

<b>Institution:</b> University of Southampton		
<b>Unit of Assessment:</b> 17 Business and Management Studies		
<b>Title of case study:</b> 17-01 Embedding sustainable practices across the haircare sector		
<b>Period when the underpinning research was undertaken:</b> March 2012 – September 2017		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b> Denise Baden Swarna Prasad	<b>Role(s) (e.g. job title):</b> Professor of Sustainable Business Senior Enterprise Fellow	<b>Period(s) employed by submitting HEI:</b> May 2005 – present March 2012 – present
<b>Period when the claimed impact occurred:</b> January 2014 – July 2020		
<b>Is this case study continued from a case study submitted in 2014?</b> N		
<p><b>1. Summary of the impact</b></p> <p>Research at Southampton Business School has contributed to environmental benefits and improved economic competitiveness for the UK's GBP6.2bn hairdressing industry. As a consequence of the research, in 2015 the industry changed its default recommendation, recommending that the UK's 55,000 hairdressers reduce shampooing from twice to just once. The recommendation and information on greener products and practices have been embedded in training for the estimated 84,000 people that have taken haircare apprenticeships since 2015. Since its launch in 2016, 141 salons and 2,918 stylists in 14 countries have gained the research-based Sustainable Salon Certification. Adopting the changes required for certification saves the average salon 286,000L of water and 24,150kWh of energy every year, leading to an estimated collective annual saving for 141 certified salons of more than GBP740,000. Sustainability training resources have been adapted for use in water-scarce countries like Mauritius and Malta. The project won the ESRC Outstanding Impact in Business and Enterprise Prize in 2018.</p>		
<p><b>2. Underpinning research</b></p> <p>The 2008 Climate Change Act commits the UK to reduce its carbon emissions by 3% each year. Business accounts for 18% of UK emissions; sectors with a high carbon footprint bring to mind heavy machinery, engines and oil. Yet, haircare, both as a sector and as an individual activity, has a vast carbon footprint. There are 36,000 registered hair salons in the UK, using high levels of hot water, energy and often toxic chemicals. Research by Professor Denise Baden is the first to examine sustainable practice in this highly visible, but often overlooked business sector, with the goal of supporting a significant reduction in its carbon footprint.</p> <p>The aim of an initial ESRC study [3.1], which began in 2012, was first to engage hairdressers in developing their own pro-environmental behaviours (PEBs) and, secondly, to explore whether hairdressers could perform the role of 'catalytic individuals' to diffuse knowledge around responsible chemical, energy and water use to their customers and social networks. Bringing together theoretical insights from the disparate areas of social network theory, social psychology, marketing and sustainability management, Baden sought to evaluate the efficacy of an innovative, bottom-up approach to social marketing that could help address the wider, urgent need for a transition to a low-carbon economy.</p> <p>Applying an action research method, Baden interviewed hairdressers and convened focus groups to assess sustainability practices across the sector and understand what PEBs hairdressers were willing to adopt. Win-wins were identified, as more eco-friendly practices tend to be better for the hair and skin, save time and lower bills. Baden designed an intervention called the Green Salon Makeover (GSM) to raise awareness of PEBs among hairdressers and encourage them to devise their own ways to reduce environmental impacts, which they could pass on to their customers. The hairdressers applied these principles to their daily practice; a follow-up workshop allowed them to share outcomes and gain a sustainable certification. Hairdressers from across the UK (N=41) indicated positive intentions to adopt sustainable practices and pass them onto their clients. Customers surveyed after their hairdresser participated in GSM were significantly more likely to report that they would consider such issues in their haircare practices at home [3.1].</p>		

The research also found that hairdressers believed effective change would be best enabled by integrating these findings into professional training. This inspired a further ESRC study [3.2] to embed sustainability in the hairdressing curriculum. Working with the Vocational Training Charitable Trust (VTCT), City Guilds and MyHairdressers.com, Baden designed a knowledge exchange programme to train the trainers in UK hairdressing colleges and large salon chains [3.3]. This included the creation of a virtual salon online training tool and formalisation of a sustainable salon certification scheme. Baden demonstrated how engaging hairdressers in sustainable practices, and having these visibly recognised through certification, could strengthen hairdressers' sense of professional identity. She proposed a conceptual framework to explain the relationship between stigma, professional identity, motivation and adoption of the sustainability discourse. It described how a perceived stigma around hairdressing as a career creates a threat to professional identity that the sector is motivated to overcome. Adoption of sustainable practices, by increasing skills and knowledge through training, and demonstrating this through achieving certification and educating the public, can enhance a sense of professional responsibility and instil greater pride in one's work [3.4].

