# GUIDELINE "CLIMATE PROTECTION COMMUNITY"

DELIVERABLE C5.2

LIFE Climate value chains

# Informations about LIFE

The LIFE program forms the basis for measures to promote environmental and climate protection by the European Union. The aim of the LIFE program is to establish environmentally friendly, innovative products, processes and services as well as best practice in Europe and to further develop the corresponding policy and administrative practice. The program forms a bridge between research and implementation on a large scale.

Das Programm LIFE bildet die Grundlage für Maßnahmen zur Förderung des Umwelt- und Klimaschutzes durch die Europäische Union. Ziel des Programms LIFE ist es, umweltfreundliche, innovative Produkte, Verfahren und Dienstleistungen sowie Best Practice in Europa zu etablieren und die entsprechende Politik und Verwaltungspraxis weiterzuentwickeln. Das Programm bildet eine Brücke zwischen der Forschung und der Umsetzung im großen Maßstab.

# Document informations

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# Content



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# Joint greetings

The utilisation of natural resources and competition for scarce resources is increasing worldwide. At the same time, global environmental problems such as climate change, soil degradation and biodiversity loss are increasing. The careful use of natural resources is a key challenge of our time and an important issue for local authorities. It is therefore essential that local authorities adopt innovative approaches to promote sustainability in society, but also in administration as a whole. Municipalities are currently facing enormous challenges in terms of the energy transition, climate protection and climate adaptation measures.

In addition, the supply of affordable housing, especially the energy-efficient refurbishment of existing buildings, poses major challenges for politicians and local authorities. Instead of simply responding with the motto 'build, build, build', a responsible policy must also ask the question of 'how' to build, remodel and renovate. Procurement difficulties and high prices for building materials should provide an impetus for better climate and resource protection as well as local value creation potential.

Wood plays a decisive role in shaping a future-proof and sustainable construction industry.

Wood is a natural and renewable raw material.It was wood in particular that coined the concept of sustainability in its origins, according to which no more wood may be felled than can grow back. The use of wood not only offers ecological advantages and thus makes an important contribution to climate protection, but also enables a sustainable strengthening of regional value creation. This is because the increased use of wood from local forests reduces the ecological footprint and at the same time promotes municipal forestry, while maintaining and developing jobs in the region and improving the economic stability of local authorities.

The European non-profit initiative Holz von Hier is committed to the use of wood produced in a climate-friendly way and sourced from sustainable, regional forestry. The eponymous climate and environmental label HOLZ VON HIER® (HVH) and LOW CARBON TIMBER® (LCT) ensure climate and environmentally friendly, energy and resource-efficient products manufactured with 100% raw materials from responsible extraction and verifiably sustainable forestry as well as EUDR-compliant deforestation-free supply chains, and such products are immediately recognisable.

The brochure serves as a guide and source of inspiration for companies, customers, planners and local authorities who want to take the path of climate protection and regional value creation through wood.

It provides an impetus for sustainable, future-orientated development through the use of wood from local forests as well as for procurement, tendering and construction with products made from Holz von Hier® or Low Carbon Timber®.

In a European project with partners from several European countries in the EU LIFE programme, the Holz von Hier® or Low Carbon Timber® supply chain system was also adapted to the requirements of the new EUDR as part of the development of various tools.

The non-profit Holz von Hier initiative has now been recognised by the responsible European body as a 'representative' of the European Union so that EUDR-compliant bookings can be processed via the HVH/LCT supply chain system from 2025.

More information on the other tools associated with Holz von Hier® or Low Carbon Timber® can also be found in the basic brochure. Guides for implementing the EUDR with HVH / LCT and for using the other tools described can be requested free of charge from www. Holz-von-hier.eu and www. low-carbon-timber.eu.

HVH /LCT has also been an official partner of the 'New European Bauhaus (NEB)' initiative since 2024, which was established by the European Union as part of the European Green Deal.

# CLIMATE FRIENDLIY VALUE CHAINS

HOLZ VON HIER® resp. LOW CARBON TIMBER®: Best practice example for climate-friendly and deforestation-free supply chains in the European Union.

## Climate change and Paris

'Increasing climate change harbours increasing risks for the economy and society, to which companies are also exposed' (FMA)[1]. According to the World Economic Forum (WEF)[2], climate change and the failure to mitigate and adapt to climate change are categorised as the highest risk.

The Paris Agreement calls for limiting the global temperature increase to below 2°C, preferably 1.5°C, compared to pre-industrial levels and for risks to be assessed and barriers that could hinder these goals to be removed as quickly as possible. In order to avert and limit serious economic, social and environmental impacts, the European Union has adopted the Green Deal with the aim of achieving climate neutrality by 2050 and has set a CO2 reduction target of 50-55% by 2030. The enormous investment required for this can only be achieved together with the financial sector [1].

Changing climatic conditions give rise to various sources of risk, which can vary from sector to sector and region to region, such as an increase in extreme heat, less rainfall in summer and more frequent periods of drought, higher risks of flooding, heavy rainfall, storms, hail, landslides and even higher risks of species extinction. This has serious consequences for local authorities and property developers, as buildings in such risk zones will hardly be insurable and the risk zones will expand. According to the FMA [1], properties in exposed locations are often no longer insurable and even with insured properties, only a fraction of the damage is usually covered by the insurance.

## Changing Course 2019

Due to the "worrying developments on earth", the United Nations called on the nations of the world to immediately start implementing sustainability in 17 areas of action with its "Sustainable Development Goals"[3] in 2015. The "Changing Course" report by the UNEP Finance Initiative[4] shows that the "1.5 degree target" and even the "2 degree target" are hardly achievable worldwide today - a "3 degree target" is seen as "optimistic policies". The report also makes it clear that immediate action must be taken now if blatant disruptions to the economy and society are to be avoided.

## Transport as the main driver of emissions

The European Environment Agency stated in 2022 that energy production and transportation are the two main drivers of CO emissions in the EU[5]. This puts emissions from transportation ahead of private households, industrial production and construction. This is particularly interesting in light of the fact that the energy sector has achieved the most reductions in the last three decades, while transport-related emissions have actually increased. The absolute CO2 emissions from road freight transport have increased significantly despite technical improvements. The main reason for the increase in CO2 emissions in freight transport is the very sharp rise in transport volumes and transport distances[5],/[6]/[7]. At the same time, the EU wants to halve the EU's total greenhouse gas emissions by 2030. Over the past 30 years, however, emissions have only been reduced by 30% [8].

## Short supply chains are more efficient and cost-effective climate protection

Reducing transport-related emissions by shortening transport routes throughout the entire material flow has an immediate and guaranteed effect. Technical developments, on the other hand, are expensive and only make a small contribution to climate protection because the potential has often already been exhausted, at least in the European Union economy. Real innovations are necessary, but they should be part of long-term action strategies. Demand for short distances in the supply chain, however, has a direct impact on climate protection with every single decision. Corresponding measures have an immediate effect and do not require any investment.

## Short supply chains also reduce the risk of biodiversity loss

The latest reports from the World Economic Forum[2] for the first time list only environmental risks among the top 5 global risk factors for the world economy, such as

"Failure in the fight against climate change" and "Reduction of biodiversity". Here, too, short supply chains help to preserve biodiversity, as around 50% to 70% of all species in the world live in tropical forests[9] . Their protection is the greatest contribution to the preservation of species diversity worldwide. In addition, almost as many animal species are threatened by transportation worldwide as by logging in primary forests [10].

## Proximity creates security

A report by UNEP and Interpol makes it clear that forest certification alone has not been able to stop illegal logging in forests[11] . WCMC analyses have shown that the former EUTR has only had a weak impact[12] . A more recent project (deforestation.inc) [13] by a network of investigative journalists documents the extent to which the illegal timber trade and forest destruction are still taking place today. 20- 50% of timber from Russia and 80% of timber from Siberia comes from illegal logging[14] . According to WWF, clear felling is also possible and common practice in certified forests in western Russia[15] . With the increasing focus on wood as a sustainable resource, the pressure and attractiveness of illegal, unsustainable wood is growing. It is becoming increasingly clear, according to the WCMC, that global flows of goods are almost impossible to control[12] . Short, regional supply chains create transparency and security. However, short routes in supply chains must be credibly proven, because you cannot tell from the wood how far it has been transported. Practical experience shows that the real flow of goods only becomes apparent when attempts are made to establish proof of regional supply chains.

## Climate-friendly supply chains need support and demand

It is therefore very important to note that material flows today do not simply regionalize on their own or automatically. Decision-makers from politics, authorities and municipalities are called upon to set the course for the climate.

Only a targeted, strong demand for wood from short supply chains can provide the corresponding incentives and impetus for economic players to shorten their supply chains in real terms. Local authorities have suitable and effective leverage here through public procurement.

But shortening supply chains also requires government incentives. This is just as true for sustainable forestry, electromobility, energy refurbishment and other areas of sustainability. Economic incentives can help to avoid foreign trade flows. It must also become more economically attractive to keep wood in the country.

# CLIMATE-FRIENMDLY BUILDINGS

HOLZ VON HIER®
Best practice example for sustainable and climate-friendly, energy- and resource-efficient construction.

## Sustainable and climate-friendly buildings

High energy efficiency of the building alone is no longer sufficient for truly climate-friendly construction. The lower the energy consumption and CO2 emissions in the use phase of buildings ("red energy", "red CO2 "), the more significant the CO2 emissions in the supply chains of the building materials ("gray energy", "gray CO2 ") become. This includes CO2 emissions from the extraction of raw materials, all transportation (cradle-to-gate and gate-to-building) and all production processes along the processing chains, as well as transportation from the last manufacturer to the construction site.

The use of renewable materials, especially wood, in long- lasting products is an important measure for sustainable construction. However, the following calculation for a modern timber house shows how important the origin of the building materials and transportation in the supply chain can be in timber construction [16].

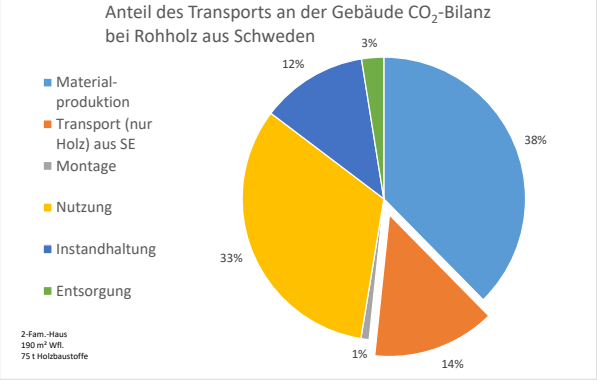



Fig. 1) Importance of transportation in modern timber houses.

