

# **Case Study of Occupational Safety and Health in Haiti's Apparel Sector: Third Year Follow-up**

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## **Introduction**

This document summarizes the third year follow-up for a set of longitudinal cases that are part of an evaluation of Better Work Haiti (BWH) conducted by a team of researchers from Tufts University. The long term goals of this study are to explore the potential for change in occupational safety and health (OSH) in Haiti's apparel sector, and more specifically the role of BWH in improving OSH conditions over time. It is the hope that this multi-year case study will help identify the drivers of change in BWH apparel factories, and the Haitian context for inhibiting or promoting these changes.

## **Case Selection and Methods**

The US provides preferential trade to Haitian apparel products under HOPE II legislation with the condition that benefiting factories comply with international core labor standards and national labor laws. Any Haitian apparel factory receiving the trade benefits of Hope II legislation are mandated to participate in the BWH program, which requires periodic compliance assessments and public reporting of compliance (and non-compliance) through bi-annual synthesis reports (ILO 2010, 2011a, 2011b, 2012a, 2012b, 2013).

We use a longitudinal case study approach to explore the role of BWH in supporting OSH improvements in Haiti over time. This work was originally designed to complement evaluation data collected from computerized worker and manager surveys. However, there are no additional evaluation data to report in Haiti since baseline in 2011. A second case study highlighting the role of BWH in promoting innovation in Haitian apparel factories is being conducted in parallel to the this work (Rappaport 2013).

The baseline evaluation and initial observations of change in OSH conditions are the subject of two previous reports (Davis 2011, 2012). This document summarizes the results and observations from the third round of site visits to four of the five original case study factories chosen for baseline interviews in 2011. The original five case study factories evaluated for baseline in 2011 were selected to represent a variety of sizes (700-2500 employees as measured in 2011) and ownership categories from the 28 companies then participating in the Better Work program. Unfortunately, one factory in the original baseline set was unable to

participate in year three of the longitudinal assessment, as their primary point of contact for the case study was unavailable. An additional two factories outside the Port au Prince area were selected as new cases for this most recent assessment. These follow-up factory visits (and two new site visits) were conducted during the week of May 20, 2013. In order to maintain the anonymity of the two factory sites outside of Port au Prince, it was necessary to remove many of the tables outlining specific factory-level details because it might enable the reader to identify specific case factories and/or managers.

For the purposes of this case study, the manager in charge of occupational safety and health in the factory was interviewed, although the job title for this manager varied across the factories. In some cases, additional observations were based on interviews conducted with other factory managers that were questioned primarily for the purposes of the innovation case study noted previously. These additional managers included the Owner, General Manager, Financial Manager, Human Resource Manager, Industrial Engineer, and Production Manager. Translation was provided, where needed, by an independent translator who accompanied us to all interviews and spoke Spanish, French, and Haitian Creole. Interviews were conducted in a conference room or another relatively quiet space onsite. Following the interviews, we were given a tour of the factory and had the opportunity to ask additional questions and observe many of the features discussed in the interviews.

During these interviews and factory tours, we focused on a number of specific occupational health and safety concerns identified as potentially hazardous to workers in the Haitian apparel sector (Davis 2011; European Agency for Safety and Health at Work 2011; International Labour Office 2010; US Department of Labor 2011): 1) toxic chemical exposure from the use of cleaning agents, 2) mechanical hazards related to equipment operation, 3) air pollution exposure from internal sources such as aerosolized cotton and fiber dust, as well as external sources from diesel generators and poor local air quality, 4) musculoskeletal stressors related to poor ergonomic conditions, 5) heat stress, and 6) noise exposure.

### **Developing World Apparel Industry**

The majority of the world's workers work in conditions that do not satisfy basic international standards for occupational safety as outlined by ILO and WHO guidelines, and only 10% of developing world workers are even protected by OSH laws (LaDou 2003). Haitian apparel therefore represents no exception to the ubiquitously poor working conditions present in the developing world, and the continuing struggle with OSH in BWH factories is not unique to this country or industry.

### *Apparel as a 'Starter Industry'*

The apparel industry represented an important engine of economic growth during the early industrialization period of the now developed world (Mortimore 2002). However, it is difficult to draw similarities in the development process between former developed countries and presently developing economies, especially in small countries such as Haiti that primarily perform localized assembly functions. In these cases, barriers to entry are often low, and competition for suppliers is fierce. As such, profit margins (and wages) face continual downward pressure to maintain competitiveness on the world market.

The strategy of 'export upgrading' (Schrank 2004) whereby countries build the export markets and human capital necessary to progress to higher value added products and spur economic growth may in fact be significantly flawed as a strategy for small developing world economies such as Haiti. Apparel in and of itself does not necessarily generate the productive capacity needed to promote an ongoing cycle of exports (Sanchez-Ancochea 2006), and Mortimore (2002) suggests that this task is especially difficult for small countries seeking to industrialize based on simple labor intensive products. Schrank (2004, pg 125) further notes that 'the prospects for upward mobility [for developing world apparel] are inauspicious at best.'

Apparel as a starter industry is often at a disadvantage in small countries because they are unable to achieve profitable economies of scale that would allow them to compete on a global market. As such, they rely on a combination of international trade agreements, cheap labor, and poor environmental/occupational standards to attract foreign investment. Without extensive planning and intervention, this scenario in and of itself does not represent a stepping-stone towards an independent and sustainable export stream. In fact, some evidence suggests that the structure of developing world apparel may actually limit or otherwise distort the process of industrialization and economic growth in these countries (Mortimore 2002).

### *The Case for OSH Changes*

There is no literature available to the knowledge of the author that explores the process of change and improvement in OSH conditions in developing world apparel factories. This gap in the literature highlights the importance of case studies such as these to explore and better understand this process of change. Based on a more general review of the literature as it relates to OSH in developing world factories and industries, a number of points can be highlighted as potentially relevant to Haitian apparel. As noted by Joubert (2002, p 199), 'Each country, region, or workplace may have its own answer and own set of factors that will affect the success or lack of success for implementation of occupational hygiene controls within it.' Despite this variability, the literature outlines a general set of underlying conditions that are essential for laying the groundwork for positive change.

1) Industry profitability: A 2003 study by LaDou noted that OSH program development is linked to profitability of both the industry in question and the country within which it operates [(Joubert 2002) also emphasizes profit stream as an important precursor to change]. A certain degree of technological sophistication and a reliable base of low cost inputs such as infrastructure, electricity, labor, etc. are further required to maintain the profitability of the industry and support improving OSH conditions over time.

*Haiti.* The apparel industry in Haiti is based largely on the production of t-shirts and simple garments. The industry as a whole operates on a slim profit margin based in large part upon cheap labor and trade preferences/access to the US market. The apparel sector represents an important employer for the Haitian economy, accounting for approximately 90% of Haitian exports and nearly 5% of the gross domestic product (CIA Factbook 2013). The importance of the industry to Haiti was described by one of the factory owners, who noted that Haiti is attractive to garment businesses because of its proximity to Miami and the US market, trade preferences with the US under Hope II legislation, and their base of plentiful cheap labor. However, the same owner also noted that this competitive advantage is nearly completely offset by the high cost of doing business in Haiti, including electricity, rent, and infrastructure challenges, and that the benefit of HOPE II legislation can be somewhat fickle as it does not cover many of the products, i.e. simple t-shirts, that form the basis of the Haitian apparel product line.

