same level of ambition as for primary energy path (Option 1), to ensure energy efficiency an additional requirement on final or useful energy should be introduced (e.g. final energy demand equivalent to final energy of a reference building or a locally / country specifically defined limit value)

## Option 3 - Carbon path II: Transition approach – Average or above average GHG emissions intensity plus Paris-aligned specific “climate action roadmap” in operation

- Eligibility condition 1: GHG emission intensity of existing building based on final energy demand below carbon benchmark that represents at least average GHG emission intensity (for non-residential buildings e.g. CRREEM starting point or Climate Bond Initiative benchmark)
- Eligibility condition 2: Paris-aligned building specific climate action roadmap is specified and in operation. A “climate action roadmap” is similar to a renovation passport listing all necessary improvement measures and their realisation dates, but based on carbon metrics, limiting carbon emissions over time by applying an emission trajectory / path, that shall not be exceeded (according to a carbon budget approach) and resulting in net zero carbon emissions by latest 2050 or in line with a recognized science based targets approach.

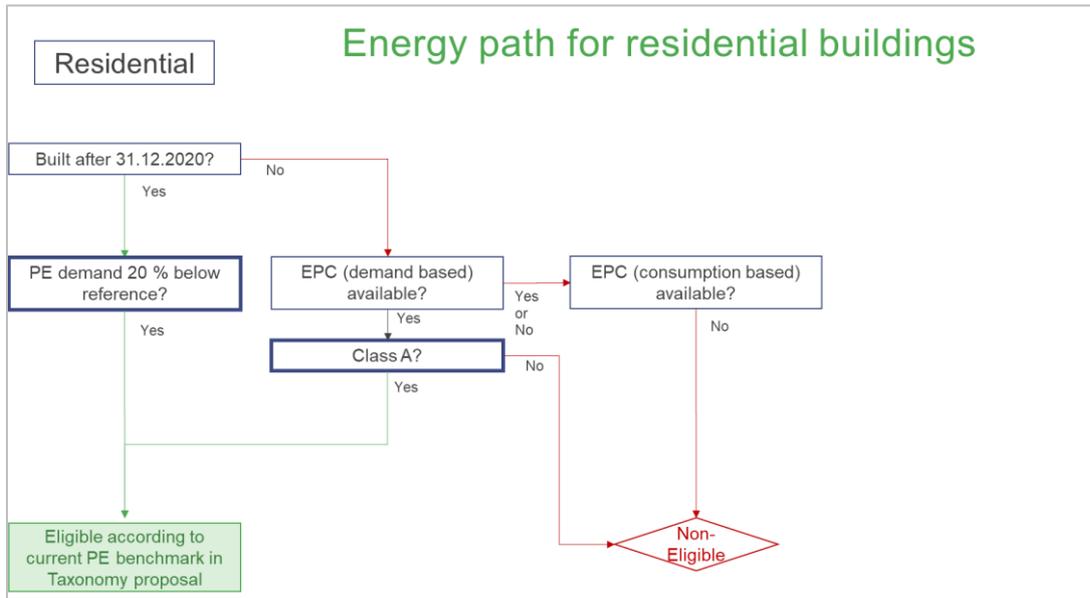


Figure 1: Energy path for residential buildings (Option 1)