This calculation models a timber origin from Switzerland, one of the most important direct import countries for softwood to Germany. In the case of a modern, energy-efficient timber house, the transport-related emissions can account for around 14% of the total climate impact of the building over its entire lifetime of 60 years (Fig. 1). This includes material production, assembly, use, maintenance and disposal.

## Influence of the origin and the Supply chains on the CO2 storage in wood

Many local authorities and planners are recognizing that sustainability in procurement and construction also means more in timber construction than just that the wood comes from sustainable forestry. The focus is therefore increasingly on the function of wood as an "extended CO2 sink". Although the actual sink is the growing tree in the forest, this "CO2 storage forest" can be increased if wood is sustainably harvested to stimulate growth in the forest. If this wood is then used in long- term products, the CO2 also remains bound in the long term and thus forms an extended reservoir.

However, this carbon storage of wood is mathematically reduced by CO2 emissions that occur along the entire process chain for the manufacture of wood products.

The CO2 storage is only (almost) completely preserved on the way to the building if the material flows are short and climate-friendly. Dabei reicht es heute keinesfalls aus, nur den Vorlieferanten zu betrachten, denn die Stoffströme sind auch beim Holz inzwischen global. Welchen Anteil an den Emissionen die

Lebenszyklusphasen in den Vorketten haben können, soll am Beispiel von 1 $m^3$ KVH als einem zentralen Holzbauprodukt dargestellt werden. Je nach Herkunft des Vorproduktes oder Rohstoffs kann bei KVH der Transport entweder nahezu keine Rolle spielen (regionale Herkunft) oder aber den überwältigenden Anteil ausmachen (z.B. Schweden, Abb. 2). Das kann in dem Fall bereits die Hälfte des durch das Holz gebundene $CO_2$ erreichen [17].

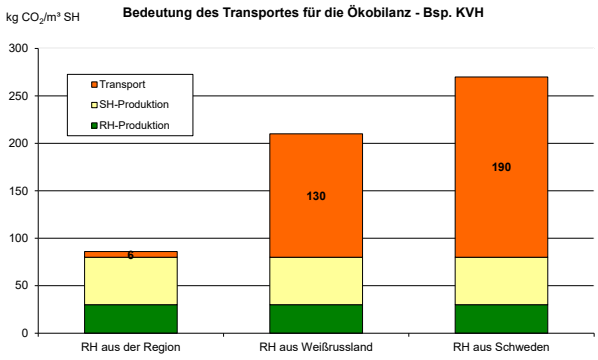



Fig. 2) Share of life cycle phases in total emissions.

In addition to the absolute amount of the share of the respective life cycle phase or process steps, the fluctuation range and variability also play an important role (Fig. 3). While, for example, the pure technical process steps between different producers only fluctuate slightly (approx. 25%) around a general industry average, the difference in the emissions associated with different sources of supply and caused by transportation can also vary greatly within a single company[18]. Transport therefore has a more decisive influence on the carbon footprint of wood products than optimizing the process technology. In addition, optimizing the technology is usually associated with high investments and is only possible over longer periods of time, while the choice of supply sources and flows of goods can be implemented without investment and in the short term.

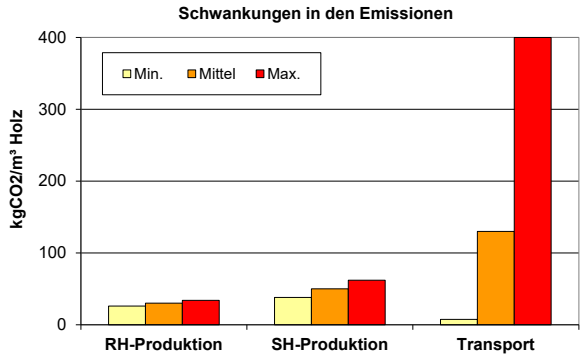



Fig.3) Fluctuation range of emissions in the life cycle phases.

## Best Practice HOLZ VON HIER®

The simplest, quickest and most cost-effective way, which can also reduce the EU's dependence on global supply chains, is to shorten the transportation distances. Large proportions of foreign trade goods flows could be avoided, especially for wood products. This is not so easy with other material groups. Products made from verifiably short-distance timber with the HOLZ VON HIER® or LOW CARBON TIMBER® certificate are climate-friendly products. The round timber comes from sustainable domestic forestry and not from tropical or boreal primary forests (virgin forests) and the climate-friendly short distances in the entire supply chain make a significant contribution to climate and environmental protection, energy and resource efficiency.

# REGIONAL VALUE CREATION

HOLZ VON HIER® best practice example for achieving the objectives of European targets such as the Green Deal, Fit for 55, forestry and biodiversity strategy, climate neutrality, EUDR, etc.

## European Regions

The importance of regions was recognized early on in the European Union (EU). In the "Europe of the regions", they are understood as cross-border areas in which Circular Economy can only be solved regionally. Global flows of goods often undermine EU environmental and social standards. However, a challenge arises when products are not purchased, procured and installed in accordance with EU environmental and social standards. Due to historical connections, a lively economic and cultural exchange takes place. The EU

In addition to cross-border cooperation on economic, ecological and socio-cultural issues, the EU also hopes to strengthen the weaker peripheral regions.

In addition to transnational cooperation on economic, ecological and socio-cultural issues, the project also hopes to strengthen the weaker peripheral regions.

The term "region" is not uniformly defined, but is usually understood to refer to territorially contiguous areas that are located above the level of cities and municipalities but below the level of state administrations.

All regions are facing very similar challenges within the European Union and worldwide, such as the globalization of goods, money and information flows, climate change, decarbonization of industries, demographic change and digital transformation. Global megatrends and developments are leading to ongoing changes in competition, demand patterns, innovation and manufacturing processes and are changing both global and regional value creation systems.

## Regional value creation strengthens sustainability, climate and environment

The regions are of great importance for processes such as decentralisation, resource conservation and long-term action strategies in climate and environmental protection. Action strategies for a climate-friendly circular economy can also only be solved regionally. Global flows of goods often undermine EU environmental and social standards. However, a challenge arises when products are not purchased, procured and installed in accordance with EU environmental and social standards.

## Regional values creation is social

Compliance with human rights and social fairness are key reasons why the Supply Chain Act was created. However, how "socially fair" a building material is also depends on where it was produced. A product that has been manufactured in its entire material flow within the European Union (EU) has been produced under the best social conditions in a global comparison. In the EU, for example, there is no child labor, forced labor, human rights violations or undignified working conditions in the workplace, which is unfortunately still the case in many parts of the world. Products that come to Europe or Germany from such countries and are not fairly traded must be rated lower in this respect than products that have been demonstrably manufactured in the EU throughout their entire material flow.

Products with regional added value from Europe's regions are also socially responsible because they help to preserve jobs and apprenticeships. In addition, regionally produced products also result in better health protection. In a global comparison, the European Union is very far-reaching in terms of consumer and health protection. The REACH Regulation, for example, regulates the handling of highly hazardous substances in the EU. In addition, regionally produced products also result in better health protection. In terms of consumer and health protection, the European Union is very far-reaching by global standards. The REACH Regulation, for example, regulates the handling of substances in the EU that are highly hazardous to health, harmful to the environment, highly hazardous to water, carcinogenic, harmful to the unborn child, mutagenic, toxic and lethal. Any product that can be proven to have been produced in the EU throughout its entire material flow is subject to strict health regulations and is therefore potentially 'safer'.

## Regional value creation is economic

Ultimately, revenues at municipal level are important for the success and long-term sustainability of infrastructure and the provision of services in municipalities. Trade tax plays a key role in municipal revenues. Companies can only maintain jobs and apprenticeships if they can produce profitably in the regions of the EU. They produce profitably when their products are purchased and when customers, architects and the public sector increasingly demand, tender and install such products. Regional supply chains also make a fundamental contribution to increasing value creation in the regions. Various socio-economic studies show an average 10 - 16-fold, in some cases even up to 27-fold increase in value added with closed production chains implemented in regions from the forest to the customer compared to the 'export' of round timber[19].

## Value chains as Game Changer

Decarbonisation of supply chains is described by the World Economic Forum (WEF) as a 'game changer' for corporate climate action. Dealing with Scope 3 emissions is fundamental to credibly meeting climate change commitments[20]. Upstream Scope 3 emissions relate to the supply chains of products, including transport. Downstream emissions include the transport of products from the end producer to the customer or building, the use of the products and their reuse potential. The increase in material and process efficiency itself often leads to cost savings with comparatively short amortisation periods and the costs are relatively low compared to other measures. An additional shortening of supply chains generally costs nothing and can potentially be implemented immediately in the case of raw materials such as wood. In practice, however, it requires political support at all levels, including that of local authorities. Raw materials only account for a small proportion of end product prices (around <10% to 20% per product group). Costs for decarbonising supply chains are low and, according to the WEF, lead to a maximum increase in end consumer prices of 1% to 4%. According to surveys, 50% to 80% of consumers in the EU are willing to pay more for sustainable products[20 / 21]. One problem that has so far prevented companies from reducing emissions in supply chains is the lack of transparency. Information is usually only available up to the last upstream supplier but not throughout the entire supply chain. The WEF therefore recommends the specification of standards and labelling as one of the most important measures. The best way for local authorities to have their suppliers prove that they have met their targets is by means of environmental labelling. The World Economic Forum (WEF) sees great potential in shorter supply chains. The WEF even recommends rethinking and limiting the need for long-distance logistics, as 'nearshoring' can both reduce emissions in logistics and improve the supply chain against potential shocks. A best practice example of particularly climate and environmentally friendly supply chains in the area of renewable raw materials is the climate and environmental label HOLZ VON HIER®.

## Best practice HOLZ VON HIER®

Prof. Jörg Randers (Club of Rome)[22] : "In our last report to the Club of Rome 'One percent is enough', we proposed several innovative strategies to prevent ecological collapse and preserve humanity's chances of sustainable survival on earth. One of these is to rethink the benefits of unrestrained global markets. Promoting decentralized regional economies is a very important step towards a sustainable future, contributing to climate protection by reducing unnecessary transportation and to well-being and employment in the future. As an example of best practice, the HOLZ VON HIER® initiative makes an important and valuable contribution to achieving the global sustainability goals.

Even though regional value creation is generally close to the hearts of municipal decision-makers, they have had little opportunity to influence this in the past. With regard to wood products, the eco-label HOLZ VON HIER® offers for the first time a legally compliant opportunity to control the type and length of supply chains and thus strengthen regional value creation in addition to targeted climate protection (see next chapter).

