



WOOD

FOREVERPACT

PRINCE ALBERT II OF MONACO
FOUNDATION





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Editorial

Since the launch of the Wood Forever Pact programme in 2010, a significant raise in environmental awareness in the yachting industry has been observed. Both professionals and yacht owners are increasingly concerned about the potential environmental impact of the construction, decoration and future use of yachts. First, research and development led to improvements on the motorization and water treatment, bringing more efficient and eco-friendly yachts on the market. Now, the focus is also put on raw materials used on yachts such as wood and numerous options are offered to designers and shipyards. Some precious tropical wood species sourced from sustainably managed forests are broadly available. However, teak, mainly used for decking, remains problematic both in terms of legality and sustainability. Yet innovative solutions are starting to arise. Less-known wood species such as freijo are currently tested to measure their resistance to the marine environment. Eco-friendly synthetic resins, offering the same aesthetical and technical values as teak, are developed and used on more and more boats.

The Prince Albert II of Monaco Foundation is actively involved in supporting the research on teak alternatives. On the one hand, many designers, furniture makers and shipyards have already joined forces through the Wood Forever Pact. On the other hand, the Foundation supports various projects to combat deforestation and promote sustainable and traceable wood, respecting the environment and the local populations. The ever-evolving yachting industry has always set an example in terms of innovation, luxury and excellence. Now it must set an example through ethical and socially-responsible behaviours.

“Both professionals and yacht owners are increasingly concerned about the potential environmental impact of the construction, decoration and future use of yachts. ,”

Philippe Mondielli, PhD
Scientific Director
Prince Albert II of Monaco Foundation

Perspectives and solutions on the use of sustainable wood

Wood is a strong, pliable and aesthetically raw material that can be produced with less energy and pollution than artificial materials such as steel and plastic. But many things can undermine this natural advantage – unsustainable forestry practices harm forests and deplete carbon stores; huge logs can be lost or wasted; indiscriminate plantation expansion can displace communities and take away their livelihoods; dirty pulp mills pollute air and water; and paper fit for recycling is dumped in landfills and burned. Net demand for wood products is going to grow with rising population and incomes in developing countries. Still, we need to remember that forests are the lungs of our planet. So how can we produce more wood without destroying or degrading forests, in a world where competition for land and water is increasing? This challenge spans the whole supply chain, from where and how the wood is grown and harvested to how wisely and efficiently it is processed, used and reused.

Solid wood items, such as furniture or wood used in construction, can have extremely long working lives. With suitable design, care and maintenance wooden furniture can last 100 years or more, and wooden structural components in buildings can endure for centuries. Even in extreme environments, such as in the sea, wooden pilings can last much longer than other materials such as steel or concrete.

Sustainable wood extraction as a forest conservation strategy

The market for wood can motivate good stewardship that maintains wood supply, can help protect vulnerable forests from illegal logging, encroachment or conversion to farmland; or it can destroy the very places where wood grows.

Production forests play a crucial role in maintaining global climate, economic development and biodiversity conservation. They provide vital buffers for, and links between, protected areas.

However, the capacity of production forests to provide ecosystem services and sustain timber yields varies greatly depending on how well they are managed and the values protected in the surrounding land-use mosaic.

For example, poorly planned selective logging results in waste of harvested wood, unnecessary damage to residual trees and soil, and large canopy gaps that disrupt forest ecology and increase the risk of fire.

Halting illegal logging through legislation and traceability

Although the illegal trade remains on a massive scale, solutions to this problem are emerging. Improved enforcement of forest laws and increasing regulation of trade in wood products is helping reduce illegal logging.

One critical step toward legality is accurate tracing of wood along the supply chain. Without traceability a business cannot be sure that the wood or fibre in products it sells, uses or manufactures originates from a legal source. Technology is making full traceability more feasible. Better labelling devices on logs or processed material enable efficient and accurate data capture at critical points along the supply chain. Internet-related data management systems are harder to forge or falsify than paper-based manual-entry systems. DNA and isotopic testing as well as fibre analysis can be used to check suspicious claims about the source or species of wood in a product. However in regions where the trade in logs or processed wood is fragmented and opaque, full traceability may only be feasible

if governance and government-led tracking is strengthened and if buyers simplify their supply chains and use the emerging tracking and tracing systems.

However, legality is only a step towards sustainability. Elements of sustainability, such as good governance, inclusiveness and maintaining forest ecosystems, usually require actions that go beyond mere legal compliance.

Forest certification to improve forest management

Forest certification enables the buyers of wood products to seek assurances that the wood was legally harvested and came from a well-managed forest.

Forest certification is a voluntary process, usually market driven, where an accredited body verifies the legality and social and environmental qualities of forest management against an agreed standard. Increasingly, such standards are set at a national level with equitable participation of all relevant stakeholders. The link from the forest floor to final point of sale as a certified forest product is achieved through an audited chain of custody.

