Paludi Pro—ducts

inspired by peatlands, designed for the future

GREIFSWALD
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Peatland conservation is climate protection

Peatlands are important carbon sinks worldwide: although they only make up around 3% of the global land area, they store more than twice as much carbon as all forests combined. In Germany, however, the reality is different: over the last few centuries over 90% of peatlands have been drained, mainly for agricultural and forestry use. Drainage of peatlands releases large quantities of greenhouse gases: in Germany, around 7% of all national emissions come from drained peatlands, which is roughly equivalent to half of the emissions from the transport sector. Rewetting of peatlands is therefore a key element of effective climate protection. However, peatland conservation does not mean “setting aside” land used for agriculture. On the contrary: only if peatland conservation can be combined with economic prospects land users become allies in climate protection.

Paludiculture – farming on wet peatlands

Paludiculture refers to the agricultural or forestry use of wet or rewetted peatlands. Unlike conventional management, it prioritizes permanent wet conditions to keep the peat saturated, thereby preserving the peat body and its capacity to store carbon. Economic incentives are needed for widespread implementation: biomass such as reeds, cattails, sedges and sphagnum moss can be processed into insulation materials, packaging, substrates or biochar, among other things. However, in order to establish functioning value chains, companies purchasing, processing and marketing these materials, as well as farmers who are willing to switch to paludiculture are needed. The Paludi product catalogue sends a clear signal in this regard.

Aim of the catalogue

The Paludi product catalogue is an initiative of the PaludiZentrale → www.paludizentrale.de, but was developed in close cooperation with projects from across the PaludiNetz network and other stakeholders. The aim is to provide a comprehensive overview of products, prototypes and services related to paludiculture and to show how diverse, innovative and marketable this new form of land use already is today. The catalogue is intended for:

- Farmers – to demonstrate the existing demand for paludiculture biomass across a wide range of products.
- Companies – that already process paludiculture biomass or plan to do so, offering inspiration and opportunities for networking.
- Research, policymakers, and society – to showcase the innovative potential of this field and highlight the diversity of existing products.

What makes it special: The Paludi product catalogue is open to further contributions. It will be regularly updated and expanded in the future. All new and existing Paludi products can be included. The only decisive factor is the contribution to the preservation or development of wet peatlands. Management or processing techniques are not included in this catalogue; a separate online platform, “PaludiScout” → www.moorwissen.de/paludiscout.html, is currently being developed for this purpose.

The product profiles are divided into five categories:

- Building and insulation materials
- Paper and packaging
- Substrates and soil improvement
- Energy use
- Design and everyday products

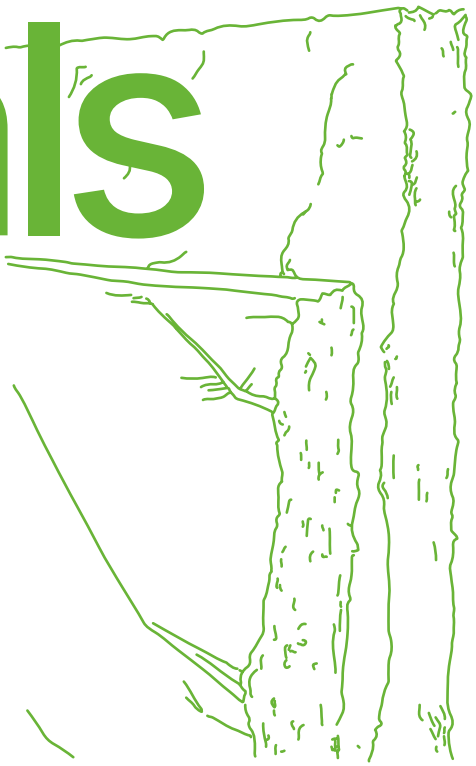
At the beginning of each chapter, brief introductions provide an overview of the respective category. The individual product profiles offer concise information on materials, applications, companies and contact details. Images and links supplement the presentation.

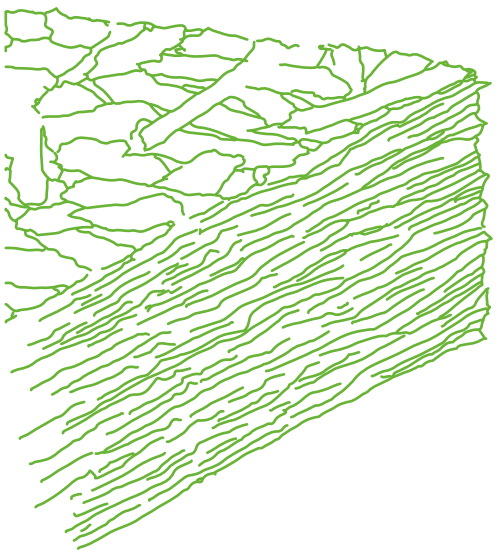
We hope that the Paludi product catalogue will serve as a source of inspiration – for land use that combines climate protection and economic activity as well as for a growing network of people and companies who are demonstrating that paludiculture has a future!

Approach & outlook

The catalogue is based on a structured online survey in which participating companies were able to provide product information, images and contact details. The contributions have not been edited, but come directly from the respective providers. The companies themselves are responsible for the content. The deadline for submissions for the first version was 27 July 2025. All contributions received after this date will be considered for a second, expandededition, which is expected to be published in the second quarter of 2026. The catalogue is published in German and English to reach a broad international audience. Translations were provided by the editorial team as required. All products and services in the catalogue have been checked for their relevance to wet peatlands. No companies are excluded; the only important criterion is that the product presented serves the conservation of peatlands or the sustainable growth of paludiculture. Interested parties can submit new product profiles or update their existing entries at any time. Questions and are welcome and can be sent to the following address:
Contact → produktkatalog@greifswaldmoor.de

Building & insulation materials





Building and insulation materials from paludiculture: natural and climate-friendly

Paludiculture offers new prospects for the building sector: plants that are ideal as raw materials for ecological building and insulation materials grow on rewetted peatland areas. Species such as common reed (*Phragmites australis*, cattail (*Typha spp.*) and sedges (*Carex spp.*) are characterised by high biomass yield, rapid regeneration and good technical properties. Thanks to their natural adaptation to wet locations, these plant species have robust, fibrous structures and air pockets that make them ideal insulation materials. A particular high insulating capacity is found in cattails, as they combine a beneficial cell structure, high dimensional stability and moisture resistance. Reeds have also been used as a building material for centuries, for example as a plaster base or roofing material. Building materials made from paludi raw materials are not only being developed for use in building works but are also becoming increasingly important in the infrastructure sector. Interest in applications such as noise barriers or foundations for roads and smaller buildings is increasing. The raw materials can be processed with relatively low energy consumption. Building and insulation materials from paludiculture make a double contribution to climate protection: they not only enable the wet management of peatlands and consequentially the preservation of carbon sinks, but also partially replace climate-damaging, petroleum-based materials in the building sector. Simultaneously, they open up new economic opportunities for farmers on peatland sites: as demand for ecological building materials grows, so does the potential for regional value chains. In this chapter, we present products and companies that already manufacture these building and insulation materials, demonstrating how climate-friendly building can be achieved with paludiculture.

Pictures: © Hiss Reet GmbH

Hiss Reet Board

Biomass used	Reed (*Phragmites australis*)
Paludiculture biomass	95%
Stage of development	Established on the market
Usage	Insulation; can also be used as cladding, acoustic insulation, non-load-bearing construction (drywall)
Application	Roof, interior fittings, exterior wall, interior wall, floor, ceiling
Dimensions	Various
Bulk density	115–160 kg/m³
Nominal thermal conductivity	0.530 λd-value in w/mk (EN13171)
Rated thermal conductivity	0.061 λ-value in w/mk
Building material class	B2 (DIN 4102-1)
Building approvals	abZ Z-23.11–2092

Possible uses Natural building materials from HISS REET are made from the renewable raw material reed and have been used as a building material for centuries. We offer you the right materials for thatched roofs, thermal insulation for wall and roof structures, as plaster bases and for interior design.

Properties Our products are manufactured manually without chemical additives by binding with wire. They are used for ecological and healthy construction methods. The low energy consumption in the manufacture of HISS REET products protects the climate and the environment. During its growth, reed binds CO_2 from the air and thus has an excellent CO_2 balance. Due to its high silicate content, the natural product reed is resistant to moisture. Disposing of our products is also easy: they can simply be composted.

Company profile We help people build better buildings and live healthier lives with our high-quality building materials and services.

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istraw/therm

Biomass used Reed (*Phragmites australis*)
Paludiculture biomass 98%
Stage of development Established on the market

Possible uses The Paludi Insulation Board is designed for ecological thermal and acoustic insulation in interior construction, e.g., in timber stud walls, ceilings, or temporary structures. It is not suitable for plastering and requires mechanical protection. Board thickness can be varied (30–200mm), and acoustic insulation performance can be optimized for specific projects. Target groups include eco-conscious builders, architects, housing associations, and specialist interior construction companies.

Properties The insulation board is produced from paludiculture biomass and contributes actively to CO_2 sequestration and biodiversity through peatland rewetting. It is vapor-permeable, fully compostable, and free from harmful additives. Manufacturing is carried out regionally with minimal embodied energy. Ideally suited for ESG-oriented construction in line with the European Green Deal. Acoustic insulation properties can be tailored upon request.

Company profile Innovation leader in building materials made from straw and paludiculture biomass.

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istraw
less ego, more eco.

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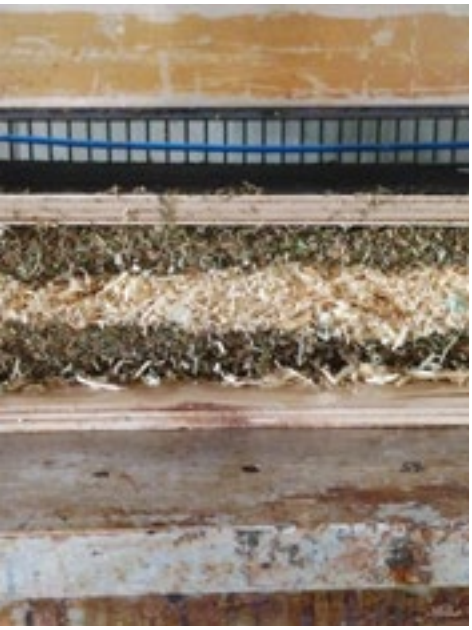
Greater pond sedge plate

Biomass used Carex (*Carex spp.*)
Paludiculture biomass Up to 75%
Stage of development Application tested



Possible uses This material can be used as plate material for indoor building. Research has shown that up to 75% of greater pond sedge (*Carex riparia*) can be incorporated without compromising the material's key properties. With a higher percentage of sedge edge, the mechanical properties decrease.

Properties Greater pond sedge grows in wet peatlands with water levels around –20cm/+10cm ground level. It is a dominant species which makes it suitable as a crop for commercial purposes. Furthermore, this crop has a fairly high yield (7,5 ton dry matter/hectares/yr). It doesn't need a lot of nutrients and grows also in brackish conditions.