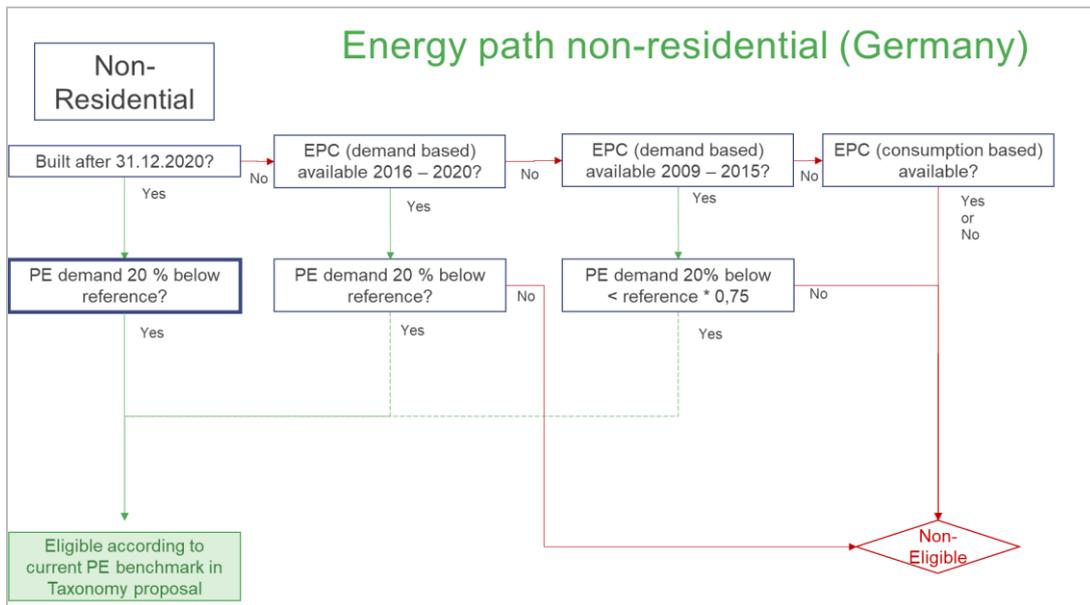


Figure 2: Proposed energy path for non-residential buildings for Germany (no energy classification available) (Option 1 – Non-residential buildings, e.g. Germany)

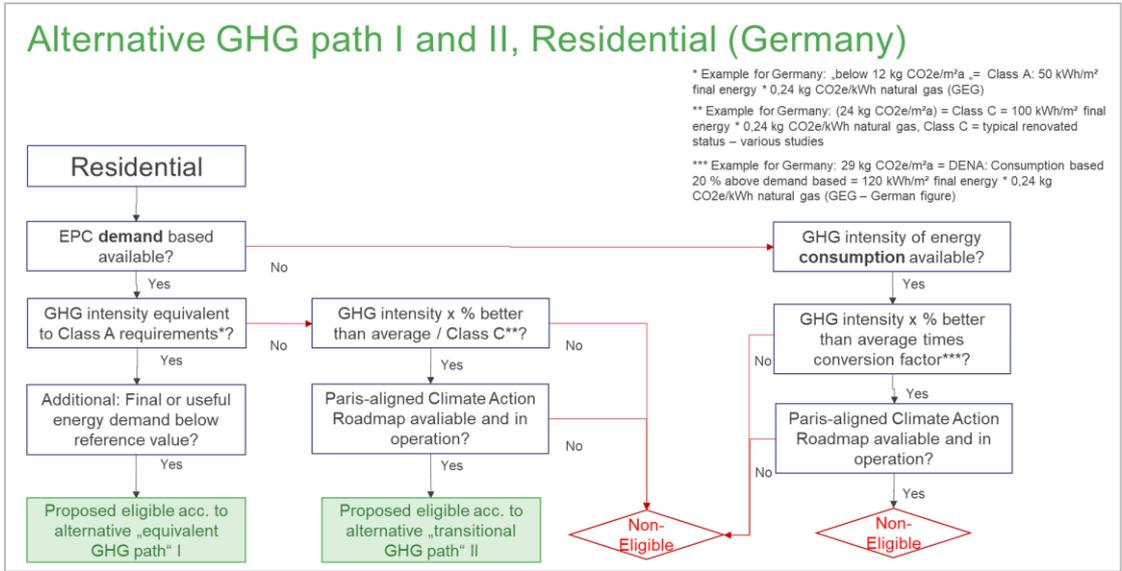


Figure 3: Proposed carbon paths I (equivalent) and II (transition path) for residential buildings (carbon metrics can be applied for Germany) (Options 2 and 3)