2) Functioning and stable legal and economic system: LaDou (2003) further emphasizes that properly functioning legal and economic systems represent basic prerequisites for successful OSH programs. This includes a strong government that understands and is capable of supporting basic human rights at work as a national priority, and able to facilitate both the efficient production of goods and services and social justice in the work place (Joubert, 2002). In pursuit of economic growth, developing world economies often neglect occupational and environmental impacts to attract foreign investment and support the industrialization of key industries (Joubert 2002). A poorly functioning economy with wide-scale unemployment may also make workers more likely to accept poor working conditions as a matter of survival regardless of whether they understand the hazardous conditions they face on the job (Joubert 2002).

*Haiti.* Haiti has a checkered past of government instability and corruption, and there is both a historical and cultural context underpinning the level of distrust with foreign intervention and authority in general (Farmer 2006). In addition to political instability, Haiti suffers from chronic economic instability. In 2010, over 40% of the island population of 10 million people were considered unemployed, while 80% of the population was living below the poverty line (CIA Factbook 2013). One manager provided an example of how these restrictions play out for

apparel factories, noting that new equipment purchases were bought and shipped directly from Miami, sidestepping Haitian businesses and bureaucracies because they refused to be 'held hostage' by corrupt Haitian government and business interests. A factory owner recognized the importance of government services and that there could be 'no economic growth without social growth.' The strength of Haiti's underlying economic and political systems are further weakened by the extent of public health and environmental challenges that face the country by way of water and sanitation, HIV, cholera, and deforestation, which often serve to dwarf working conditions as a national priority.

3) Training and human capital: Trained and experienced managers are required to structure and enforce OSH standards at the factory level, and to provide the ongoing leadership necessary to maintain a culture of safety inside the factories (LaDou 2003; Joubert 2002). Human capital by way of properly trained managers that understand the safety risks are also critical to maintaining pressure on the government to enforce existing regulations. Furthermore, it is essential that workers are themselves aware of the short and long-term consequences of their work so that they can properly advocate for a safe work environment. An uneducated workforce cannot demand improvements to conditions they are ignorant about or do not perceive as an unacceptable level of risk (Joubert 2002).

*Haiti*. The country lacks a robust educational infrastructure, and over half of the adult population is illiterate (CIA Factbook 2013). Haiti further suffers from a persistent 'brain drain' whereby the most skilled and educated citizens leave the country for greater opportunities [Jadotte (2012) notes that the largest export in Haiti is in fact not apparel but skilled labor]. Previous reports for this case study have also provided evidence of a significant deficit in OSH trained managers at the case factories (Davis 2011, 2012), a point that will continue to be emphasized in the current report. A case factory owner conceptualized the problem quite succinctly when he noted that Haitian workers are 'dedicated' *once trained properly*, and further noted that the lack of an educated workforce is one of the many factors that hold Haitian apparel back from achieving its full growth potential.

4) Worker participation: There is a strong argument presented in the literature advocating an important role for worker participation in improving OSH conditions. A 'union effect' (Partanen et al. 2005) has been noted in the literature whereby developing countries with greater union participation rates among workers also tend to rank high in OSH performance measures (LaDou 2003). The active involvement of workers is important as they possess unique and intimate knowledge of their own working conditions and of potential strategies to improve OSH conditions (Johansson and Partanen 2002). Worker apathy related to a failed sense of investment in their own work environment has also been noted as a cause

for concern (Joubert 2002). For this reason, top down management strategies alone may not be especially successful when it comes to improving OSH conditions.

*Haiti.* The most recent Biannual Synthesis Report cites a 'history of distrust between workers and employers with regard to the labour movement' (ILO 2013, pg. 10) that is problematic to supporting the joint goals of peaceful worker participation and industry profitability in Haiti. One manager described this conflict as a perception that unions (based on historical precedence) destroy companies. Despite the historical discord, union activity in Haitian apparel factories has risen quite substantially, from a single factory in 2010 to 50% of factories in 2013. The issue of union activity in BWH factories will be reviewed in greater detail in the following section.

To conclude, the literature identifies a critical role for industry profitability, functioning and stable legal and economic systems, training and human capital, and worker participation as starting points for supporting positive change in OSH conditions in developing world industries. As such, Haitian apparel represents a particularly challenging case for Better Work because many of these underlying factors are either not present or severely limited in the country. The significant challenge for BWH then is to promote long-term sustainable change within the context of a system that is not yet capable of supporting it. To further complicate matters, many of the factors needed to lay the groundwork for effective change lie outside the authority and control of the BW program. Therefore, it is important to judge the work of BWH within the overall context and limitations of promoting change in Haiti. Based on this, BWH plays an important role in both supporting OSH improvements directly (as measured in the compliance assessments), as well as facilitating the underlying conditions that will foster long-term growth and change in working conditions in the country.

### **Summary of Changes Impacting Haitian Apparel 2011-2013**

#### Economy

At the time of the previous case study report in 2012, the major external pressures of change within the Haitian apparel industry were related to poor economic conditions. The business environment in Haiti had been harshly hit by the US recession, and the apparel sector had reportedly lost some 4,000 jobs. In four of the five case study factories in our 2012 sample, there were reports of slowed production, forced shutdowns, layoffs, and reduced orders. Managers cited excess inventories, decreased demand in the US, and buyer requirements for nearly next day delivery as difficulties faced by Haitian apparel factories in 2012. To cope with the economic downturn and layoffs, factories had been forced to increase the level of productivity among their remaining workers.

The economic slowdown presented a challenge from the perspective of understanding the impact of Better Work involvement in OSH improvements over the baseline period. Attributing any OSH changes (or lack thereof) to BWH would be problematic in light of the unknown impact of this third external factor. The severe economic conditions represented a major pressure on factories that limited their potential to invest in working conditions, and most especially in those strategies with relatively high implementation costs. The previous report (Davis 2012) concluded that in light of such a harsh economic climate, the fact that OSH conditions remained relatively stable could be viewed as a potentially positive sign that BWH involvement prevented otherwise inevitable rollbacks in working conditions in Haitian apparel factories.

During the 2013 round of site visits to the case factories, the impact of economic factors was diminished and in some cases reversed. The economic climate appeared to be improving overall in Haiti, and one owner reported 25% growth in jobs over the previous year. The increase in business activity was evident across the board, as two of the original five case study factories were now in the process of expanding capacity to new buildings or significantly renovating existing spaces to increase capacity. Along with this investment in building infrastructure, factories were also investing in new technologies to improve efficiency as well as new equipment such as machines, chairs and tables.

Most notable with this new construction, renovation, and purchasing was the extent to which they were being done with the perspective of OSH in mind, and in collaboration with BWH to ensure that the new spaces were compliant to the extent possible (i.e., bathroom count still remained a challenge). These OSH innovations included investments in energy efficient (and less heat producing) lighting, insulated roofing, as well as improving the number and access to exit doors. At one factory compound toured, additional improvements included the installation of industrial fire extinguishers and solar powered night lighting.

