

Fibres & fabrics

BY PHILIPPA WATKINS

*The discussion about the consumption and mass consumption of fashion gets ever louder. With around 80 billion garments produced every year, that's hardly surprising. At the RITE conference and in her recently published book *To Die For Lucy Siegle* noted, "It's no secret that the present rates of consumption are unsustainable, and it will come as even less of a surprise that fashion's are wildly out of kilter."*

At the same event Livia Firth commented "Three years ago we embarked on a project to catapult sustainability in fashion into the limelight. We knew sustainability was the hottest game in town but how could we take it to a mass audience and to the next level?" The Green Carpet Challenge (reported in TV100) was one way.

"We are consuming 50% more than what the planet can currently sustain" noted Sri Lanka physicist and Nobel Peace Prize winner Professor Mohan Munasinghe, at the recent Sri Lanka Design Festival. "This is very unfortunate and can increase to 100% very soon. That means we would be consuming two planets' worth of resources when we only have one planet. 80% is consumed by the top 20% of the world population; that is 60 times more than the poorest 20%."

With such large numbers and as populations grow, the pressure to source more raw materials for textiles is intensifying – which makes it even more crucial to source sustainably, and to get that message across to both retailers and consumers.

So... designers and buyers need information on where sustainable fibres and fabrics can be found. Fabric fairs is one way to find them – for instance **Munich Fabric Start** and

Texworld both do much to identify sustainable fabrics. MFS actually has an ECO Village, a useful resource. But there is a need for better access to this information.

Organisations are springing up everywhere, but they need to speak with one voice and be careful not to compete with each other. One such is the **C.L.A.S.S. Eco Materials Library**, with its network of showrooms in Milan, London and Helsinki, and now also in Madrid in partnership with **Fabrics For Freedom**. Their purpose is to promote environmentally sensible products for fashion and the home, but their service is not comprehensive.

FUTURE FABRICS EXPO The Sustainable Angle is another.

It's a non profit organisation and staged the **Future Fabrics Expo** last November at the London College of Fashion. This was a small but useful exhibition showcasing some 650 fashion fabrics, sourced internationally, made from natural and man-made fibres, with *reduced environmental*



Future fabrics expo

impact at the core of their purpose. This was the second such event, organised, sourced and curated by **The Sustainable Angle**.

The aim was to show fashion designers and buyers the variety and quality of sustainable fabrics, and that it is possible to make high-fashion clothing with a low environmental impact. Fabrics are selected according to quality, design and level

of innovation as well as their environmental impact.

Visitor numbers were encouragingly high, with around 500 visitors ranging from designers to retailers, including H&M, ASOS, Puma, Ted Baker, Marks & Spencer, Ada Zanditon, Christopher Raeburn, People Tree, and Zalando.

There were display boards with statistics relating to fabric production – biodiversity, water, waste and energy use – as well as videos demonstrating production techniques such as laser finishing and innovative dyeing techniques.

As to what was on show... fabrics ranged from natural organic fibres, organic pima cotton from **Swiss Organics**, wools and luxury Peruvian alpaca from **Incalpaca**, European traceable linen through **CLUB Masters of Linen**, hemp and cellulosic fibres, to recycled and regenerated performance polyester and nylon.

The idea was to highlight sustainable alternatives to cotton

and polyester, which together account for over 80% of world clothing output (because they are abundant and cheap). The need for alternatives becomes more pressing as issues around water consumption, pollution, loss of soil fertility (cotton) and dependence on finite resources such as oil (polyester) become more pressing.

The polyester industry believes that advances in renewable energy technology will be their salvation, and that textiles made from biopolymers (such as corn-based *Ingeo* and *DuPont Sorona*) will proliferate in the coming years, which will reduce dependence on oil-derived polymers.

Some manmade cellulosic fibres offer practical sustainable alternatives. The transformation of wood into cellulose materials, as in **Lenzing's** lyocel fibre *Tencel*, processed in the closed-loop system, is an efficient use of resources – though if cellulosic fibres become more popular then demand could outstrip supply.

Cellulose-based fabrics were prominent – from **Bossa Denim** (Turkey), which combines recycled cotton, *Tencel* and linen, and aims to reduce water use. **Arvind Mills** (India) is producing its own brand of lyocel *Birla Excel* in denims as well as organic cotton selvedge denim.