Company profile Landschap Noord-Holland is committed to the protection and preservation of nature, valuable landscapes and cultural-historical heritage in North Holland. With our business services Natural Affairs, we carry out countless assignments for a variety of clients.

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Cooperation partner:
Mill vision and Louis Bolk Institute

Paludipanel

Biomass used	Mixed crop
Paludiculture biomass	90% paludi, 10% mycelium on spelt substrate
Stage of development	Application tested, currently MVP from mycelium and hemp. Development with paludi and hemp already in prototyping with first positive results.
Usage	Acoustics, cladding
Application area	Interior design
Dimensions	55 × 55 × 7 cm
Sound absorption class A–E	α-value at 250/4000 Hz – α = 0.25 / 0.7
Health / indoor climate	Air quality A+
Building regulations	Not yet approved
Circularity	Biodegradable
Production site	Preetz/Kiel – Gaarde, Germany

Possible uses The acoustic panels are suitable for wall and ceiling surfaces in offices, educational institutions, public buildings, or retail spaces. They can be flexibly mounted vertically or horizontally – as sound-absorbing wall cladding, ceiling elements, or design accents. Target groups include architectural firms, interior designers, construction managers, and municipalities seeking ecological and design-strong solutions for acoustically effective surfaces.

Properties The acoustic panels made of mycelium and paludi grasses combine top material performance with natural design. They are lightweight, flame-retardant, provide excellent sound absorption, and ensure A+ air quality. The mycelium-grown material creates a closed structure, high dimensional stability, and a uniquely lively, tactilely appealing surface. This makes them a sustainable and aesthetically striking element in modern interiors and architectural concepts.

Company profile morgenmaterials develops and produces products from fungal mycelium and peatland grasses. The company connects innovative materials with industries such as packaging, construction, furniture, and funerary services. Thanks to innovative process technology, the material is for the first time competitive and industrially scalable, offering an affordable and circular alternative to styrofoam.

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Pictures on the left: © morgenmaterials | Pictures on the right: © ParaStruct

BioReed

Biomass used	Reed (*Phragmites australis*)
Paludiculture biomass	70 vol.-% reed (finely ground), 30 vol.-% mineral binder (figures refer to this ratio; in general, a volume proportion of 75% reed is possible – depending on the reed:binder ratio, material properties can be achieved that are more wood-like or cement-like).
Stage of development	Prototype, demonstrator
Bulk density	1030–1180 kg/m³
Compressive strength	15.0–18.5 n/mm²
Flexural tensile strength	8.0–9.1 n/mm²
Self-supporting	yes
Rated thermal conductivity	0.40 λ-value in w/mk
Reaction to fire	B1 – flame-retardant (DIN 13501-1 or Euroclass)
Building regulations	2 approvals
Circularity	Mineral binder fully recyclable; biogenic filler (reed) is thermally recovered in the process.

Possible uses Panels and casting compounds made from mineral-bound reed can replace plasterboard or cement-based products. Due to the recyclability of the binder and the CO_2 storage in reed, these products are significantly more sustainable and CO_2-efficient, avoiding waste. No plastics are used. By varying the mixing ratio, a wide range of properties and applications can be achieved. The material has an appealing look and feel, and products/surfaces can be post-processed (sawing, drilling, polishing, coloring, etc.).

Properties ParaStruct combines (ground) reed and mineral binders to produce dry mixes that can be hydraulically activated and used as casting compounds. The resulting products are recyclable due to the reactivat-ability of the binder.

Company profile Development of circular, sustainable materials based on recyclable mineral binders, recycling of biogenic and mineral by-products and waste streams.

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ParaStruct
enabling circular materials

Typha-Board

Biomass used	Cattail (*Typha spp.*), Typha angustifolia
Paludiculture biomass	97 vol% Typha angustifolia, remainder magnesite as binder
Stage of development	Application tested; Continuous manufacturing process under development
Usage	simultaneously insulating and load-bearing building material with fire protection properties
Application	Interior finishing, ceilings, roofs, exterior walls
Dimensions	Variable; currently 2–12 cm thick, length max. 2.5 m, width max. 1 m
Bulk densit	270 kg/m³
Compressive strengt	0.5–1 n/mm²
Self-supporting	Yes
Rated thermal conductivity	Measured value 0.055 W/mK without allowances (EN13171)
Specific heat capacity	approx. 1600 J/kgK
Water vapor diffusion	resistance factor approx. 25 µ
Reaction to fire	B1; no glowing, dripping, or smoke (DIN 13501-1 or Euroclass)
Building material class	B1 (DIN 4102-1)
Health / Indoor Climate	No harmful emissions; high mold resistance
Building regulations	2 approvals
Circularity	Recyclable, biodegradable, mechanically separable, compostable

Possible uses Thanks to its numerous physical building advantages combined with high strength, the material can be used for a wide range of applications. In addition to new construction projects with simple wall structures, it is also very well suited for renovation projects due to its good workability – for interior insulation, ceiling and wall construction, roof insulation, and infill for half-timbered buildings. A major advantage is its high fire resistance, making it especially suitable for urban densification projects.

Properties The magnesite-bonded Typha board combines a low thermal conductivity of 0.055 W/mK with exceptionally high strength and dynamic stability, making it suitable even for structural applications. In addition, it is a renewable building material with high resistance to mold, excellent fire, sound, and summer heat protection. It can be easily processed with standard tools, is in many cases demountable and recyclable within the material cycle, and is particularly well-suited for simple construction.

Company profile Our Typha-based building materials meet the highest technical requirements, are fully recyclable within the material cycle, and thus meet today's urgent need for sustainable and future-proof construction.

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typha technik
Naturbaustoffe

Pictures on the right: © Werner Theuerkorn

Typha-OSB

Biomass used	Cattail (*Typha spp.*); Typha angustifolia for the facing layers; wood chips (e.g. poplar) for the core; magnesite as binder.
Paludiculture biomass	approx. 35 vol-% Typha angustifolia, 65 vol-% wood chips; remainder magnesite as binder; no other additives
Stage of development	Prototype, demonstrator
Usage	Stiffening function comparable to typical OSB boards but with better fire protection and thermal insulation; highly sustainable.
Application	Interior finishing, ceilings, roofs, exterior walls
Dimensions	variable; currently thicknesses from 10–30 mm
Bulk density	850 kg/m³
Flexural tensile strength	9 n/mm²
Self-supporting	Yes
Rated thermal conductivity	measured value 0.083 W/mK without additions (EN13171)
Specific heat capacity	approx. 1600 J/kgK
Reaction to fire	B1; no afterglow; no dripping; no smoke (DIN 13501-1 or Euroclass)
Building material class	B1 (DIN 4102-1)
Health / Indoor Climate	no harmful emissions; high mould resistance
Building regulations	2 approvals
Circularity	recyclable, biodegradable, compostable

Possible uses Mineral-bound sandwich with high fire resistance, featuring high-density facing layers made of Typha and core layers made of wood chips. The panels have comparable strength to standard OSB boards but offer lower thermal conductivity, greater sustainability, and improved fire resistance.

Properties Thermal conductivity value (λ) of 0.083 W/mK at a density of 800 kg/m³ (measured by the University of Göttingen). Flammability test (small burner test, DIN 11925-2): after 15 seconds – 5 cm soot cone height; after 30 seconds – 6.5 cm (maximum allowable height: 15 cm). No afterglow. Provides a stiffening function comparable to typical OSB boards, but with improved fire protection and higher thermal insulation performance.

Company profile Our Typha-based building materials meet the highest technical requirements, are fully recyclable within the material cycle, and thus meet today's urgent need for sustainable and future-proof construction.

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Cooperation partner:
Fraunhofer Institut für Bauphysik
Universität Göttingen
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Hiss Reed Mat

Biomass used Reed (*Phragmites australis*)
Paludiculture biomass 98%
Stage of development Established on the market

Possible uses Privacy screens protect against prying eyes and serve as windbreaks and sunshades for gardens, terraces, balconies, garages and carports. In commercial settings, privacy screens can be used as decoration, construction fencing, windbreaks or wall cladding. Their advantages: they are lightweight, quick to install, biologically safe and inexpensive. In horticulture, Hiss reed mats are also a proven and attractive form of tree protection.

Properties The Hiss reed mat is not only popular as a privacy screen or windbreak: it is also ideal for enhancing the appearance of fences, walls, terraces and balconies. In addition, it can be used flexibly as cladding at events, in party rooms or in garden pavilions. In natural gardens, it also serves as practical winter protection for plants or as effective protection against damage caused by wild animals. The versatile mat impresses not only with its appearance, but also with its functional suitability for everyday use.

Company profile We help people build better buildings and live healthier lives with our high-quality building materials and services.

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HISS REET 1835
SCHÖNES AUS REET

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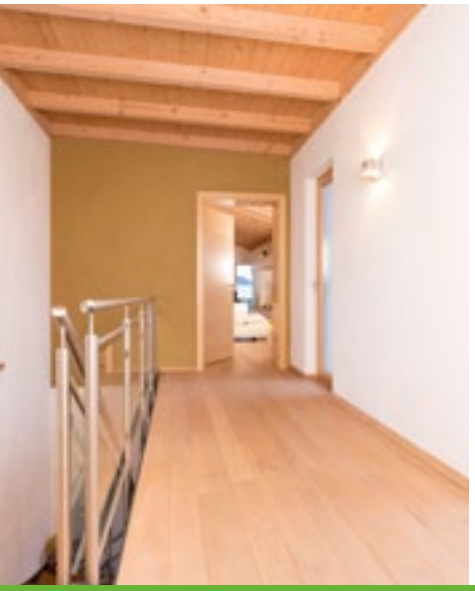
Universal Clay Plaster UNI 1.8

Biomass used	Cattail (*Typha spp.*); Only the seed heads of the plant are used
Paludiculture biomass	1 %
Stage of development	Established on the market
Usage	Interior plaster
Dimensions	Application thickness 5–25 mm in a single layer
Bulk density	1900 kg/m³
Compressive strength	1.8 n/mm²
Flexural tensile strength	0.7 n/mm²
Rated thermal conductivity	1.1 λd-value in w/mk (EN13171)
Specific heat capacity	1000 j/kgk
Water vapor diffusion	5–10 µ resistance factor
Reaction to fire	A1 (DIN 13501-1 or Euroclass)
Building material class	A1 (DIN 4102-1)
Health / Indoor Climate	Suitable for allergy sufferers, regulates indoor humidity, completely emission-free
Building regulations	DIN 18947 approvals
Eco-/ Climate balance	GWP 6.09 × 10^{-3} kg CO_2 equivalent / kg product

Possible uses “Lehmuniversalputz UNI 1.8” is a ready-to-use, dry clay plaster that can be applied both as a base coat and as a top coat. It consists of clay, loam, and washed mixed-grain sand (0–1.8 mm). It also contains almost invisible cattail fibers (Typha fibers), which provide excellent properties such as high strength, very low drying shrinkage (minimal cracking in thick layers), and very good moisture absorption and release.

