

From Reforestation to Hangers

By Gunter Pauli

This article introduces a fresh approach to reforestation as one of the 100 innovations that shape "The Blue Economy". This article is part of a broad effort to stimulate entrepreneurship, competitiveness and employment.

The Market for Hangers

The world market for hangers is estimated at 50 billion units annually, good for a market value of \$25 billion. The cheapest are the metal wire hangers which are offered free of charge at dry cleaners. These cost a mere eight to twelve dollar cents each to manufacture. Of the 3.3 billion used in the USA, some 2.7 billion are imported from China at a cost of \$83.6 million by the latest count in 2008. The 30,000 dry cleaning companies in the US spend an estimated \$6,500 a year, about 10 percent of their average turnover on supplying free hangers to customers who consider it an essential component of the cleaning service. Worldwide an estimated 7.5 billion wire hangers made from carbon steel wire end up in landfills, creating a giant rats nest to the point that some cities have resorted to prohibiting its free distribution due to the havoc created at disposal sites. The second most common type of hangers is made out of plastics, mainly polystyrene and polycarbonate. These often branded devices are delivered predominantly through retail outlets. At a cost of 15 to 50 cents, these hangers also tend to end up in landfills after one single use leaching benzene and bisphenol A.

An estimated 15 percent of retail hangers is recycled thanks to the efforts of shops like Zara and Hennes & Mauritz. However, the recycling is complex since the plastic is combined with metals, and other plastics making the recovery of materials complex and expensive. The total production of clothes hangers worldwide is estimated to emit 6.5 million tons of CO₂. This is the equivalent of 1.5 million cars. There are no world leaders in this industry which remains small scale and local. The largest company reaching an estimated \$250 million in sales is the privately controlled Mainetti, based in Castelgomberto, Italy, with manufacturing units in 42 countries around the world.

The Innovation

The hangers converted over the years into a deposit of chemicals. From formaldehyde to fight insects, phthalates to provide flexibility, azo dyes to offer color, flame retardants, polycyclic aromatic hydrocarbons, lead, mercury, cadmium, chromium VI and more. Few people realized what a chemical blend concentrates in our wardrobe. While several companies like MAWA from Pfaffenhofen, Germany headed by Michaela Schenk has made an effort to eliminate all toxic components, the question remains what is in there, and how is the choice of content influencing consumers to steer society towards sustainability while being competitive. The Hanger4Life offers a solid plastic that is indestructible, while the EcoHanger is made from 100 percent recycled paper and pays for itself with advertising. What more and better can be a future business model?

Lucio Ventania always had a calling to become a social entrepreneur. African Brazilian of indigenous origin, he learned about bamboo from his Chinese neighbor Master Lu. Without any formal education but inspired by his mentor as early as the age of ten, he started working in the early 80s with natural fibers. After successfully offering some academic courses on the use of bamboo, he created in 1988 Ateliê Pengala in Belo Horizonte which offered street children training in the production of furniture using widely available bamboo. His success soon created a demand from professionals like architects and engineers to learn the same techniques he was sharing with the children.

In 1996 Lucio set up the Brazilian Institute for Bamboo and soon after BAMCRUZ, a multidisciplinary center with actors, medical doctors, social workers, union members, reaching out to rural cooperatives and art schools securing opportunities for the most challenged in society. Lucio's vision is to provide a cultural, economic and environmental platform for bamboo in order to achieve social development. His dream is to create a bamboo civilization knowing that 2.5 billion people on earth have bamboo as part of their daily life but nearly all consider this grass growing in the wild as a symbol of their poverty. He conceived the idea of Bambuzerias, a social cooperative which produces and commercializes eco-products from bamboo. The first product he envisaged manufacturing in large volumes back in 2000 was the hanger.

The First Cash Flow

In 2001 Lucio learned about the challenges of the city of Cajueiro, in the state of Alagoas, the North East of Brazil, once the home of an ancient rainforest that was destroyed to make way in the early sixties for sugar cane farms. In 1990 this region produced 85 percent of all sugar cane in Brazil. Then, the pressure from a globalized market forced the introduction of mechanization and automation in farming and harvesting cane, reducing demand for workers by as much as two thirds. Faced with a major social problem of unemployed farm workers, he designed with the local population an integrated plan from farming bamboo to marketing finished products. He offered to regenerate the degraded soil with bamboo. The sugar cane barons offered dry and unproductive areas to plant at the beginning 10,000 culms of *Phyllostachys viridis*, a thin local variety of only 1.5 cm in width that could be harvested quickly.

Within six months of the initiation of the project, Lucio had trained 80 former workers to produce 5,000 hangers per month. These hangers are made from bamboo without any glue or metal fixtures, solely working with available materials. The cardboard packaging of these designer hangers is made from left-over sugar cane bagasse from the local factory, adding work to the job hungry population. A community characterized by high unemployment, analfabetism and child mortality, the workers gained as members of the cooperative from the first month \$120. This offered livelihood to families while the business of planting, harvesting, processing bamboo as well as selling hangers generates a surplus that allows to continue investing in the expansion of production with self-generated cash flow. Several design

awards, including Casa Planeta, helped create a steady demand for these ecological products by the cooperative that is now known under the name Bambuzeria Capricho. This initiative goes beyond the generation of jobs, it builds social capital.

The Opportunity

Demand continued to rise. The State of Alagoas now has 3 production centers each earning 10 to 15 Cruzeiros (\$ 6 to 9) per hanger and revenue per worker thanks to an effective marketing and distribution campaign reaches just under \$ 500 which is a fortune for any laborer in Brazil. This income lifts up the community, offers work for marginalized citizens, while at the same time secures a new impulse to the regeneration of the Atlantic Rainforest by planting these precursors of biodiversity, offering an alternative to sugar cane farming. The product portfolio expanded from hangers to furniture and garden material. Lucio decided that these opportunities must offer opportunities for Brazilians of African descent, unemployed rural day laborers, street children and citizens with special needs. This approach of combining social, cultural, ecological and economic development is a strong case of how The Blue Economy can contribute to a new social development, while putting Nature back on its co-evolutionary path. The ZERI Brasil Foundation has accompanied Lucio since 2000 who visited the ZERI Bamboo Pavilion at the World Expo in Hannover.

By 2012, Lucio has offered training to create his concept of a bamboo civilization, including human development, work ethics, social integration, health care and entrepreneurship to more than 30 communities in Brazil. As of latest count this has lead to the creation 5 Bambuzerias in the form of cooperatives, and a large number of independent artisans producing some 25,000 hangers each month. The hanger has become a symbolic product, and many more could enter the market inspired by this successful business model with a track record of more than a decade. Lucio believes that the era of bamboo has only just begun since bamboo has 6 times more cellulose than a pine tree which is the preferred source of paper of the Scandinavian and North American manufacturers. And, based on Lucio's wide experience in interior and exterior design he feels that this opportunity to create a bamboo culture is simply a matter of years. Perhaps the only thing that is missing, are more entrepreneurs who do not distinguish between social business and real business. The Blue Economy only promotes the entrepreneurs who embark on real business that is always social and ecological. And Lucio Ventania is a fine example to be inspired by.

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Further information on the 100 innovations at www.theblueeconomy.org

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