

22



FASHION AND  
TEXTILE DESIGN  
AMBIVALENCES



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**Publisher****Aiap Edizioni**

via A. Ponchielli 3 – 20129 Milano – Italy  
aiap@aiap.it – www.aiap.it

PAD © ISSN 1972-7887

#22, Vol. 15, June 2022

[www.padjournal.net](http://www.padjournal.net)

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# **NEW/OLD PRODUCTION AND CONSUMPTION APPROACHES**

# Unlocking Competitive Advantages in Sustainable Namibian Fashion through IK, Indigenous Materials and Design

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## Keywords

Kalahari Wild Silk, Indigenous Knowledge, Sustainability, Design.

## Abstract

A variety of sustainable fashion trends as an economic and ethical concept from the design and consumer perspective through sustainable materials and production processes to the product face challenges worldwide.

Sustainability is an approach for design and development processes pinpointing not only on environmental but also social, and economic factors, whereby significant global improvements are seeded in the minimum waste and slow fashion production. The colonial and apartheid eras forced the replacement of not only indigenous materials but also knowledge and designs. At times the heritage classified as “primitive” and “backwards” was dismissed in urban Namibia. However, the impact of “Negrophilia” (1920), a short-lived appreciation of African designs, later African Renaissance and current global fashion trends implemented the new dynamics around African indigenous materials, knowledge, and designs, whereby African and Western designs cross-fertilized each other.

This paper outlines several contextual sustainability concepts mapping possibilities of utilizing lived experience embodied as a re-contextualization of indigenous designs, knowledge and materials to unlock competitive advantages in the Namibian’s emerging fashion economy.

## 1. Introduction

Africa is seen as a cradle of humankind. The oldest proof of human decorating themselves comes from Africa and is presumed to be 100.000 years old (Gosine, 2006). Fashion design is one of the oldest forms of expression and communication, reflecting the development of humanity through design, a culture of creation reflecting wisdom and intentions of society's ancestral being (Hamalwa, 2012). This article will attempt to discuss sustainable fashion design with the hope that indigenous resources and knowledge can be seen as catalysts and advantage in implementing changes in the growing Namibian fashion industry.

In Namibia, the fashion design industry is very young. Over the years, industry growth is noticeable. Traditionally, indigenous attire was linked to natural resources. With time, traditionally eco-friendly tanned leather became replaced with cheap synthetic fabrics and polyester products, questionable in sustainable fashion enhancement.

## 2. Namibian Heritage: Tangible and Intangible Culture

People of Africa have had a distinguished relationship with their attire and ornaments for centuries (Hamalwa, 2012). The reconstruction of the historical path would help understand Namibian fashion's evolution from as far back as when it was first recorded. Beautiful Palaeolithic figures painted or engraved, some 26.000 years old, represent unique, historical documentation, giving clues about traditional Namibian attire. One of them, *White Lady* (Brandberg), is more than 2.000 years old. The rock painting presents a San hunter in traditional attire (Breuil,1955).



**Figure 1.** *White Lady*, Brandberg. Author’s own photo.

The colonial and apartheid-era inhibited traditional costumes and forced the replacement of indigenous materials, knowledge and designs, dismissing them as “primitive” and “backwards” in urban Namibia. The appearance of “Negrophilia”, a short-lived appreciation of African designs, enforced the new dynamics around African indigenous materials and knowledge, besides the global fashion trends, whereby African and Western designs cross-fertilize each other. Archer-Straw (2000) explains that for Picasso, African arts were “conceptual sophistication”; Brancusi valued the “conceptual simplicity” of African designs that he understood through the affiliation of arts and rituals (Archer-Straw, 2000, p. 137). Since Picasso’s “African moment”, many fashion designers from Yves Saint Laurent, John Galliano, to Jean-Paul Gaultier



and others have offered African fashion aspects in their portfolios, embracing “cherry-picking” from African arts. Gradually African designs became the inspiration of fashion trends (Pirotte et al., 2005). This inspiration was so strong and desired that it became cultural misappropriation, especially by fashion designers. Eventually, the African Renaissance and the decolonizing fashion re-contextualised lived experience embodied in indigenous knowledge (Hamalwa, 2012).

### **2.1. Sustainable intangible culture**

According to Benneh (1996) sustainable development is not simply a question of managing resources (Okigbo, 1996). Sustainable development “is a strategy that regards the cultural heritage as a baton in a relay race handed down by the ancestors” (Wienecke, 2005, p. 58).