Properties Thanks to solar drying of the raw materials and the careful selection of ingredients, this clay plaster can be produced in a nearly CO_2-neutral manner. The cattail seed fibers provide the plaster with very high strength.



Company profile Egginger Naturbaustoffe GmbH supplies builders and craftsmen with building materials made from renewable raw materials and other ecological construction products. In addition, the company manufactures its own clay-based products under the brand name Levita Lehm.

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Reed Stucco

Biomass used	Reed (*Phragmites australis*)
Paludiculture biomass	98% (remainder: wire)
Stage of development	Established on the market
Application	interior finishing on walls, ceilings, sloped roofs
Dimensions	width 1.60 m, roll content 10 m², thickness approx. 6–10 mm
Health / Indoor Climate	no allergic reactions expected, no emissions
Building regulations	approvals not required
Circularity	recyclable
Further information	lehm.com/fileadmin/user_upload/downloads/Montage_Schilfstuckatur.pdf
Production site	Hungary

Possible uses Reed stucco has been used for centuries as a plaster base to make wooden surfaces (rough-sawn wood or OSB boards) suitable for plastering. The reed stucco is firmly stapled to the wooden surface, allowing the plaster to interlock with the reed stems. Reed stucco consists of approx. 70 reed stalks per linear metre, connected with galvanized wire. It is supplied in rolls covering 10 m², with a width of 1.60 m.

Properties Our reed stucco is made from carefully selected reed stalks with a roughly uniform diameter. The only materials used are reed and galvanized wire – no hidden chemical additives or emissions. The reed is tied with wire at 10 cm intervals, ensuring a very secure attachment, especially for ceiling applications.

Company profile Egginger Naturbaustoffe trades in ecological building materials and produces its own clay-based building materials under the brand name Levita Lehm.

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Interior Door with Paludi Infill

Biomass used Sedges (*Carex spp.*)
Paludiculture biomass approx. 92% sedge, approx. 8% natural binder
Stage of development prototype, demonstrator

Possible uses Production of panels made from paludiculture sedge grass with a natural binder, suitable as infill material for interior doors.

Properties Free from harmful substances, compostable

Company profile As a timber construction company, Baufritz stands for uncompromising healthy living and sustainability – with innovative, individual architecture, strictly tested natural materials, and the highest responsibility towards people and the environment.

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BAUFRITZ
WIR BAUEN GESUNDHEIT

Hiss Reet Acoustics Absorber

Biomass used	Reed (*Phragmites australis*)
Paludiculture biomass	75%
Stage of development	Established on the market
Usage	Acoustics, panelling
Application	Indoor
Dimensions	500 × 500 × 180 mm
Sound absorption class A-E	C

Possible uses Breaking new ground in interior design and room acoustics: with acoustic elements made from reed, you can combine the unique look of this natural building material with outstanding properties for optimising room acoustics.

Properties Hiss-Reet acoustic ceiling elements combine the ideal solution for the acoustic and visual optimisation of rooms with their 'stubble look'. Measurements taken at the University of Lübeck have now proven the effectiveness of this world first: the acoustic ceiling elements made from natural materials immediately achieved sound absorption class C ('highly absorbent') on a scale from A to E in accordance with the DIN standard EN ISO 11654, which is binding in this area.

Company profile We help people build better buildings and live healthier lives with our high-quality building materials and services.

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REEDuce noise barrier

Biomass used	Reed (*Phragmites australis*)
Paludiculture biomass	approx. 2/3 (by volume)
Stage of development	Application tested. The first test section with the REEDuce Standard noise barrier was built in 2023 along the S33 in cooperation with the Austrian motorway company ASFINAG and has been available on the market since then.
Usage	acoustics, cladding
Application	As noise protection elements along motorways and roads, railways, airports, around industrial facilities, and other noise sources
Dimensions	REEDuce Noise Protection Element Standard 3940 × 1000 × 190 mm
Self-supporting	Yes
Sound absorption coefficient	REEDuce Standard: Sound absorption DLα (EN 1793-1): 5 dB
Building material class	CE-label
Certificates	LCA, EPD in preparation
Circularity	recyclable and biodegradable
Eco-/Climate Balance	GWP: 30 kg CO_2/m²
Production site	Austria

Possible uses Noise barriers are used wherever people, animals, or the environment need to be protected from harmful ambient noise – e.g. along motorways and roads, railways, airports, around industrial facilities, and other noise sources. The use of conventional noise barriers is important but has numerous negative consequences for our environment. They generate high CO_2 emissions during production and disposal, cause problematic leaching into groundwater, and are disposed of as hazardous waste at the end of their service life.

Properties REEDuce has developed and patented the first ecological noise barrier made of reed, thermo wood, and clay. It reduces road and environmental noise just as efficiently and durably as conventional products, but is made entirely from renewable, locally sourced raw materials and has a very low carbon footprint of only 30 kg/m². Its design follows the principles of the circular economy, ensuring that no hazardous waste is generated at the end of its lifecycle. In addition, the wall contributes to improved air quality and, by serving as an insect hotel, makes a valuable contribution to promoting biodiversity.

Company profile REEDuce is driving the sustainable transformation of noise protection. Our ecological noise barriers are made from renewable raw materials, protect the climate, and are designed according to the principles of the circular economy. In this way, we combine effective noise control with genuine sustainability.

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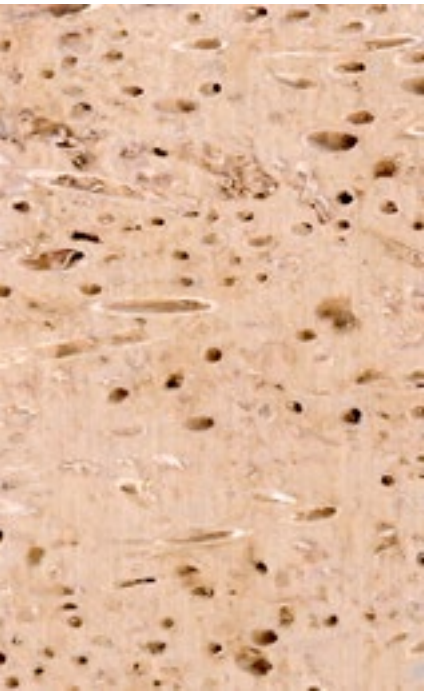
REEDuce

Reetwellerlehm

Biomass used	Reed (*Phragmites australis*)
Paludiculture biomass	In Reetwellerlehm, reed accounts for up to 90% of the volume and up to 10% of the dry weight
Stage of development	prototype, demonstrator
Usage	Reetwellerlehm is suitable as a thermally insulating, acoustically effective material. It is self-supporting. With a lower proportion of reed, it can also be used as a load-bearing construction.
Application	Noise barriers, load-bearing walls, facades, indoor acoustic walls, infills
Dimensions	variable depending on application
Bulk density	600–1600 kg/m³
Compressive strength	0.5–3 N/mm²



Possible uses It is a contribution to climate protection and the transformation of the construction sector, and functions as a sound-absorbing, thermally insulating, indoor climate-regulating, fully recyclable, and CO_2-binding building material. Possible applications include noise barriers, load-bearing walls, facades, indoor acoustic walls, vertical nature conservation surfaces, and habitats for wild bees. In addition, it supports sustainable economies and creates new markets for reed.

Properties Project status 2025: The product is patent pending. Six prototypes are currently being produced and will be installed in 2025/26. These will be tested for resistance to salt spray (noise barriers along motorways), sound absorption capacity, and their effectiveness for wild bees. Further research will follow.

Company profile The *Zentrum für Peripherie* uses the inherent conflict between infrastructure and building construction on the one hand, and nature conservation and biodiversity preservation on the other, as a starting point for innovation.

Zentrum für Peripherie und Netzwerkpartner
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ZENTRUM FÜR PERIPHERIE

Pictures on the left: © Sebastian Bertalan, Zentrum für Peripherie; bottom: © Christian Hansel, Lehmbau Lovis | Pictures on the right: © M. Plomp

Using of willow for foundation

Biomass used	Willow species (*Salix spp.*)
Paludiculture biomass	100%
Stage of development	Application tested
Usage	Load-bearing construction
Application	Foundation of small roads, cycle paths and light weight buildings
Dimensions	Thickness of the willow package is approximately 90 cm
Self suporting	yes
Production site	Hellouw, Netherlands

Possible uses Willow is used for the foundation of small roads, cycle paths and light weight buildings in peat soils. Therefore, the willow is packed in bundles. The bundels are put together and brought in the underground below the groundwater level.

Properties Willow wood is a completely natural material and can be used instead of concrete or plastics. Instead of emitting carbon dioxide, it stores it–contributing to carbon sequestration. This application is currently being tested in the field.

Company profile Landschap Noord-Holland is committed to the protection and preservation of nature, valuable landscapes and cultural-historical heritage in North Holland. With our business services Natural Affairs, we carry out countless assignments for a variety of clients.

Landschap Noord-Holland
Schuine Hondsbosschelaan 45
1851HN, Heiloo
The Netherlands

Cooperation partner:
Van Aalsburg
www.vanaalsburg.com
Peat Innovation Centre
(Veen Innovatie Centrum (VIC))
www.veenweiden.nl

Sample corner nature

Biomass used Reed (*Phragmites australis*)
Stage of development Prototype, demonstrator
Production site Bauhaus Earth workshop and on site at Roter Saal Bundesstiftung Bauakademie

Possible uses The mock-up corner (Musterecke Natur), using regional and circular value chains, showcases possibilities for contemporary construction. A load-bearing wall made of unfired earth bricks from Berlin excavation material rests on reused concrete elements. A timber ceiling made of Brandenburg pine sits at full story height, filled with earth bricks, hemp-earth insulation, and topped with a wooden flooring. On the outside, a weatherproof and insulated shell of biobased materials protects the structure.

Company profile We want to transform the built environment from a carbon source to a carbon sink. As a research institution, we therefore lead scientific inquiry into the nexus of climate and the built environment. Our research agenda encompasses a range of topics, including the entire life cycle of materials, the necessary material transition in construction, global and regional nature-based supply and demand chains – and their socio-spatial, environmental, and political dimensions – regenerative design approaches to buildings, infrastructures, neighbourhoods and urban systems as well as potential solutions that address the challenges and opportunities in specific regional contexts.

Bauhaus Earth
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Oberlandstraße 26–35
12099 Berlin
Germany
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Cooperation partner:
www.reetdach-berlin.de
www.bauhauserde.org/articles/treffpunkt-bauwende-regeneratives-bauen

BAUHAUS ERDE

Pictures on the left: © Anke Illing; Thomas Voßbeck | Pictures on the right: © Riebort, Massnehmen

Moorpavilion

Biomass used Paludi materials for design and construction concepts

Paludiculture biomass The proportion of paludiculture biomass varies depending on the project – however, we always strive to use as much as possible and to further develop the materials both in terms of design and construction.