# LOW CARBON TIMBER®, HOLZ VON HIER® European best practice example for climate-optimized supply chains

Using HOLZ VON HIER® to shorten transportation in the material flows of upstream chains using the example of wood products is an untapped potential that has an immediate effect and is easy to implement.

## The non-profit organization

HOLZ VON HIER® is a non-profit initiative with a stakeholder board of trustees, advisory boards, an expert panel, an office and national branches, which is committed to climate protection and resource efficiency in the forestry and timber industry.

## The network

HOLZ VON HIER® is implemented by a network of committed companies along the entire processing chain. HOLZ VON HIER® is equally suitable for companies of all sizes and specializations and is very easy to apply. HOLZ VON HIER® also works with an open and growing network of planners with an affinity for wood and a focus on climate protection and is used and supported by a growing number of local authorities who want to build in a particularly climate-friendly and resource-efficient way and also want to support regional value creation and jobs and apprenticeships in the regions. More than 100 partners from organizations, associations and institutions support HOLZ VON HIER® in the joint implementation of the goals, each according to their own possibilities. HOLZ VON HIER® is now represented in 7 European countries.

## The HOLZ VON HIER® climate and environmental label

The eponymous climate and environmental label WOOD FROM HERE® is an environmental label TYPE I, compliant with ISO 14024. This means that the environmental label is based on scientific principles, has a high standard of improvement, is externally monitored and meets a number of other requirements of the European Union.

HOLZ VON HIER® certifies optimally climate-friendly supply chains of short distances with wood from sustainable domestic forestry. The ecolabel thus addresses a central environmental factor. It is the only type I environmental label in accordance with ISO 14024 that records and documents the direct environmental impact of the supply chain. HOLZ VON HIER® is based on scientific principles and was developed in stakeholder consultations. It is continuously developed internally and through scientific projects at national and European level. In non-German-speaking EU countries, HOLZ VON HIER® has also been called LOW CARBON TIMBER® (LCT) since a European project funded by the EU Commission and works with the same system throughout the EU.

HOLZ VON HIER® makes climate-optimized supply chains recognizable, controllable and measurable. HOLZ VON HIER® is proof of transparent, deforestation-free and regional supply chains and thus an easy way to make sustainable consumption decisions

### Tenderability

The HOLZ VON HIER® climate and environmental label meets the requirements of § 34 VgV and can therefore be used by the public sector in tenders and procurements as well as for public buildings. This is underpinned and confirmed by expert opinions and practical tenders by local authorities and public developers. HOLZ VON HIER® is already being put out to tender for municipal buildings in the EU and nationally.

### Criteria

The round timber must come 100% from sustainable forest management, verified by forest management (FM) certificates according to FSC, PEFC or comparable. No wood from primary forests and no wood from internationally endangered tree species is permitted. The supply chains are particularly climate- and environmentally friendly, energy- and resource-efficient thanks to above-average short transportation routes throughout the entire upstream chain, from raw material extraction to the place of use.

### Controlled and externally monitored

The Ecolabel monitors origins, supply chains and material flows using an innovative electronic controlling system that records the material flows across the various processing stages. The system functions and works independently of borders and across borders. It meets the highest data security requirements and is hosted in a German security data center.

The eco-label and the controlling system are externally monitored twice by neutral third parties. On the one hand by TÜV and on the other hand by auditors for the PS 880 test standard of the German Institute of Auditors, comparable to the German state biogas register. The proof is not the label itself, but a certificate that must be available for each specific product and contains all relevant information on the product and its transportation footprint, including the amount of CO2 bound in the wood.

## Recognition and conformity

HOLZ VON HIER® is recognized in Germany and Austria in all relevant platforms for sustainable consumption and sustainable procurement. HOLZ VON HIER® is an alternative certificate for wood from sustainable forestry and as such is already recognized in modern building assessments as proof of wood from responsible forestry.

The DGNB (German Sustainable Building Council), the BNK (Assessment System for Sustainable Small Residential Buildings) and the KGA (Municipal Building Certificate Austria) have all recognized HOLZ VON HIER® as a sustainable building. HOLZ VON HIER® is a quantity balance system for chain-of-custody control, compliant with ISO 38200.

## Products

HOLZ VON HIER® covers with certified products a wide range of applications:

Timber and building elements: Timber building materials such as construction timber, KVH, BSH, CLT as well as building elements such as windows, doors, stairs, wooden panels, facades and insulating materials.

Interior fittings and furniture construction: floors, walls, wall elements, ceilings, room dividers as well as office furniture, other types of furniture and interior fittings for private, commercial and communal areas.

Wood energy: pellets, wood chips, logs.

Wood in outdoor areas: terraces, street furniture, playgrounds, park benches, garden timbers, garden sheds, fences, sound insulation, etc.

Municipal buildings and parts of buildings such as: Kindergartens, schools, retirement homes, office buildings, gymnasiums, high-rise buildings, halls, modular construction, serial renovation, special buildings, exhibition buildings and pavilions, etc.

## Holz von Hier® and the SDG

The climate and environmental label WOOD FROM HERE® or LOW CARBON TIMBER® (LCT) is a best practice example of climate-friendly, sustainable supply chains and focuses on a hot spot for climate protection. For the first time, the focus here is on short distances in supply chains. This has a significant positive impact on the climate and environment, energy, resource and water efficiency and reduces the risk of biodiversity loss. The climate and environment label thus inherently fulfills various Sustainable Development Goals (SDG) of the United Nations (UN).

# LOW CARBON TIMBER®, HOLZ VON HIER® in sustainable procurement and tendering

The current expert opinion on the suitability of HOLZ VON HIER for tendering clarifies important questions on 90 comprehensive pages.

https://ec.europa.eu/growth/single-market/public-procurement/rules-implementation/thresholds_en

Expert opinion on the usability of the HOLZ VON HIER® eco-label in public procurement: http:// www.holz-von-hier.de/wp-content/uploads/2016/01/ Gutachten_Prof.-Frenz.pdf http://www.holz-von-hier. de/wp- content/uploads/2016/01/Knauff-Gutachten-Labelverwendung.pdfhttp://www.holz-von-hier.de/ wp- content/uploads/2016/01/Vergaberechtliche-Prü- fung_Umwelt-verband-Vorarlberg-final.pdf

## Why HOLZ VON HIER® in tenders?

Many political decision-makers and stakeholders want to support their region, but 'regional' products or 'regional' origins are not permitted in tenders. For the first time, HOLZ VON HIER® as a climate label offers a way for the public sector to implement this concern in a simple way that complies with public procurement law. This has been confirmed by several expert opinions on public procurement law. HOLZ VON HIER® supports municipal climate protection goals and is the strongest lever for initiating climate-friendly, short supply chains. WOOD FROM HERE® promotes the stability of supply chains and security of supply. Forest-owning municipalities can use WOOD FROM HERE® to combine the municipality's goals as a forest owner with their goals as a procurer. The integration of WOOD FROM HERE® into specific tenders not only makes a considerable contribution to reducing CO2 emissions, but also has a direct, immediate and efficient effect and is not associated with any costs for the municipalities.

### HOLZ VON HIER® is a leading certificate for climate protection. eligible for tender

HOLZ VON HIER® can be required as a lead certificate for climate protection in tenders in accordance with EU and public procurement law, in the lower and upper threshold range as well as for construction and supply services. Following the amendment of EU public procurement law, it is possible to name a specific quality label in tenders and focus on it as a "lead certificate". Municipalities for whom climate protection is important can refer to HOLZ VON HIER® as a lead certificate. Outside of German-speaking countries, the LOW CARBON TIMBER© label variant comes into effect here.

### HOLZ VON HIER® is an alternative CoC certificate for wood from sustainable forestry.

If the criterion 'origin from sustainable forest management' is required for tenders with wood, a HOLZ VON HIER® certificate must also be recognized as an alternative proof to FSC or PEFC certification according to legal opinions of recognized experts and the implementation practice in EU countries (see AT). This means that bidders who submit a HOLZ VON HIER® certificate can also participate in such tenders, which expands the potential group of bidders. HOLZ VON HIER® is recognized as such a certificate in the DGNB, BNK and Klimaaktiv building assessment labels and is recommended by the Agency for Renewable Resources (FNR) for procurement. In Austria, HOLZ VON HIER® is listed in the "National Action Plan for Sustainable Procurement" (NaBe) and in the "Baubook" as such an alternative certificate. The NaBe is the equivalent of the German Federal Procurement Decree, only more comprehensive.

### With environmental labels such as HOLZ VON HIER® climate and environmental protection and energy and ressource efficiency is established.

Ecolabels provide a sound basis for evaluation, address significant environmental impacts, identify products that are better than the average of comparable products, monitor their criteria and represent a real environmental improvement. In addition, externally monitored eco-labels are also a suitable instrument in terms of public procurement law to anchor environmental criteria in tenders and to be able to check compliance with them in a meaningful way. The World Economic Forum also clearly advocates the use of eco-labels[20].

## How can HOLZ VON HIER® be integrated into tenders?

The simplest, quickest, clearest and safest way to achieve greater climate and environmental protection is to require the HOLZ VON HIER® eco-label in tenders, buildings and purchases. This can be implemented as follows:

1) As an objective in the preamble, whereby a reference to any existing climate protection plans of the municipality or similar is always helpful here.

2) As a product-related requirement in the specifications. This has the strongest effect, as only bidders who use the corresponding products can be awarded the contract. This ensures the desired climate protection effect.

3) As a weighted award criterion. In this case, tenders are weighted according to various criteria, such as price on the one hand and environmental aspects on the other. Here, HOLZ VON HIER® can be weighted with a score as a sustainability criterion. This does not in principle exclude bidders who do not provide appropriate evidence and therefore sets lower hurdles, but there is a possibility that the desired climate protection effect will not be achieved. A form provided by HOLZ VON HIER® can be included in the tender documents, which must be completed by the bidder and enclosed with the tender. Upon execution, compliance with the requirements must be proven by means of product- related HOLZ VON HIER® certificates. These can easily be checked for authenticity by the client or the awarding authority itself. In addition to many helpful materials in the "Helpdesk for Local Authorities", Holz von Hier also provides instructions on the practical procedure for tenders on the website. The initiative also supports local authorities directly in the implementation of projects, from preliminary planning and market exploration to tendering and monitoring.

## Best practice examples

In Germany, Austria and Luxembourg, there are already various tenders with HOLZ VON HIER® for construction projects such as kindergartens, schools, halls of residence, bridges, warehouses, office buildings and neighborhoods as well as framework agreements for the supply of pellets. In Vorarlberg, HOLZ VON HIER® is now always requested in all municipal tenders. Austria is therefore a pioneer in Europe.