One manager noted that economic growth had made it easier to focus on OSH because there was more money to work with, which further reinforces the conclusions of the previous report that the economy was a major factor in stalling OSH improvements between the initial two periods. Despite this, some of the anticipated improvements were not realized over the course of the year. For example, one factory that had a market under construction last year that would provide essential items at cost on worker credit was no longer in progress.

In general, managers and owners seemed cautiously optimistic about the growth of the industry in Haiti. One owner noted that Haiti had the potential to offer the 'full package', meaning a more comprehensive and value added product that included fabric manufacture, dyeing, cutting, etc. The overall goal of the full package would be to make Haiti a 'source that is hard to replace' and increase profit margins, which according to this owner would ultimately

trickle down to improve worker pay. Another owner stated this less optimistically when he noted that Haiti was in a 'stable growth' pattern, but that it was not operating at its potential.

At the time of the previous report, managers noted the continued challenge of infrastructure for apparel factories operating in Haiti, such as poor roads, which exacerbate worker commutes and increase transportation costs, as well as deteriorating government-owned factory buildings and extraordinarily high energy costs relative to their competitors. Contrary to some previous observations, this year we saw evidence of private investment in the government owned buildings at two of the factories, where one had laid removable tile in their leased space and another factory was contemplating the same improvement. Although still a significant challenge, a number of infrastructure improvements were evident at the Port au Prince airport and surrounding roads, and hotel construction appeared to be on the rise.

In addition to the positive effects of the improving economy and infrastructure, there was an overall impression that Hope II legislation was a critical draw to foreign investment in the country. One owner reported an additional fourth factor at play in increasing the attractiveness of foreign investment compared to competitor countries, namely the recent apparel disasters in Bangladesh. The owner reported to have received calls about order transfer from Bangladesh, as Haiti represented a potentially less controversial supply source for their products.

### Labor

Labor challenges in the apparel industry that were beginning to surface during the previous site visits had risen to the forefront in 2013, with unions now present in 50% of the apparel factories (ILO 2013) and in all but one of the case factories visited during this assessment. By comparison, when the baseline assessment was completed in 2011, only one apparel factory in all of Haiti was unionized and none of the case factories had unions present. The unions can be seen to represent both opportunities and challenges to the factories. One manager noted that the union was helpful in explaining work-related policies including OSH to workers because they represent a more trusted source among workers than managers. This same manager also believed that the level of trust and communication among workers and managers was better in his factory compared to others in Haiti because there is more interaction among the two groups and less distinction drawn between them.

In addition to increased union activity, the country's new minimum wage law had taken effect on October 2012, bringing the daily minimum wage from 150 to 200 gourdes (approximately \$3.50 to \$4.60 based on the July 2013 exchange rate), with a target for setting the piece rate wage that varied from 200 to 300 gourdes (\$6.90). To provide additional perspective, estimates of the *living wage* for workers in the SONAPI industrial park (where three of the case study



factories are located) was recently estimated to be \$29/day, over six times higher than the new daily benchmark of 200 gourdes (AFL-CIO 2011). This living wage estimate was reportedly calculated based on survey of average monthly expenses for a 3-member household comprised of one adult wage-earner and two minor dependents for a locally appropriate basket of goods.

The minimum wage law was unclear on the specifics of how the piece rate would be determined, and absent guidance from the Haitian government on how to establish this benchmark, there was a high degree of conflict between the BWH and factory interpretations. According to a number of managers and owners, the single biggest challenge presently for their factories is uncertainty related to the minimum wage, and that this controversy had the potential to scare away investors during an otherwise calm period of stable growth in the industry. Many managers suggested that the industry was in a 'holding pattern,' and that growth and investment is detracted until the minimum wage debate is settled.

Exacerbating this conflict over labor costs is an underlying culture of 'distrust between workers and employers with regard to the labour movement' (ILO 2013, pg 10) and the significant historical and cultural context of this distrust with respect to foreign intervention and authority in general (Farmer 2006). A number of managers cited poor communication and distrust among various levels of the operation as a critical problem making labor-manager relations difficult in Haiti. One manager went so far as to suggest that the pervasive 'cultural bias against bosses' was the biggest stumbling block to doing business in Haiti.

## **OSH Non-Compliance**

Table 1 summarizes the percent of non-compliance across the OSH categories over time for all of the BWH factories (ILO 2010, 2011a, 2011b, 2012a, 2012b, 2013), as well as the most recent non-compliance information for the combined group of seven case study factories. Overall, OSH compliance rates in the most recent report improved in each category except for 'Health Services and First Aid' and 'Welfare Facilities'. Improvements were much lower in the case study factories, where non-compliance held steady or worsened in all categories except for 'OSH Management Systems' and 'Working Environment'.

Why is OSH compliance so slow to change in Haiti? The sporadically slow rate of change in OSH non-compliance points among the BWH factories is due in part to the country-specific factors noted previously as necessary conditions for promoting change, but which in the case of Haiti are either absent or grossly lacking. These include a profitable industry, non-corrupt and viable economic and legal systems, human capital, and worker participation. In addition to these external factors that are beyond the control of BWH, it is also important to recognize that non-compliance as outlined in the synthesis reports represent a slow pace of *reported* change,

which is likely exaggerated due to the increasing amount of data collected by the Better Work Enterprise Advisors (EA) and made available for reporting over time. For example, noise and temperature data inside the factories have only recently begun to be collected, with only two years of data available at the time of this report. Therefore, it is difficult to evaluate compliance over time in the Working Environment category based on the limited observations available. Also, as the factories come into compliance with the most basic OSH conditions, it allows the Better Work EA's to assess additional layers of compliance that may have been previously ignored in an effort to focus on these more fundamental improvements. This additional scrutiny may cause fluctuations in compliance points at factories over time.

**Table 1: OSH Non-Compliance Rates**

OSH Compliance Point	% overall non-compliance in BW synthesis reports					% non-compliance <i>Case factories only</i>	
	April 2011	October 2011	April 2012	October 2012	April 2013	April 2012	April 2013
OSH Management Systems	100%	74%	70%	45%	42%	80%	33%
Chemicals and Hazardous Substances	89%	87%	70%	82%	75%	80%	100%
Worker Protection	93%	96%	100%	95%	92%	100%	100%
Working Environment	21%	52%	75%	86%	50%	80%	67%
Health Services and First Aid	100%	100%	100%	100%	100%	100%	100%
Welfare Facilities	100%	96%	95%	86%	88%	100%	100%
Emergency Preparedness	82%	96%	95%	86%	67%	100%	100%

\*A factory is found non-compliant in a subcategory if they are found to be out of compliance on any one aspect of it (for full description of compliance point subcategories, see ILO 2013)

Also worthy of note in the fluctuating and stagnant trend in OSH compliance is that half of the factory managers interviewed reported that the Better Work compliance assessment methods, and particularly the interview of workers, were inconsistently applied across the BWH EA's. These same managers also expressed concern that the EA's interpreted the compliance rules differently, and factories could be judged in/out of compliance unfairly based on judgments made by the individual EA. One manager felt that the EAs needed more training to understand both international labor standards and also protocols for interviewing so that the assessment results would not vary across EAs. Another felt that the compliance report should not presume a problem simply because it is reported by a small number of workers, and that if issues are raised during the worker interview process they should prompt a further comprehensive survey of workers before being reported as non-compliance. However, another manager also noted that they were pleased with the ability to respond to the compliance assessment before the document is made public, which provides them an opportunity to argue their case.