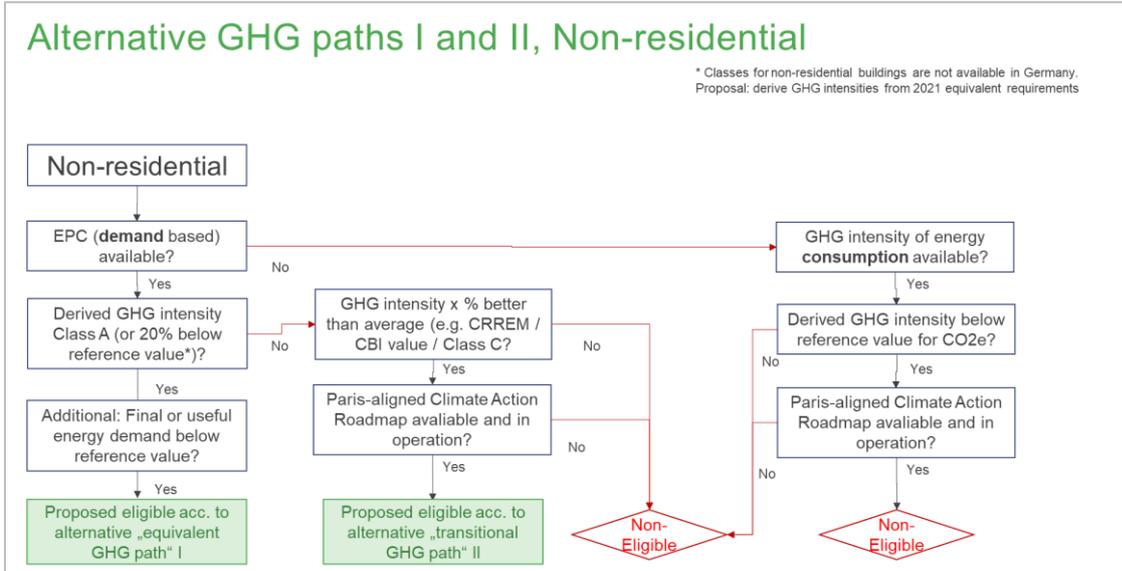


Figure 4: Proposed carbon paths I (equivalent) and II (transition path) for non-residential buildings (Options 2 and 3)

# Annex II: DGNB's feasibility assessment of the requirements of the EU taxonomy for Construction of New Buildings and Renovation of the Do No Significant Harm criteria for "Pollution prevention and control"

## Summary

DGNB has evaluated the feasibility of the DNSH criterion for pollution prevention and control with DGNB's advisory committee for hazardous and risk related substances. Main concerns are:

- The **scope** of applying the criteria needs to be specified in more detail: Which "building components and materials" are meant? "Do not contain" is not an applicable definition for asbestos and SVHCs, a limit value is needed. And what exactly is meant with "contact with occupiers": via air, skin, ingestion?
- Depending on the definition of the scope of "components and materials" **SVHCs** are either subject to declaration or not. This makes it very vague and arbitrary, if SVHCs are declared or not, thus detected or not. A **limit value** with clear references is needed to make this criterion applicable. Reference should be made to the CLP regulation.
- **Carcinogenic VOCs, other VOCs** and **formaldehyde** emissions of products need further specifications in the test conditions. Alternatively, for formaldehyde and VOCs, the topic could be approved by an adequate **indoor air testing** as an instrument of quality control.

Over the last 13 years, DGNB has developed a list of very specific requirements regarding dangerous and harmful materials, products and preparations. This list is part of the DGNB Certification system but can of course be applied separately. The lowest "quality level 0" takes several hazardous and risk related aspects more into account: lead, cadmium, tin, chromium(VI), artificial mineral fibers, halogenated propellants, DDT, PCB, HCH/Lindane and requires respective management. As for indoor air relevant VOCs, the management via a compulsory indoor air measurement has shown the strongest driver to prevent certain substances. The criterion can be found here: [https://static.dgnb.de/fileadmin/dgnb-system/en/buildings/new-construction/criteria/02\\_ENV1.2\\_Local-environmental-impact.pdf](https://static.dgnb.de/fileadmin/dgnb-system/en/buildings/new-construction/criteria/02_ENV1.2_Local-environmental-impact.pdf)

In order to implement pollution prevention and control instruments for construction of new buildings and renovations as well as for single measures, we recommend the European Commission to refer in the EU Taxonomy Delegated Act to market proven instruments, such as the DGNB criteria list for local environmental impacts and to require indoor air measurements.