Recycling is another alternative and gives new life to materials otherwise destined to become landfill. Recycled and regenerated performance fibres were prominent, such as *Newlife* recycled polyester (represented by **C.L.A.S.S.**) and recycled nylon '*Mipan regen*' from **Hyosung** (Korea). **Asahi Kasei** (Japan) uses recycled polyester to produce suede alternatives.

As for cotton, which remains a natural fibre we all want to wear, issues surrounding its growing are complex and as yet there is no framework for assessing its sustainability. But cotton is no longer seen as "black or white", "good or bad", and initiatives to improve the growing of conventional cotton, such as the *Better Cotton Initiative* (BCI) and *Integrated Pest Management* (IPM), go some way



Leather alternative by Paper No. 9

towards lowering its environmental impact.

Also on show were leather alternatives made from paper by **Paper No.9** (USA) and from fish by-products, as well as post-consumer coffee-ground fabric *S.Cafe* from **Singtex** (Taiwan), and recycled denim from **Apac International** (Indonesia).

Wool fabrics ranged from **Cornish Organic Wool**, with certification at every stage, to Scottish native-breed wool from **Ardalanish Weavers**. **Marling & Evans** had British wools spun and woven from naturally coloured fleece,

Dashing Tweeds used British and internationally sourced wool, while using GOTS-certified dyes and processes.

Holland & Sherry included wool from their Scottish Merino flock – the only UK Merino there is.

For more information: www.thesustainableangle.org

DOUBLE FACED BY JERSEY LOMELLINA Italian Jersey **Lomellina (JL)** has developed three innovative high-performance fabrics which are an absolute novelty in the circular knit market. These are "double-faced" fabrics, and can offer twice as many advantages as standard single cloths.

Made in an innovative structure developed by JL, the double-face fabric has an effect only achieved previously by putting together two different layers. Now it can be created as one cloth, the double layers having high stretch, extreme comfort and softness. The fabrics can also be cut easily and are available in both tone-on-tone or contrasting versions. Garment makers will be able to offer customers two different styles in one.

The double fabric comes in three different versions, all titled with the letter B (as in bi).

The first, *B-Natural* is cotton on one side and performance polyamide on the other, offering properties such as fast drying and breathability. *B-Fit* is polyamide on one side and polyester on the other, for the creation of comfortable, breathable, moisture-wicking sportswear. Polyester draws sweat off the skin to the outside, while polyamide makes it evaporate more easily. And *B-Fashion* is polyamide piece-dyed with polyamide yarn-dyed, the most "fashionable" variant, as the contrast between the faces of the fabric is achieved by matching the yarn-dyed side with a fashion colour on the other side.

Confident of the desirability of its fabric, JL is already working on new versions.



A B-Fit by Jersey Lomellina

CARIAGGI – THE PRIDE OF LIGHTNESS At Pitti Filati specialist cashmere spinner **Cariaggi** will be presenting the first carded silk yarn. Achieved through a new manufacturing technique developed by the company, *Sirius* is a pure silk yarn in 2/46s, with a full-bodied look, more like cashmere than silk – light but opaque and very elegant.

Taking up the theme of lightness again for S/S 2014, **Cariaggi** is also presenting a new set of ultra-light yarns with a light hand and a silky appearance. This is the result of skilful spinning and produces lightness which was previously unimaginable, in yarns as thin as silk with the touch of cashmere. New yarns, which give silk a fuller, brighter look



while still being light, include *Gelso*, a pure silk yarn in 2/120s, *Jaipur* in 70% cashmere/30% silk in 2/120s; *Soffio*, pure cashmere in 2/140s; *Alzir* pure Tussah silk in 2/120s.

The most summery yarns range from fine *Belize cotton*, used on its own or mixed with cashmere or vicuna

fibre, to *Linum*, a blend of linen/cashmere. The colour palette is based on shades that "sing" and inspire joy. Pink is the colour chosen for the collection's theme, in its most alluring shades of tender pink, bois de rose, salon rose, poudre rosée and many more. The mood of the collection is reflected in five different stories:

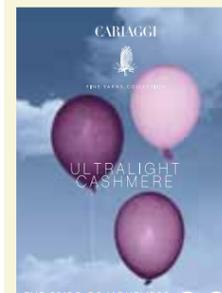
The happy side of chic - total softness. 2/28 cashmere in gauges so fine as to almost defy gravity. A light and cool palette, ideal for garments "fit for a princess".

Bon voyage returning to wonderful landscapes of the Silk Route. Silk lies at the heart of this story, with superfine yarns ideal for kaftan-style garments.

