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Effective protection of workers' health and safety in global supply chains

By Garrett D. Brown, MPH, CIH

<u>Abstract</u>

Over the last 20 years, manufacturing of a wide variety of consumer goods in the global economy has shifted from relatively well-regulated, high wage and often unionized factories in the developed world to basically unregulated, low wage and rarely unionized factories in the developing world. The prevailing supply chain approach for OHS protections for workers is to incorporate them into the international brands' corporate social responsibility (CSR) programs in the hopes that there will be a "trickle-down" effect of corporate-level occupational health and safety (OHS) protections to the factory floors of the brands' suppliers. This approach has resulted in only marginal improvements of working conditions in global supply chains. A different approach – exemplified by the work of the Maguiladora Health and Safety Support Network (MHSSN) – is a worker-centered approach where the goal is to create knowledgeable, informed and active workers in factories at all tiers of the global supply chains who are familiar with OHS concepts, hazards and controls, as well as their rights under the law, and who are able to speak and act in their own name to protect their own health and safety on the job. The article highlights case studies of OHS capacity-building activities by the MHSSN and partner organizations with workers in five countries: Mexico, Indonesia, China, the Dominican Republic and Bangladesh.

Text

Over the last 20 years, manufacturing of a wide variety of consumer goods in the global economy has shifted from relatively well-regulated, high wage and often unionized factories in the developed world to basically unregulated, low wage and rarely unionized factories in the developing world. Protecting workers' health and safety in these countries where governments frequently lack the political will or the resources (financial, human and technical) to protect workers within their borders – and are often willing to sacrifice the safety and health of the national workforce for foreign investment required for economic development – is a significant challenge.

However, protecting workers under these circumstances is precisely the goal for the global labor movement and for occupational health and safety (OHS) professionals, both to prevent the immediate adverse impacts on the directly affected workers, and to counteract the "downward pressure" that bad conditions exert on all workplaces in the global economy.

The prevailing supply chain approach for OHS protections for workers is to incorporate them into the international brands' corporate social responsibility (CSR) programs in the hopes that there will be a "trickle-down" effect of corporate-level OHS protections to the factory floors of the brands' suppliers. This approach has resulted in only marginal improvements of working conditions in global supply chains operating in the real world context of corrupt, ineffective governments, harsh employers who are squeezed themselves by international brands, and desperately poor, vulnerable workers without feasible alternative jobs.

A different approach – exemplified by the work of the Maquiladora Health and Safety Support Network (MHSSN) – is a worker-centered approach where the objectives are to create knowledgeable, informed and active workers in factories at all tiers of the global supply chains who are familiar with OHS concepts, hazards and controls, as well as their rights under the law, and who are able to speak and act in their own name to protect their own health and safety on the job.

Characteristics of Supply Chains in the Global Economy

Today 51 of the largest 100 economies on the planet are not countries but rather transnational corporations. These corporations control 70% of world trade, one-third of all manufacturing exports, three-fourths of trade in commodities, and four-fifths of technical and management services (Dunning and Lundan, 2008; Mander, 2014).

Many of these corporations have replaced manufacturing facilities in the developed world with multi-tiered supply chains that stretch the length and breadth of the globe. For example, Nike has 744 factories in 43 countries with close to a million workers (NIKE, 2014). The Gap has 1,300 factories in 50 countries sending apparel to its retail stores in Europe and North America (Gap, 2012). Disney, a major seller of toys, has licenses with 5,500 factories in 70 countries and several million workers (Disney, 2014).

But none of the workers in these supply chain factories are directly employed by Nike, The Gap or Disney. Instead they are employed by tiers of suppliers, sub-contractors and, increasingly, temporary help or contingent worker agencies in every tier of the supply chain.

Not surprisingly, the working conditions in global supply chains are frequently illegal, unsafe and unhealthy, including the following (AMRC, 1998; AMRC, 2012; AMRC, 2013; Brown, 1999; Brown, 2002; Brown, 2004; Brown, 2005a; Brown, 2009a; Brown, 2010; Brown and O'Rourke, 2007; Chan, 2013; Cha, Ngai, Seldon, 2013; Duhigg and Barboza, 2012; Goria, 2012; Hale and Wills, 2011; Loomis, 2015; Luethje, Hurtgen, Pawlicki, Sproll, 2013; Ngai and Chan, 2012; Pringle and Frost, 2003; Takaro, Arroyo, Brown, Brumis, Knight, 1999):

- long hours of work, often in violation of national law;
- low pay, often below the national average for their industrial sector and well below a "living wage;"

- pay that is delayed, under-paid, or never paid in cases of "wage theft" by employers;
- unsafe and unhealthy conditions, including serious uncontrolled hazards;
- physical abuse and sexual harassment;
- child labor; and
- lack of basic legal and human rights.