## Background: Requirements of the draft delegated act of the EU Taxonomy for building related activities

*Pollution prevention and control - "Building components and materials used in the construction do not contain asbestos nor substances of very high concern as identified on the basis of the list of substances subject to authorisation set out in Annex XIV to Regulation (EC) No 1907/2006 of the European Parliament and of the Council. Building components and materials used in the construction that may come into contact with occupiers\* emit less than 0,06 mg of formaldehyde per m<sup>3</sup> of material or component and less than 0,001 mg of categories 1A and 1B carcinogenic volatile organic compounds per m<sup>3</sup> of material or component, upon testing in accordance with CEN/TS 16516 and ISO 16000-3 or other comparable standardised test conditions and determination methods."*

*"\*Applying to paints and varnishes, ceiling tiles, floor coverings, including associated adhesives and sealants, internal insulation and interior surface treatments, such as those to treat damp and mold."*

## Comments concerning the scope

A clear definition of the term "building components & materials" must be given, otherwise this criterion cannot be implemented. Secondly the term "do not contain" is not an applicable definition, a limit must be specified, e.g. < 0.1% with a corresponding reference.

The nomenclature "Building components and materials used in the construction that may come into contact with occupiers" is also unclear. What exactly is considered interior-relevant? What is the medium of contact: breathing air, skin contact, ingestion - or all? It has to be clarified whether it is practicable to define interior surfaces (possibly only in permanent workplaces, since these have relevant "contact times" to materials...). A reference to standards is recommended.

### **Comments concerning SVHCs**

An unambiguous reference to the version of the REACH authorization list is required.

Secondly, which "building components and materials" are meant in this context? According to the current regulations, products along the supply chain that contain SVHC substances > 0.1% are subject to declaration. This means, however, that contained materials can exceed the limit value. Depending on the definition of the components (single parts, materials, etc.), the limit values applies or not. For manufacturers it would then be possible to pretend that products contain only materials that fall below the 0.1% limit. Rubber e.g. is present in a number of products in very small quantities. With this criterion, as defined now, it would not be feasible to address products that are subject to declaration via the call for tenders, which is the current construction practice.

A full list of all products installed in a building is very rarely available, because some products installed in buildings are not mentioned in any tender explicitly. A full declaration of materials following clear rules (e.g. what information is included, who is responsible, etc.) is an important basic requirement. The introduction of a "building passport" or similar is rather recommended.

### **Comments concerning formaldehyde and carcinogenic VOCs emissions**

An indoor air measurement could be used as an alternative approval for the requirements for VOCs and formaldehyde and is an adequate quality assurance instrument for product specific requirements. However, there is the problem that other formaldehyde / or error sources cannot be excluded from indoor air measurements, as opposed to the test chamber method. Thus, an indoor air measurement should not fully replace product-related test chamber measurements to declare the emission-levels but can be used either as an additional quality control instrument or in cases where full declaration is not practical.

The verification of VOC limit value for categories 1A and 1B carcinogenic VOCs is not very easy, due to the low limit value, since even the smallest disturbances exceed the measurements. The standard reference should be updated: The reference to ISO 16000-3 is not regarded necessary as this standard is practically contained in EN 16516. The Taxonomy criteria mentions a limit value related to EN 16516. From this it can be concluded that the product tests should be based on the reference space. The air change of 0.5/h is predetermined. But the loading depends on the applications. Test conditions need to be clarified, the current definition leaves too much room for interpretation. In general, it would be very useful to refer to the CLP regulation. For formaldehyde, the release criterion of the REACH regulation prescribes the limit value of 0.06 mg/m<sup>3</sup>. This value refers to wood / timber-based materials.