In Germany, individual federal states have already addressed the issue at the highest ministerial level and

In Germany, individual federal states have already addressed the issue at the highest ministerial level and in programmes and guidelines, such as **Rhineland-Palatinate** and **Saxony**. Other federal states want to follow this example

Many other cities and districts have expressed interest in implementing buildings, districts and procurements with HOLZ VN HIER® in the future.

**The first examples of tenders with HOLZ VON HIER® in DE were the new buildings of the Kleebachschule elementary school and the Landgraf-Ludwig-Gymnasium grammar school in the city of Giessen.**

**Motivation:** An urgent need for additional classrooms meant that the project had to be implemented quickly. In addition, ecological sustainability requirements were to be implemented. **Selected procedure**: General contractor, functional tendering. The wood eco-label from Hier® was integrated into the tender as an award criterion. **Experience:** Positive, the integration of ecological criteria into the award criteria of the functional tender enabled rapid structural implementation and a sustainable construction method. **Contact**: Katharina Rinn: info@ingenieurbuero-rinn.de.

**Further examples of municipal buildings**:

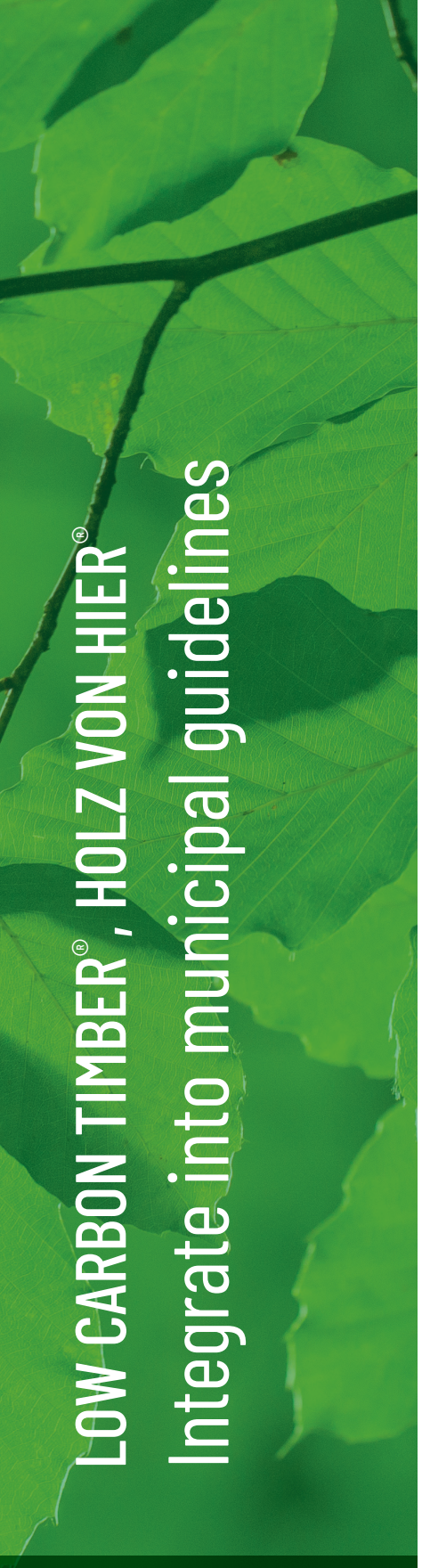
- New Habakuk children's home, Friedrichshafen
- Schelklewiese bridge, Baiersbronn
- Renovation and extension of the secondary school, Renningen
- 4-year framework agreement for pellets, Karlsruhe
- New elementary school, Au
- New lido, Lochau
- New kindergarten building, Koblach
- New kindergarten building, Hörbranz
- Renovation/extension of elementary school, new secondary school and polytechnic school, Hittisau
- New elementary school, Andelsbuch
- New building and school extension, Bludenze
- New children's house, Schwarzach
- New building for infant care, Rankweil
- Refugee home, Rottenburg

as well as buildings by property developers and businesses, here are two prominent examples:

- Franklin Village Mannheim (Quarter)
- Multi-storey office building Maisel Brewery
- New administration building Züblin Timber
- Various others and several currently being implemented

Example of tenders with HOLZ VON HIER® and a "Helpdesk for local authorities" at:

**https://www.holz-von-hier.eu/fuer-kommunen**.



# LOW CARBON TIMBER®, HOLZ VON HIER® Integrate into municipal guidelines

Municipal guidelines for construction, procurement and climate protection define the objectives that municipalities should pursue here would like. HOLZ VON HIER could generally be optimally integrated into be integrated into such climate guidelines.

## Municipal guidelines on construction, procurement and climate protection

Internal municipal guidelines define the municipality's long-term climate and environmental policy goals. Each municipality can set its own guidelines. Such guidelines for sustainable procurement, sustainable construction and climate protection are often defined in the form of climate protection strategies. Corresponding guidelines, administrative regulations, service instructions, procurement regulations or plans have many advantages. They create continuity even with changing political leadership and staff composition. They create a sense of commitment and give employees and managers certainty in their actions. They ensure increased and broader knowledge of strategies in the administration. They form an important basis for defining environmental requirements in procurement and awarding contracts. As they are based on resolutions of the municipal council, district council and local council, they represent a certain consensus of the municipality's objectives.

## Integrate HOLZ VON HIER® into guidelines.

As the World Economic Forum (WEF) has determined[2, 20] , the greatest $CO_2$ reduction potential today is usually no longer in our own sphere of influence (Scope 1 and 2) but primarily in the supply chains (Scope 3). This applies in particular to the construction sector, where 80% of the reduction potential lies in the supply chains. For wood products in particular, emissions in the supply chains are largely determined by transportation costs. It is therefore an important, supportive and essential step towards more climate protection to include the eco-label WOOD FROM HERE® in guidelines as proof of climate-optimized supply chains. One reason for this is that it supports the goal of climate neutrality and CO2 reduction significantly, effectively and in the short term. If WOOD FROM HERE® is anchored in climate protection guidelines or guidelines for sustainable construction by municipalities, reference can be made to the climate protection or sustainability goals of the municipality in a specific tender. This creates a link between the municipality's environmental goals and the subject matter of the tender.

In order to formulate guidelines or instructions for awarding contracts, basic principles must first be formulated for the various topics that the municipality wants to follow or goals that it wants to achieve. At this point, it is a good idea to make a reference to climate protection, for example: "Municipality X intends to increase the use of the renewable raw material wood as a CO2 store in products and in particular in construction, as a contribution to achieving the municipality's climate protection goals. The aim is to keep not only the use phase (red energy, red CO2 ), but also the entire upstream chains (grey energy, grey CO2 ) with all transports particularly climate-friendly by consistently considering the life cycle. Transportation along the entire supply chain should therefore be as short as possible."

In other parts of the guideline, the desired procedures are then specified. In most cases, the type of verification to be provided by the bidder is regulated here. In this context, reference is often made to relevant quality marks that are to be required. At this point, the HOLZ VON HIER® or LOW CARBON TIMBER® quality mark should be listed for wood products.

## An additional option ...

One potential starting point for strengthening climate protection in urban development projects is urban development contracts. Cities and municipalities can conclude these with private investors. The main content is regulated in Section 11 BauGB, but is not conclusively defined. For example, according to Section 11 (1) No. 5 BauGB, "the requirements for the energy quality of buildings" can be specified in urban development contracts "in accordance with the objectives and purposes pursued with the urban development plans and measures". One starting point could therefore be to also set requirements for gray energy, i.e. climate protection requirements for the building materials used. However, it must be borne in mind that the agreed services must be appropriate to the overall circumstances and a large number of concerns must be weighed up in each individual case..

## Best Practice examples

**"Guide to sustainable building", district of Ravensburg**

IKP is responsible for the renovation, refurbishment, conversion and new construction of the district's own properties. The creation of a guideline for sustainable construction is intended to provide a standard for the development of sustainable construction methods and the district of Ravensburg's own buildings for upcoming construction projects. The aim of the district of Ravensburg is for sustainable construction methods to become an integral part of selected building projects. In the guidelines, the aspect of regional, climate-friendly building materials has already been anchored in the basic planning of new construction and renovation projects. In the case of wood products, the use of HOLZ VON HIER® certified materials is particularly emphasized and rewarded..

**"Guide to the sustainable choice of building materials" of the Archdiocese of Munich-Freising**

The internal guideline of the archdiocese formulates the following requirements (excerpts) with regard to wood and wood products: "No use of tropical wood or wood from virgin forests (Siberia or European Russia). In this context

1st choice: sustainable regional, 2nd choice: sustainable Central Europe. Proof must be provided by means of appropriate certificates, e.g. wood from Hier®, Naturland or PEFC regional labels. In the case of PEFC and FSC®, the origin (no tropical wood, no wood from virgin forests) must also be verified".

**"A guide to sustainable purchasing" by the City of Berlin**

"What to look out for?

When buying wood products, make sure that they have a long service life, that the wood used comes from the region where possible, that they are certified and that no tropical wood is used. You cannot tell the origin of wood products."

Proof is recommended, among other things:

"The "Holz von Hier" label focuses on transportation routes and aims to promote regional and sustainable wood production/processing. A prerequisite for the award of the label is therefore that all the wood comes from sustainable forestry. Proof is provided on the product via a product-specific certificate with a unique ID number, which also enables the wood to be traced on the label provider's website."

These and other examples can be found at:
**https://www.holz-von-hier.eu/fuer-kommunen/**


Including HOLZ VON HIER in municipal funding programs ultimately saves considerably more money than funding costs.

## Why anchor HOLZ VON HIER® in local authority funding programs?

One way in which municipalities can achieve their climate protection goals (e.g. climate neutrality) is by also providing incentives for the private sector in the municipal area to save energy, protect the climate and build in a climate-friendly or sustainable way. This can be achieved through information campaigns or financial incentives, for example. Such support programs have already been launched by a number of municipalities.

The use of renewable raw materials, and wood in particular, is also playing an increasing role in such funding programs. However, if the wood used does not come from sustainably managed domestic forests, it can often be imported into the European Union (EU) via long routes and can also come from unsafe sources. In addition to the risk of forest loss, this is also associated with massive emissions in the supply chains.

However, climate-friendly, short supply chains do not develop automatically, but require political and municipal support, just like other climate protection measures. With HOLZ VON HIER®, climate-friendly supply chains can be implemented immediately, simply and effectively. Integrating the climate and environmental label into any existing municipal support programs is therefore very helpful for the implementation of climate- friendly supply chains for products and buildings. CO2 reduction through the use of HOLZ VON HIER® certified building materials, climate protection targets can be achieved more quickly. This applies to both new builds and renovation measures.