Baden also worked with academics at Southampton's Centre for Environment Sciences to understand the most energy-intensive practices in haircare. A technical study [3.5] revealed that heating water consumes the most energy, and in most homes too. It therefore recommended only shampooing once, using a leave-in conditioner to reduce rinsing and lowering water temperature. It also highlighted substantial carbon, energy and water savings through the use of dry shampoo.

### **3. References to the research**

**3.1** Baden, D. and S. Prasad: 2016, 'Applying behavioural theory to the challenge of Sustainable Development: Using hairdressers as diffusers of more sustainable hair-care practices', *Journal of Business Ethics* 133 (2), 335-349. <https://doi.org/10.1007/s10551-014-2398-y>

**3.2** Grant: Denise Baden ESRC PI 2014-2016. 'Embedding sustainability in the hairdressing curriculum – sustainable solutions for hair and beauty sector'. Amount awarded: £118,709 + matched funding by VTCT of £12k.

**3.3** Robinson, N. and D. Baden: 2016, 'Embedding sustainability in the practice of trainee entrants to the Hairdressing industry', *TVET Asia* (Journal for Technical and Vocational Education and Training in Asia). Co-authored with VTCT. <http://www.tvet-asia.info/issue/6/robinson-baden>

**3.4** Baden, D.: 2017, 'Professional identity as an unexplored motivator for sustainable practices'. *6th International Conference on Social Responsibility, Ethics and Sustainable Business* Berlin. (available upon request)

**3.5** Smith, A, Williams, I, Baden, D, Warren, A & Prasad, S. 2015 'The carbon footprint and energy costs of shampoo and hair-care routines' Centre for Environmental Sciences, University of Southampton. Available via the project website: <http://ecohairandbeauty.com/the-carbon-footprint-and-energy-costs-of-shampoo-and-hair-care-routines>

### **4. Details of the impact**

Through sustained engagement with the hairdressing industry to implement changes to policy and practice, this research has generated both environmental and economic benefits for businesses and customers. It has contributed to improving economic competitiveness of salons through more efficient use of resources, the transference of more sustainable haircare practices to the wider public and, ultimately, the reduction of the carbon footprint of haircare. The training programmes and online resources shaped by the research have influenced practice internationally, including in countries acutely affected by water shortages. The programme of work won the 'Outstanding Impact in Business Enterprise' award in the ESRC's Celebrating Impact Prize 2018, which recognises 'outstanding ESRC research and success in collaborative working, partnerships, engagement and knowledge exchange activities that have led to significant impact' [5.1].

#### **Changing occupational standards and vocational qualifications to embed sustainable practice in the haircare sector**

Industry standards are central to achieving change and promoting best practice in any industry. Baden partnered with VTCT, which has a 35% market share of qualification delivery for the

hairdressing industry, the Hair and Beauty Industry Authority (HABIA) and City & Guilds. In 2015, as a direct consequence of the research, HABIA added sustainability practices to all technical units within its new National Occupational Standards, which form the basis of all hairdressing training and professional practice in the UK. This meant that hairdressers across the UK's estimated 55,000 salons were advised to abandon the default shampooing practice of 'rinse and repeat', to shampooing only once. HABIA also integrated these new sustainable standards into its own skills training, and sustainable practice is now taught in **all** hair and beauty qualifications across the country and internationally by VTCT and C&G [5.2]. Training providers responded by introducing a new sustainability module to NVQs and other apprenticeship programmes. For example, the VTCT changed its training guidance in 2014/15 to make it clear that shampooing only once had been made the default practice. According to industry figures, 14,000 people begin an apprenticeship in hair professions each year, which means that an estimated 84,000 trainees have studied these amended qualifications over the impact period. The VTCT's apprenticeship manager explains the enduring impact of these changes: *"Since 2014 all qualifications that have been written have now got sustainable practice built into them. The knock-on effect that we get is: a learner becomes the stylist, the stylist becomes the senior stylist, becomes the salon owner – and this is a self-perpetuating cycle within the industry."* [5.2]

### **Supporting adoption of sustainable guidelines through training, online toolkits and the creation and promotion of a certification scheme**