## **Manager Background and Perceptions of BWH-OSH**

Unlike the previous two site visits, we were unable to interview many of the same OSH managers due to high turnover in OSH middle management staff at the case study factories. Of the six companies that were visited during this trip, four had hired new OSH managers within the last year (time on the job ranged from one month to one year). During the previous 2012 site visits, four of the five baseline OSH managers remained on staff, and the additional year on the job was noted as important increase in critical human capital relevant to OSH in these apparel factories. Of these continuing managers, time on the job ranged from 17 months to 4 years. Unfortunately, the gains in human capital related to time on the job have been reversed over the last year at the case factories.

Two of the managers interviewed were industrial engineers and therefore had some academic training in occupational health and industrial hygiene, while the academic background of the other managers varied from business to communications. Only two of the managers interviewed reported to have participated in BWH OSH-related training over the last year, and the newest OSH hire had never participated in any BWH, company, or other related OSH training to date. This manager training deficit is consistent with last year's observations, which noted that most managers had not participated in any organized OSH training since the baseline interviews were conducted in 2011.

Interviews with the OSH managers highlighted a number of safety improvements that were unlikely to be captured in the BWH synthesis reports. Although personal protective equipment (PPE) usage was still a problem, managers reported a general improvement in the adaptation of safety procedures among workers. In some cases the managers attributed this change to pressure from BWH and buyers to make improvements; in other cases it was the result of the floor managers and OSH committee members providing greater direct oversight of workers with verbal prompts and increased safety signage on the factory floor.

There was also significant progress in worker involvement in OSH, as all but one of the visited factories now have active OSH committees that include workers in place. This is in contrast to last year, when two factories still had no OSH committee in place and another two had only recently begun to set them up and had yet to involve workers. Managers felt that despite the labor disagreements, communication (as facilitated by BWH) had improved between workers and management and that BWH helps with the spread of ideas. A number of interviewees noted that good working conditions made for more efficient workers, resulting in more money for everyone.

Two factories had begun to do routine monitoring and self-assessment of environmental conditions inside their buildings (light, noise, temperature) and a third had plans to begin data

collection soon. These efforts show a growing incentive on the part of factories to be proactive as opposed to reactive to the BWH compliance assessment, and one manager bluntly noted that they would not be conducting routine self-assessments of working conditions in the absence of BWH involvement. Another manager also noted that they had begun to benchmark their OSH performance against other factories in Haiti and outside the country, providing a means for technology and ideas transfers across the industry.

### *Suggestions for Improvements*

A majority of the managers felt that BWH should provide more training seminars, including senior management training to keep HR 'on the cutting edge,' as well as worker training to improve personal protective equipment (PPE) usage and awareness of safety issues. One manager noted that training specific to areas of non-compliance would be useful, as well as training for workers on how to unionize in a peaceful and realistic fashion. Another manager requested more hands on training and follow-up to see if changes required by BWH are sufficient. This same manager also noted that BWH should spend more time in the factories, and that the BWH 'seminar style' of providing training was inappropriate for many of the factory needs. A third manager requested training on the environment and sustainability, since environmental impact is often scrutinized by buyers; however, this may be outside the scope of BWH.

Last year, managers noted a general desire for BWH to help develop low-cost compliance solutions. That theme was repeated this year, with continued interest in BWH support for negotiating group pricing of safety equipment and facilitating discussions with equipment suppliers about worker needs. A final suggestion noted by a manager at one of the factories located outside of Port au Prince was for BWH to bring their popular Health Fair to non-Port au Prince sites, as the manager felt that this type of event would be motivating to workers at his factory.

### *Critiques of Existing Program*

Many of the criticisms brought to light in the previous report were again highlighted in this third round of management interviews. Managers generally recognized the shared interest they have with BWH to keep workers safe and healthy, and that BWH guidance has the potential to help the factory run more smoothly, which they believe is ultimately tied to productivity and efficiency. BWH was recognized as a partner in this process, and some of the managers appreciated BWH's hands on approach and advice on interpreting Haitian and international labor laws. Managers also appreciated BWH participation as they believed it provided 'credibility' to buyers.

That said, managers also expressed concerns that BWH was operating outside of its primary goals by acting in some cases like a ‘judge’ or a ‘policeman’, when management would prefer to enter the dialogue as a partnership. There was a general concern among managers that BWH was biased towards workers, and that BWH failed to listen to both sides of the story. As noted in the previous section, many managers felt that the rules of compliance were inappropriately and inconsistently applied in some cases. Managers expressed concern that BWH should focus on the needs of the factories and what is feasible in Haiti, and not just compliance points. One manager specifically noted that many of the international standards just aren’t feasible in Haiti, such as temperature and number of bathrooms. The single biggest complaint by managers was the BWH interpretation of the Haitian minimum wage law, and that BWH should work with factories to make them more competitive, and not less.

### *OSH Training Programs*

The baseline assessment highlighted the need for improved safety training at the factories, and suggested that BWH take a more active role in organizing and sponsoring training events at the factory. Although little to no progress in training was made between years one and two of the study, more significant gains were observed this year. The most recent BWH synthesis report (ILO 2013) records multiple OSH training activities at the Port au Prince case study factories of workers and managers, as well as additional training on ILO Core Labour Standards. Also, BWH held OSH committee trainings in each of the factories where such a committee was present. Based on the current sample, BWH-sponsored OSH trainings are more limited in factories located outside of Port au Prince. In addition, half of the factories reportedly used the BWH training videos to educate management and/or workers around OSH issues.

A major difference from last year regarding training is the increased interest in fire safety as a result of recent events in Bangladesh. The four Port au Prince factories specifically noted that BWH had facilitated discussions and training with the local fire department. There was a clear appreciation from managers about BWH’s involvement in facilitating these activities. One of the factories expressed a desire to learn more about installing sprinkler systems inside their building, and had requested that the fire department locate a facility inside the SONAPI factory cluster.

The BWH-sponsored Health Fair received mixed reviews this year. Two of the managers were not familiar with the Health Fair, and a third noted that attendance had overwhelmed capacity to the point that it became dangerous. Based on last year’s popularity of the Health Fair and the increased level of attendance this year, the event appears to be an important way for BWH to disseminate ideas and connect with workers. Ideally, this event could be expanded and held more often, such as twice a year, with a similar event sponsored at factory clusters outside of Port au Prince.

### *Accident and Illness Reporting*

There were no improvements in the way that accidents and/or illnesses were reported and catalogued at the case study factories. The identification and mitigation of potential OSH hazards in the Haitian apparel sector remains a challenge. The single factory that in previous site visits had reported to be working on constructing a searchable database of worker accidents was no longer attempting this project. The factories continue to document injuries and send monthly paper reports to the Haitian government, but none collect and record accident and illness data in a searchable format that would allow for the analysis of causal relationships and trends. Based on manager opinion and observation, the most common injuries to workers were needle pricks, followed by work-related neck and back pain, and fainting.