**HOLZ VON HIER® makes it easier to achieve climate neutrality in new builds**

For passive houses, 6 kg CO /m 2 *a (2 kg electricity / 4 kg heat) is calculated, for EnEV buildings 10 kg CO /m 2 *a (4 kg / 6 kg)[24]. At around 150 m2 per detached house (EFH), this equates to 0.9 - 1.5 t CO2 /EFH*a or 24 - 41 t CO2 /EFH in "red CO2 " over the next 27 years (2023 - 2050). On average, around 60 m3 of wood is needed for an average timber house. A timber house with a HOLZ VON HIER® certificate for the wood building materials instead of wood from Russia saves a calculated 16 t CO /timber building. With a HOLZ VON HIER® certificate, climate neutrality can be achieved 10-18 years earlier (compared to wood from central/eastern Russia).

**HOLZ VON HIER® improves the achievement of the 1.5 degree target in existing buildings**

Replacing an oil boiler with a heat pump or a pellet boiler is a relevant climate protection measure, but the origin of the pellets is also important, as shown in the following comparative calculation.

According to the Federal Environment Agency, an oil condensing boiler in renovated old buildings emits around 3100 kg CO /year, while a low-temperature pellet boiler emits around 325 kg CO /year [25]. If the oil boiler in a renovated detached house (150 $m^2$ floor 2-äq space) is replaced with a pellet boiler, a calculated saving of approx. 2,775 kg CO / year is achieved. However, this does not take into account the "gray CO2 " of the fuels. This CO saving can only be achieved in real terms if pellets from sustainably managed forests are used for heating. With imported pellets in the EU, the savings are reduced on average by 2300 kg/year or by approx. 500 kg/year (Canada) or 650 kg/year (Russia)[26]

It would therefore make sense for state and municipal subsidy guidelines to also take this aspect into account, as is already the case in the Vorarlberg housing refurbishment guidelines, for example.

**HOLZ VON HIER® starts where enormous climate effects can be achieved without significant costs.**

There is huge potential for energy efficiency in buildings. However, people often only think about construction and consumption during use (red energy). The latest study by ARGE Bau[27] shows that the technical effort required to reduce the kWh of red energy is very material and cost- intensive and that most private building owners and local authorities will face high demands in the coming years. It therefore calls for "calibration factors", below which even greater energy efficiency in red energy can only be achieved through "disproportionately high costs".

The HOLZ VON HIER® initiative therefore aims to make local authorities more aware of the enormous climate and environmental protection potential that the gray energy of supply chains has for the overall balance of buildings. The demonstrably short distances in the entire supply chains are increasingly probably the only way to achieve climate neutrality for buildings and neighborhoods at all, without overburdening building owners economically or incurring costs for local authorities.

## Best Practise Examples

**HOLZ VON HIER® is already anchored in the following funding programs in Germany, Austria and Luxembourg:**

- NaBe (Sustainable Procurement Action Plan).
- Municipal building certificate Vorarlberg
- Vorarlberg residential construction guidelines
- Residential building renovation guideline Vorarlberg
- Timber construction funding guideline of the state of RLP
- Guideline for sustainable building of the LK Ravensburg
- Guideline for sustainable building of the LK Karlsruhe
- Climate Pact Luxembourg
- CO2 program City of Munich
- Wood construction funding program City of Freiburg
- Forest Fund Austria

### Examples

**NaBe Austria.** The Austrian Sustainable Procurement Action Plan (NaBe) is the Austrian government's strategic programme for sustainable procurement. It therefore goes beyond the scope of the German Federal Government's Timber Decree, which relates exclusively to timber products. However, it has a similar significance and weighting. HOLZ VON HIER® is already comprehensively anchored here.

**KGA funding for public buildings.** The state of Vorarlberg promotes sustainable construction via the municipal building certificate (KGA). The anchoring of HOLZ VON HIER® in the KGA, with training for inspectors, has set new standards. Through the KGA, public building owners receive 10% of the points in the product management and building products criteria group on presentation of a HOLZ VON HIER® certificate.

**Housing subsidies.** In addition to the KGA, the state subsidizes housing construction via a new construction guideline if it meets special ecological criteria. HOLZ VON HIER® is also anchored in the list of criteria for this housing subsidy. On presentation of HOLZ VON HIER® certificates, builders receive a subsidy of € 70/$m^2$ usable area for windows and € 30/$m^2$ usable area for façades. That is up to €13,000 for a new-build residential property with 130 $m^2$. In renovation projects, building owners receive a subsidy of €20/$m^2$ for windows, façades and roof structures on presentation of HOLZ VON HIER® certificates. This amounts to around € 3,500 - 8,000 for an average detached house, and correspondingly more for a large residential complex.

**Residential building renovation guideline.** The use of regional wood with HOLZ VON HIER® is not only promoted in new builds, but also in the renovation of existing buildings. Here, the use of HOLZ VON HIER® is subsidized with 20 €/$m^2$ component area (facades, roof, windows).

# LOW CARBON TIMBER®, HOLZ VON HIER® in Financial Markets and Financing

"Climate protection can only be implemented financially together with the capital market" (HOLZ VON HIER®)

## Sustainability in the financial sector: requirements and risks in financing

Financing will increasingly be geared towards **sustainability factors such as climate protection** targets and other eco-social aspects. To achieve the goals of the Paris Agreement and the Sustainable Development Goals of the United Nations, the European Green Deal and the EU Sustainable Finance Action Plan, from which the European Taxonomy Regulation emerged, were published.

**Sustainability risks** refer to events or conditions whose occurrence could have a significant negative impact on the financial and investment sector or real estate management. One example is climate risks, which are roughly divided into two risk categories: (1) **physical risks** and (2) **transaction risks**.

Physical risks as a result of changing climatic conditions include, for example, damage to real estate due to storms, hail, flooding or increasing losses in forestry and agriculture due to droughts, fire and other factors. Transaction risks can lead to a devaluation of assets. Examples of risks include changes to the political and legal framework (e.g. introduction of a CO2 tax, changes to building regulations), technological developments (e.g. renewable energies, storage) or changes in consumer behavior. Financial institutions will increasingly focus on the risk of stranded assets and formulate sustainability requirements in the financing criteria in order to minimize these risks. This applies in particular to the area of greenhouse gas emissions in order to achieve the 1.5° target if possible.

## HOLZ VON HIER® reduces risks

The risk potential from transition risks is also highly dependent on emissions in the value chain. Although Scope 3 verification has not yet been prescribed, this will probably soon be the case and then all options for action that can reduce emissions here will be a significant strategic advantage in the sustainability portfolio of companies, projects and buildings.

Most financial institutions such as banks, insurance and reinsurance companies, pension funds, occupational pension funds, investment companies, investment funds, securities firms and others are now tightening existing risk management systems with regard to climate change or are setting up new ones.

According to the banks surveyed, real evidence will also have to be provided in future to prove that the financing requirements have been met.

Municipalities today proceed according to the overall coverage principle, i.e. loans for planned investments are included and applied for as part of an overall budget, so that specific sustainability criteria do not have to be met directly. This is provided for under municipal budget law. According to the municipal umbrella organizations, this principle will have to remain in place in the future.

However, according to financial market players, local authorities will be increasingly pushed by banks towards project-related lending. By then at the latest, documentation of compliance with sustainability requirements will be an advantage for local authorities

However, according to financial market players, local authorities will be increasingly pressurised by banks to take out project-related loans. By then at the latest, documentation of compliance with sustainability requirements will be an advantage for local authorities.

Buildings that are tendered and constructed with HOLZ VON HIER® certificates for building materials have strategic advantages and minimise risks for financial institutions

CO2 savings through HOLZ VON HIER® products, construction materials and buildings compared to benchmarks can be clearly demonstrated. In addition, a number of tools have been developed to enable comparisons and risk potentials of various origins and materials to be estimated and compared.

In addition, it is not only write-off or default ratings that play an important role in lending today, but also sustainability ratings, which determine the value (e.g. mortgage lending value) of the property. However, if the building suffers a considerable loss in value after 20 years, for example, due to such sustainability ratings, the borrower's collateral vis-à-vis the bank is also devalued accordingly. It must then be regained through appropriate (conversion) measures or raised in some other way. Buildings that are given a higher ecological rating than usual from the outset can also achieve a longer security during the term of the loan. HOLZ VON HIER® certificates can also contribute to this.

The supervisory bodies of financial institutions are already increasingly demanding climate protection measures, but in the short term other environmental risks such as air and water pollution, threats to biodiversity and ecosystems and the generation of hazardous waste will also have to be reflected in risk management. Declining biodiversity, for example, can also pose financial risks. Today, 1 million animal and plant species are threatened with extinction, many of them within a few decades. This loss could have a similarly serious financial impact as climate change. According to the FMA, the risk to agriculture alone from the loss of pollinators could amount to damage costs of up to USD 577 billion per year[1] . HOLZ VON HIER® also has a positive impact with regard to the risk of biodiversity loss.

## Best Practise Examples

Builder-owner loan:

Some banks, such as the **Ethikbank**, provide builders with loans at favourable interest rates if a WOOD FROM HERE® certificate can be presented for the products and building materials used. Other sustainability banks will follow suit. You can access the conditions here: https://www.ethikbank.de/privatkunden/oekobaukredit/foerderkriterien-neubau.html.

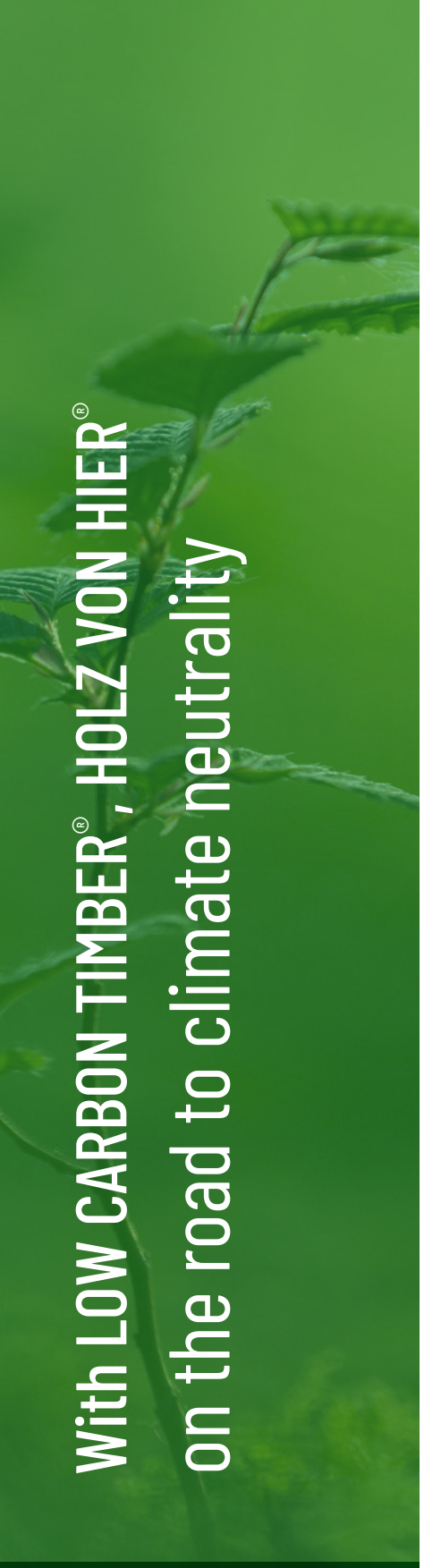
Investment loan:

The HOLZ VON HIER® eco-label can be useful not only for building owners, but also in the context of investment promotion programs. Banks are also making increasing demands on sustainability activities for investment loans. The **Sächsische Aufbaubank**, for example, mentions the HOLZ VON HIER® eco-label in the GRW RIGA funding guideline as a way of documenting the requirements within the framework of the extended ecological sustainability certificate.