Aphrodite the statue of Aphrodite was the first female nude in the history of sculpture. This story commemorates the nude by adorning it with the most luxurious fibres, like silk and vicuna. The colours are soft like light dusty pink, in shades that are merely hinted at.

Rare birds of fashion this is a tribute to the irreverent characters like Iris Apfel that strengthen our faith in the virtuosity of bright colours. The inspiration may be exotic, but the result is intended for men and women who dress elegantly. The key colour of the silk-based yarns is amber.

The age of Aquarius a deep, aquatic world, full of translucence and fragile structures. A deep, dark colour palette that evokes unexplored depths. The touches of brightness appear like imaginary sea creatures.



Ultralight, the newest yarn creation by Cariaggi

FILOSCOZIA COTTON RELAUNCH **Filoscozia**, a name well known in the past for the excellence of its cotton products, is to be re-launched for S/S 2014, building on its past glories and with a restyled logo. A high-quality cotton yarn, **Filoscozia** is produced from the finest extra-long-staple (ELS) cotton, which has fibres over 43 mm in length, making it durable and naturally shiny. After combing, twisting, gassing and mercerizing, the cotton's natural characteristics are enhanced and it becomes more absorbent and less prone to shrinkage.

The yarn was well known for its extreme comfort next to the skin, because its silkiness and low-pilling were maintained throughout its long life and because it kept its vivid tones. But the brand's good reputation became tarnished by a proliferation of fakes. Now putting that right are cotton-spinning sister companies **Filmar** and **Olcese**, the accredited producers of the **Associazione Filoscozia** responsible for the brand development, who are sponsoring the re-launch of the brand.

As part of the relaunch the spinners will collaborate with fashion and design institutes so that young designers can get to work with the yarn. The first stage involves a group of students working with **Filoscozia** to create "socks playing to be not socks" using original but functional knits with a texture designed to complement the yarn. This initial project will be presented at Expofil in Paris.

SCHOELLER'S SUN-SOAKING SOLAR+ Swiss performance-fabric specialist **Schoeller** has developed a new solar textile technology which keeps the wearer pleasantly warm



Schoeller solar+

even at low temperatures. Textiles finished with **solar+** absorb the sun's rays, whatever the colour of the textile, thus making

the clothes warmer. The fabric will debut at the winter Ispo in Lasse Kjus's Icestar ski jackets, which are made with functional fabric with **solar+**. **Schoeller** is using various fabrics to showcase the new **solar+** technology, which also complies with **bluesign**, the most stringent ecological standard for textiles.

TENCEL CELEBRATES 20TH BIRTHDAY In 1992 the first large-scale marketable lyocel production plant commenced operation in Mobile, Alabama, USA. Invented by **Courtaulds**, a big UK name, TENCEL is significant because it was the first new fibre developed and designed on environmentally sound production principles.

The process was based on extracting cellulose from pulp without using the chemically complex viscose process, which was increasingly being called into question. Subsequently

Courtaulds and **Lenzing** ran a bitter and costly race to produce the first solvent-based cellulose fibre through the revolutionary closed-loop system, in which solvents are constantly reused. Courtaulds won.

However, since the demise of Courtaulds it is **Lenzing** which has been manufacturing TENCEL fibres since 2004 at its three sites in Austria, UK and USA. A fourth production plant is now being constructed in Austria.

Lenzing celebrated this anniversary by holding a commemorative ceremony and customer symposium. Lenzing CEO Peter Untersperger emphasized the importance of the TENCEL technology. "TENCEL has been the biggest technological step forward in the man-made cellulose-fibre industry since the invention of viscose fibres about 100 years ago. The development of the fibre over the last 20 years only marks the beginning of a success story which will continue for many decades to come."

SORONA ENTERS THE MARKET

DuPont also markets a renewably sourced biopolymer, a constituent of its fibre *Sorona*. A breakthrough high-



Sorona

performance fibre, derived in part from bio-based ingredients rather than petrochemicals, *Sorona* has a variety of applications. Thanks to the use of renewable raw

materials, rather than petrochemicals, the production of *Sorona* requires 30% less energy, says **DuPont**, and produces 63% less greenhouse gas compared to the production of an equal amount of nylon.

The fibres, available both as filament and staple, are designed for high-quality, high-end applications that require softness, comfort stretch and recovery, chlorine and UV resistance. They come in a variety of vivid colours designed for easy care – ideal for swimwear, sportswear and lingerie, as well as trousers and jeans.