Indigenous knowledge (IK) is a diverse multi-layered concept passed through generations in a specific ethnic group and their geographic boundary. It follows a natural learning process where “nature is the centre of knowledge based on material culture, and evolutionary response to sustain” (Islam, 2012, p. 284).

IK is also a way for controlling waste. In industrialised societies, humans get jostled around with modernity and lose the strategies to adapt to the environment. In the consumerist paradigm, waste came into existence with inventions of non-degradable materials. It is the proof of social degradation, alienation from nature where, in traditional culture, nothing is “waste”. In this case everything is used, re-used, consumed and absorbed until it merges with the organic earth (Rodríguez-Martinez, 2010).

Today, the interest is growing to re-discover ancient techniques to secure the industry's sustainability. "Design is becoming hybrid: different disciplines mix and turn into a new one", explains Li Edelkoort, world well-known trend forecaster and the keynote speaker (Edelkoort, 2012). Therefore, the current generation duty is to ensure that the IK circularly transfers into a sustainable future (Wienecke, 2005).

## 2.2. Sustainable Tangible Resources

After global analysis, it is not uncontroversial that indigenous resources might be seen as a catalyst for sustainable fashion apart from traditional Namibian knowledge. Leather is often not considered an animal-friendly product because it is made from animal skin. However, in Namibia, the hide used to make leather comes from animals raised for their meat in a very ecological environment or from sustainable hunting controlling the food chain. As the industry claims, in that sense, it uses a by-product. For instance, the traditional vegetable leather tanning requires skilled artisans and has been a knowledge cultivated for generations, commonly used in ethnic attires. However, today is almost forgotten.

Swakara Karakul sheep bred present in Namibia since 1907, recently published a booklet, *Swakara – Sustainable and Resilience in Africa* (Swakara, n.d.), manifesting the social-economic sustainability of the company by following United Nation 17 Sustainable Development Goals (SDGs) fulfilled by 2030 (Munyai, 2014). Skirts, bangles and headdresses made from leather are decorated with beaten copper, shells, ivory, seeds, wood, bones, beads.



**Figure 2.** “This photograph was taken by Alfred Duggan Cronin in 1936 and shows the incredible headdress, ekori, of a married Herero woman in Namibia. Small hand-beaten metal beads are sewn in rows onto the cup, and ‘petals’ of shaped leather are sewn onto the top. Bands of slightly bigger beads are worked together to hang down the back” (Crabtree & Stallebrass, 2002, p. 31).



**Figure 3.** Author's own design. Model: Maria Hiwilepo. Photograph: Sigi Kolbe.



Figure 4. Swakara sheep's eco fur, 2021. <https://www.swakara.net/sustainable-fur>.

Bead making is a long-standing tradition based on skill derived from indigenous resources and designs and still present in Namibia since ancient times. For instance, the copper smelting and working were done by Damara Smiths (Goldbeck, 2012). The oldest *tuyeres* used to smelt and produce the metal beads have been found along Okavango River, are dated back to 840-50 AD.

Himba and Herero people create bangles of solid copper iron and brass, spiral bangles of solid copper iron and brass. Himba women also add anklets made out of metal beads and neck ornaments out of copper wire and solid metal pieces. Metal cartridges beaten flat are in use for decorations in Oruwanda headdress and Ohumba necklace.

Kwanyama women wear overskirt decorated with ostrich eggshells beads (*omutobe*) that consists of about 30 to 50 strings ostrich shells beads. *Ekipa* (a button) was made out of elephant ivory; today, instead of using ivory *Ekipa* is created out of ani-



**Figure 5.** Kwanyama women wear overskirt decorated with ostrich eggshells beads. *Ekipa* was made out of elephant ivory. *Ekipa* was made out of elephant ivory, worn by Kwanyama women on a leather back belt (Scherz et al., 1992, p. 49).

mals bones. It has got a striking design that survived for centuries. Lastly, Kalahari Wild Silk comes from the moth *Gonometa Postiga* dry cocoons collected in central east Namibia.

The breeding of Swakara sheep, leather production, bead making and collecting Kalahari Wild Silk creates a livelihood for local people in one of the world's harshest climate, not requiring additional land or resources for sustainable production (Torbitt, 2013; Swakara, 2021).

### 3. Kalahari Wild Silk

Kalahari Wild Silk Manufacturer (KWS) is a small factory in Leonardville, Namibia. The *Wild Silk Project* was initiated in 2001 by the NGO CRIAA SA-DC (Centre for Research Information and Action in Africa, Southern Africa-Development and Consulting). According to Saskia den Adel-Sheehama from CRIAA SA-DC, Ian Cumming and Dave Cole as the technical advisors, who understood silk as a natural fashion-forward fibre, harnessing its potential as a sustainable endeavour (2021, May 10).