Perhaps 30 per cent of the world's production forest is certified. To have the greatest impact, certification will need to expand significantly in those regions, particularly the tropics, where forests suffer most from destructive forestry, and to do so while maintaining quality standards and systems. Longer term, voluntary certification has the ability to generally raise standards of forest management, certified or not, by for instance highlighting outmoded forestry practices.

Source: WWF Living Forests Report Chapter 4: Forests and Wood Products

Aguti Yachts the Revolution of yacht building

As a graduate shipbuilder and design engineer, the Managing Director and Head of Development of Aguti Yachts GmbH - Andreas Grieger - is he also an ingenious visionary but also a down-to-earth realist who fully identifies with his homeland, particularly the Lake of Constance region in Southern Germany. This is the location of Aguti Yachts, where, after 36 months of planning followed by 40 months construction, Andreas Grieger fulfilled his dream of creating the first timeless, but modern, classic motor yacht completely made of wood.

The Aguti motor yachts are the first luxury yachts in the world, which combine traditional wooden shipbuilding techniques with high-tech composite technology and derive from the origins of yacht building. The revival of this inheritance allows the exclusive use of precious woods, hand-stitched leather and high-quality stainless steel metal parts. These features are paired with nautical high-tech. The fusion of established craftsmanship with a balanced design creates a modern interpretation of the traditional inheritance.

Aguti Design attaches particular importance on maintaining the value of the vessels by applying design elements of timeless elegance. Therefore, short-living design trends were strictly excluded. The natural origin of the used materials are reflected

by organic forms. Hence, the boat boasts an appearance powerful as well as light and agile.

The design is always convincing by the harmony between the interior and the exterior. It represents a consistent language of form with regard to all design and function elements. Even the bridge and its instruments are haptically and optically all of one piece.

The hand-build wooden hulls consist of a cedar core which is fibre reinforced. To achieve the final strength, several additional high quality mahogany veneers are applied. This sort of wooden construction provides high rigidity and an excellent vibration damping behavior.

All wooden surfaces are hand grinded to their outstanding finish. The use of wood as main building material has also the advantage of comfortable smelling rooms free of annoying evaporations.

Aguti yachts are all individually custom-made according to the wishes and imaginations of the customer. They are available in lengths of 10m, 12m and 20m.

In 2015, Aguti Yachts became the third shipyard to join the Wood Forever Pact.



Could you tell us a few words about Aguti Yachts?

The Aguti Yachts derive from the origins of yacht building and are perfectly shaped beauties. The revival of this inheritance allows the exclusive use of precious woods, hand-stitched leather and high-quality stainless steel metal parts. These features are paired with nautical high-tech. The fusion of established craftsmanship with a balanced design creates a modern interpretation of the traditional inheritance. Aguti Design attaches particular importance on maintaining the value of the vessels by applying design elements of timeless elegance. Therefore, short-living design trends were strictly excluded. The natural origin of the used materials are reflected by organic forms. Hence, the boat boasts an appearance powerful as well as light and agile.

How important is the wood component on your yachts and what kind of importance do you give these materials?

The wood component is very important, as the yachts are completely made of wood. The Aguti yachts combine traditional wooden yacht building methods with modern high-tech and composite technologies. The hand-build wooden hull consists of a cedar core which is fibre reinforced. To achieve the final strength, several additional high quality mahogany veneers are applied. This sort of wooden construction provides high rigidity and an excellent vibration damping behaviour. All wooden surfaces are hand grinded to their outstanding finish. The use of wood as main building material has also the advantage of comfortable smelling rooms free of annoying evaporations.

Why Aguti Yachts joined the Wood Forever Pact?

As our yachts are exclusively made of wood, it is very important for us to buy consciously the necessary wood component. We very much like to support a foundation which is engaged in protecting the environment.

Eva Mechler

“experience the beauty of natural wood”

Tell us about your work and career.

I am a master cabinet maker - and my aim is to create wonderful products that give people the opportunity to experience the beauty of natural wood in everyday settings.

Having worked in diverse manufacturing businesses in Germany and Switzerland, I completed my training over several years in both cabinet making and galvanisation - both to master level. Until now, I have some fourteen years of experience in the design and manufacture of solid wood products especially for the bathroom. With my true experience of handcraft and with my knowledge of production management, I am able to present a viable commercial product with originality and flair that will satisfy the highest quality standards.

Currently, I am presenting my collection with wood for the bathroom. The pieces are manufactured to the highest level of craftsmanship and are designed with the wood for a simple and easy charisma. The construction is also designed to work with the wood's natural technical qualities. I am influenced by Leonardo da Vinci and the Golden Section - and I admire the plain and honest nature of the Shaker furniture.



What was the catalyst for you to work with wood?