Stage of development Application tested

Possible uses Massnehmen develops and constructs design interventions for peatland landscapes in transition. The mobile or fixed structures – such as pavilions, exhibition elements, or temporary buildings – make paludiculture tangible and comprehensible. They are used in educational landscapes, nature parks, or model regions. Target groups include visitors, school classes, research institutions, and municipal actors – all those who want to rethink and experience peatlands.

Properties Massnehmen's products are characterised by simple assembly, modular construction, and robust materials – often regional, recycled, or from paludiculture (e.g. cattail, reed). The architecture is minimal, transportable, and adaptable to different locations. A key added value lies in the combination of design and environmental education. Each intervention raises awareness of peatland and climate protection and serves as a communicative element in education and tourism concepts.

Company profile Massnehmen designs and builds in the context of paludiculture. Through spatial concepts, exhibitions, and prototypes, the studio makes peatland landscapes and their ecological significance visible, tangible, and accessible to the public.

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studio@massnehmen.com
www.massnehmen.com

Cooperation partner:
moor and more
www.moor-and-more.de

Massnehmen
Raum & Holz

Paludi-Tinyhouse

Biomass used	Woody plants (e.g. alder (*Alnus spp.*), willow species (*Salix spp.*) Sedges (*Carex spp.*), Reed canary grass (*Phalaris arundinacea*), Common reed (*Phragmites australis*), Cattail (*Typha spp.*), Wet meadow species (various species, heterogeneous composition)
Paludiculture biomass	As much paludiculture material as possible, used both for insulation and interior design
Stage of development	Established on the market
Usage	Acoustics, cladding, insulation
Application	Multifunctional use, education, and information
Dimensions	6.6 m × 2.55 m platform external dimensions
Health/Indoor Climate	diffusion-open construction
Building regulations approvals	TÜV available, electrical installation approved
Circularity	recyclable, mechanically separable, all elements can be dismantled
Production site	Greifswald, Germany

Possible uses The Tiny House serves as a mobile demonstrator for building materials made from paludiculture biomass. It is used at trade fairs, specialist events, educational formats, and public outreach activities. Target groups include planners, municipalities, educational actors, craftspeople, and political decision-makers. It makes innovative materials tangible and inspires imitation.

Properties The Tiny House was built using as many paludiculture materials as possible: cattail for insulation, reed and wet grass panels for interior finishing, and alder wood for the supporting structure. It is transportable, fully equipped, and suitable for repeated use. It demonstrates climate-positive construction in a practical and tangible way, at a 1:1 scale.

Company profile Moor and more develops building materials from peatland biomass, realised the Paludi Tiny House, and advises on construction projects. Together with partners such as HNEE, HSW, and GMC, the company develops furniture panels, insulation materials, and exhibition concepts for peatland-based construction.

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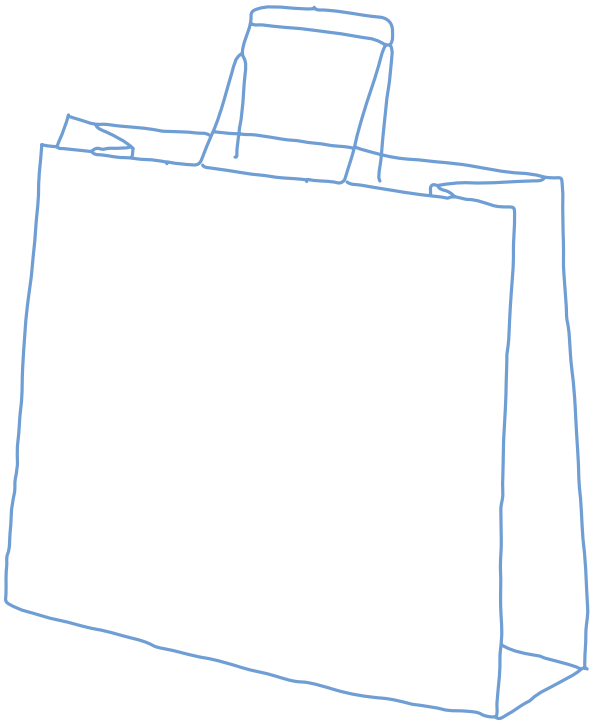
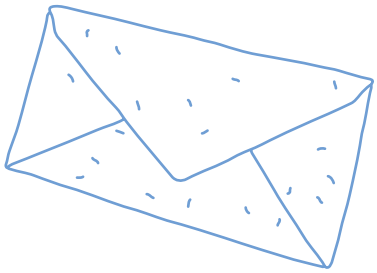
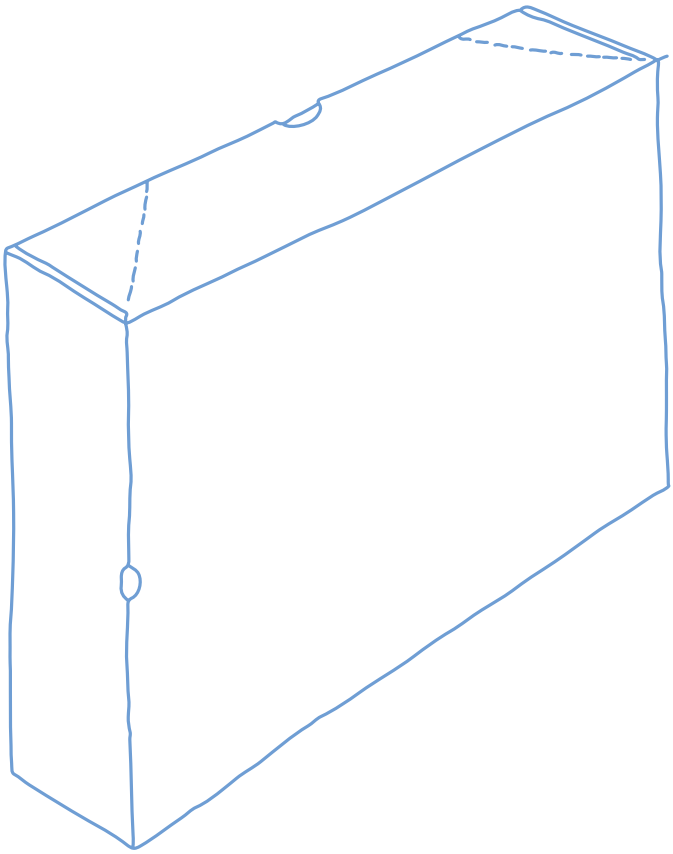
MOOR AND MORE

Pictures: © Moor and More

Paper & packaging







Paper, packaging and moulded parts made from paludi biomass – new fibres for a sustainable industry

Paper and packaging are among the most important consumer goods in our everyday lives and, at the same time, among the largest consumers of fibre raw materials worldwide. At a time when wood is under pressure as a resource the industry needs new sustainable raw materials. Paludiculture biomass can offer a viable alternative here. Reeds (*Phragmites australis*) and other tall wetland plants in particular provide fibrous biomass that, after appropriate processing, is suitable for the production of paper or packaging. Initial tests show that these raw materials can be processed into various grades of paper, for example for hygiene paper, cardboard or stable packaging. Combination with recycled fibres or other residual materials is also possible. The use of paludi biomass as a fibre source has both economic and ecological advantages. It reduces pressure on forests and creates new sales markets for agricultural businesses on peatland sites. At the same time, its use in short-lived products such as packaging binds large quantities of rapidly renewable biomass in short cycles and strengthens regional value creation. This area of application is still in its infancy. However, with growing interest in environmentally friendly packaging solutions and the search for alternative fibre sources, paludiculture offers great future potential for both industry and peatland conservation. In this chapter, we present the first products, concepts and companies working with paludiculture biomass in the paper and packaging sector and show the paths that are already being pursued.

Pictures on the left: © creapaper GmbH / Vera Siepen; bottom: creapaper GmbH, Jan Martin

Paludi gras, Paludi paper

Biomass used Sedges (*Carex spp.*)
Paludiculture biomass 100% paludiculture biomass in the raw material, 10–20% to the paper composition
Stage of development Established in the market; Several companies, such as OTTO, already use the material in the formof shipping cartons or carrier bags.
Production site Düren, Germany

Possible uses Our raw material can be combined with either virgin fibers or recycled paper in the papermaking process. Depending on the paper weight and properties, the finished material is suitable for a wide range of paper products – from packaging and carrier bags to stationery and printed matter. We target companies that actively embrace sustainability and seek innovative approaches to reduce CO_2 emissions and conserve resources within their life cycle assessments (LCA).

Properties Using our certified and patented process, the raw material for PaludiPaper is produced with a natural appearance, distinctive tactile qualities, and FSC® certification. The paper is recyclable, regionally manufactured, and offers companies the opportunity to visibly demonstrate sustainability. By utilizing paludiculture biomass, an economic incentive is created to re-wet peatlands – an important contribution to emission reduction on managed land.

Company profile Creapaper offers alternative raw materials derived from grasses harvested on permanent grasslands and peatland areas for the paper industry.

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www.creapaper.de

creapaper
THE GRASSPAPER COMPANY

Paludi Shipping Carton

Biomass use Sedges (*Carex spp.*)
Paludiculture biomass 10% paludiculture biomass, 75% recycled paper, 15% virgin fiber paper (papers are FSC-certified)
Stage of development application tested
Pilot test with 100,000 cartons at the end of 2024; further production of approximately 130,000 cartons planned for 2025
Production site Germany

Possible uses The shipping carton is used to package products ordered online. The target group consists of end customers who have placed orders via the online platform.

Properties A recycling test of the paludiculture shipping carton yielded a rate of 98%. Initial findings regarding the life cycle assessment (LCA) of the shipping carton containing peatland plants have been obtained, focusing on the production and end-of-life phases, while the upstream supply chain was not considered. Current results indicate that the paludiculture shipping carton achieves comparable values in these areas to conventional OTTO cartons of the same size. Further analyses with quantitative data are currently underway.Feedback from an accompanying customer survey conducted during the pilot test was very positive.

Otto GmbH & Co. KGaA
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22179 Hamburg
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www.otto.de/unternehmen

Cooperation partner:
Mechanical processing of paludiculture biomass by Creapaper GmbH / Carton manufacturing by Mondi Paper Sales GmbH

OTTO

Picture on the left: © Otto GmbH | Pictures on the right top: © Nenno / DonaumoosZweckverband; bottom: © Janda / Donaumoos-Zweckverband

Paludi Office Supplies

Biomass used Reed canary grass (*Phalaris arundinacea*)
Paludiculture biomass 10–30%
Stage of development Application tested
Production site Lenningen, Gmund, Germany

Possible uses In the Bavarian Donaumoos region, various industrially manufactured products with different proportions of paludiculture fibers have been developed as part of the research and development project "Products from Peatland Fibers". The resulting product examples include envelopes (C4, DL, and C5 formats, each with and without windows) as well as file folders. These can be used by public authorities, companies, and private individuals alike.

Properties In addition to relieving pressure on the raw materials market, the product also provides climate protection benefits from the land on which the biomass is produced. Paludiculture offers the opportunity to combine this climate benefit with value creation. Even with only a 10% share of peat-land fibers, every metric ton of paper produced already achieves an estimated saving of around one metric ton of CO_2 equivalents.