KWS is an eco-friendly natural product that enhances the welfare of the animals and humans in Namibia's inhospitable areas. It comes from the moth *Gonometa Postiga* dry cocoons that inhabit south-east Namibia and the cocoons are harmless for wildlife. The region is populated by humans farming livestock, their animals while grassing feed on them. Once the animals swallow cocoons, cocoons expand in the animals' intestines, resulting in severe rumen impaction or death.

Thus after the *Gonometa Postiga* larvae pupate, the cocoons are collected. In the past, farmers burned them after seasonal collection; today, they can profit by collecting and selling

them to KWS. Through controlled harvesting and processing, the factory creates an eco-friendly, biodegradable product (Torbitt, 2013) aligned with the consumer shifting to perhaps more expensive but healthy fashion-forward.

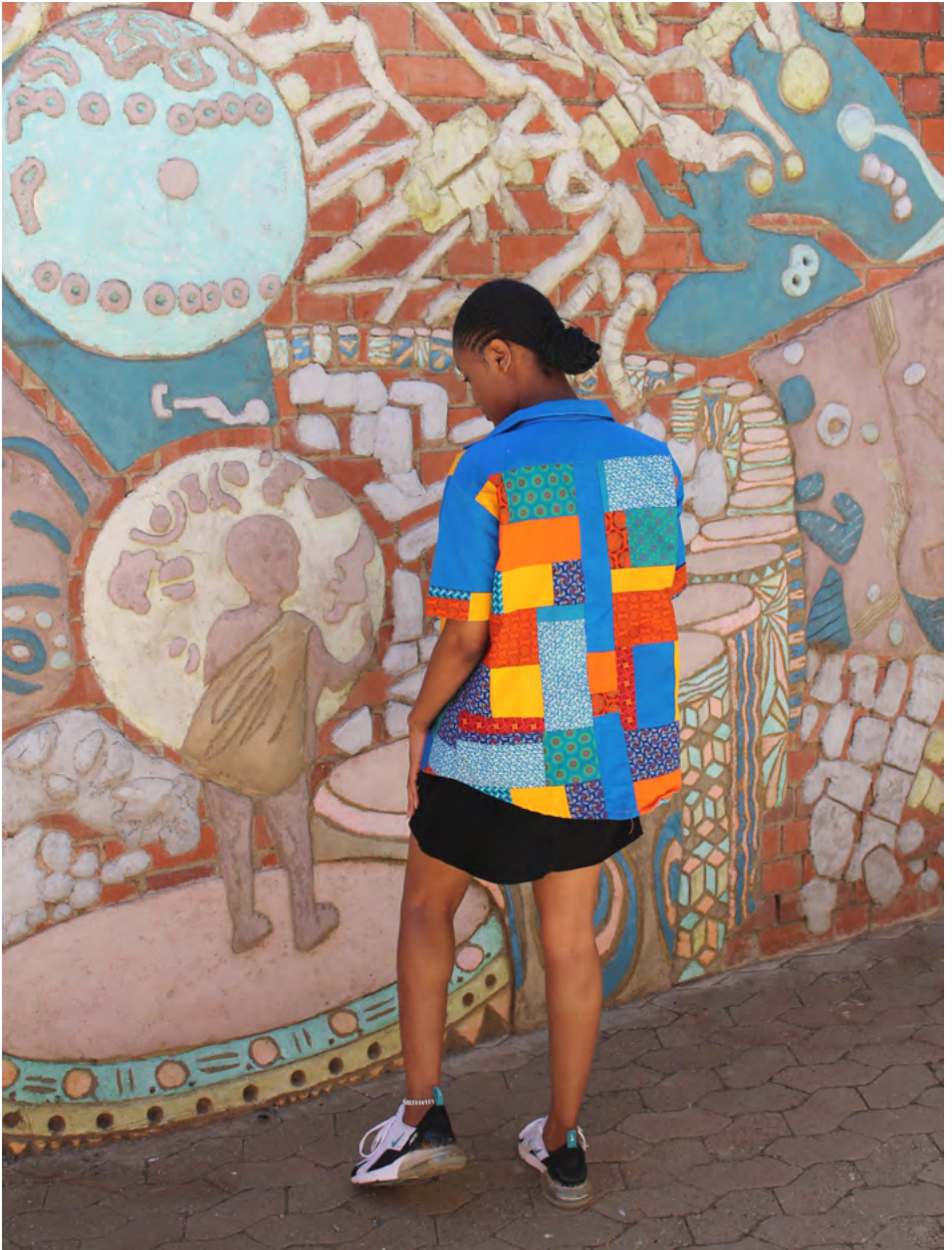
Post-development or African Renaissance allude to the inclusion of indigenous knowledge and cultures. The production obeys responsible consumption: collecting, cleaning, thread extraction, spinning, dyeing, air drying and weaving are carried out by hand, without chemicals and minimum electricity use. The KWS community project primarily consists of Damara ethnic group. It creates jobs for women in the rural community, where working together on the handicraft is part of their tradition. In the past, their indigenous aesthetics involved leather. Today, colourful cherishing fabrics scraps are interwoven in beautiful designs.