Documentation of these conditions – often not disputed by the international brands but described as being not representative of the entire supply chain and quickly being remediated wherever discovered – comes in four general categories: 1) news media reports; 2) investigative reports from non-governmental organizations; 3) investigative reports from multi-stakeholder initiatives (MSI) that include brands; and 4) the brands' own corporate social responsibility reports.

Workers in global supply chains are forced to tolerate these conditions because they are so poor that they cannot refuse any work, no matter how illegal, unsafe or unhealthy. According to the latest available statistics from the International Labor Organization and World Bank, the global workforce lives in a context of widespread poverty and misery (ILO, 2013; ILO, 2014a, ILO, 2014b, ILO, 2015; World Bank, 2015):

- In 2011, one billion people on the planet lived on less than US\$1.25 a day, the definition of "extreme poverty;"
- In 26 countries, those living in extreme poverty constituted more than 40% of the entire population;
- In 2013, 375 million workers world-wide lived on less than \$1.25 a day, with 839 million workers surviving on less than \$2 a day;
- In 2013, there were 202 million unemployed workers around the globe, with 74.5 million being young people between the ages of 15 and 24;
- In 2012, there were 21 million people around the world in the condition of forced labor, producing \$150 billion in illegal profits;
- In 2013, there were 232 million international migrants (not including the tens of millions of internal migrants in China and other countries), an increase of 19% between 2010 and 2013, and with 50% being women; and finally
- In 2013, there were 168 million children between 5 and 17 years of age at work in the global economy, with 85 million of these children performing "hazardous work."

At the same time, the major global corporations frequently have resources beyond those of national governments, which gives them tremendous political influence, and the power to pursue and achieve their private objectives.

For example, Nike's fiscal 2014 sales revenues were \$27.8 billion, which was larger than the Gross Domestic Product (GDP) of Estonia (\$26.4 billion) or El Salvador (\$25.1 billion), and larger than the national government's budget in Bulgaria (\$19.6 billion) or Slovenia (\$20 billion) (CIA, 2015a; CIA, 2015b; Nike, 2014).

Apple's 2014 sales revenues clocked in at \$182.8 billion, greater than the GDP of Kuwait (\$179.3 billion), and larger than the budget of Finland's government (\$146.3 billion) and just shy of India's national government budget of \$185.7 billion (CIA, 2015a; CIA, 2015b; Apple, 2014).

Walmart's 2014 sales revenue was \$485.6 billion, larger than the GDP of Austria (\$436.1 billion) or Iran (\$402.7 billion) and much greater than the national budget of Russia (\$416.5 billion) or the Netherlands (\$413.8 billion) (CIA, 2015a; CIA, 2015b; Walmart, 2014).

Under these conditions, protecting the health and safety of vulnerable workers in global supply chains is a major challenge.

CSR Approach and Its Failure

In response to the "anti-sweatshop" campaigns mounted by students and others starting in the early 1990s, global corporations began adopting corporate codes of conduct and reporting their implementation first by in-house audits, and then by use of for-profit, third-party monitoring firms.

CSR started out as a cottage industry, but became a \$15 billion-plus global industry with an extensive culture of conferences, magazines, newsletters, books and professional associations (Smith, 2014). Ironically, an industry set up to fix problems in outsourced supply chain production is now itself out-sourcing critical components of the CSR system, including on-site factory inspections and awarding of "certifications" of safe and lawful working conditions.

The CSR industry and factory suppliers, mindful that future work depends on reported compliance with the brands' corporate codes of conduct, has found ingenious methods of "gaming the system" of CSR audits and providing "plausible denials" when illegal and unsafe conditions are inevitably brought to light. The vast majority of CSR programs have an impact, if any, only on the "Tier 1" suppliers, like Foxconn in electronics or Pou Chen in sports shoes, and virtually no impact on their sub-contractors, or the sub-contractors (Barrientos, 2013; Barrientos and Smith, 2007; Brown, 2007; Brown and O'Rourke, 2003; Casey, 2006; China Labor Watch, 2011-2015; Cole and Chan, 2015; Confino, 2013; Loomis, 2015; Nova and Shapiro, 2012-14; SACOM, 2013; SOMO, 2013; SOMO, 2013a; SOMO, 2015).