At the age of eight, I built my first piece of furniture with my grandfather who lived in south west Germany. He built furniture and toys for my brothers and I, and he allowed us into his workshop. Inspired by him and the scent of wood, I joined years later in his footsteps and began as a cabinet maker myself.

What type of wood are you using and why?

I find that solid wood is the most natural and honest material in all the fields of carpentry work. In my products I use mainly the hardwoods of walnut, chestnut, and ash. Their high level of hardness and their pore structure are very suitable for my work - and their simple grain gives my product the desired character.

What is your procedure in the selection of wood - and what is your approach to the traceability of the supply chain?

Before the wood is delivered to the workshop, I go to the merchants to look at the stem wood sections. Inspecting board for board, I go through the stems and decide on those boards that are suitable for my products. Depending on the species and size of the tree, I need multiple choices from the stems for making a single bathtub. Here, in order to achieve a uniform overall presentation, I have to keep a special focus on the different shades and structures of the stems. The wood is purchased exclusively from sustainable forestry sources - including from the national forests or from international certified forestry operations. My suppliers are very aware of my demand for integrity in the supply chain and this is a learning journey for us both.



Why did you choose to join the Wood Forever Pact as a Partner?

Like many people, I have been aware of the need to consider forest sustainability when selecting timber for my work. When I came across the Wood Forever Pact for the first time I realised that I had been rather too lazy in my previous buying decisions. The Wood Forever Pact along with the Prince Albert II of Monaco Foundation are uniquely positioned to reach influential owners and designers and it is now without hesitation that I wish to support their work. The effect on my approach to purchasing since becoming a Partner has been pronounced. My awareness and the awareness of my suppliers has accelerated steeply, and I think that this ultimately is the point - the Wood Forever Pact needs to be supported financially but just as critically, all of us as owners and designers need to establish our own awareness in order to influence others about the importance of forests and how our individual supply chains can be bettered.

Michelle Cézanne

“make a change in our near future”



Tell us about your work: your approach to design and challenges you have faced.

Since 7 years I have been specialising in the field of mega-yachts and slowly started to develop my own deco items and furniture to start with in 2016.

I am enthusiastic about new developments and challenging projects, whilst being selective and respecting delivery deadlines, as well as budgets.

My resources are chosen carefully and with a long-lasting approach from selected manufacturers with traditional techniques and the highest quality.

My daily business is a very refreshing ongoing challenge, regarding the demand for quality, durability and delivery times to be mentioned at first.

Design for me, is more of an action coming to place where every pre-produced items don't fit or the client needs require different shapes, materials, sizes... or simply something different.

My sources of inbuilt wooden furniture are chosen very carefully and as well retail products, will not be purchased via me/my clients if they are not coming from a certified sustainable area.

In what way becoming a Wood Forever Pact Partner is in line with solutions to environmental issues and capacity to raise awareness you developed in your company?

My more than 25 years of experience with interiors and exteriors furniture has raised my awareness regarding wooden and natural products. In comparison with long lasting diverse pvc-a like fiber-items and furnitures, it has become an ongoing discussion, weather to invest and sell these mainly recyclable goods and to skip teak.

In the yachting industry it is a bit difficult to work against the decking product number 1, but there are alternatives such as Esthec for example:

Esthec is a material that is economically and environmentally viable. Indeed, it is cost effective as operations like laying it and sealing the seams to prevent leakage are must faster in comparison with teak, which results in important cost savings. In addition, it doesn't possess the disadvantages of teak such as wear and tear, discolouration and a constant maintenance while being lightweight, resistant and safe in heavy weather conditions. Thus, it is appears as a very interesting alternative to fight against teak massive deforestation.

I believe it is worth while looking a bit deeper into the subject in order to make a change in our near future and step by step on our daily basis, to save the most precious environments we have, as long as possible and re-construct slowly but surely, damages that have been executed by the industry, regardless the costs for nature, animals, humans and atmosphere.



Tell us about your studio: your approach to design and challenges you have faced.

We design architecture and interior design of luxury residential, commercial and Superyacht interior design projects. Our approach to design is to create a great experience of Joy and Wonder in the environments we design. A wow factor of sorts in every project we engage in. We believe design to be a medium which transcends the visual like music, film and art; It conveys and envelops the visitors to have a great experience, and we design to create that great, unforgettable experience. Our goal is to create the great environment that will lead to the great experience. Our work is complete when people inhabiting our environments enjoy them and bring their own response to what we have created for them.

In our studio we've overcome many challenges that arise in construction and fabrication by implementing great communication not only within our team members, but the communication with our vendors and fabricators outside our office. We are in a business where we envision, and we then communicate that vision to folks that will construct it into reality. Communication in the process is crucial, and we continually work on improving our communication by ensuring that all parties involved in our projects are fully on board to create our vision. At the same time, we are always using communication to learn more, and are always open to learning from the experts that we hire. We value the process greatly, because we are continually learning and hopefully continually teaching. At the end of the project, we are all very proud of the work created, and we share that pride with all the folks involved in the fabrication of the great work I always like to think we do.