The factories continued to lack a centralized reporting system of worker attendance, and so managers were unable to identify the extent to which worker absences could be linked to factory-related accidents or clusters of worker illnesses. The managers described the most common ailments of workers as headache and stomach ache, followed by fever, blood pressure, and diabetes.

### **OSH Hazards**

A number of specific occupational health and safety concerns were identified in the baseline report as potentially hazardous to workers in the Haitian apparel sector: 1) toxic chemical exposure from the use of cleaning agents, 2) mechanical hazards related to equipment operation, 3) air pollution exposure from internal sources such as aerosolized cotton and fiber dust, as well as external sources from diesel generators and poor local air quality, 4) musculoskeletal stressors related to poor ergonomic conditions, 5) heat stress, and 6) noise exposure. We conducted follow-up assessments of these occupational hazards during interviews and factory tours, and focused specifically on identifying change in these conditions over the past two years. This information was originally designed to supplement evaluation data from computerized worker and manager surveys; however, there are no new evaluation data available to report for Haiti since baseline in 2011.

### Toxic Chemical Exposure

There were some production process changes noted over previous assessments as some factories were attempting to switch to more value added products and fabrics. However, the

processes impacting chemical exposure remained largely unchanged compared to the previous two assessments. The major source of chemical exposure continues to be the garment cleaning process, and there were no reported changes to the use of cleaning agents in the past year.

There have been some advances in OSH training efforts that include chemical safety, and the factories reported to be increasingly using verbal prompts by OSH and floor managers, as well as through the loudspeakers, to remind workers of safety precautions. The use of protective gear at the cleaning stations continued to vary greatly across the case study factories. We observed sporadic and in some cases very limited use of protective masks in each of the factories during our facility tours. The manager interviews reinforced these observations with a high level of concern over the continued lack of proper personal protective equipment (PPE) usage among workers. However, half of the factories reported improvements in PPE usage over the last year, with one manager suggesting that usage is up 80% since last year. The cleaning stations continue to be located in close proximity to other work areas such as machine operators, and in one case, they were located at the center of sewing activity. This remains problematic because the workers surrounding the cleaning stations are not properly protected from the vapors, causing an additional layer of risk beyond the limited PPE use among the cleaners themselves. During the factory tours, we also continued to see dust masks in use, even though these masks are not protective of chemical vapors.

At the baseline assessment, there were no eye wash facilities present in any of the case study factories. In the first follow-up assessment, eye wash precautions were available to workers at each of the factories, which varied from eye wash bottles to full-scale stations. There were no additional changes to the availability of eye wash stations during this follow-up.

There continued to be no specific official policy at the majority of the factories that would exclude pregnant women from working at the cleaning stations. Only one factory had a policy in place whereby pregnant women were reassigned to other work stations. However, at this factory, the cleaning stations were located in the middle of the machine operator space, which suggests that operators within the vicinity of the cleaning stations would be both effected and unprotected. Another factory noted that although they don't have a specific policy to keep pregnant women away from the chemicals, the workers are trained about the consequences of chemical sprays for a developing fetus and could choose to be reassigned.

### Mechanical Hazards

There were no major changes to the factory operations that significantly impacted the mechanical hazards faced by workers over the past year. Most managers continued to cite the sewing operations as the most common cause of worker injuries (needle pricks), while the cutting machines (where present) were typically cited as the most dangerous. Old machinery and broken safety controls such as finger guards continue to be a problem at the factories, although a number of factories had replaced equipment in the last year. However, according to the managers, the workers still reject the safety equipment available to them on the new machines, making a much smaller difference than would be anticipated if the new machines had fully functioning safety controls. Overall, managers continued to complain of the difficulties of getting workers to properly use the equipment available to them, and noted that workers often break or hide equipment to avoid using it. Factories continue to use a trial and error approach to finding safety equipment that fit worker preferences, and one manager suggested that BWH could provide support in communicating with PPE supplier companies about appropriate equipment.

Education and training of workers in mitigating mechanical hazards remains a problem, although there has been an increase in training efforts over the previous year. Managers report using verbal prompts by OSH and floor managers and the loudspeaker system to remind workers about safety issues. However, one manager noted that staying on top of workers is more difficult for operators because there are so many of them, as opposed to the smaller number of cleaners. According to management, workers complain that the equipment is uncomfortable and often times too big for the purpose. However, another important aspect of safety rejections continued to be the simple fact that these equipment slow workers down, and are rejected by some workers because they reduce productivity and ultimately wages that are tied to the piece rate system.

### Air Pollution Exposure

Poor air quality in and around the factory sites are the result of a range of local sources, including diesel generators, boilers, trash burning, and dense urban traffic, especially from old model diesel vehicles that commonly clog the streets of Haiti. All of the factories run backup diesel generators to manage uneven energy supply issues. The factories also increasingly rely on scrap and trash burning boilers to produce steam, which in some cases are located in close proximity to open bay doors where workers are present.

Although data on air pollution was unavailable at baseline, our team conducted air sampling of PM<sub>2.5</sub> (particulate matter <2.5µm in diameter) during the second and third year follow-up at background sites in Petion-Ville, inside the factories, and in traffic (both within and outside the



Port au Prince area). Exposure to PM<sub>2.5</sub> has been linked to negative cardiovascular and respiratory health effects, and can be especially harmful to asthmatics, children, and the elderly. For this reason, the World Health Organization recommends that background concentrations of PM<sub>2.5</sub> not exceed 25µg/m<sup>3</sup> over a 24 hour period (WHO 2006), and the US Environmental Protection Agency regulates PM<sub>2.5</sub> to 35 µg/m<sup>3</sup> over the same time period (US EPA 2012).