Staple fibre made with *Sorona* can be blended with other fibres, such as cotton, wool or viscose, to create fabrics that provide comfort stretch and natural touch, suitable for stretch khaki, denim, dress pants and suits.

SRI LANKA DESIGN FESTIVAL November saw the fourth annual Sri Lanka Design Festival (SLDF) in Colombo. This important focus for the industry, designers and producers has become one of South Asia's key celebrations of design and culture. A demonstration of the richness of the country's

creativity in handicrafts, it also highlights the importance of Sri Lanka's international fashion and apparel industry.

The SLDF, which takes place in the Mount Lavinia Hotel, one of Colombo's grandest historic hotels, is designed to promote Sri Lanka's handicrafts and the creativity of its designers, as well as the country's important fashion and apparel industries.

The founder and principle organiser of the event is Sri Lanka's **Academy of Design (AOD)**, the proactive South Asian organisation offering international-standard undergraduate education in design (in collaboration with Northumbria University's School of Design, UK). This vigorous college, only 11 years old but already with a reputation for design success, trains designers who will enter Sri Lanka's fashion and textiles industry.



Lanka Design Festival Forum

But **AOD** (a private enterprise initiative) also extends its mission beyond education. Through its *Design for Sustainable Development Foundation (DFSD)* it works with rural artisans and craftspeople to improve the lives of local communities. This is the spur behind the **SLDF**

Island Craft Exhibition and Fashion Show – the local crafts featured are very much the result of the work inspired by the AOD project. The festival is also supported by the government, tourist industry and Sri Lankan apparel industry together with international brands and retailers.

The Sri Lankan industry prides itself on its reputation for adhering to Fairtrade principles – alleviating poverty, providing decent working conditions and fair terms of trade. Thus an over-riding theme permeating the events was the issue of *sustainability* in the fashion and textile industries, and how the industry can develop along ethical and eco-friendly lines.

The four-day festival opened with the **Island Craft Exhibition**, a showcase for local artisans combined with the creative input of local and international designers. Products ranged from lacquer work, woven furnishing fabrics, coir flooring and carpets and batik textiles. Tamil basketware



Island craft fashion show

Gampaha, with which I had a personal involvement (See box). In the evening the **Island Craft Fashion Show** put some of the vibrant batiks, hand-woven fabrics, hand embroidery (and more) onto the catwalk.

There were two other catwalk shows during the three days of festival. On the second evening students from the AOD put on the **Future Designers Fashion Show**, which was, in effect, their degree show. On the third the Sri Lankan apparel industry showed what it could do with the **Best of Industry Fashion Show**. The rest of the time was given over to seminars, talks and discussion.



Future designers fashion show

SUSTAINABILITY – TOWARDS A GLOBAL CONSENSUS

The first symposium was chaired by the **Danish Fashion Institute** Development Director Jonas Eder-Hanse. He is the man behind the *Copenhagen Fashion Summit*, the world's largest event on sustainable fashion. But Sri Lanka has its own homegrown "sustainability" guru,

from the north was shown alongside lace from the old Dutch outpost of Galle in the south – after decades of conflict it was heartening to see an event which brought the whole island together. Included were a wide collection of woven textiles from the handloom-weaving villages of

Professor Mohan Munasinghe, the physicist who shared the 2007 Nobel Peace Prize with former US vice president Al Gore for his work on climate change.

He gave the conference the same message he has been giving governments throughout the world: "We are consuming 50% more than what the planet can currently sustain. This is very unfortunate and can increase to 100% very soon. That means we would be consuming two planets' worth of resources when we only have one planet. 80% is consumed by the top 20% of the world population. That is 60 times more than the poorest 20%. We must find a way for the rich to maintain their lifestyles but by reducing their consumption levels and at the same time raise the income levels of the poorest section."

The world must find an integrated approach, he said. Financial and political approaches are disjointed, and thanks to the short-sightedness of governments these problems are not being dealt with properly. Which means citizens must act as drivers to push governments to do the right thing, both from the consumption and production end.

"We have multiple problems but we can solve them if we begin at once. We know what to do and this festival is a good start."

As far as consumption is concerned, Jonas Eder-Hanse maintained that the key to getting the right result is consumer education. "Choices we make as consumers have great impact professionally and on other parts of society. When a consumer goes shopping and buys a shirt, he is making a conscious choice which can affect buying behaviour elsewhere."