The CSR system has failed to make more than marginal improvements in actual factory working conditions over the last 20 years because of three major problems:

- the dominant "sweatshop business model" in all global supply chains;
- corrupt and ineffective CSR or "social" monitoring; and
- the near-zero participation of workers in the development, implementation and verification of factory-level CSR or health and safety programs.

The supply chains' business model has several aspects that work against effective factory-level programs (Bader, 2014; Bader, 2015; Cole and Chan, 2015; Confino, 2013; Fleming and Jones, 2013; Karnani, 2010; Loomis, 2015; Lyon and Karnani, 2010; MSN, 2007; O'Rourke and Brown, 2003; SACOM, 2013; SOMO, 2013a; SOMO, 2015; Wells, 2007).

First is the brands' sourcing department's "iron triangle" of the lowest possible price, fastest possible delivery and highest possible quality that almost always trumps all other considerations, including workers' safety and other CSR goals.

Another is the "race to the bottom" in production costs where brands pit countries, regions, cities and contractors against one another in a pitiless drive to reduce costs to the lowest possible level regardless of the impact on the workforce.

Moreover, there is a relentless effort to cut ever deeper, year after year, even with suppliers whose "rock bottom" costs won them the contract in the first place. Suppliers, and their subcontractors down the chain, are routinely told that they will be paid less next year for their products, and less still the year following – and if they do not care for this arrangement, then the business will go elsewhere.

The result of this global business model – now combined with mandatory brand-required CSR projects for which the brands rarely provide any financial support – is that the suppliers and subcontractors have ever shrinking resources to pay for code-compliant production, including legally required overtime and benefits, or "non-productive" activities like employee safety trainings, exhaust ventilation to remove airborne chemicals, or machinery lockout/tagout programs to prevention amputations.

Even if the contractors and their subcontractors had the desire and political will to implement effective safety programs, few of them have the resources necessary to accomplish this. Instead supply chain employers mount CSR and OHS programs for "show," with the main benefit being marketing and public relations gains for the corporate brands and retailers.

The CSR monitoring that is supposed to detect and correct these problems has been almost completely ineffective, and is often corrupt. These systems have been successfully "gamed" by all involved – brands, contractors, subcontractors and auditors – with the only losers being the workers (Anner, 2012; Anner,, Blair and Blasi, 2013; BBC, 2014; China Labor Watch, 2009; China Labor Watch, 2011-15; Claeson, 2015; Clean Clothes Campaign, 2005; Clean Clothes Campaign, 2008; Clifford and Greenhouse, 2013; Esbenshade, 2004; Frank, 2008; Fleming and Jones, 2013; Gould, 2005; Harney, 2008; He and Perloff, 2013; ILRF, 2015; Locke, Qin, Brause, 2007; Locke and Romis, 2010; Loomis, 2015; O'Rourke, 2000; Plambeck and Taylor, 2014; SOMO, 2013; SOMO, 2013a; SOMO, 2015; Walsh and Greenhouse, 2012).

Most auditors do not have anywhere near the training required – especially in OHS – to make a valid determination of the sufficiency and effectiveness of the factory-level

programs. The standard monitoring, usually announced in advance and often no more than short, "once-over-lightly" or even "drive-by" inspections, are conducted by forprofit enterprises that know their future business depends on satisfying the needs/expectations of their current clients. Ironically, many CSR auditing companies now out-source the actual field inspections and program evaluations to even less qualified and less responsible subcontractors.

Two of the most well known examples of CSR audits that resulted in certifications of factories that subsequently had major disasters killing and injuring workers are the Ali Enterprise factory in Pakistan and the Rana Plaza factory building in Bangladesh.

At Ali Enterprise, the factory received a "SA 8000" certification just three weeks before an entirely predictable and preventable fire killed 25% of the workforce, 289 workers who were burned to death in December 2012 (Claeson, 2015; ILRF, 2012; SOMO, 2013). The certification from Social Accounting International was subcontracted out to the Italian-based RINA company, who then subcontracted the actual factory inspection in Pakistan to the RI&CA company, which has certified more than 100 factories in Pakistan. Neither SAI nor RINA ever visited the factory. Like all CSR auditing, RI&CA's inspection report generating the certification has never been publicly released.