HOLZ VON HIER® is currently in extensive and promising talks with various other eco-social banks in order to anchor the climate and environmental label comprehensively in various financial instruments of the banks as a sustainability criterion

Green Bond:

HOLZ VON HIER® is currently in negotiations with the Evangelische Bank with a view to issuing a new green bond for the (re)financing of timber buildings, which would also include the HOLZ VON HIER® eco-label as a requirement in the criteria catalog.



With LOW CARBON TIMBER®, HOLZ VON HIER® on the road to climate neutrality

Climate neutrality does not work without real energy savings. Savings through short distances in the supply chains are easy and quick to implement. This is an immediately usable and effective lever on the way to climate neutrality for municipalities.

## Why? - The climate-neutral municipality

In its ruling on the Climate Protection Act of March 24, 2021, the Federal Constitutional Court also made compliance with the Paris Agreement the central sustainability task of our time under constitutional law. The increase in global mean warming must be limited to well below 2 °C and, if possible, to 1.5 °C compared to pre-industrial levels. In order to achieve this, climate protection must also become significantly more ambitious in the European Union - ultimately leading to climate neutrality as quickly as possible. Germany, for example, has formulated the political goal of becoming climate-neutral by 2045. The public sector plays an important role here, not only because of its role model effect, but also because many socially necessary transformation processes are taking place in the municipal sector. Many municipalities have therefore set themselves the goal of becoming 'climate neutral'.

At this point, it is perhaps important to take another brief look at the concept of climate neutrality. No human activity in itself can ever be climate neutral, as every process is associated with the consumption of energy and resources and thus with corresponding emissions. Climate neutrality is understood as the balance between unavoidable human-induced emissions (sources) and, even in the distant future, predominantly natural sinks. Sinks bind CO2 and remove it from the atmosphere. An important sink is, for example, plant growth and the subsequent fixation of the biomass built up. In order to achieve net zero emissions, all greenhouse gas emissions worldwide would have to be offset by carbon sequestration. A carbon sink is a system that absorbs more carbon than it releases. The most important natural carbon sinks are soils, forests and oceans. According to estimates, natural sinks remove between 9.5 and 11 gigatons of CO2 per year. In 2021, however, global CO2 emissions amounted to 37.8 gigatonnes. This means that the global community is currently emitting around 3 - 4 times as much CO2 as the natural sinks can absorb[28] . Accordingly, natural sinks must be used in a resource-efficient manner and our energy and resource consumption must be drastically reduced, because there is no sufficient technical energy efficiency without energy sufficiency.

The current problem of climate change has arisen precisely because human sources have far exceeded the capacity of natural sinks. So far, there are no artificial carbon sinks that can remove carbon from the atmosphere to the extent that would be necessary to combat global warming. Therefore, the primary goal must be to reduce the sources and then increase the capacity of sinks where possible.

In the widespread concept of climate neutrality, in addition to the goal of reducing one's own emissions, the remaining, unavoidable emissions are often compensated for by measures to promote sinks (via financial contributions). Such offsetting projects are mostly located in the "countries of the global South" and their impact is to be monitored using various standards. However, based on the above figures and in view of the growing human population and developments in recent decades, it is understandable that it is impossible to offset all human emissions and make them climate neutral in this way. Therefore, this should not be the focus. This can only be an interim solution. Ultimately, it must be about real climate neutrality and everyone must contribute to this.

The European Union has also focussed on the climate neutrality of buildings through current regulations. However, measures in the programmes, funding and planning are usually limited to the consumption of 'red energy' in the use phase of buildings, such as increasing efficiency in the consumption of electricity and heat through energy-saving lamps, air conditioning systems, heating or insulation. The more energy-efficient buildings and construction elements become today, the more important the 'grey energy' of the upstream chains of the building materials used becomes for the overall balance of

the building. This is largely dependent on energy and resource-efficient supply chains.

## Accounting for emissions

Various procedures and models exist for determining and balancing emissions[29]. However, these models generally take a strictly territorial approach, i.e. only those sources and sinks that occur within the municipal boundaries are recorded and included.

It quickly becomes clear that with this approach, many municipalities can never actually become climate neutral, as the sources always outweigh the potential sinks, for example in the case of large industrial conurbations. Some municipalities, e.g. low-population and industry-free, densely wooded municipalities, can, however, represent net sinks under certain circumstances. Therefore, this approach or methodological procedure can only make sense at all at national level when balancing 'source' municipalities and 'sink' municipalities.

The application of the territoriality principle can make sense from a national perspective, but it can also be disadvantageous for the individual municipality. On the one hand, the greatest reduction potential for climate protection today often no longer lies within the municipality's own sphere of influence (Scope 1 and 2) but primarily in the supply chains (Scope 3), as the World Economic Forum has also analysed. Corresponding activities by the local authority to reduce emissions in the supply chains would therefore bring about a real environmental improvement, but could not be included in the local authority's carbon footprint and therefore not be honoured in future. This becomes clear in the example of transport. According to the existing climate balance models for local authorities, transport-related emissions should be balanced using the traffic that takes place within the local authority area. This may still be feasible for private commuter traffic within the municipal boundaries, over which the municipality in question can also exert influence by promoting local public transport. However, freight transport in particular extends across a large number of territories within supply chains and is highly volatile, meaning that it can never be reliably allocated to specific municipal areas. At the same time, however, a municipality can significantly reduce the climate impact of the supply chain through the demand for products from short supply chains and thus make an immediate and effective contribution to climate protection, which should appear in the municipality's climate balance sheet and can also be presented using the instruments that HOLZ VON HIER® provides for this purpose.

## How to integrate HOLZ VON HIER® ?

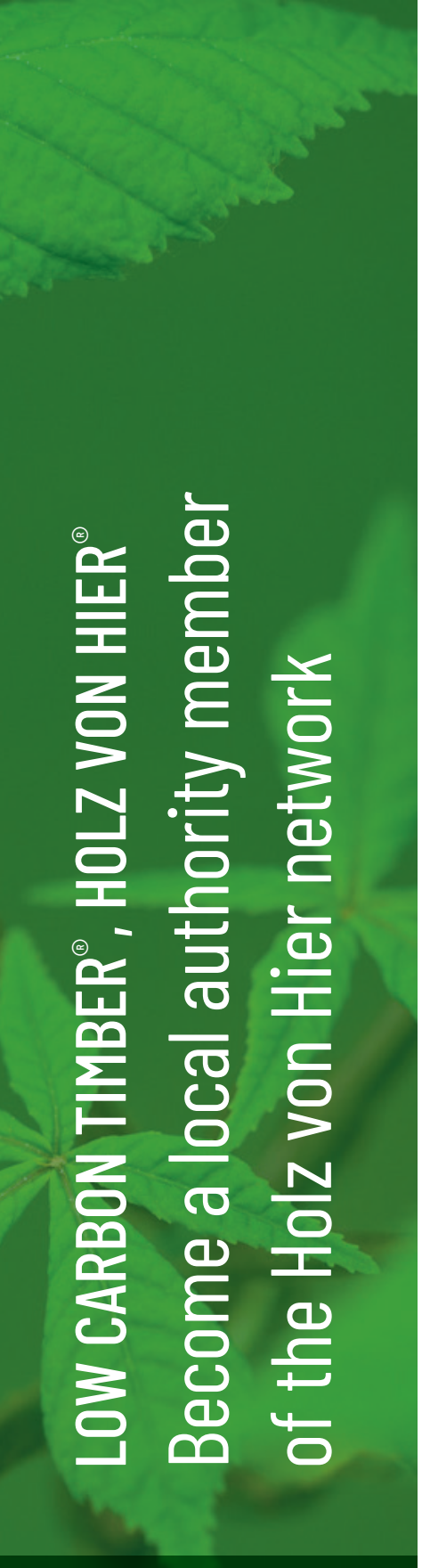
In addition to the methodically prescribed standard modeling of the emissions balance in the climate protection report, municipalities can also describe and quantify their climate commitment through accompanying measures. In the case of procurements and construction projects with wood, this is documented, for example, via products certified with HOLZ VON HIER® or a HOLZ VON HIER® building passport and can be included in the carbon footprint. Other tools support municipalities in this. As financial rewards for climate commitment in the context of efforts to achieve climate neutrality are unclear, corresponding reduction efforts should definitely be included in the municipal carbon footprint. This also applies, for example, to emissions offsetting activities, which are practiced by many municipalities. Supporting climate protection projects (e.g. financially) makes sense in any case and makes a contribution, even if this is not included in national carbon footprint models. In this area, HOLZ VON HIER® also offers the possibility of offsetting in regional sink projects by issuing CO2 certificates on the basis of documented emission reductions.

## Support

HOLZ VON HIER® provides practical support to local authorities with advice and various usable tools and instruments. If you have any questions, please do not hesitate to contact us and we look forward to hearing from you.

## Best Practice Example

Your municipality could be located here.




Local authorities deal with many problems locally, they take care of education, health, urban planning and much more. And they also have to respond to global challenges such as the climate crisis. Thank you to all of our mayors, city councillors and those responsible for being there for us all.

## We are here for you

The aspect of climate-friendly supply chains is increasingly becoming a central issue in procurement. In view of current and future developments, HOLZ VON HIER® is a very good implementation tool for local authorities to be able to demonstrate and use this aspect. The use and application of the HOLZ VON HIER® eco-label by local authorities is of course free of charge for them. The initiative is happy about every local authority that also uses the eco- label when procuring wood.