However, consumers are faced with many challenges, key among which is the notion that "sustainability is not sexy". Eder-Hanse suggested that to clear this hurdle the fashion industry should target sustainability and play up ideas of desirability and sexiness. Labelling can help too – what, without confusing customers, does sustainable fashion look like? Then there's price – are consumers really ready to pay a premium for sustainable fashion?

Labelling was also the subject of the address by Ryan Young, manager of the **Sustainable Apparel Coalition (SAC) Index**, based in San Francisco. **SAC** has developed the *Higg Index*, which quantifies the sustainability and environmental impact of an apparel or footwear product on a scale of 0 to 100.

"When we assess a product, we look at the full life cycle – materials, packaging, manufacturing, transportation, usage and end of life. This is organised into modules – brand models, product module and facility module, which give a holistic picture.

"Our index is eventually going to show up on a label or hand tag so that everyone has the same information, including consumers, about what the impacts of the

product are.” SAC is currently working with over 75 global leaders in apparel and footwear – brands, retail suppliers and trade associations. There is, he observed, only one Sri Lanka company which is part of SAC – MAS Intimates, the lingerie and swimwear group.

Great strides have been made, particularly in Sri Lanka, to produce sustainable fashion in green factories, but there is still work to be done on the logistics and transport side. Jill Hellmann Regouby is Business Development Manager at **Hellmann Fashion Logistics**, a German-based global organisation which specialises in logistics. She pointed out that logistics account for 5.5% of global emissions. “To decarbonise the supply chain you have to make a concentrated effort to break it up and look at all sections individually.” Areas which she says can make a difference are packaging and making use of solar power.

With its green factories, Sri Lanka is firmly on the road to going green, but a large percentage of waste comes from trucking. Hanif Yusoof, CEO of the wide-ranging **Expolanka** freight group, advocated the use of rail. **MAS Holdings** director Rohan Ranasinghe also promoted rail as a cleaner transportation method but wants “bullet trains” to provide the speed which fashion deadlines demand.

CRAFTS AND SUSTAINABILITY Handicrafts as a sustainable element of the fashion industry were also discussed. Dr Darlie Koshy, Director General of the **India Apparel Export Promotion Council**, pointed out that “crafts emanate from the lives of the people and are sustainable.” They are an important way of promoting a country’s uniqueness. “Crafts will be the new idea of luxury. They connect with the emotions. It is vital to preserve and protect them and realise their commercial value.”

He was echoed by Durriya Kazi, Head of Visual Arts at **Karachi University**, who said that in Pakistan the fashion industry is growing slowly but it is growing ethically, and villages are being encouraged to develop design. “*Crafts are a way of life for villagers, which is exactly why they should be made an economic function.*”

No one could agree with this sentiment more than Linda Speldewinde, the young Sri Lankan entrepreneur behind the Design Festival (she also founded the Academy of Design). She pointed out that Sri Lanka has a high-tech apparel industry, and there is potential for collaboration with the crafts industry.

“We are working on this collaboration. It is still in the initial stages of conceptualisation. The idea behind it is to use crafts for the restoration of livelihoods and get commercial benefit to large communities. What we are looking at is how to make as big an impact from a low-tech point of view as the apparel industry has done from a high-tech point of view.”

The work on view in the sumptuous surroundings of the Mount Lavinia Hotel was a first taste of that ambition.

SOUTH ASIAN APPAREL LEADERSHIP FORUM The third day saw the **South Asian Apparel Leadership Forum**, which was well attended by professionals from the apparel sector, who discussed topics around their industry, looked at the growing and changing of value-chain partnerships, while also addressing sustainability.

One of the aims was to increase the scope of the event to take in the whole of South Asia, to encourage collaboration and not to act solely as if everyone were competing with each other. One good reason for this – to keep costs down.

Sri Lanka sees itself as becoming a regional hub. “There is no place like Sri Lanka,” said Mike Todaro, Event Chair and Managing Director of the **American Apparel Producing Network (AAPN)**. “Compared to other countries playing the role of manufacturers, Sri Lanka has the strategic commitment and strives to become the “Turkey” of this region, to become the hub of South Asia.”

He highlighted opportunities for Sri Lanka as retailers leave China due to the rising cost of production there. A growing number of buyers will shift to lower-cost suppliers. Stephen Fore, MD global Sales for **Coats**, agreed, noting that “Sri Lanka has the competitive advantage and more buyers will flood into the market when they realise they cannot be accommodated in countries such as Vietnam, Bangladesh and Cambodia”.