### 3.1. Sustainable Design through Re-adapting of Cultural Model

The KWS project is an example of “design beyond form”, creating a positive and sustainable future. It is a design for togetherness characterised by sharing probed skills and experiences. An individualised community presents the social cohesion, sense of healthy belonging that builds resilience and helps develop solutions collaboratively to overcome the challenges. For instance, after the death of the KWS funder, the community tried collectively to run the project (Tjihenuna, 2013). “Indigenous science is participatory, fostering dialogue between humans and the rest of nature. It is a life-long task” (Wienecke, 2005, p. 57).

To be classified as a long lasting design, KWS ought to be re-created through the design thinking process.





The long-term solution might be a marketable strategy and re-interpretation of old styles aligned with the Classic and Recurring Fashion Cycle phenomena. Fashion that always remains on the rise stage and never becomes obsolete.

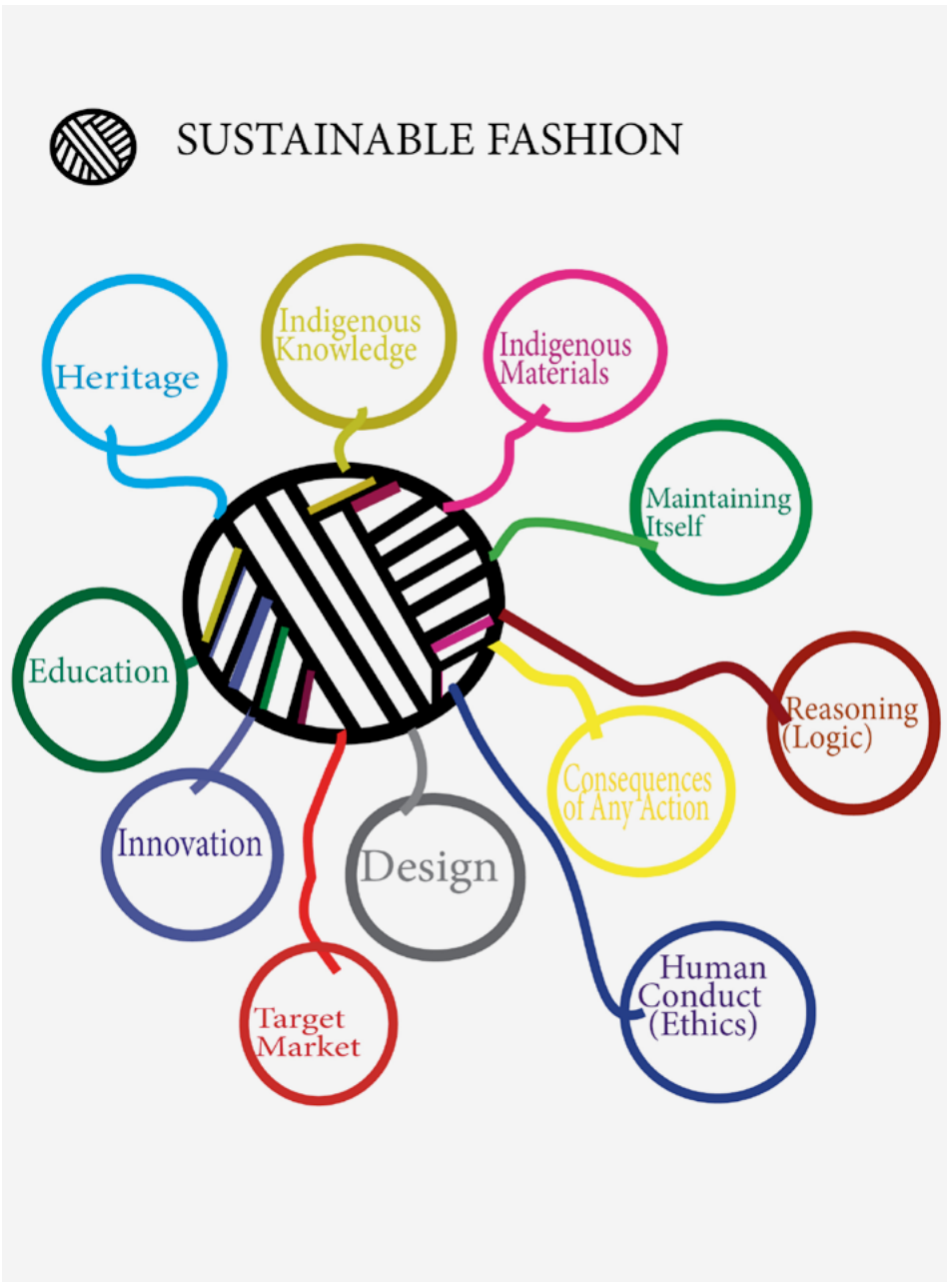
For example, Coco Chanel Brand draws inspiration from its inheritance, reinterpreting its signature styles endlessly. Successful fashion design in commercial terms provides what consumers want. If a product sells well, a detailed reworking of the design takes place.