Municipalities that want to plan, tender and build with HOLZ VON HIER® can of course also contact the head office at any time free of charge and without obligation if they have any questions. With your consent, we will forward any questions that we cannot answer immediately to the relevant experts on the HOLZ VON HIER® expert panel. Of course, as a non-profit organization, HOLZ VON HIER® may not and cannot provide legal advice or planning services, but we have an extensive network of planners with an affinity for timber construction and experienced legal advice firms to which we can refer you with relevant questions. You can find a continuously growing range of information at www.holz-von-hier.eu or www.holz-kommunal. de. The HOLZ VON HIER® **Helpdesk for local authorities** facilitates the tendering process for many general questions using the following documents:

- General information about HOLZ VON HIER®.
- Information on the certificate of origin, the environmental footprint and the building climate passport from HOLZ VON HIER®.
- Information on the eligibility for tender of HOLZ VON HIER® and platforms on which the eco-label is already listed.
- Sample formulations for tenders.
- Legal opinion on the ability to award contracts.
- Practical examples of tenders with HOLZ VON HIER® from DE, AT, LUX.
- List of funding programs in which HOLZ VON HIER® is anchored (DE, AT).
- Examples of partnership agreements (e.g. Landesforsten).
- Information from HOLZ VON HIER® as proof of wood from sustainable forestry (basis for argumentation, recognition by other systems such as e.g. DGNB, BNK, FNR, NaBe, ÖZ, Klimaaktiv and others, as well as legal opinions on why HOLZ VON HIER® may not be rejected as proof of wood from sustainable forestry in tenders).
- Information on HOLZ VON HIER® as proof of deforestation-free supply chains.

## Why become a member of the network?

First of all: HOLZ VON HIER® is pleased about every building, every renovation, every interior design, every piece of office furniture, every procurement of building materials, products and bioenergy that is realised by municipalities with the climate and environmental label HOLZ VON HIER®. In this way, local authorities make a tangible, quantifiable and real contribution to climate and environmental protection, energy and resource efficiency and regional value creation.

As a non-profit organisation, HOLZ VON HIER® also offers more comprehensive and far-reaching support beyond the application of the eco-label in the municipality for municipalities that would like to enter into continuous cooperation. Interested municipalities can benefit from this for a small fee.

Conversely, local authorities can use this membership to support and promote the topic

of regional, climate-friendly supply chains in general.

In return for a manageable solidarity contribution, the network municipalities receive, for example:

- Support in the process for optimal climate-friendly construction projects on the way to climate neutrality of buildings and neighborhoods in close cooperation with the responsible departments.
- Advice for more "gray" energy and resource efficiency in cooperation with local energy agencies.
- Support in the supply of biomass for short supply chains.
- Help with market research for construction and procurement projects.
- Support in the design of tenders, guidelines or funding programs relating to the grey energy of supply chains.
- Support in the creation of climate protection plans, also compliant with the EU Taxonomy Regulation.
- Initial consultation with regard to building material comparisons.
- Advice on risk assessments in relation to eco-social aspects of supply chains and origins of raw materials, bioenergy, building materials and products.
- Free rental of HOLZ VON HIER® exhibitions.
- Support with public relations work on buildings built with HOLZ VON HIER® in an optimally climate-friendly way.

## How to become a member?

If you are interested, simply contact the HOLZ VON HIER® head office.

## Best Practice Examples

As a current example, the **city of Rottenburg**, which was one of the first municipalities to become a municipal network member of HOLZ VON HIER® in 2023, will be presented here.

**Motivation**. "In connection with the larger construction projects ... the question of how regional building materials can be integrated into the planning and construction process was repeatedly discussed in Rottenburg am Neckar. Rottenburg is one of the largest forest owners in Baden- Württemberg and therefore the question of how to use wood from the municipal forest was a focal point".

**Experience**. Quote: "The simple principle of "Holz von Hier" was convincing ..." "For the city, "Holz von Hier" with its climate label offers a way of integrating climate protection reasons into tenders in compliance with public procurement law. This ensures that the construction timber offered by bidders in the course of a tendering process comes from the region and is transported to the construction site over short distances. The "Holz von Hier" environmental label identifies products whose wood has been obtained from sustainable forestry. ... Quote: "In the city's opinion, sponsoring membership is a framework condition that supports us in the implementation of the sustainability strategy, the EU- compliant implementation of climate protection and regional value creation, the securing of sustainable and deforestation- free supply chains and the achievement of CO2 neutrality of products and buildings. In addition, the city can use the "Holz von Hier" environmental label for buildings and procurements. The sponsoring membership supports the initiative in that it can continue its efforts to promote the eco-label".

... Quote: "With a supporting membership of "Holz von hier" the following sustainability goals (UN SDGs) in particular can be implemented: 8. decent work and economic growth, 9. industrial innovation and infrastructure,

11. sustainable cities and communities, 12. sustainable consumption and production, 13. climate protection measures,

15. life on land, 17. partnerships to achieve the goals."

**Contact**: Thomas Weigel, First Mayor. Markt- platz 18, 72108 Rottenburg am Neckar. www.rottenburg.de

# LOW CARBON TIMBER®, HOLZ VON HIER®
# Further tools and support for municipalities at a glance

For information about HOLZ VON HER and its tools for local authorities and their property developers and planners, just get in touch with us. We look forward to your call.

## The instruments and tools for you

With regard to the diverse starting points and strategies for climate protection, HOLZ VON HIER® resp LOW CARBON TIMBER® offers a range of supporting tools and instruments, which are summarized below.

## The HOLZ VON HIER® resp. LOW CARBON TIMBER® certificate

The proof of origin from HOLZ VON HIER® resp LOW CARBON TIMBER® in the form of a customer and product-specific certificate is the central instrument with which municipalities can control the climate impact of the supply chain and check compliance with formulated requirements.


## The HOLZ VON HIER® resp. LOW CARBON TIMBER® Environmental-footprint

In addition to the certificate of origin as a type 1 environmental label in accordance with ISO 14024, HOLZ VON HIER® (HVH) resp LOW CARBON TIMBER® (LCT) also provides an environmental footprint that quantifies the various environmental impacts of the individual products and materials supplied. In traditional, particularly generic, life cycle assessments, the aspect of transport-related environmental impacts in the upstream chains (A2) of the products is greatly underestimated. Moreover, the transportation from the factory gate to the place of use or the construction site (A4) can only be recorded or accounted for by these using assumptions or not at all (Whitepaper: "Klassische Ökobilanzdaten: Statement, limits, options for action", ed. HVH, 2023).

The environmental footprint provides the following LCA data: CO2 , GWP (total, biogenic, fossil), AP, EP, ODP, POCP, ADP, PERE, PENRE, water. In contrast to generic life cycle assessment data, the environmental footprint data relates to the specific product that is procured or delivered to the construction site. The data covers the entire supply chain up to the construction site, including all actual transportation processes.

They transparently show the life cycle phases separately as values for A1, A2, A3, A4 and not just as a total value A1-A3. The data is recorded for a specific supply chain in real time

and not just once every several years, as is the case with traditional life cycle assessments. The environmental footprint is compliant with the European PEF principles and the methodology was coordinated with partners from several European countries as part of a European project (LIFE).

## The HOLZ VON HIER® resp. LOW CARBON TIMBER® buildingpass

Many building owners want a reliable estimate of the real positive climate and environmental effects achieved with the use of HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) for the realized buildings. However, the usual data or information provided here, such as generic life cycle assessment data, falls short or is unable to determine the real savings, particularly with regard to the significant trans- ports.

For this purpose, HVH / LCT provides a HVH / LCT building passport (certificate and report) for municipal building owners, which provides a reliable balance of the CO2 reduction performance through the use of building materials certified by HVH / LCT against real-world benchmark values and makes it clear. This data can also be helpful for further building assessments.


These real-generic benchmark values were developed as part of a European funding programme for supply chains of the most important wood product groups and the methodology and data were coordinated with the project partners from several European countries. Real-generic means that the transports in the supply chains are taken into account appropriately and realistically, that the raw material extraction is adjusted using country factors and that the values for production are based on the electricity mix of the respective countries. The HVH / LCT climate certificates (see next point) are also based on these benchmarks in the calculation of CO2 savings through the use of HVH / LCT certified building materials.

## HOLZ VON HIER® resp. LOW CARBON TIMBER® climate-certificate

The CO2 reduction can be quantified on the basis of the HOLZ VON HIER® ( HVH ) resp. LOW CARBON TIMBER® (LCT) product certificates and the environmental footprint of the products delivered certified according to HVH / LCT. It results from the comparison of transport-related emissions with real-generic benchmarks for the transport load of products of unknown origin.

The certificates issued meet the requirements for the trading of climate certificates in terms of quantification of the reduction, additionality of the measure, permanence of the reduction, uniqueness of the issue and others, as documented in international projects via the Gold Standard, for example. However, a regional standard for the issue of CO2 certificates, the VCM standard (Voluntary carbon market standard for HVH / LCT products), was developed for this purpose, as international standards are usually simply too expensive for small-scale projects. The standard is based on existing regional standards, such as the 'Moor Futures', which were developed by the Ministry for Climate Protection, Agriculture, Rural Areas and the Environment in Mecklenburg-Western Pomerania. Individuals, trade and industry can purchase climate certificates to either protect moors or, for example, to co-finance municipal buildings with climate-friendly wood and thus compensate for the residual amounts of their carbon footprint that cannot be saved for the time being.

HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) climate certificates are the first opportunity to combine CO2 reduction through transport reduction with the carbon market. These CO2 certificates have a twofold significance and benefit for local authorities. Firstly, local authorities can benefit financially as building owners from the purchase of climate certificates by third parties. On the other hand, local authorities also have another opportunity to support regional climate protection projects to offset their own unavoidable emissions.

The possible creation of a new emissions trading scheme for buildings, road transport and additional sectors (EU ETS 2, in planning, possibly from 2027) does not affect the issue of HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT)

climate certificates either. Similar to the national emissions trading scheme (nEHS) already introduced in 2021, pricing under ETS 2 is based on an upstream approach, i.e. the distributors of fuels must surrender emission allowances for the emissions contained in the fuels. The associated costs are passed on by the distributors to the end consumers, thus creating incentives for climate-friendly behaviour[30]. The CO2 reduction effect of avoided transport cannot be captured (and therefore not already compensated for) by the system. The climate certificates therefore do not represent double-counting.

The municipality of Bezau in Austria has already passed a municipal council resolution (municipal guideline on construction + energy) to subsidise the CO2 stored in wood used in the long term to the tune of €50/tonne of CO2 as a compensation measure as part of its efforts to achieve climate neutrality. Proof of this is a HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) certificate with the recognised CO2 storage. This is fully recognised due to the short distances and thus climate-friendly supply chains. The reasoning is that this is the only way to ensure that the CO2 storage in the wood is mathematically preserved and not completely or partially cancelled out by long distances in the real supply chains.