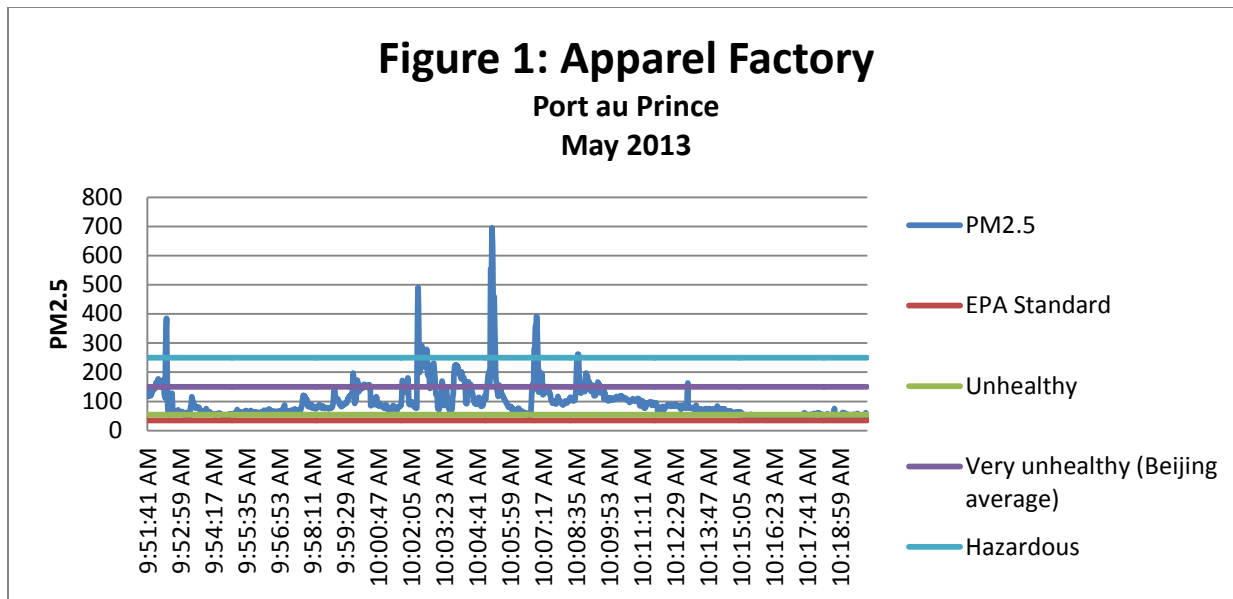
The observations made in Haiti over the two year period were compared to PM<sub>2.5</sub> levels collected using similar methods in a study of US trucking terminals (Davis et al. 2006) in Table 2, which tend to be located within dense urban transportation networks in close proximity to highway traffic and other polluting industries. For additional perspective, this table also provides a comparison to PM<sub>2.5</sub> levels observed at residential, commercial, and industrial background sites in Mexico City in the early 2000s (Vega et al. 2004). During the 2012 round of air monitoring, filter samples were collected, and values in the table are scaled to approximate an average eight hour work day. In contrast, real-time monitoring was conducted in 2013 using a Dustrak sampler, and values in the table represent average levels observed over each sampling period. Assuming these real-time observations remain relatively constant over the eight hour workday, these data can be roughly compared across the two periods.

**Table 2: PM<sub>2.5</sub> Levels (µg/m<sup>3</sup>) in Haiti and Comparisons**

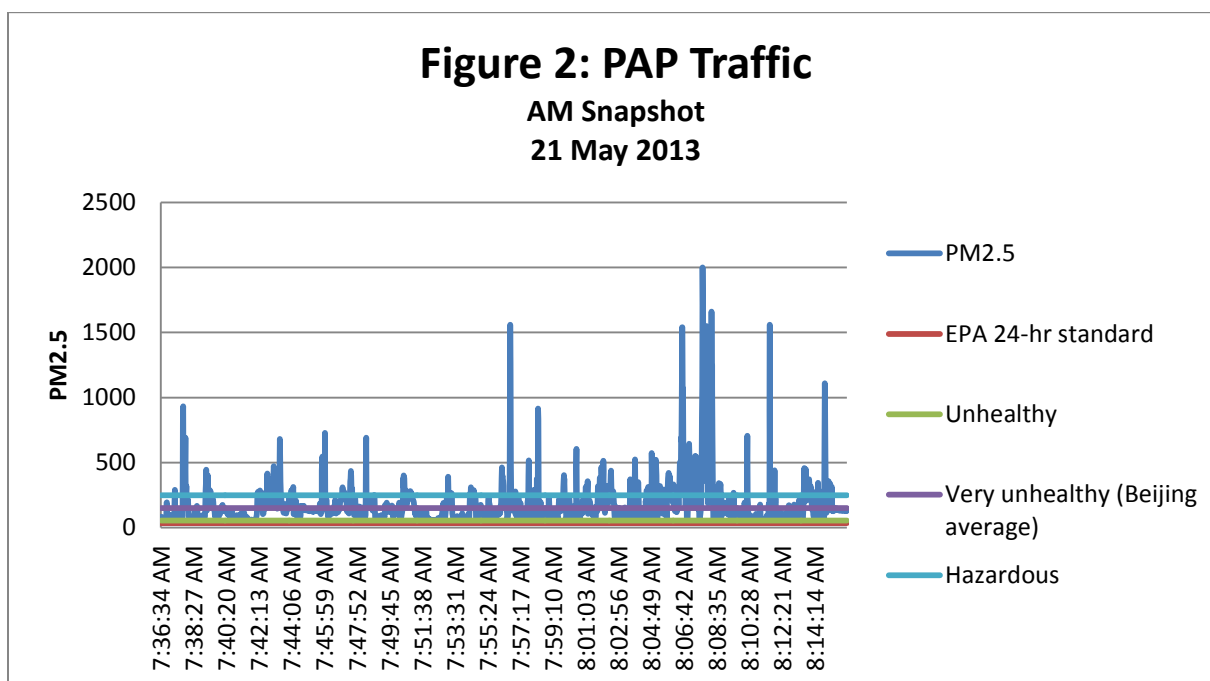
	Haiti				US trucking terminals		Mexico City background		
	Background (Petion-Ville)	Traffic (Port Au Prince)	Traffic (Outside Port Au Prince)	Apparel factory	Loading dock	Background	Industrial	Commercial	Residential
2012	38.7 (n=4)	260.3 (n=2)	n/a	50.7 (n=1)	16.4	11.9	50.8	31.3	22.9
2013	34.5 (n=4)	211.8 (n=11)	156.6 (n=4)	49.7 (n=7)					

The background monitoring of PM<sub>2.5</sub> in Petion-Ville located on the outskirts of Port au Prince produced similar results across the two years (slightly lower in 2013). Observed levels surpassed the 24 hour standards for both the WHO and EPA in 2012. Interestingly, these levels were over three times higher than those observed at background sites around US trucking terminals, and were higher than similar observations made in commercial and residential areas of Mexico City.

PM<sub>2.5</sub> levels inside apparel factories also produced similar results across the two year period. Figure 1 provides an example of real-time PM<sub>2.5</sub> observations made in one case study factory in 2013, including benchmarks for various EPA health threat designations. Average observed levels were over three times higher than PM<sub>2.5</sub> on the loading docks of US trucking terminals, and were similar to levels observed at an industrial site in Mexico City.



PM<sub>2.5</sub> levels observed driving through traffic around Port au Prince were especially alarming, and represent an extraordinary air pollution hotspot for commuting workers and the general population in the country. Figure 2 provides a snapshot of a brief morning commute through Port au Prince traffic in 2013. Traffic monitoring was also conducted outside of Port au Prince during the most recent site visits. Although PM<sub>2.5</sub> levels are approximately 25% lower outside of Port au Prince, they continue to represent a serious public health threat.



This evidence suggests that poor air quality deserves much greater attention in Haiti than it currently receives. Based on the high PM<sub>2.5</sub> levels observed, it is very likely that air pollution is a

major cause of acute and chronic worker illnesses. Although it is not surprising that air pollution concerns have been ignored given the larger challenges related to poverty, sanitation, and infectious diseases in Haiti, it clearly is a public health threat that deserves greater attention.

### Musculoskeletal Stressors

There were a number of concerns about musculoskeletal stressors related to repetitive movement and poor ergonomic conditions that were raised during both the baseline and second site visits. These included the availability of break space and bathroom facilities, the training and use of proper safety equipment such as fatigue mats, and poor seating.