If the product fails, it will be unlikely to re-appear on the markets (Jackson & Shaw, 2001). Following current sustainable trends, with the moderation of technology, design and some details, the consumers will not get tired of the appeal cherishing the quality of the textile.

### 3.2. Kalahari Wild Silk and Global Sustainability Production Standards

Today in the West, there is a paradigm shift in production. By learning from past experiences based on practice knowledge, many fashion companies reflect in retrospection and take responsibility to develop a better sustainable future. (Matevosyan, 2014). From the conference, *Textile Tomorrow Summit* hosted by Aalto University Helsinki (2019) based on technology transfer and education became clear that globally, the mainstream fashion industry constantly tries to align with sustainable norms even though the pathway to sustainable fashion faces lots of challenges.

Globally, the eco-friendly fibre in a garment doesn't always translate into a sustainable product.



**Figure 7.** Graphic of the possible indicators of Sustainable Fashion.

The indicators of sustainable fashion such as Maintaining Itself, Consequences of any Action, Reasoning (Logic), Human Conduct (Ethics) are vital since everybody has to bear the repercussions.

Most of the development approaches have their origin in the West. Economic development and industrialization are among the leading causes for the current state of none sustainability (Wienecke, 2005).

Good On You (GoY) is a well known sustainability rating platform for fashion. Their vision is comprehensive ratings to empower consumers to know the impact of brands on the environment, labour and animals and be free to make conscious choices (*Rating brands on the issues that matter*, n.d.). Following the sustainable phenomena of the *Good On You* and global indicators, it appears that Kalahari Wild Silk community dynamics glories a meaningful eco-design.

## 1. Maintaining Itself

*GoY – Accessibility – Consider each material issue*

The factory eliminates the menace posed by the KWS through controlled harvesting and using it in the slow production process. The textile is durable therefore has a long life span quality of recycling ability (Ecostandards, n.d.).

## 2. Consequences of any Action

*GoY – Efficiency – Impact across the product lifecycle*

As mentioned, KWS comes from the moth dry cocoons. The dry cocoons are attractive for grazing domestic animals, but they are also deadly to them.

Therefore, the project collaborates with local farmers who are selling the collected dry cocoons to the project instead of burning them, as they had done previously.

#### *GoY – Relevance – Impact on the environment*

The cocoons are not processed with any toxic chemicals. They are cooked for an hour to separate the fibres; the water is recycled. After that, silk yarns are separated; they are spun, dyed, and finally hand woven, all by hands. To eliminate hazardous chemicals, water-based dyes, natural pigments from plants - quite often indigenous, are used. Consequently, the textiles have got no microplastic. Therefore, the carbon footprint is minimal (Ecostandards, n.d.).

### **3. Reasoning (Logic)**

#### *GoY – Transparency – Consumers have a right to know*

The information about the production process is on their website and the “green label”(Ecostandards, n.d.). Apart from that, visitors have a chance to tour the project. Members of this community project are keen to explain the production process and share obstacles and successes.

#### *GoY – Truthfulness – Provide users with data that is accessible*

The data is collected to provide information that the project does not cause any harm to the environment.