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Cooperation partner:
Fibers365, Papierfabrik Gmund

Postcards from Peatland Paper

Biomass used Reed canary grass (*Phalaris arundinacea*)
Paludiculture biomass 15–20%
Stage of development Application tested
Production site Lenningen/Gmund, Germany

Possible uses As part of the research and development project "Products from Peatland Fibers", the industrial-scale production and processing of paludiculture fibers was investigated. Larger quantities of peatland paper were produced, which were subsequently processed into, among other things, postcards. However, the possible applications of the paper, available in different grammages, are diverse.

Properties Due to its paludiculture fiber content, the peatland paper actively contributes to peatland conservation, provided that the paludiculture plants are cultivated on wet peat soils. Experience from previous harvests, fiber production, and further processing shows that every metric ton of cardboard with only 10% paludiculture fiber content results in an estimated saving of approximately one metric ton of CO_2 equivalents. In this way, the products become a tangible means of climate protection for customers.

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Cooperation partner:
Fibers 365, Papierfabrik Gmund

Donaumoos Zweckverband
Heimat verbindet.

Pictures on the left and top right: © Janda / Donaumoos-Zweckverband | Pictures on the right bottom: © Nenno / Donaumoos-Zweckverband

Paludi-Packaging Material

Biomass used Reed canary grass (*Phalaris arundinacea*)
Paludiculture biomass 10 to 20%
State of development Application tested
Production site Lenningen, Gmund, Schrobenhausen, Memmingen, Germany

Possible uses In the course of the research and development project "Products from Peatland Fibers," the Donaumoos Special-Purpose Association, together with industrial partners, has researched the industrial production and application of peatland cardboard and corrugated cardboard from paludiculture. The application possibilities in the packaging sector are diverse. A specific application has already been implemented via the producer Leipa – as plant cartons for the OBI retail chain.

Properties With a proportion of just ten percent Paludi fibers, a GHG saving of about one metric ton of CO2 equivalents per metric ton of paper produced is achieved on the rewetted cultivation area. Added to this are the positive aspects in the argumentation: The cultivation of Paludi on peatland creates a viable combination of climate protection and value creation. At the same time, customers receive tangible climate protection with the products.

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Cooperation partner:
Fibers365, Papierfabrik Gmund

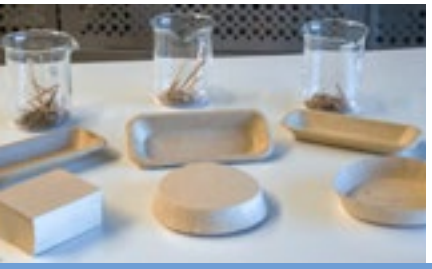
Donaumoos Zweckverband
Heimat verbindet.

Packaging demonstrators

Biomass used Reed (*Phragmites australis*)
Reed cane, reed canary grass and sedges were used for the demonstrators.
Paludiculture biomass 100%
Stage of development Prototype, demonstrator
Production site Fraunhofer IVV, site of Freising and site of Dresden, Germany

Possible uses As part of a research project, a knowledge base on manufacturing processes for the material use of paludiculture crops was developed. On a laboratory scale, paludiculture fibers were processed into various paper types and into packaging demonstrators produced through thermoforming, folding, and fiber casting. These trials showcased the diverse application possibilities of paludiculture fibers. The resulting knowledge base supports the design of future packaging solutions, the characterization of suitable materials, and the development of manufacturing processes from concept to implementation.

Properties The developed packaging demonstrators show that the use of 100% paludiculture fibers in packaging is technically feasible. The papers produced from these materials, as well as the thermoformed, folded, and fiber-cast packaging demonstrators, exhibited equivalent mechanical and tactile properties to conventional papers and packaging. Furthermore, the papers could be printed and processed using standard manufacturing methods, such as thermoforming. These results promote the implementation of ecologically and potentially economically advantageous regional value chains in the future.



Company profile The Fraunhofer Institute for Process Engineering and Packaging IVV is a leading organisation for applied research for the industry in the areas of food, packaging, product effects, processing machinery, recycling and the environment.

Fraunhofer Institut für Verfahrenstechnik und Verpackung (IVV)
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85354 Freising
Germany
www.ivv.fraunhofer.de

Cooperation partner:
Research project “Paludi packaging” within the framework of the initiative “Biogenic Value Creation and Smart Farming, supported by the German BMFTR, the Bavarian StMWi and the WKM Mecklenburg-Vorpommern

Pictures on the left: © Fraunhofer IVV | Pictures on the right: © OBI

Plant transport box

Biomass used Reed canary grass (*Phalaris arundinacea*)
Paludiculture biomass 10% reed canary grass, 90% waste paper
State of development: Application tested

Possible uses The box is used in OBI markets for transporting plants. The target group is all OBI customers. Further information at: www.obi.de/corporate/nachhaltigkeit/moore

Properties This rather inconspicuous-looking box, reduced to function and communication, consists of waste paper and 10% fibers from reed canary grass, which grows on rewetted peatlands. Particularly noteworthy is the specially developed fiber technology: a special pulping process produces fibers that, unlike other annual plants, not only serve as filler, but significantly increase the strength of the cardboard. Even after several recycling cycles, they remain fully recyclable – a real gain for the circular economy.

Company profile The OBI Group is an internationally active trading company with headquarters in Wermelskirchen and one of the leading providers for DIY (Do-it-yourself) in Europe. The offering includes products and services for the home improvement, construction, leisure, and garden sectors in wholesale and retail.

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vsustainability@obi.de
www.obi.de/corporate

Cooperation partners:
Leipa, LEOPOLD, Donaumoos Zweckverband, fibers365
www.obi.de/corporate/nachhaltigkeit/moore

Substrates & soil improve-ment

Substrates made from paludi biomass – peat-free alternatives for climate-friendly plant production

The substrate market is undergoing a fundamental transformation. A large share of the growing media used in Europe is still based on peat, with severe consequences for the climate and peatland ecosystems. Extraction destroys habitats permanently and releases large amounts of CO_2. This is why the pressure to develop peat-free alternatives is increasing. Paludiculture offers concrete solutions. On wet or re-wetted peatlands, plants such as sphagnum moss, reed, cattail, or sedges can be cultivated, with their biomass serving as raw material for substrates. Sphagnum-based substrates are particularly convincing due to their structural stability, water retention capacity, and low nutrient content, making them attractive for professional horticulture. Other paludiculture biomasses are also being researched and processed using mechanical or biological methods. Substrates from paludiculture make a dual climate contribution: they prevent peat extraction while simultaneously creating economic incentives for rewetting degraded peatlands. In this way, peat-conserving production systems emerge in both agriculture and the substrate industry. In addition, interest is growing in applications such as soil protection, erosion control mats, or green roofs. Another promising field is the production of biochar through pyrolysis: it stores carbon in the long term, improves soils, can be used in animal husbandry and construction materials, and at the same time provides usable process heat. This chapter presents pioneering products and promising developments from paludiculture biomass: building blocks for a peat-free future and healthy soils.

Pictures on the left: © BeadaMoss Micropropagation Services

BeadaHumok®

Biomass used Peat moss (*Sphagnum spp.*)
Paludiculture biomass 100% at point of supply
Stage of development Application tested
Production site UK but exporting to EU

Possible uses BeadaHumok® are micropropagated Sphagnum plugs developed as seed stock for the cultivation of Sphagnum biomass, intended for use as a sustainable growing media component in horticulture. These fast-growing and resilient moss clumps can be planted either mechanically or by hand, with a typical crop cycle of approximately three years. Trials by commercial nurseries have proven successful and will be available to purchase for the horticultural sector in autumn 2025 for the UK.

Properties Sphagnum is the optimal replacement for the peat used in horticulture, as it possesses similar physical properties (water-holding, air-filled porosity), and chemical properties (nutrient holding). A sustainably micropropagated seed stock ensures purity, consistency, and reliability without the need to wild harvest. Micropropagated Sphagnum as Beada-Humok® for Sphagnum Farming are fast growing selections of Sphagnum species suitable for growing media. This ensures they can out-perform wild harvested mosses, or material propagated from wild harvested material produced by other methods.

Company profile BeadaMoss have been sustainably micropropagating Sphagnum mosses for peatland restoration projects for over 15 years, branching out into the production of *Sphagnum* as a seed stock for paludiculture to produce growing media for horticultural use.

BeadaMoss®
Micropropagation
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Loughborough,
Leicestershire,
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United Kingdom
+44 1509 856 295
sphagnum@beadamoss.co.uk
beadamoss.com

Vermincompost and bedding

Biomass used Reed (*Phragmites australis*)
Stage of development Established on the market
Production site Finland

Possible uses MATOMULTA: peat-free growing media; KOMPOSTI-KUIVIKE: compost and dry toilet bedding, animal bedding.

Properties Kiteen Mato ja Multa Oy was founded in 2010. The production of peat-free growing media began in the summer of 2013. The plant fiber-based growing medium has been under development since 2010, and the production method is protected by a patent. The plant fiber-based growing medium is ecological (containing approximately 50% carbon and a significant amount of nutrients recovered from water systems) and an excellent alternative to peat-based growing media.

Company profile Kiteen Mato ja Multa Oy produces worm compost, compost and dry toilet bedding, animal bedding, and domestically bred fishing and compost worms.

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www.matojamulta.com

Pictures on the left: © Kiteen Mato ja Multa Oy | Pictures on the right: © Klasmann-Deilmann GmbH

Sphaxx

Biomass used Peat moss (*Sphagnum spp.*)
Comment Sphagnum palustre and Sphagnum papillosum
Paludiculture biomass 100% Sphagnum
Stage of development Established on the market

Possible uses Sphaxx is a high-quality Sphagnum for planting in the open field. It comes from sustainable propagation, is clean, vital and ready for immediate use. Sphaxx is ideal for establishing *Sphagnum* on wet peatland. Whether for the restoration of damaged raised bogs, the implementation of scientific projects or the establishment of *Sphagnum* farming areas, Sphaxx can be your key to success.

Properties *We grow our own product, Sphaxx, an innovation for peatlands and agriculture.* From the horticultural industry, we know how important high-quality seed and planting material is. Only vital, fast-growing plants enable rapid establishment, ensuring good yields and high-quality biomass. Klasmann-Deilmann has therefore developed an innovative process to propagate Sphagnum under controlled conditions, producing clean, vital planting material called Sphaxx.

Company profile Klasmann-Deilmann is the leading corporate group in the international substrate industry. The product portfolio includes high-quality substrates and innovative solutions for professional horticulture.