I've always said, and continue to reiterate that Interior Design and Architecture are wonderful ways to study life and human behavior. I am grateful to be in this business and have the team of clients and professionals that I work with on a daily basis.

Rey Viquez

“create that great, unforgettable experience”



In what way becoming a Wood Forever Pact Partner is in line with solutions to environmental issues and capacity to raise awareness you developed in your company?

We believe in the objectives and intentions of the Wood Forever Pact, as they align intrinsically within our goal to help our environment in all our projects, whether on land or at sea, the sustainable component is crucial our process and our work.

In our studio, the social and environmental responsibilities we carry in creating our work are crucial to our success, and we find the Wood Forever Pact Partner to be a great system of standardisation to implement in our Superyacht projects. Our intention, as we enter the Superyacht interior design arena, is to educate our clients and the shipyards we work with to establish the requirements of the Wood Forever Pact in executing our designs, and therefore make a difference in our environment. We are grateful that Wood Forever Pact exists and we intend to raise awareness of it in the United States market.

We are currently collaborating with Luxury Technology a German Robotics Company and Sea Level, a Dutch Naval Architect, in the design of an 80 meter Superyacht Concept utilizing the latest robotics and transformational components on the interior of the ship- and we are requiring the construction of this concept to comply with the Wood Forever Pact Programme. I am personally very strongly committed to that initiative, and intend to further that initiative.



From field work to scientific research Two innovative projects to preserve the forest resources

Since 2014, the Prince Albert II of Monaco Foundation supports Congolese communities concerning forest management as well as wood DNA traceability as a tool to fight against deforestation.

Community management in the Itombwe Natural Reserve – Rainforest Foundation Norway

Eastward of the Democratic Republic of the Congo, Itombwe forest massif culminates between 1500 and 3400 meters high and covers an area of approximately 9000 km². The project contributes to promote the sustainable management of natural resources in the Itombwe Massif based on conservation methods incorporating the rights, traditional practices and development of the local and indigenous communities. Numerous projects in Africa do not take into account local specificities.

In 2006, the Ministry of Environment adopted a decree in order to transform a part of Itombwe massif into an integral natural reserve, forbidding any human activity. This decision, taken without consultation with the population, has caused several conflicts and tensions, such as the migration of Bantoues or Pygmies. Activities developed in this project will serve to promote the use of participatory approaches to identify the rights of the local communities and indigenous peoples, to define limits and mark out the areas of the protected zone, as well as to develop and implement a management plan for the area, in addition to income-generating micro-projects.

Populations will be integrated to a common framework to promote the application of and respect for the principle of Free, Prior and Informed Consent within the scope of setting up and managing a protected area. The management committees, already created locally, have received training on the rights of autochthone populations and nature conservation. These committees will be in charge of the massif administration.

This innovative project, the first example in Democratic Republic of the Congo, is a fine example of a new conservation approach based on the rights of the local communities and indigenous peoples and ensures synergy between the conservation of biodiversity and the traditional practices of the communities dependent on the forest.

Developing DNA tracing tools and a conservation strategy for a critically endangered tree, the African Mahogany (Khaya spp.) – Bioversity International

Unsustainable and illegal logging is one of the main factors of deforestation. Over 50% of timber exported from the Amazon Region, Central Africa, South East Asia and Russia, is harvested illegally, representing losses of revenue for the countries concerned of 10 to 15 billion dollars every year.

Political instruments have been developed to reduce illegal logging and the associated wood trade on a global scale, but the practical control mechanisms to identify species and the origin of the wood are lacking. New technologies associating DNA markers and stable isotopes ensure the traceability of timber thanks to its intrinsic properties. However, genetic data and stable isotopes are not yet available for the protection of many extremely precious species such as the genus Khaya.

The genus Khaya, also known as African Mahogany, comprises five species, all of which are sought after by the illegal timber trade (K.ivorensis, K.anthotheca, K.grandifoliola, K.senegalensis and K.madagascariensis). The wood from the first three species is sold under the name "African Mahogany" and is among the most precious lumber on the continent for exportation purposes, as it is widely used, especially in shipbuilding.

The Prince Albert II of Monaco Foundation, already involved in the yachting industry with its Wood Forever Pact programme had to support this project by Bioversity International. This organisation plans to develop bar codes to define the taxonomy of African species of Mahogany and to create a genetic reference data base to track the origin of K.senegalensis, which is currently logged more intensely than the three other species. This molecular information will be combined with existing morphological and ethno-ecological data in order to put forward a sustainable conservation strategy for these species.

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