As of the previous site visit, all case study factories had some break space available to workers, although it varied greatly in quality and accessibility. One factory was using an indoor converted space as a cafeteria, but it was not at the time actively used by workers because there was no food available for purchase nearby. However, this year the manager reported that the break space is overflowing with workers after they contracted with local food vendors to make lunch available for purchase just outside the cafeteria door. Another factory faced a similar space limitation, noting that the area designated as the cafeteria was too small to accommodate all workers. Two other factories were in the process of constructing new or re-working existing spaces to accommodate onsite cafeterias. The factory that previously reported to be in the process of constructing a 'mart' where workers could purchase necessities at wholesale on wage credit was no longer in the works. In the SONAPI industrial park where three of the case factories are located, there are continued discussions of building an external cafeteria that would service all workers in the park, but no further progress had been made on this project. The quantity and quality of bathroom facilities were unchanged over the previous assessment and continue to be problematic. Overall, providing break and bathroom space to workers continues to present a major challenge to management given the limited space and configuration of the factory buildings and the high cost of implementation.

The use of fatigue mats and back support belts was sporadic at best. One factory taped fatigue mats to the floor to prevent workers from kicking them out of the way. During that same factory tour, we observed workers standing to the side of the taped mats. Managers also reported difficulty convincing workers lifting heavy materials to use the back support belts available to them. Although the seating available to workers in most factories was still deficient, new chairs were available at one factory, and a second reported that 25% of chairs had been replaced in the last year. Despite these improvements in seating at some of the factories, the seating available to the majority of workers continues to represent a challenge,

and it is not surprising that backaches were noted by managers as a major source of worker health complaints.

### Heat Stress

In the baseline assessment, it was difficult to determine the impact of temperature on workers because there was no temperature monitoring data available. However, BWH began collecting temperature data inside the factories during the winter of 2011, providing an evaluative tool for assessing changing temperature conditions at the factories. Also notable is the fact that two of the case factories began collecting their own temperature monitoring data, and another reported plans to start such environmental monitoring soon, all as a proactive measure to anticipate and remedy temperature issues before reaching the point of non-compliance during the BWH assessments.

Better Work recommends a 30<sup>0</sup>C maximum temperature level inside the factory buildings. Although the average temperature observed inside the case study factories was 30<sup>0</sup>C in 2011 (29<sup>0</sup>C in 2012), half of the indoor measurements over both periods were above the recommended limit. Furthermore, 70% of the indoor temperature samples were higher than the outdoor temperature observed at the same time in 2011 (66% in 2012), while 25% were more than 3<sup>0</sup>C higher and 17% were more than 5<sup>0</sup>C higher in 2011. On average, temperatures in the pressing areas were the most elevated over outdoor temperature levels, with an average increase of 3.2<sup>0</sup>C over the outside in 2011. This differential, along with the fact that temperature levels were already at the BW max during the cooler months of the year, suggests that heat represents a major occupational hazard in the warmer months. The facility tours provided further evidence of stifling heat inside the case factories.

All of the managers voiced some concern over temperature levels, and each of the factories had experimented with remedial measures at varying degrees of cost to reduce temperature levels inside the factories. These included painting/insulating the roof, large industrial fans, switching to less heat producing lighting, as well as more complex engineering solutions to circulate cooler air down to the work spaces. The managers reported that the solutions experimented with did in fact reduce temperature levels on the order of 2-4<sup>0</sup>C, but not enough to make a dent in BWH non-compliance. There was a general frustration with BW expectations that they believed were not feasible given Haiti's climate.

### Noise Exposure

The major sources of noise exposure to workers inside the apparel factories were identified as the operation of machinery, especially older sewing machines, and the diesel generators. Poorly constructed buildings and the lack of wall and roof insulation were noted to contribute to high levels of indoor noise. In the baseline assessment, it was difficult to determine the impact of noise on workers because there was no noise monitoring data available. However, BWH began collecting noise data inside the factories in 2011, providing an evaluative tool for assessing the potential impact of occupational noise at the factories. Also notable is the fact that two of the case factories began collecting their own noise monitoring data, and another reported plans to start such environmental monitoring soon, all as a proactive measure to anticipate and remedy noise issues before reaching the point of non-compliance during the BWH assessments.

BW recommends a 90 decibel (dB) limit for noise, and average noise levels aggregated across all of factories and work locations was just under this at 89dB in 2011. During this same monitoring campaign, two of the five factories recorded average noise levels above that limit, although it is unclear whether noise data from the loudest recorded factory might have been due to the music played over the loudspeakers for workers. Not surprisingly, the 2011 data singled out the sewing area as the loudest work space on average across the factories, with estimated average noise levels above the BW limit (92.5dB). In 2012, the noise monitoring data showed much improvement. Although a handful of individual noise observations at the case study factories continued to remain above the BW limit, all average work area levels (including the sewing area) were now below the recommended 90dB.

This improvement in noise over the previous period is likely the result of two major factors. First, factories became more aware of this issue as a result of non-compliance during the first round of monitoring and took basic remedial measures such as limiting noise from the loudspeakers or making changes to equipment locations. This point was reinforced by two factories that reported to have stopped or limited music over the loudspeakers in an attempt to reduce ambient noise. Second, the replacement of old machines noted to have occurred at a number of the factories had a positive impact on decreasing noise levels at these factories. As factories continue to react to BWH non-compliance points and replace old machinery, it is likely that the positive trend in noise reduction will continue.

## **BRIEF**

Summary of 2013 OSH Case Study Report and Recommendations

Mary Davis

### **The Case for Change in Haiti**

The attached report summarizes the results in a continuing longitudinal assessment of a select group of Haitian apparel factories participating in Better Work Haiti (BWH) being conducted by Tufts University. The long term goals of this study are to explore the potential for change in occupational safety and health (OSH) in Haiti's apparel sector, and more specifically the role of BWH in improving OSH conditions over time. It is the hope that this longitudinal dataset will help identify the drivers of change in BWH apparel factories, and the Haitian context for inhibiting or promoting these changes.

During an annual series of manager interviews and factory tours, we focused on a number of specific occupational health and safety concerns identified as potentially hazardous to workers in the Haitian apparel sector (Davis 2011; European Agency for Safety and Health at Work 2011; International Labour Office 2010; US Department of Labor 2011): 1) toxic chemical exposure from the use of cleaning agents, 2) mechanical hazards related to equipment operation, 3) air pollution exposure from internal sources such as aerosolized cotton and fiber dust, as well as external sources from diesel generators and poor local air quality, 4) musculoskeletal stressors related to poor ergonomic conditions, 5) heat stress, and 6) noise exposure. We also focused on additional key OSH indicators from the compliance points noted in the biannual synthesis reports.

When viewed solely from the perspective of the biannual synthesis report, OSH has stubbornly remained the largest source of non-compliance for apparel factories participating in the BWH program. Certainly there is some cause for concern regarding the failure of these factories to meet international and national standards for safe working conditions despite the active involvement of BWH over a number of years. However, this failure to comply should also be viewed with caution, as many complicating factors have both constrained the activities of BWH and limited the ability of Haitian apparel factories to improve working conditions over this time period.