Through the 2014-2016 ESRC grant, Baden sought to maximise the impact of the new occupational standards and qualifications by delivering dedicated sustainability training and creating practical resources and toolkits for the sector. She co-produced with MyHairdressers.com, who provide online hairdressing training internationally, a bespoke sustainable hairdressing video that was published on the website [5.3]. VTCT, HABIA and City & Guilds gave Baden access to college trainers at CPD events over the 2014-2016 period, enabling her to present on sustainable practice to more than 2,000 trainers and industry professionals across 60 workshops and training events. She highlighted greener products and practices, including new water-saving technologies such as low-flow showerheads, leave-in conditioner and dry shampoo. The research findings themselves, as outlined in section 3, provide evidence of the impact of this engagement: 97% of the 847 trainers, trainees and hairdressers surveyed said the workshops had resulted in an increase in the amount of focus given to sustainable practices, with half reporting a substantial increase. Surveys were also given to trainees to check their awareness of green practices, and results (N= 481) showed that the act of completing the survey itself increased pro-environmental intentions. Trainees were significantly more likely to say they would turn off tap, turn off appliances, reduce colour waste at end of the survey than at start. For example, trainees were asked at the start of the survey 'how aware are you are of the need to save water (e.g. by turning the tap off between shampooing and conditioning a client's hair)? Then at the end they are asked 'how likely are you to turn the tap off between shampooing and conditioning a client's hair?'

In March 2016 Baden attended a meeting of the All-Party Parliamentary Group on the Hair Industry, which seeks to promote the professionalisation of the sector. Baden proposed the idea of introducing a formal sustainability certification programme, which was endorsed by the hairdressing bodies present, including The Hair Council, the National Hairdressers Federation, HABIA and VTCT. Writing in 2018, the APPG Chair John McNally MP said that Baden's presentation *'proved invaluable to us in developing our case for changing the methods salons use and, importantly, how they think (about) improving the waste and energy savings that individuals and businesses can make'* [5.4]. Baden created the website [www.ecohairandbeauty.com](http://www.ecohairandbeauty.com) for colleges and salons to access training materials, presentations and information on eco-products and suppliers. An online 'virtual salon' training programme, leading to a Sustainable Salon Certification, was launched in October 2016. Individual stylists participate in the training and receive a certificate upon completion; when 75% of stylists are certified, a salon can obtain the sustainable salon certification. The scheme is free of charge. As of 31/12/2020, 141 salons and 2,918 stylists have obtained this certification.

Baden secured funding from the University's ESRC Impact Acceleration Account to further promote sustainable hairdressing practices to the sector, in particular the sustainable salon certification scheme and toolkits on the Eco Hair & Beauty website, over a 12-month period from March 2017. She promoted the resources through media engagement (including articles for Guardian Sustainable Business and The Conversation), regular social media engagement, through which salons obtaining certification were publicly recognised, and flyers, which were co-produced with HABIA and VTCT and targeted at salons. For example, monthly usage reached 4,165 page views in May 2019, 83% of which were from new visitors (UK: 674; Australia: 537; USA: 346; New Zealand: 179; Canada: 76; India: 72; South Africa: 66). [5.5]. Evidence of impact from this online engagement comes again, in part, from the research findings set out in [3.4], which indicated that the certification scheme has strengthened the professional identity of participating hairdressers. As an example of how training colleges have benefitted from accessing these resources, Fife College confirmed it had widely used the tools on the Eco Hair & Beauty website, such as the carbon footprint of haircare calculator, which 'helps the students to realise that as hairdressers they really can make a huge difference by the advice they give to their clients'. The College wrote: *'We believe a more subtle, yet important outcome of your project has been towards creating a more professional culture across the sector, which helps to raise the status of the profession. Your role in training the lecturers, developing certification and influencing the National Occupational Standards means that the impact of this project will last long after your particular project has come to an end.'* [5.6]

L'Oréal have requested to partner with Baden and the Ecohair project to help design a bespoke sustainable salon certification scheme and to train their field representatives to audit customers' salons' sustainable practices and help design training materials to assist the salons to go green.

#### **Achieving reductions in carbon emissions and water usage through engaging with businesses and influencing public behaviour**

Through interviews with colleges, suppliers and hair salons, the technical study carried out by Baden and academics in the Centre for Environmental Sciences quantified the environmental benefits arising from a small four-seater salon adopting the recommendations around sustainable practice: annual savings of 286,000L of water and 24,150kWh of energy.

There is evidence of a positive ripple effect onto the general public, where hairdressers have advised clients on more sustainable practice, for example by highlighting benefits of water-saving products such as dry shampoo and leave-in, rather than rinse-out, conditioner [3.2]. One certified salon estimated the effect of this advice given to 300 clients a year at: annual savings of 7,800kg CO<sub>2</sub>e from increased use of leave-in conditioner and emission reductions of 15,600kg CO<sub>2</sub>e from the adoption of dry shampoo [5.7]. To put this in context, the carbon footprint of using half a tank of petrol is 57kg, the weekly carbon footprint of someone who shampoos their hair every day with 2 shampoos and rinsed out conditioner with hot water running for 10 minutes in total is **9kg**. The weekly carbon footprint of someone who shampoos their hair twice a week with 1 shampoo and leave-in conditioner with hot water running for 4 minutes in total, plus uses dry shampoo once a week is **1kg**.