### **4. Human Conduct (Ethics)**

#### *GoY – Governance processes – workers’ compensation*

What is not sustainable at the project is labour. From the very beginning, the project faced a fair wages problem,

primarily because of the distinction between the developed and developing world. As a part of adjusting the sensitivity towards workers wellbeing, new measures might readapt human needs, keeping in mind that we ought to support those who protect the ecosystem. Globally, similar ethical challenges appear frequently when involving workers in the rural area. It seems that from the very beginning, the women involved in the project didn't make a large amount of money. The explanation was that considering that they live in a remote area of Namibia, they can sustain themselves and their families and secure their children's education (Tjihenuna, 2013). Also, there is a lack of a proper governance system. The partnership between the community and local authorities should strengthen by clarifying the continuously debated ownership of the project. Self-leadership skills should be review.

As a market strategy combined with the production of added value products could be a buster for human sustainability as the project. Fashion Revolution Week (FRW), under *Good for You*, came about after the collapse of the Rana Plaza garment factory in Bangladesh on 24 April 2013, which killed 1.138 people and injured another 2.500. Over the years since the tragedy, Fashion Revolution has become a global movement, pushing the fashion industry to clean up its actions (Rating brands on the issues that matter, n.d.). The goal of FRW is to help eco fashionistas all over the globe be part of production transparency by finding who made their garments and what substances are hidden in them by following hashtag *#Who-MadeMyClothes?*, *#WhatsInMyClothes?*, on social media.

FRW will focus on three key areas: Rights, Relationships, and Revolution. Human rights and the rights of nature are interconnected and interdependent; we are part of the wider living world, and our right to a healthy environment depends on the health of our planet. COVID-19 has prompted growing numbers of people to reassess what's meaningful in their lives (Rautuier, 2021).

### 3.3. Shortcomings

As Namibia is a developing country, creating a new sustainable brand might surface in a more substantial magnitude, spirally slow down the production, and limit the quality and the business growth. Many shortcomings emerge for the KWS project can't be easily overcome: low prestige of rural life, limited business management skills, financial risks, ignorance, and finding the target market that stops more profitable living in this rural harshest climate. Over time several organizations, such as among other Spanish and Finish Embassies, contributed their assistance. Their overall objective was to align KWS with *Vision 2030* (Silk project improves standard of living, 2012). The supports were deemed necessary. However, the question begs if their role was not a "first aid bandages", covering temporary deeper entrepreneurial structural problems since Namibia was not ready for promoting the *Vision 2030* model of industrialization (Wienecke, 2005). Personal views of the project participants, management, local government and the stakeholders created constraints on running this enterprise. Due to the remote location, communication between the parties caused prolonged decision-making.

At times marketing tools and measures were inadequate. Namibian climate is scorching in summer or quite cold in winter, though for a very short period. Considering KWS wool-like current spinning qualities and the continent's hot climate, the thread in its current form is not very marketable in Africa. Therefore, KWS was displayed at a trade fair in Europe. However, at those fairs, the buyers expected to source more significant quantities. On the other occasion, KWS was exhibited in Botswana, the country that also produces wild silk.



Figure 8. Kalahari Wild Silk green label.



Each crisis tested the project's abilities to mitigate and reinvent its adaptation skills. Today the situation has worsened. The global COVID 19 crises cut off tourism to Namibia, which created a tremendous unexpected challenge that neither governments, companies or communities were prepared to handle. Like many businesses globally, the KWS project has found itself struggling to stay afloat, worrying about the uncertain future.

### 3.4. Sustainable Eco Design

In 2012, an attempt was made to create a KWS garment collection. The volunteer designer, Beata Hamalwa, conducted the workshop to up-cycle and re-design KWS production rejects and defected goods.

Considering that the KWS designs are rudimentary, the project has to deal with its quest for a better product through design and intervention.

The discourse of the definition of “design” term has a long history. However, the “design” is a multi-layered activity; its ambiguous meaning and role are debated in the contemporary world for decades. Today the “design” is put in a perspective of challenges of economic growth and sustainable development. Above all, the design is influenced and controlled by social economics and environmental dynamics.

Zhiqiang and Sotamaa (2011) point out that “design” is not just about beauty and individual happiness. It can also enhance the quality of life and create optimism about the future and the reason for human existence. Similarly, “design” is hope for improving the development towards sustainability that can secure economic, ecological, social and cultural benefits.