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49744 Geeste
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+49 5937 310
info@sphaxx.com
sphaxx.com

Energy Substrate BioGold (TerraPreta)

Biomass used Wet meadows (various wetland species, heterogeneous composition)
State of development Established on the market
Production site Cloppenburg, Germany

Possible uses The 100% peat-free premium fertilizer for true garden lovers. 100% peat-free organic fertilizer: Our premium fertilizer, manufactured in Germany according to a European patent, is the future of environmentally conscious soil improvement. First-class fertilization results: With its efficient moisture retention, Texas BioGold is a real growth booster for your plants. Effective micro-bioturbation: Thanks to high-quality microorganisms, our Terra-Preta organic fertilizer is a true soil-building wonder for highly effective plant growth.

Properties Free of environmentally harmful chemicals: Texas BioGold Terra Preta is a CO_2-storing and 100% peat-free premium fertilizer and automatically minimizes climate-damaging gas formation. Immediate soil regeneration: Its humus-building and root-forming effect immediately regenerates damaged soil upon application and eliminates residues from pesticides, monocultures, or over-fertilization.

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Texas BioEnergie

Pictures on the left: © Energiewert Cloppenburg | Pictures on the right: © Silke Kumar

SphagnumBioMass for Substrate (SBM)

Biomass used Peat moss (*Sphagnum spp.*); freshly harvested Sphagnum material for propagation/application on restoration areas. Processed SBM Sphagnum material (dried, steamed, and fractionated).

Paludiculture biomass 100%

Stage of development Established on the market; sufficient quantities to meet current demand are not always available.

Production site Moorseiter Straße 37 (access road), 26939 Ovelgönne, Germany

Possible uses Raw material for horticultural soils and substrates, especially in commercial horticulture. Propagation material for bog restoration in nature conservation/soil protection. Traditional insulation material (Austria).

Properties Sphagnum culture substrates (SCS) are horticultural substrates consisting predominantly of *Sphagnum* biomass (SBM). SBM is understood to be partially dewatered, sanitized, and cut plant parts of the genus *Sphagnum*. SBM represents a peat substitute in the truest sense, as SBM can completely replace peat in horticultural substrates without causing disadvantages in cultivation techniques. Numerous scientific experiments have already proven the suitability of SCS for horticultural application.

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www.moorkultur-ramsloh.de

Cooperation partners:
University of Greifswald, Humboldt University of Berlin, Scheper Tree Nursery Saterland, Graalfs Gartenbau Aurich

Sphagnum moss

Biomass used Peat moss (*Sphagnum spp.*)
Paludiculture biomass 100%
Stage of development Established on the market
Production site Gnarrenburg in Lower Saxony in Germany

Possible uses Sphagnum moss is an ideal material for growing media for hobby gardening and horticulture for cultivating plants.

Properties Sphagnum moss grows naturally on wet peatlands and has the most similar properties to peat compared to all established peat alternatives. It is particularly suitable as a resource for substrates due to its low pH value, low nutrient content, high water and air storage capacities, very good rewettability, low volume weight and hardly any nitrogen immobilization.

Company profile ZukunftMoor rewets drained peatland and cultivates sphagnum moss. That's how we avoid greenhouse gas emissions and enable climate-friendly growing media and agriculture in peatland regions.

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www.zukunftmoor.de

Zukunft Moor

Pictures on the left: © ZukunftMoor | Pictures on the right: © B. Spanjers

Paludi-mat, Type PM-JJ

Biomass used Wet meadows (various wetland species, heterogeneous composition)

Paludiculture biomass for a mat with approx. 400 g/m²: Paludi mass: 76%, organic carrier nets and yarns (from jute): 24%

Stage of development Application tested; erosion control mats have been tried and tested since the 1970s and have been continuously developed ever since. The latest development is the Paludi-mat.

Application Civil engineering, traffic route construction (road and rail), gardening and landscaping, hydraulic engineering, renaturation and recultivation, weed control

Dimensions Roll of 2.40 × 42 m or 1.20 × 42 m (others on request)

Circularity 100% biodegradable

Production site 16278 Angermünde, Germany

Possible uses The Paludi-mat consists of a Paludi fiber fleece, which is enclosed top and bottom in carrier nets made of jute. All components are sewn together with jute threads. Depending on the basis weight, the Paludi-mat serves as an erosion control mat (up to 500 g/m²) or as a fully organic mulch mat (from 600 g/m²) to suppress light-germinating grasses and plants.

Properties In addition to erosion control (soil erosion from precipitation, floods, and wind), other properties of the Paludi-mat include: Minimizing evaporation, bird predation (of the seeds under the mat), and soil warming from solar radiation. Furthermore, the Paludi-mat promotes plant development – on the one hand, through the aforementioned factors, and on the other, through the nutrient release during composting.

Company profile Manufacturer of organic and semi-organic geotextiles for surface erosion control, weed control, noise protection (earth-filled gabions), and slope protection (reinforced earth).

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Cooperation partners:
Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB), Nagola Re GmbH, Institute for Food and Environmental Research (ILU), State Office for the Environment (LFU)

Paluboard

Biomass used Wet meadows (various wetland species, heterogeneous composition)
Paludiculture biomass Wet meadow threshings
State of development Application tested
Application area Roof
Dimensions 20–40 mm upon delivery
Bulk density 180–240 kg/m³
Production site Preetz, SH (Laboratory and development site)

Possible uses The lightest and plastic-free substrate for affordable and easy-to-install green roofs: We call it Paluboard! Comment: The first pilot projects and implementations, together with a landscaping company with many years of experience, show successful vegetation growth in the green roof structure and demonstrate the time-saving application.

Properties The ecological advantages are complemented by the following technical properties, which lead to a significant improvement of green roof systems: very lightweight substrate, simple, cost-saving and fast installation, and a water-retaining function to support the growing phase. The Paluboard is an effective solution for greening roofs, facilitates adaptation to climate change in urban areas, and simultaneously strengthens climate protection in rural regions.

Company profile Planterial GmbH is a start-up based in Preetz that focuses on the development and production of innovative, sustainable building materials and materials.

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planterial®

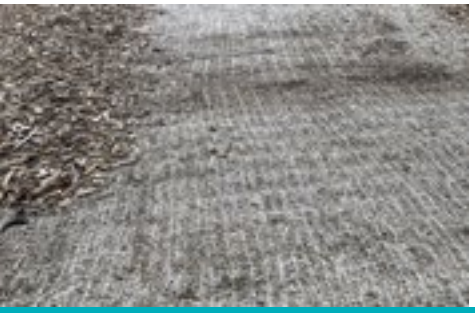
Pictures on the left: © Planterial GmbH | Pictures on the right: © re-natur GmbH

Erosion Control Mat & Fascines

Biomass used Wet meadows (various wetland species, heterogeneous composition)
Paludiculture biomass 90% paludiculture, depending on the version with coconut fabric, jute fabric, or polypropylene fabric
Stage of development Application tested; The stage is between “application tested” and “prototype,” as the mats have been laid out and unrolled at both a festival and the Erfde Climate Farm.
Application area Erosion control, slope protection, water protection, bank protection
Dimensions 350–1400 g/m² for erosion control mats; fascines up to 40 cm

Possible uses Erosion control mat with various thicknesses (weights) for erosion control on embankments, slopes, and bodies of water. The thickness and stitching depend on the slope gradient and level of stress. It is fastened with wooden pegs and stitched with jute or PP fabric. It is also optionally available with a seed insert. The target group is civil engineering, gardening and landscaping, and the building materials trade. It is sold in whole rolls of 1.20 × 30 m or 2.40 × 25 m.

Properties The goals are to replace raw materials from Asia, create a regional value chain, and ensure short delivery routes. The use of paludi material is intended to replace the use and transport of coconut and jute material from Asia in the long term. In the short term, a mixture with coconut or jute will still be necessary. The properties of the raw material (peatland plants) make the Paludi erosion control mats very resistant to microbial decomposition.



Company profile Wholesale of products for horticulture and landscaping, civil engineering, commercial horticulture, and the building materials trade.

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Cooperation partner:
Klimafarm Erfde (Stiftung Naturschutz SH), MST

Biochar & Distillates

Biomass Used Reed canary grass (*Phalaris arundinacea*). Various paludi biomasses have been tested so far, including alder and willow. It is also possible to make use of biomass from the clearing of areas that are to be rewetted.

Paludiculture biomass For the thermolysis process, the paludi biomass must be mixed 50:50 with woody biomass (wood chips). The biomass yields at least 25% biochar and 40% distillates

State of development Application tested

Field of application Thermolysis of paludiculture biomass into biochar and paludi-distillates for agriculture, forestry, and the chemical industry

Possible uses The company Carbon Technik Schuster GmbH developed a thermolysis process that enables a consistent quality of the produced biochar and its distillates, such as acetic acid, furfurals, and phenols. We have applications for the biochar in agriculture and forestry for animal health, as a fermentation additive, for nutrient binding in barns, as a seed coating for agriculture & forestry, as a granulate additive for direct seeding, and as a substrate additive in reforestation for water retention. The separated distillates are used as basic chemicals and as biostimulants.

Properties Our product quality is characterized by strictly monitored feed safety, excellent and consistently high product properties, and the complete absence of pesticides and antibiotics – guaranteed GMO-free. Regular analyses for undesirable substances such as PAHs, PCBs, and dioxins, as well as compliance with the requirements of various quality certificates such as FiBL, EBC Feed, and GMP+, ensure the highest level of safety. Naturally, we fully comply with all legal regulations. Further information can be found on the website of Carbex, a subsidiary of Carbon Technik Schuster GmbH.

Company profile CCC works together with Carbon Technik Schuster GmbH on the production of paludi biochar and the resulting distillates, as well as on the development of their value chains in the sense of a circular economy.

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Cooperation Partner:
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Pictures on the left: © CarbonCapture Company GmbH | Pictures on the right: © Snow Leopard Projects GmbH

Mobile Carbon Box

Paludiculture biomass Paludi biomass must have a max. 12% water content for pyrolysis.
State of development Application tested
Production site Fürstenzell, Germany

Possible uses The main product of the Carbonbox is high-quality biochar, which can be used as a soil improver, as a feed and food supplement, or as a fuel.

Properties The Carbonbox is used for the thermochemical conversion of organic substances into incompletely oxidized products. It is a semi-mobile pyrolysis kiln with which slow carbonization can be realized in batch operation.

Company profile We are a father-daughter team with a few core employees. We are a small team – and that is our strength. We are flexible and fast. With us, decisions are made quickly. To handle larger or multiple projects simultaneously, we have a large network of partners, suppliers, service providers, and freelancers.

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Energy use

Energy from paludi biomass – sustainable heat and more

Paludi biomass can also be used for energy production, offering a climate-friendly alternative to fossil fuels and energy gained from peat extraction from drained peatlands. The use of plants from wet or rewetted peatlands for energy production combines the provision of regional, renewable resources with active peatland conservation. Various processes are suitable for energy use. Fermentation in biogas plants is an established method. Fresh or silaged biomass such as reeds (*Phragmites australis*), reed canary grass (*Phalaris arundinacea*) or cattails (*Typha spp.*) are particularly suitable for this purpose. Thermal utilisation is also gaining importance: dried paludi biomass can be used in heating systems in the form of pellets, briquettes or whole bales. The use of paludi biomass for energy not only contributes to regional energy supply, but is also a strategic lever for climate protection: it opens up new prospects for the use of wet peatland sites where conventional energy crops can no longer be cultivated. At the same time, it creates value in rural regions and reduces emissions in several sectors at once. In this chapter, we present two different factsheets on energy use, illustrating the diverse possibilities for generating sustainable energy from paludi biomass.