At Rana Plaza, two of the five garment factories in the building had received a safefactory certification from the European Business Social Compliance Initiative (BSCI) prior to the collapse of the building in April 2013 that killed 1,138 workers and injured 2,000 more (Brown, 2015; Claeson, 2015). The BSCI certification does not address issues of building structural integrity – a major issue in Bangladesh, which is second only to China in global garment production and exported \$24 billion in garments in 2014.

A third famous example of CSR certifications failing to protect workers is the case of Apple's supplier Foxconn. In January 2012, the *New York Times* ran a series of stories on working conditions in Chinese factories producing Apple products that documented illegal, unsafe and unhealthy conditions despite Apple's much-publicized CSR program and promises (Duhigg and Barboza, 2012).

Apple immediately joined the business-friendly Fair Labor Association and paid for the FLA to conduct audits of three supplier factories run in China by the Taiwan-based Foxconn corporation. In March 2012, the FLA issued reports on the factories that noted that two of three had been award "OHSAS 18001" certifications for their occupational health and safety management systems when, in fact, no functional OHSMS system existed in either factory (Fair Labor Association, 2012). No explanation for this was offered by the auditing company – reportedly the Swiss-based SGS – to the FLA, or by Foxconn or Apple.

The FLA report listed several dozen uncorrected hazards, program deficiencies and lack of implementation in the report's appendices. The report concluded:

- "Although the factory has obtained an OHSAS 18001 certificate, and Health & Safety system is well developed as far as written policy and procedures are concerned, the implementation of the system is not effective in many areas, arguably due to the ineffectiveness of the HSE committee and of the methodology and tools used for internal audits and routine HSE inspections, along with the absence of an effective review process.
- Most managerial staff interviewed mentioned that these issues have never been raised during external OHSAS 18001 audits.
- No active worker representation and participation on HSE committee.
- No active system for encouraging workers to participate in ongoing HSE efforts."

Given the economic, political and social contexts in which global supply chains function, and the fatal laws of the CSR auditing systems, it is not surprising that media stories, NGO reports, MSI reports and even the brands' own CSR reports document continuing hazardous and illegal conditions in the global economy, and supply chains in particular.

Finally, none of the current CSR programs in global supply chains have real, as opposed to nominal, participation by shop-floor workers in the development and implementation of OHS programs (Brown, 2009). Part of the reason for this is precisely the high turn-over rate in supply chain factories caused by low wages, long hours and bad working conditions created by the brands' "sweatshop business model" itself.

As is well known in the OHS profession, workers play an essential and necessary element in effective, factory-level OHS programs that actually reduce or eliminate injuries, illnesses and fatalities. Workers in effective OHS programs play critical roles in conducting periodic inspections, investigations of incidents, development and verification of corrective actions, and in peer-to-peer training of coworkers. However, this level of worker participation is almost non-existent in global supply chain factories.

Worker-centered Approach

An alterative approach to supply chain CSR/OHS programs is to rely <u>less</u> on ever-more elaborate occupational health and safety management systems (OHSMS), metrics and external monitoring, and <u>more</u> on integrating meaningful worker participation into the key elements of effective programs – hazard identification, hazard elimination and controls, and worker training and education (Meredith and Brown, 1995; Brown, 2009).

Although "worker empowerment" and "worker participation" have become common "buzz words" for CSR/OHS programs in developed economies, the concepts have been given only lip service in global supply chain factories in the countries where the products are actually made.

If workers are to play a key role in OHS programs, then they must have the training, knowledge and information necessary to perform the tasks assigned to them. Workers at the factory-level must be able to speak and act in their own name in order to protect their health and safety on the job. This has been the goal of the Maquiladora Health & Safety Support Network since its founding in 1993.

The MHSSN which consists of approximately 400 occupational health professionals (mostly in the United States) who have put their name on a roster to donate their time and expertise to provide training, information and research, and technical assistance to worker organizations (unions, workers centers, injured worker/family survivor groups, women's and community organizations) in the developing world.

The Network has developed ongoing partnerships with the labor health education programs at the University of California at Berkeley and Los Angeles (the Labor Occupational Health Program in Berkeley and the Labor Occupational Safety and Health program in Los Angeles) to conduct many joint trainings over the last 20 years.

The MHSSN trainings have consisted of interactive, participatory teaching methods using literacy- and culture-appropriate materials to build on the knowledge and experience of the worker participants, and to provide them with the skills and information they need to conduct their own trainings and OHS activities in their workplaces and their communities.

Multiple trainings are usually done in order to reinforce the information gained and to provide participants with a sense of confidence and self-efficacy to conduct their own workshops. A binder of easy-to-understand materials in the language of the country where the training occurred is always generated, and often forms the basis of the participants' later workshops and educational activities.