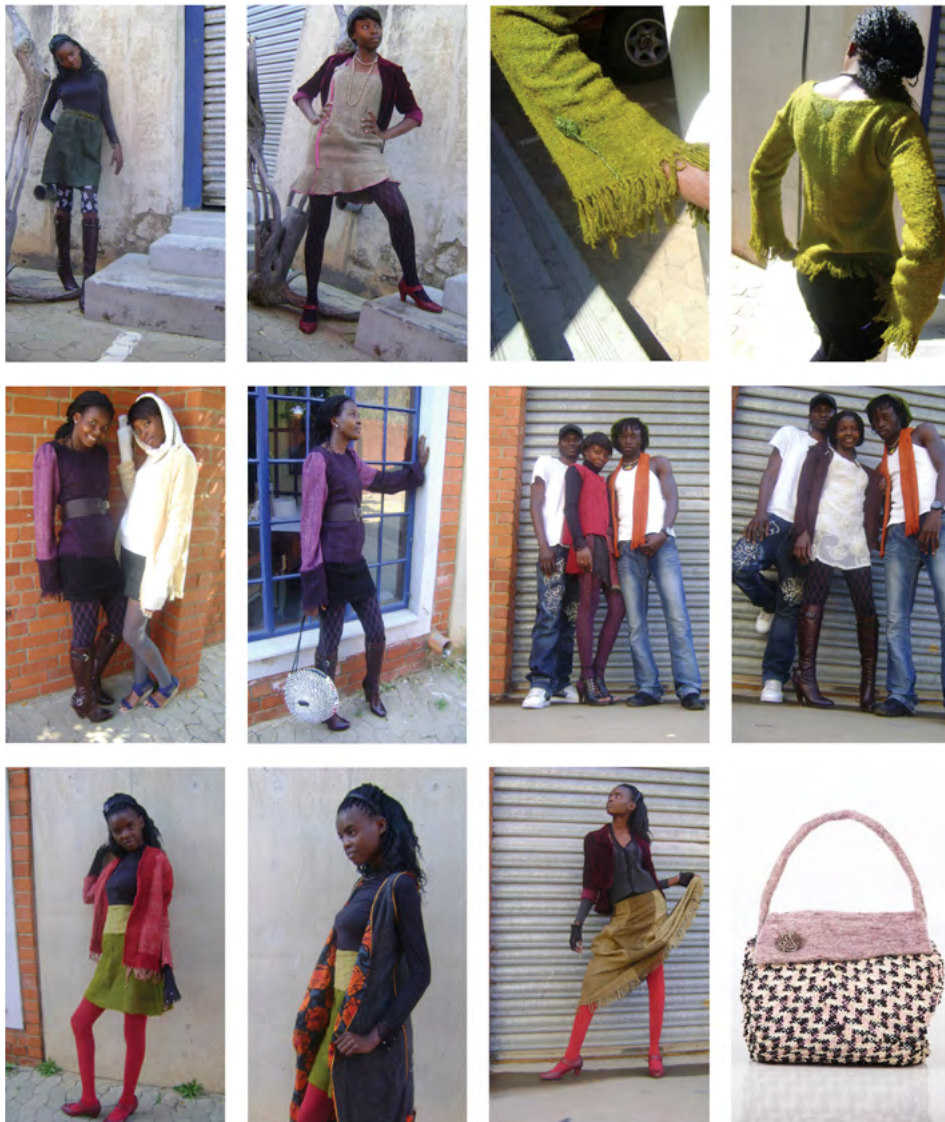


Figure 9. Author's own KWS 2012. Models: Albertina Shatimwene, Fiina Nghifikwa.

Perhaps it should be looked beyond the “form” even though the form is the base of understanding the design. Consequently, “sustainable design” based on indigenous society is a design focusing upon interrelation, interaction, rooted in the culture, and human behaviour passed through generations, preserving eco-friendly processes and identify in developing countries. In communities like this, creating a sustainable future through transparent production and slow fashion feels more relevant than ever, because without disturbing the harmony between the man and nature, community works with full participation (Tji-henuna, 2013), rewriting the indigenous community back into the narrative through uplifting the quality of life.

The focus on design, practical aspects, procedures and solutions might line up new developments to market KWS and directions so the product can meet the client desires. KWS fabric can stimulate creative ideas and vice versa (Udale, 2008). Currently, KWS is used to produce scarves and throws, but it can reach its enormous eco, long spam design potential if re-designed with a reinvented version.

#### **4. Conclusion. The Emergency of Education**

Putting these conclusions KWS might be an example of a competitive value-conscious market, whereby the textile reflects timeless trends. The timeless fashion trends don't imply acceptance by everyone but only by those who understand them. What's more, the slow production in small quantities might give designers more room for creativity and innovation. In case of a high price, the item may be not widely sold but may remain considered the most desired. With time the KWS designs might increase in popularity and be recognised by fashion trendsetters.