Haiti represents a particularly challenging case for BW because many of the underlying factors identified in the literature as necessary conditions for positive change in working conditions are not present. These factors include a stable economic environment both within the industry and country-wide, reliable and non-corrupt government institutions, human capital in the form of trained and experienced OSH managers, and the active participation of workers in the decision-

making process. The case for change in Haiti is further exacerbated by ‘the history of distrust between workers and employers (ILO 2013, pg 10).’

The challenge for BWH is to promote long-term sustainable change within the context of a system that is not yet capable of supporting it. To complicate matters, many of the factors needed to lay the groundwork for effective change in working conditions are outside the authority of the BW program. BWH has no more control over the unstable economic and governing systems of Haiti than they do over the poor infrastructure, although each of these factors has vast consequences for Haitian apparel and the ability to invest in working conditions. For example, many managers criticized BWH for its interpretation of the national minimum wage law. However, it was also clear that BWH was not receiving adequate guidance from the Haitian government on how to interpret and apply the minimum wage law to the apparel industry. Although the overall economic and governing system in Haiti are outside the control of BWH, it is important to recognize the potential that the program represents for increasing Haitian apparel’s competitive advantage in the world market. For example, managers noted that participation in BW provided much needed credibility for the Haitian factories and represented a draw for buyers.

Despite these challenges, BWH can and does effect change in a key number of areas within their authority, such as improving human capital through OSH training programs, facilitating worker involvement through promoting PICCs, OSH committees, and peaceful unionization efforts, and reducing the level of mistrust by improving communication between workers and management. In the year since the previous case study report, BWH has increasingly promoted OSH training efforts as a way to improve human capital, providing significantly more training for both workers and managers in OSH. Despite this effort, a troublingly high rate of turnover in middle-management OSH staff was observed at the case study factories. This is exacerbated by the already high rate of turnover among apparel workers, both of which complicate efforts by BWH to increase OSH human capital through training efforts.

BWH has actively promoted the involvement of workers through PICCs, OSH committees, and unionization efforts. In this third round of site visits, all case study factors had an actively functioning OSH committee that involved workers, and 50% of all Haitian apparel factories are now unionized. By comparison, when the baseline assessment was completed in 2011, there were no existing OSH committees, and only one factory in all of Haiti was unionized.

In addition to these external factors underlying effective change that are largely beyond the control of BWH, it is also important to recognize that compliance as judged in the biannual synthesis reports represent **reported** change (not actual change), which is likely exaggerated due to the increasing amount of data collected by the BWH Enterprise Advisors (EA) and made available for reporting over time. For example, noise and temperature data inside the factories

have only recently begun to be collected, with only two years of data available at the time of this report. Therefore, it is difficult to evaluate compliance over time in the Working Environment category based on the limited observations available. Also, as the factories come into compliance with the most basic OSH conditions, it allows the BWH EAs to assess additional layers of compliance that may have been previously ignored in an effort to focus on these more fundamental improvements. This additional scrutiny may cause fluctuations in compliance points for factories over time. Managers also noted a concern over inconsistencies in how the BWH EAs interpreted the law, and were further troubled by differences in EA worker interview methods. In general, managers felt that the compliance assessments were sometimes delivered unfairly as they depended in part on the judgment of EAs, although much of this concern was allayed by the fact that the process allowed them a period to review and comment on the assessments before the results were made public.

Due to these many factors complicating the underlying goals of the BW program in Haiti, the more detailed assessment provided by this longitudinal case study is critical to understanding how involvement by BWH has resulted in important changes in OSH conditions that are not captured by the aggregate numbers provided in the biannual synthesis report. Continued follow-up of the case study factories will be essential to understanding changes over time.

#### OSH improvements observed at the case study factories compared to previous assessment

- Improvements in building infrastructure, new equipment, and quality break space at some case factories
- Increased number of BW-sponsored OSH training efforts
- Managers continue to report greater awareness of safety issues among workers and increased personal protective equipment (PPE) usage
- Continued environmental monitoring data available to assess changes in conditions over time
- OSH committees now present at all factories; managers report increased communication and interaction with workers through these committees
- Second Health Fair popular with workers and raised awareness of OSH issues; however, participation reportedly outpaced capacity, suggesting BW should expand Health Fair to additional locations and/or offer multiple times a year

#### OSH deficits observed at the case study factories compared to previous assessment

- Despite improvements in worker awareness of safety noted above, low and sporadic PPE usage rates continues to be problematic
- High turnover in OSH middle management and apparel workers impedes BW effort to increase human capital through training efforts



- Managers continue to remain largely unaware of many basic worker hazards, such as pregnant workers' exposure to chemicals in the vicinity of the cleaning stations
- Reporting systems for accidents, illnesses, and absenteeism still not sufficiently developed to evaluate the severity of OSH-related problems at the factories
- Strained relationship between the factory managers and BWH staff over efforts to interpret and report non-compliance with the minimum wage
- Physical building constraints continue to limit capacity to make OSH improvements at some case factories

Based on the findings of this report, we provide a number of preliminary recommendations and priorities for Better Work to improve OSH conditions in Haitian apparel factories. However, it is important to recognize that continued follow-up will be necessary before a more thorough evaluation of recommendations and findings can be provided.

**Continue to support efforts to increase worker participation through OSH committees and peaceful unionization efforts.** Given the level of mistrust between workers and management, as well as Haiti's troubled past of labor-related violence, it is essential that BWH continue to facilitate communication between workers and managers in a way that supports both worker participation and the growth of the industry. It is essential that workers contribute to the discussion about safety in the factories, and that they have a forum for presenting their OSH concerns to management in a peaceful fashion.

**Continue to collect environmental data so that future assessments can evaluate critical improvements in working conditions.** Noise, temperature, and limited air quality data are now available for a two year period. These data provide limited evidence of improving environmental conditions inside the case factories, although observations from the facility tours (such as intense heat) showed a continuing problem. BWH should continue to collect these data, which are essential to evaluate improvements in OSH conditions over time.

**Facilitate the development of a reporting system for accidents, illnesses, and absenteeism among factory workers.** These data are critical to understanding OSH conditions at the factories, but are not currently reported or recorded in any kind of analyzable format. This information is essential to understanding changes in OSH conditions over time, and it is recommended that BWH support a uniform reporting framework for accidents, illnesses, and absenteeism across the factories.

**Continue to provide frequent OSH training opportunities for both managers and workers.** These efforts are essential to improving the human capital needed to support long-term change in OSH in the Haitian apparel industry, especially in light of the high turnover rates among both managers and workers.

**Better Work should explore and facilitate alternative low cost solutions to OSH non-compliance points where possible.** Physical space as well as economic constraints make expensive solutions and retrofits infeasible for most factories. It is recommended that BWH help develop innovative and low-cost solutions to OSH non-compliance points.

**Better Work should review and consider management complaints about inconsistency in the assessment process.** To the extent possible, compliance assessments should remain free of value judgment and the methods of inquiry should consistently follow standard practices of inquiry.

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