But says David Birnbaum, an independent opinion leader at the Forum, “the industry has to change. Both suppliers and buyers have to be rational and build a strategy to bring down the largest single garment cost – the ‘markdown’ cost.” This means working closer and quicker to the market. Another way, said Nikhil Hirdaramani, Director of **Hirdaramani Group** and Chairman of SLDF 2012, is to add value through services such as design, which Sri Lanka is well placed to offer.

Ethical manufacturing was much discussed, and why ethical buying is not following suit. The Sri Lankan industry has a reputation for working on Fairtrade principles – the major manufacturers **Hirdaramani Group**, which operates a green factory, and **MAS Holdings** and **Brandix**, all work on sustainable principles. However, sustainability costs money. On the upside the perceived value of garments made in Sri Lanka is high.

But the battle of costs is not a battle anyone is winning. “The battle cannot be fought single-handedly. But by using collective approaches where all share experience, be on the same page and not look at each other as competitors, this battle can be won,” said Rohan Abeykoon, Chairman of the **Sri Lankan Apparel Exporters Association**. People will have to get used to paying higher prices.

A PERSONAL REFLECTION ON A HAND WEAVING TRIUMPH

I was lucky enough to observe the handloom weaving project in the village of Divulapitiya, in the Gampaha district, which has one of the largest weaving communities in Sri Lanka, and where AOD had been invited by the government to revive the weaving industry. Around 60 weavers, both women and men, (working on handlooms in their own homes) in collaboration with designers from the **AOD Design for Sustainable Development (DFSD)** project, produced the woven fabrics shown in the **Island Craft Exhibition AND Fashion Show**.

Four young design graduates from AOD, who had been working for some months on the pre-planning of the collections, arrived in the village and handed out coloured yarns for the warps, then spent time with the weavers, working with them as they wove, adjusting designs as they went.

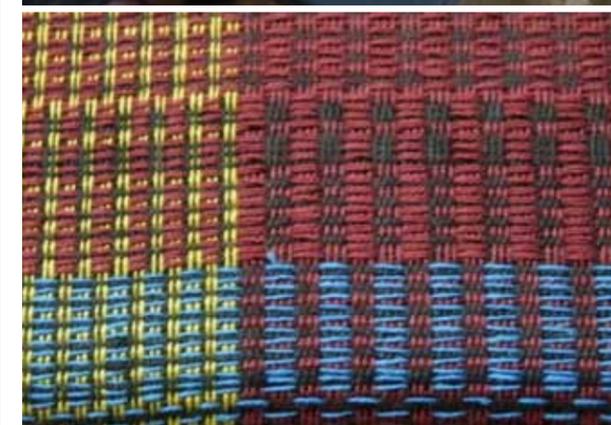
This was exciting though fraught with difficulty, not least because the weavers started so late. The continuing monsoon rains and the damp conditions meant yarn just wouldn’t dry after dyeing, and it seemed as if the weaving would never be finished in time. But, surrounded by lush tropical vegetation and idyllic gardens, the weavers kept treading their looms, in spite of the fact that the damp was also affecting the yarns as they wove.

Travelling back and forth between Colombo and Gampaha, slipping down muddy paths in the rain, the designers collected fabrics as they came off the loom, and at the same time worked on new designs for the next batch of weaving, for as long as the coloured yarns lasted.

But that was not the end of it. The fabrics were intended for a range of products – shawls, scarves, saris and clothing as well as for furnishing and linens, cushions and throws – and these needed to be made up for the exhibition and the Island Craft Fashion Show. Back at AOD sewing machines rattled way into the night.

The reward for such labours was seeing them on public display. Beautifully coloured fabrics, in stripes and decorative patterns in different weights of cotton from the finest voiles were conjured up overnight as the fabric arrived, to appear on the catwalk, beautifully styled in a large thatch-roofed beach hut – which somehow managed to keep out the endless rain.

And the weavers, arriving excitedly in their best saris for the opening events, were able to see for themselves the results of their labour. And it is the impact on the weavers that has been the point of it all, to show how creativity and new designs can generate sales. The weavers had at first been reluctant to try new ideas or techniques, but when these proved to be successful they felt encouraged to keep their tradition alive and to develop their own new designs – with a little help from their friends.



Hand weaving



Island craft exhibition