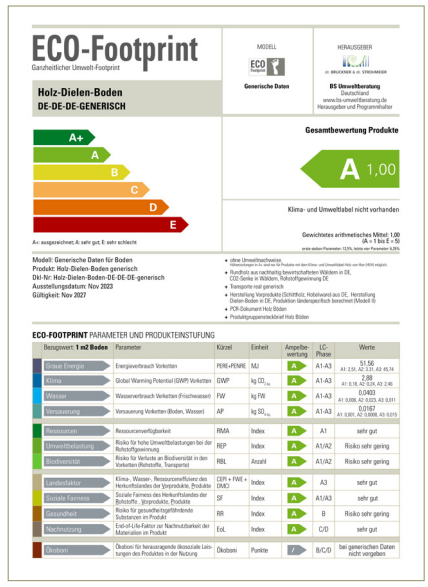
### LOW CARBON TRUST

*Think globally - act regionally*

The Low Carbon Trust will begin its work for the first time in 2024. The Low Carbon Trust will be chaired by a stakeholder-based supervisory body with representatives from environmental, social, economic, municipal, scientific, financial and foundation organizations. This committee will decide on the selection of projects and approve funding for the projects in accordance with the Trust's statutory objectives. The disbursement of funds to regional municipal projects is carried out under notarial control. Organizationally, the trust is initially managed by HOLZ VON HIER® on a provisional basis, but can also be outsourced. The underlying documents, data and benchmarks were all calculated exclusively using data from internationally recognized databases (Eurostat, EU Commission publication, etc.). All documents and compliance with the required criteria are monitored externally (see Standards).

## The extended "ECO Footprint"

Traditional life cycle assessments and the HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) environmental footprint reflect quantitatively measurable environmental aspects such as greenhouse gas emissions. However, the manufacture of products also has environmental impacts that are difficult or impossible to quantify and allocate to a specific quantity of product. In many cases, however, it is precisely these aspects that are highly relevant, such as effects on biodiversity. Such environmental impacts can rather be described as risk factors. This is possible according to the European PEF regulations and risk assessments are now required in many EU specifications and directives, precisely because many key environmental risks cannot be recorded in 'kg'. The newly developed 'ECO Footprint' classifies products in several eco-social parameters according to a 5-level scale with a colour scheme similar to the energy certificate and combines the most important classic life cycle assessment data with other innovative risk factors. The methodology of the relatively new ECO Footprint is currently being used for windows and flooring.




## Forest diversity platform

The proportion of hardwood in communal forests will increase, but the sales opportunities for woods such as beech, oak, ALH and ALN are currently still significantly limited. The potential uses of hardwood must therefore be further developed, because in sustainably managed forests, the main focus is usually on growing back what can also be marketed. HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) supports by increasing the demand for a wide range of wood species from the local forest through the business network and public relations work for the ecological advantages of using local wood.

HVH / LCT also offers forest owners the **"Forest Diversity" GIS platform**. Here, forest owners can enter standing stocks of less common tree species or varieties free of charge. On the one hand, the platform supports forest owners in the acquisition of interested wood processors as buyers of such as-

sortments and, on the other hand, serves to communicate and illustrate the diversity of species in managed forests.

The **Forest Diversity information platform** offers various information materials for forest-owning municipalities that want to support the implementation of HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) in the following areas: (1) Site-appropriate tree species selection, (2) Tree species profiles, (3) Forest management in Central Europe (e.g. working methods and machinery, ownership and mobilisation, stand protection, permanent forest, coppice, coppice forest, high forest, recognising forest pests, quality management, etc.), (4) Forest management in Central Europe (e.g. working methods and machinery, ownership and mobilisation, stand protection, permanent forest, coppice forest, high forest, recognising forest pests, quality management, etc.). (3) Forest management in Central Europe (e.g. working methods and machinery, ownership and mobilisation, stand protection, permanent forest, coppice forest, coppice forest, high forest, recognising forest pests, quality management, etc.), (4) Forests and climate (e.g. renewable energy, wood chips, pellets, firewood, carbon stocks in forests, forests and climate change), (5) Forests and biodiversity (e.g. biodiversity in domestic forests and worldwide, new tree species, risk of biodiversity loss, forest functions, etc.), (6) Timber industry (e.g. EUDR, due diligence, timber industry in figures, timber market, hardwood and special woods, secondary uses, weak wood and thinned wood, strong wood and valuable wood, growth, harvesting, revenues, etc.), (7) info cards (e.g. calorific values, wood moisture, cellulose-containing biomass, annual requirements, wood sorting, conversion factors, quality, needs-based log sorting, RED III lists, etc.).

## Object database

All properties built with HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) certificates for the building materials are entered free of charge in a property database. Interested local authorities and planners can then find out about the details of buildings already built with HOLZ VON HIER®. Initially, only municipal, public and interesting commercial buildings will be entered here. Single and multi- family houses are not initially entered here, unless they are interesting scalable concepts, for example in modular construction or entire building areas, neighborhoods, etc

## Media library

The HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) media centre is available to local authorities, planners and companies that support HOLZ VON HIER® or are part of the network, in certain areas free of charge and in others for password-protected download. Subject areas in the media centre are ECO-Planner training materials, forest owner information, builders' folders, flyers and brochures, roll-ups and wall panels, flags and promotional items, reports and publications, brochures, white papers, building and purchasing checklists, country profiles, CO2 comparisons, timber mobiles (free hire for partners and members), small exhibitions, information steles and accessories.

## Trainings

**Digital training courses**. HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) offers training courses for local authorities, planners and companies in close cooperation with local partners. **In-house training courses**. In-house training courses are also offered for individual local authorities and companies, tailored to their specific needs.

## New Risk Assessment Tool „ORIGIN“

Many new EU policies, strategies and regulations rely on risk assessments, such as the Supply Chain Act or the new EUDR as the successor to the previous EUTR. The EU Taxonomy Regulation also requires tools and methods for dealing with sustainability risks, and the supervisory organisations in the financial sector are also placing increasing emphasis on this.

So-called 'risk management heat maps' are now often used to assess and manage climate and environmental risks. A corresponding management tool is being developed as part of a European LIFE project. This GIS-based new heat map 'ORIGIN' helps to better categorise risk potentials for wood products in buildings that are not certified according to HOLZ VON HIER® (HVH) resp. LOW CARBON TIMBER® (LCT) and to compare them with the risk potentials of certified products. This offers local authority purchasers the opportunity to assess other product origins, particularly wood, but successively also other renewable resources and other materials, with regard to the risk of different environmental hazards or social risks and thus make a purchasing or procurement decision.

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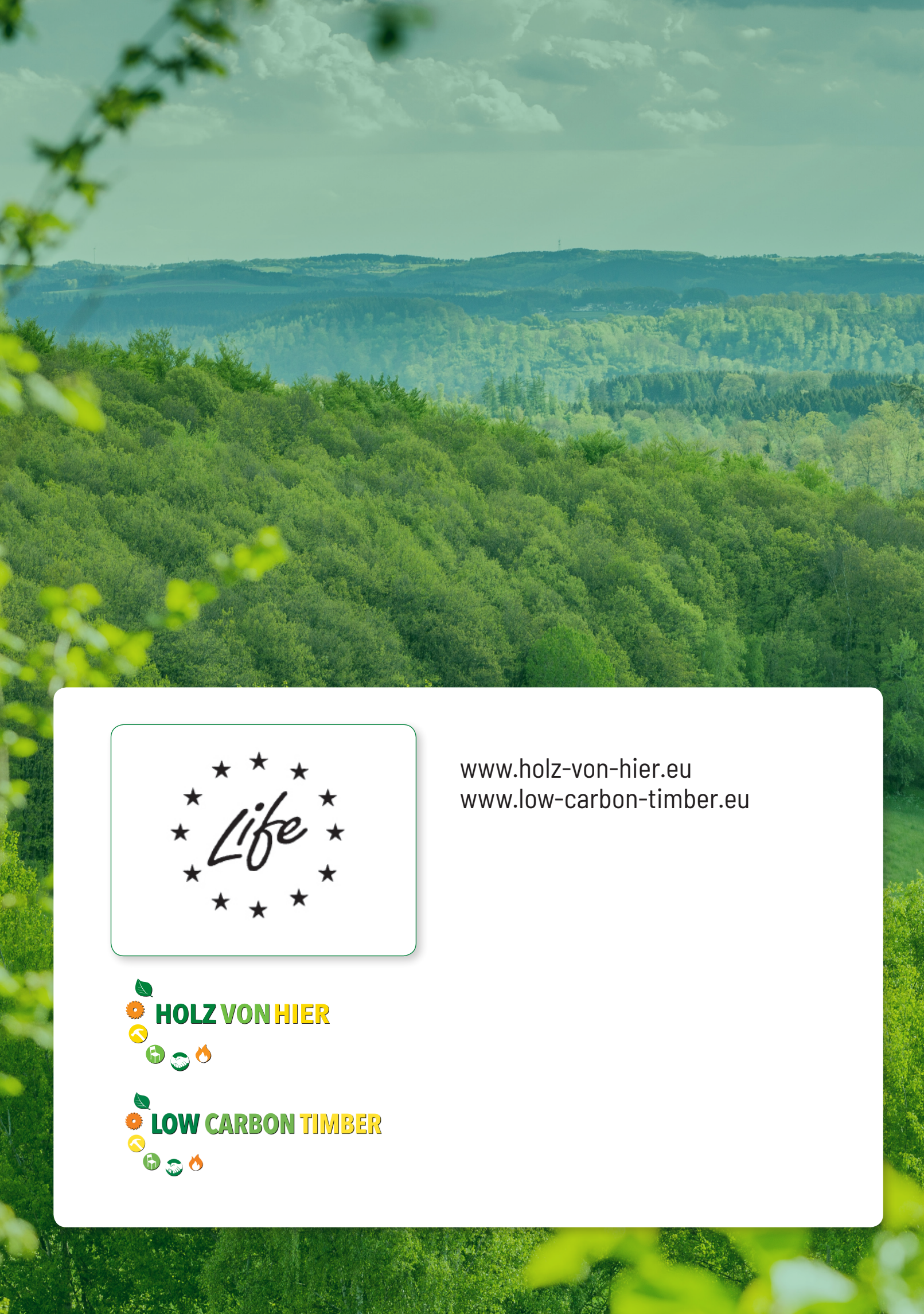
# Notes

# Notes



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