Pictures on the left: © Green Planet Energy

Paludi-Biomethane

Biomass used Wet meadows (various wetland species, heterogeneous composition); In principle, a heterogeneous mix is possible as long as the DM content (dry matter) is kept between 30 and 45%.

Paludiculture biomass max. 20–30% of the biogas plant substrate mix. Then it depends on the size and technology of the biogas plant.

State of development Application tested

Production site Preferably existing biogas plants in the region close to the public gas grid

Possible uses In our utilization concept, paludi biomass is processed into biogas in biogas plants to then produce high-quality biomethane from it. This is then delivered via the public gas grid to our customers throughout Germany, who in turn use the biomethane for heating or cooking. We therefore market the biomethane from paludi biomass to private customers in the building sector for heat generation.

Properties In addition to switching electricity generation to 100% renewable energies, it is also necessary to convert the heating sector in building energy. Besides switching to heat pumps, the defossilization of gas is important, especially for the transformation over the next 15 to 20 years. This is where renewable biomethane comes into play: so that, unlike what has happened in Germany in the past, it is not necessary to intensively cultivate energy crops, our customers promote the use of ecologically valuable substrates for the production of biomethane, such as biomethane from paludiculture.

Company profile The energy cooperative Green Planet Energy eG, founded by Greenpeace in 1999, is owned by its more than 45,000 members and supplies around 200,000 households and business customers with innovative green electricity and gas products. Green Planet Energy relies on power generation from 100% renewable sources.

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GREEN PLANET ENERGY

Paludibiomass Briquette

Biomass used Various successive paludi growths
Paludiculture biomass 100%
Development status Prototype, Demonstrator

Possible uses At present, we produce wood chips from short rotation coppice (SRC) for Berlin's biomass heating plants. In the future, we aim to develop a suitable process chain for peatland biomass, which must be harvested primarily in late winter in order to wash out salts, among other things. To optimize logistics, briquette production is expected to be integrated into the process. The energetic use of these "paludi briquettes" in solid fuel power plants is planned from 2029 onward.

Properties A tested ash content. By adjusting harvest times, consumer-friendly sodium and potassium chloride values are to be ensured.

Company profile Energy Crops is a subsidiary of Berliner Fernwärmeversorgung (BEW GmbH), providing biomass for solid fuel power plants. We are a Brandenburg-based company currently focusing primarily on the management of short rotation coppice and agroforestry strips, thereby supplying a sustainably recognized form of biomass for Berlin's district heating supply. Within the framework of contract farming, we provide advice and support to farmers.

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energy crops

Pictures: © Energy Crops GmbH

Design & everyday products

Design and everyday products

The use of paludi biomass is full of potential and continues to surprise with new applications. Paludiulture is also opening up completely new avenues in the field of everyday products and design. The possibilities are almost endless. Plants such as reeds (*Phragmites australis*), cattails (*Typha spp.*) and sedges (*Carex spp.*) can be used to produce bio-based plastics, bio-chemicals, furniture, disposable tableware, textiles and innovative materi-als. More and more companies and designers are discovering the special material properties of paludi biomass, such as its lightness, durability and unique aesthetics and are using it to develop products that are ideal for everyday use. This chapter provides an overview of current developments in this still young but dynamically growing field. It shows how paludiulture can be not only ecologically sound but also inspiring for design, nutrition and what opportunities it opens up for bio-based, regional value creation.

Pictures on the right: © Curious Boy

“Kiebitz & Dolomedes”

Biomass used Reed canary grass (*Phalaris arundinacea*)
Paludiculture biomass approx. 80%
Development stage Prototype, Demonstrator
Application area Interior Design/functional Art
Production site Bavaria, Germany

Properties Markus Benesch Creates recently presented the Paludi Series as part of the “Riches to Rags” Exhibition at Palazzo Litta during Milan Design Week 2024. As designers and artists, the core of our professional life revolves around creativity, around the act of creating things. Our profession is also our calling, but it creates a paradox when we realize that the world doesn’t necessarily need more products. Every object consumes finite resources. And then there is Paludi. Far too unknown yet so vital. A material that contributes to carbon sequestration and promotes biodiversity simply through its cultivation in peatlands. We’ve fallen in love with this material. Whether it can be used to build furniture, we’re not sure yet – we’re experimenting. But Paludi needs to be made known; a carbon-negative material that can be fully decomposed. Let’s get inspired and brainstorm together. In Paludi cultures, endangered species like the hunting spider and the lapwing can thrive again, which inspired the naming of the two pieces of furniture. Kiebitz & Dolomedes

Company profile Markus Benesch Creates is a multi-discliplinary design studio creating surfaces, products, interiors, installations and smiling faces since 1988.

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CURIOUS BOY

Woven hanging basket

Biomass used Cattail (*Typha spp.*)
Paludiculture biomass Basket made from 100% cattail leaves, hanging loop made from recycled cotton
Production site Wolgast, Mecklenburg-Western Pomerania, Germany

Possible uses Decorative and practical organiser for the kitchen, bathroom and garden

Properties The basket's open structure makes it perfect for airy storage of many household items. The loop on the back provides a practical hanging option. The use of fibre-rich cattail leaves creates a stable yet lightweight and flexible weave. The hanging basket is approx. 20 cm high plus hanging loop (made from recycled cotton) and has a diameter of approx. 18 cm. The size may vary slightly due to the use of natural materials, and the colour of the cattail leaves also varies. Each basket is a unique, handmade piece.

Company profile Manufacturer of basketware made from regional natural materials.

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Flechtwerkstatt verflochtenes

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Hiss Reed Parasols

Biomass used Reed (*Phragmites australis*)
Paludiculture biomass 60%
Stage of development Established on the market

Possible uses Our parasols are distinctive because they are made from natural materials. In many places, the name ‘straw parasol’ has become established, although these parasols are not made from straw, but from reeds or various grasses. Want to enjoy the straw parasol from your favourite beach in your holiday region at home too? No problem! Our straw parasols offer you a handmade model to suit every taste.

Properties The most common roofing material for straw umbrellas is reed, rushes, or related plants such as reed grass. Strips of palm leaves can also be used. These natural materials are valued for their weather resistance and attractive appearance. The stand is made of larch wood, while the other structural components are constructed from galvanized steel or aluminium. Straw umbrellas are ideal for providing shade in the garden or, for example, as a decorative and protective element in commercial areas. Straw umbrellas can be used both outdoors and indoors.

Company profile We help people build better buildings and live healthier lives with our high-quality building materials and services.

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HISS REET
SCHÖNES AUS REET

Moor-Living furniture

Biomass used	Wet meadows (various types of wet meadows, heterogeneous composition)
Paludiculture biomass	99 %
Stage of development	Prototype, demonstrator
Usage	Furniture panels
Application	Furniture and interior design
Dimensions	180 × 60 cm panel size
Bulk density	750–1000 kg/m³
Self-supporting	yes
Circularity	recyclable or thermal recycling
Production site	Greifswald, Germany

Possible uses The panels are suitable for furniture construction, wall cladding, acoustic elements, fixtures and presentation modules. Target groups include carpenters, architects, designers and exhibition organisers. The panels can be processed in the same way as MDF – by sawing, sanding or milling.

Properties The panels are made from regional wet meadow grass and are dimensionally stable, highly compressed and mechanically resilient. They do not require traditional glues, store CO_2 and are versatile in terms of design. Their added value lies in the climate-positive origin of the material. Life cycle assesment/carbon footprint: Thanks mainly to the high reduction potential offered by the rewetting of peatlands, which has been fully taken into account here, the production of 1 m³ of furniture board from wet cultures can save 2,246 kg of CO_2 over its entire life cycle (cradle-to-grave). The PCF of a comparable MDF board is approximately 500 kg CO_2 (cradle-to-gate) (Forum Nachhaltiges Bauen, 2024).

Company profile Moor and more develops building materials from peat biomass, built the Paludi Tiny House and advises on construction projects. Together with partners such as HNEE, HSW and GMC, it produces furniture panels, insulation materials and exhibition concepts for peatland-based construction.

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Cooperation partner:
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MOOR AND MORE

Pictures on the left: © Moor and more | Pictures on the right: © Maximilian Wenzel, University of Greifswald

Paludi-Compound

Biomass used Sedges (*Carex spp.*)
Paludiculture biomass 25–30% sedge content
Stage of development Prototype, demonstrator
Production site Schwerin, Germany

Possible uses Thermoplastics filled with biomass from paludiculture can be adapted and optimized for almost any application. The production of products using the paludi-compound on standard injection molding and extrusion equipment has been tested and classified as unproblematic. Bioplastics are particularly suitable as a matrix polymer for the base formulation. Before use, a specifically tailored formulation should be developed for the intended application to ensure an optimal filler content. Filler amounts of up to 25% are easily achievable.

Properties The addition of paludi-filler to plastics reduces both the amount of plastic used and the greenhouse gas emissions of the resulting product compared to products made from pure plastic. In biodegradable bioplastics, paludi-biomass improves the overall resource balance and consumption. Since their production is energy-intensive, composting or weathering is less resource-efficient than recycling. The addition of paludi-biomass helps to mitigate this effect.

Company profile Manufacturer of plastic compounds

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www.germaat.com

Cooperation partners: Development as part of the Paludi product project (funded by BMFTR, Plant³). Project partners: University of Greifswald, Institute for Polymer and Production Technologies gGmbH, Germaat Polymer GmbH, Schweriner Aus- und Weiterbildungszentrum e.V.

BioPuff

Biomass used Cattail (*Typha spp.*)
Paludiculture biomass 60–80%
Stage of development Application tested
Production site Bristol, UK

Possible uses Our first product, BioPuff is an innovative insulation material used as an alternative to animal-based goose-down and synthetic fillers. BioPuff is warm, puffy and naturally water-repellent. It comes in both a loose and nonwoven form for use in puffers, quilted jackets and accessories.

Properties Our products enable fashion brands to have 88% less impact than conventional goose-down products and 19% less impact than petroleum-based synthetic fills.BioPuff has already been launched with brands such as Stella McCartney, Parley for the Oceans, Yoox (Net-a-porter), and Sky High Farms Universe.

Company profile Ponda is a biomaterials company developing technologies to transform plants grown on regenerated peatlands into next-generation textiles for the fashion industry. Our first product, BioPuff, is an innovative insulation material used as an alternative to animal-based goose-down and synthetic fillers. By connecting the restoration of precious peatlands to the creation of healthier materials, farmers are able to build climate resilience whilst supplying an industry striving to reach net-zero targets.