Given its organic quality and longevity, hopefully, KWS will never be rejected.

In the Namibian context, one has to look at how the geographical and political circumstances create a business vacuum. However, it is worth pointing out that innovations are not developed in a vacuum. Perhaps this is a time for re-innovation to foster resilience. Considering that the KWS project operates in a vacuum, outside assistance might help to build the growth. Engagement and investigations can refine the design through an educational framework by exploring, visualizing, reflecting, re-creating and communicating (Matevosyan, 2014). Islam (2012) explains that achieving an effective design outcome can be reached through education based on understanding the production process, materials, sustaining business activities, and profit from a commercial application.

Following Rauturier (2021) and the *World Hope Forum*<sup>1</sup> events, conferences, exhibitions, workshops, and even online public demonstrations, spreading the word about building a more ethical and sustainable fashion industry might be a good start. Proposing new measures such as; re-discussing design thinking for a unique design potential and re-establishing new technologies should be encouraged as a solution. Followed by entrepreneurial learning positioned in sustainable production, it should be a novel direction, creating a roadmap for change. Finally, considering benchmarking on a complementary project such as following the hashtag *#WhoMadeMyClothes?*, *#WhatsInMyClothes?*, under *GoY* on social media for transparency and marketing tools that might bring financial stability.

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1 [www.worldhopeforum.org](http://www.worldhopeforum.org).

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**Gina Nadal Fernandez**

Gina Nadal Fernandez is a final year PhD student in the Design Department at Manchester School of Art, Manchester Metropolitan University. Her doctoral research is by practice, and investigates how emotional experience can be designed into digital jacquard woven textiles during a co-design process by using digital coding.

She takes a multidisciplinary approach that embraces design theory, textiles, digital coding, consumer behaviour and mass customisation in her weaving practice using a TC-1 loom and natural yarns.

Gina has presented her research at the PhD by Design workshop at the Design Research Society Conference 2018, at the Global Fashion Conference 2018 and 2020. She is also a member of the Textile Society and Design Research Society. She holds a master's degree in Fashion Graphics from Manchester School of Art, Manchester Metropolitan University that looked at the relationship between digital jacquard textile practice and emotional value using digital coding.

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Beata Hamalwa founded Fashion Design Diploma at College of the Arts, Windhoek, Namibia, and Fashion Design Certificate at City Varsity, Cape Town, South Africa, and co-founded the Heroes Primary School - all became imperative in employment creation. Her versatile educational background from Poland, Namibia and South Africa in arts and fashion design has provided a valuable foundation for her career in several art training programmes. She holds a Master of Technology in Design. Her Master's thesis, titled 'Beadwork and its impact on contemporary fashion in South Africa,' investigates the cultural wealth contribution to decolonizing fashion. She believes that modern arts and trends do not imply the demise of indigenous culture. Her latest endeavour is to investigate the possibility of sustainability in the current fashion industry in Namibia, which led me to PhD research at the Cape Peninsula University of Technology. As an artist, Hamalwa has showcased at premier fashion events in Namibia, Portugal, Germany, France, Poland, the United Kingdom, South Africa, Botswana, and Reunion Island.

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She has experience in Mechanical Engineering with an emphasis on Mechanical Design and in Textiles and Fashion with an emphasis on product design methodology, sustainable product development, Brazilian natural fibers, knitting technology and Industry 4.0. She is currently Assistant Professor II at Nossa Senhora do Patrocinio University and Coordinator of the Fashion Design Course.

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Member of the Board of Directors of AGC - Association for Contemporary Jewellery, she taught jewellery design at IED Moda in Milan and at the Academy of Fine Arts in Naples.

In 2018 she has published the monograph "Multipli Singolari. Contemporary jewellery beyond digital" with ListLab, Barcellona, in double edition (ita/eng), and in 2020 "Oggetti pensiero. Storie di design, organismi e nature plurali" with Lettera Ventidue, Siracusa. Her theoretical research is characterized by a speculative hybridization between digital technologies and manufacturing excellence linked to contemporary design and fashion.

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She teaches from 2013 to now Social Design and Design for Cosmetic - Design for Innovation Degree Course at University of Campania 'Luigi Vanvitelli'.

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**PAD. Pages on a and Design**

International, peer-reviewed,  
open access journal  
ISSN 1972-7887

#22, Vol. 15, June 2022

[www.padjournal.net](http://www.padjournal.net)



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