Baden also engaged an estimated 5000 people (members of the public) in these sustainable practices through a number of roadshow and festival events in 2015, including Glastonbury, Winchester Science Festival, Cheltenham Science Festival and Countryfile Live. At Glastonbury festival, impact was measured by asking stand visitors who had tried out dry shampoo and eco products and done the carbon footprint quiz to indicate their opinion of advice provided by putting counters in relevant boxes. Out of 792 respondents 85% agreed that 'Reducing the use of heated appliances such as hair straighteners, curlers and blow dryers is better for hair condition, your bills and the planet' and 86% agreed that 'Dry Shampoo is good for your hair, your bills and the planet'.

#### **Delivering financial benefits to businesses and improving competitiveness**

The technical study calculated a cost saving of GBP5,300 per year for a four-seater salon that has followed the sustainable guidelines. This equates to a collective annual financial saving of more than GBP747,300 for the 141 certified salons, with additional reputational and marketing benefits. One certified salon reported an 80% annual saving in laundering and tumble drying

costs [5.7]. International haircare brand Davines, which has a presence in 90 countries and describes itself as a carbon-neutral company, developed a training scheme based on Baden's sustainable salon certification scheme. [5.8] The technical study highlighted the energy and water savings from the use of new technologies such as the Scirocco Smooth by Hair Drying Solutions (HDS) Ltd, which sucks water from the hair thus removing the need to launder towels. Annual savings from using the product for a four-seat salon were calculated at: 1,330kWh in energy, 27,000L of water and a financial saving of GBP1,630. Baden recommended use of this product through the virtual salon training programme and at four sustainable salon launch events. According to HDS: *'As a result, our units started to sell ... As we are a small business start-up it can be expensive to promote new technology to salons when it is something they have not come across before, so this support from the Ecohair project has been essential in raising awareness of a product that will save money, energy and water.'* [5.9]. In addition, savings of GBP200 per year have also been identified by the technical study for members of the public who follow the advice passed on by their hairdressers.

While very difficult to quantify, it is reasonable to conclude that the introduction of sustainable haircare practices also has had positive health benefits, as less heat, water and chemical products can improve hair and skin condition. In 2018, a University of Colorado study [5.10] into the harmful effects of Volatile Organic Compounds, published in *Science* and covered widely in the international media, found evidence that shampoo poses health risks, which highlighted the advantage of shampooing once rather than twice.

### **Informing sustainable practice overseas including in countries with water shortages**

The ESRC Outstanding Impact prize included an award of GBP10,000 which Baden used in 2019 to promote sustainable hair practices overseas, particularly in two countries that experience acute water shortages: Malta and Mauritius. Baden worked with Natural Health Malta (NHM), which runs a small chain of salons, to adapt the Virtual Salon programme for Malta and run two workshops for hairdressers and trainers. NHM launched this adapted programme as the Go Green Salons project in late 2019 [5.11]. Baden was invited to Mauritius in April 2019 by the charity Centre de Formation Aroma, the only representative of VTCT UK in Mauritius. She gave a talk on sustainable hairdressing to 65 people (hairdressers and the charity's trainers), which was covered by the island's main television and radio stations [5.12]. Salons overseas have accessed the Eco Hair website (as outlined earlier) and Baden has proactively shared resources with hairdressing organisations in other countries. The Zahra International Hair Academy, a training provider based in Cape Town, South Africa, requested a hard copy of the Virtual Salon sustainability manual in 2018 for use in training students.

Information on sustainable hair practices has been widely disseminated in national press such as the Guardian in 2014 and 2020, and local press, television and radio, industry publications and social media [5.13].

### **5. Sources to corroborate the impact**

**5.1** <https://esrc.ukri.org/news-events-and-publications/impact-case-studies/cutting-carbon-footprints-in-the-service-sector/>

**5.2** Corroborating statement from VTCT.

**5.3** Corroborating statement from MyHairdressers.com

**5.4** Corroborating statement from the Chair of the APPG on the Hair Industry.

**5.5** Google analytics report for [www.ecohairandbeauty.com](http://www.ecohairandbeauty.com)

**5.6** Corroborating statement from Fife College.

**5.7** Corroborating statement from Shine Salon.

**5.8** Corroborating statement from Davines.

**5.9** Corroborating statement from Hair Drying Solutions Ltd.

**5.10** McDonald et al: 2018, 'Volatile chemical products emerging as largest petrochemical source of urban organic emissions', *Science* 359, 760-764.

<https://doi.org/10.1126/science.aag0524>

**5.11** Report from Natural Health Malta.

**5.12** Report from Centre de Formation Aroma, Mauritius.

**5.13** Print and online media report.