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ponda

Pictures on the left: © Ponda | Pictures on the right: © RietGoed / Iris Veentjer

RietGoed

Biomass used	Cattail (*Typha spp.*)
Paludiculture biomass	the aim is 100%, due to technical difficulties this has not yet been achieved. (now its between 50–80%)
Stage of development	Prototype, demonstrator
Usage	Not construction-oriented but decorative for curtains, for example.
Application	Interior decoration, curtains, interior textiles, geo-textile
Dimensions	not yet specified
Production site	The aim is to produce as locally as possible. Currently this is done in Rotterdam, the Netherlands.
Circularity	biodegradable

Possible uses The project is still in the development phase, and the textile created so far represents only one step in the broader research and production process. With RietGoed we strive for the highest possible application of the textile. The hope is to be able to achieve the quality of interior or clothing textiles. In addition, RietGoed is also investigating the possibility of applying the textile in a low-grade way but with more impact, such as using it as a geo-textile. The overall goal is to develop a chain for the cattail plant in order to create value to the cultivation of wet fiber crops.

Properties The cultivation of cattail plant can prevent soil subsidence, purify water and increase biodiversity. In the Netherlands specifically, we can make the landscape future-proof with this plant. RietGoed does not intend to compete with linen or hemp textiles, but sees it as a supplement to these fibers. The cattail plant grows on wet peat areas where other textile plants do not grow (well). Initiator Iris Veentjer hopes that this development will contribute to the entire development of local plant-based textile flows.

Company profile RietGoed is a design-research project exploring the value chain and potential of producing textiles from the cattail plant. Although the fiber resembles the fibers of linen and hemp, the process of getting the fibers out of the plant is significantly different.

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RIET GOED

“Cuddling mires”

Biomass used Cattail (*Typha spp.*)
Paludiculture biomass Approximately 50–70%, with additional use of hemp fabric and sheep’s wool
Stage of development Prototype, demonstrator
Production site Berlin Germany

Possible uses “Moore kuscheln” (Cuddling Mires) is a series of different mire cuddle plants to look at and touch. They bring the beauty of peatland plants and the potential of paludiculture to life. Thanks to their contemporary design and precise execution, the objects are desirable and invite a wide audience to rediscover their relationship with the plant environment. The mire cuddly plants are filled with cotton wool made from cattail seeds. This filling material, which was researched and produced for the project, can also be used for cushions, blankets or in the manufacture of clothing.

Properties Currently, two of the ten planned mire cuddly plant species are being implemented as prototypes and prepared for series production. Various methods of processing the reed seeds into filling material are currently being researched and tested.

Company profile Daniel Hengst is a freelance artist who works on peatlands and paludiculture. His artistic forms of expression include VR, XR, video, lectures, workshops and texts – always in dialogue with human-plant relationships and more-than-human perspectives.

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Cooperation partners:
Greifswald Mire Centrum, Gravitex, Aufschnitt, ATB Potsdam, STFI Chemnitz

STUDIO HENGST

Pictures on the left: © Daniel Hengst | Pictures on the right: © Hiss Reet GmbH

PAIO Drinking straws from reed

Biomass used Reed (*Phragmites australis*)
Paludiculture biomass 100%
Stage of development Established on the market

Possible uses Reed straws for 100% sustainability and 100% drinking pleasure. Nature itself provides different straw sizes, each suitable for different drinks and containers. Whether for soda, cocktails, smoothies or hot drinks – reed straws are tasteless and universally applicable.

Properties Unlike most alternatives to plastic straws, which are now banned for very good reason, our high-quality PAIO drinking straws for cocktails are tasteless. This means you can enjoy your cocktail without any restrictions. Another advantage is that they can be reused for private use: you can sip several cocktails with a PAIO drinking straw before it becomes unusable. Our tip: chop up the 'old' drinking straw and compost it – yes, it works perfectly! PAIO drinking straws for cocktails are 100 percent natural, meaning they are completely chemical-free.

Company profile We help people build better buildings and live healthier lives with our high-quality building materials and services.

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HISS REET
SCHÖNES AUS REET

Insect-based feed ingredients

Biomass used Wet meadows (various wet meadow species, heterogeneous composition); Biomass is derived from rewetted peatland systems and includes cattail, reed, and mixed wet meadow species. These lignocellulose-rich materials are used directly or pre-fermented for BSFL rearing.

Paludiculture biomass Up to 90% as sole substrate; most effective results observed in mixtures with ~30–50% paludiculture biomass combined with food by-products

Stage of development Prototype, demonstrator; Successfully tested in lab-scale with promising bio-conversion and larvae development performance.

Production site Quakenbrück, Germany

Circularity Biodegradable, Recyclable (organic), Part of a circular system, the product alorises waste biomass and contributes to nutrient cycling.

Eco-/ Climate Balance Life cycle assesment carbon footprint: Preliminary assessment suggests net carbon savings due to avoided emissions from unused biomass and peatland rewetting benefits

Possible uses Protein and fat from the black soldier fly (BSFL), derived from paludiculture biomass and by-products of food processing. Used as a feed ingredient for pets, aquaculture, and poultry. Goal: sustainable agriculture and circular feed supply chains.

Properties High in protein and fat, with enhanced digestibility. Reduces environmental impact through waste recycling, carbon sequestration, biodiversity promotion, and nutrient pollution mitigation. Supports decentralised farming.The biomass originates from rewet peatland systems and includes cattail, reed, and mixed wet meadow species. The lignocellulosic materials are used directly or after pre-fermentation for rearing BSFL.

Company profile The DIL Deutsches Institut für Lebensmitteltechnik e. V. (German Institute of Food Technologies) is a non-university, non-profit research institute in food technology and food science.

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In collaboration with University of Veterinary Medicine Hannover, Foundation, Germany, agricultural stakeholders, and food industry side-stream providers.

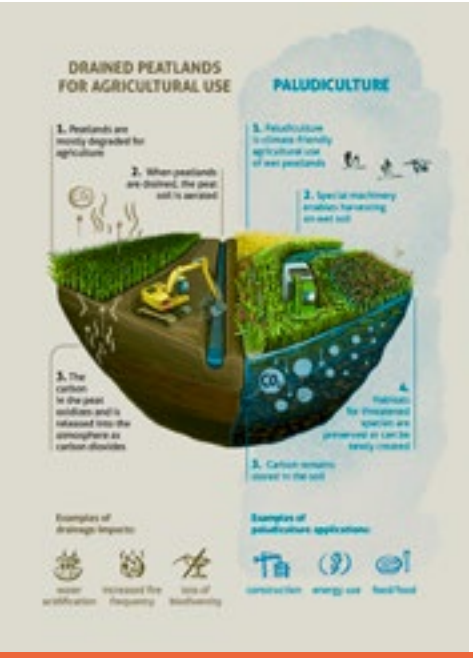
Pictures on the left bottom: © DIL; top © AI generated | Pictures on the right: © RE_PEAT

“Morsels from the Moor”

Biomass used Edible plants
Paludiculture biomass 10%
Stage of development Prototype, demonstrator

Possible uses The book “Morsels from the Moor” not only contains information about peatland ecosystems and paludiculture but also examples of how crops, harvested from wet peatlands, are part of European cuisine and heritage. The purpose of the project is to highlight the crucial role of culture in supporting this ambitious land-use transition.

Properties The book is targeted at people who are interested in peatlands, the future of our food systems, and EU policymakers. The recipes found in the book are experimental dishes that use paludiculture crops to add a twist on traditional meals.



Company profile RE-PEAT is a youth-led collective on a mission to deepen people’s relationships with peatlands. They work across Europe on projects ranging from school education programmes, hands on youth engagement with ecosystem restoration, and political campaigning for peatland justice.

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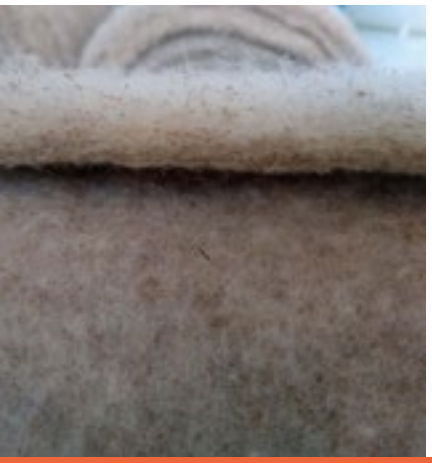
Cooperation partner:
Wetlands International Europe & RE-PEAT
europe.wetlands.org/world-wetlands-day-putting-delicious-peatlands-on-the-spotlight

Non woven textile from Typha

Biomass used Cattail (*Typha spp.*)
Paludiculture biomass 50%
Stage of development Prototype, demonstrator
Production site Sächsisches Textilforschungs Instituut e.V. (STFI), Germany



Possible uses The fluff from the Typha cigars is seperated from the seeds and used for making non woven textile. In this case wool is added (50/50). This non woven textile can be used for clothing (filling/insulation) or for packaging material of high valuable products.

Properties The material is harvested from typha fields in rewetted peatlands. The typha- leaves are being used for building materials.

Company profile Landschap Noord-Holland is committed to the protection and preservation of nature, valuable landscapes and cultural-historical heritage in North Holland. With our business services Natural Affairs, we carry out countless assignments for a variety of clients.

Landschap Noord-Holland Schuine Hondsbosschelaan 45-A 1851HN, Heiloo The Netherlands
vip-nl.nl/portfolio-item/themasheet-natte-teelten/

Cooperation partner: Wetland Products and the Struunhoeve

Pictures on the left: © Aldert van Weeren, Wetland products | Pictures on the right top: © The Cranberry Company; bottom: © Katja Diesterhaupt

Cranberries

Stage of development Established on the market
Production site Gouderak, South-Holland, The Netherlands

Possible uses Fresh use and use in product processing such as compote, juice and sauces

Properties We focus cranberry distribution on the organic and high-quality fruit and vegetable trade, restaurants, and specialised greengrocers.

Company profile The Cranberry Company combines organic fruit cultivation with nature management, which fit seamlessly together. In fact, the strength of The Cranberry Company lies in working with nature – sometimes by intervening, but more often by simply letting nature take its course. That's why our motto is: "Farming with nature."

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Buffalo sausage & buffalo meat

Biomass used Farm animals
Production site Fürstenwerder/North-West Uckermark,Germany

Possible uses Sausages: salami, ham, bratwurst
Meat: steaks, roasts & goulash

Company profile Production of meat and sausage products from water buffalo meat and game

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The Paludi Product Catalogue initiative is being implemented as part of the PaludiZentrale project. PaludiZentrale (2023–2033) is an overarching joint project that coordinates and supports five BMEL model and demonstration projects on peatland soil protection and paludiculture. The establishment of the "PaludiNetz" will facilitate exchange between the projects and aim to create links with four pilot projects already being run by the BMUV on peatland soil protection (MoorPiloten). The joint project is being carried out by the University of Greifswald, the Michael Succow Foundation (both partners in the Greifswald Moor Centrum) and the Thünen Institute.

Data All participants have signed a declaration of consent to the publication of their data in the Paludi product catalogue. The data will be used exclusively for this purpose. It will be made available online and printed in a small edition .

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