Following the trainings, MHSSN volunteers have provided ongoing assistance with preparation of training materials, curriculum and lesson plans, as well as technical assistance in evaluating specific operations, hazards and controls in workplaces where training participants are involved.

The following are brief case studies of OHS capacity-building activities by the MHSSN partnering with worker organizations in five countries: Mexico, Indonesia, China, the Dominican Republic and Bangladesh.

Mexico

The impetus for the formation of the MHSSN in 1993 was the passage of the North American Free Trade Agreement (NAFTA) and the expectation, as occurred, that many manufacturing facilities would close in the United States and move operations to the US-Mexico border. Although OHS regulations in Mexico are roughly equivalent to those in the United States, there is no effective enforcement of OHS protections in Mexico (Brown, 1999; Brown, 2005a; Meredith and Brown, 1995; Multinational Monitor, 2000; Takaro, Arroyo, Brown, Brumis, Knight, 1999).

From 1993 to 2002, when drug trade-generated violence in Mexico made working there too dangerous, the MHSSN conducted a dozen trainings with worker and community organizations. Because there are few trade unions in the maquiladora sector, and almost none that are member-controlled, the partners for these trainings on the Mexican side of the border from Tijuana to Matamoros, were community-based organizations in neighborhoods adjacent to the maquilas, women's and human rights organizations made up of workers from the maquiladoras.

The principal result of this activity was the development of a corps of approximately 40-45 women workers all along the 2,000-mile border who used the training binder and other materials to conduct their own workshops with co-workers and workers in other near-by facilities. The women trained by MHSSN also conducted activities in their workplaces to call attention to health and safety hazards on site and to collaborate with co-workers to seek employer action to reduce or eliminate the hazards (Meredith and Brown, 1995; MHSSN, 2015).

In October 2007, the MHSSN responded to a request from the Mexican Miners union and the United Steel Workers in the United States to assist miners at the historic Cananea copper mine in northern Sonora, Mexico (Brown, 2008; Zubieta, Brown, Cohen, Medina, 2009).

A multi-disciplinary and multi-national team of occupational health professionals conducted medical screenings, gathered work histories, identified health and safety hazards from an on-site inspection of the huge, 100-year-old open pit mine and large processing plants. The MHSSN team consisted of three occupational physicians, three industrial hygienists, a respiratory therapist and an occupational nurse, who were from Colombia, Mexico and the United States.

The MHSSN team generated a report on the health and safety hazards at the facility, the adverse impacts detectable in the workforce, and a series of recommendations to protect the lives and health of the miners (MHSSN, 2015). The unions held a press conference in Mexico City announcing the report, and met with senior officials of Mexico's workplace health and safety agency.

As a result of the publicity, the mine's owner, Grupo Mexico, contracted with engineering and OHS consulting firms to address all the findings of the MHSSN report and to improve conditions throughout the sprawling facility.

Indonesia

Following the fall of the 31-year dictatorship of President Suharto in Indonesia in 1999, there was an explosion of unions and labor rights non-governmental organizations in the country.

In June 2000, working with the LIPS labor rights organizations, the MHSSN conducted a training with representatives of 14 organizations – six unions and eight women's, labor

and human rights organization. In addition to classroom activities, the training involved field day exercises at a 7,800-worker sports shoe plant operated by a Korean company producing shoes for Nike (MHSSN, 2015).

Follow-up activities to the training included a meeting with participants in March 2001 by two of the MHSSN instructors, and a second full training in September 2001. The participants in the trainings went on to conduct their own OHS activities using the information and materials provided in the MHSSN events.

One of the unions participating in the June 2000 training, SBSI, used the training binder to produce an 80-page, pocket-size booklet on key OHS concepts, hazards and controls that had a printing of 15,000 copies financed by the German Friedrich Ebert Foundation.

China

Factory health and safety committees involving production workers are part of Chinese law, but rarely exist in the "foreign-owned enterprises" that are part of global supply chains in apparel, sportswear, toys and electronics.

In July 2001, the MHSSN partnered with the Hong Kong-based China Labor Support Network to put on a training in Dongguan, China, for managers and workers assigned to be part of joint health and safety committees in three sports shoe factories in the Pearl River Delta producing for Adidas, Nike and Reebok (Brown, 2003a; MHSSN, 2015; Szudy, O'Rourke, Brown, 2003).

In addition to 25 committee members of each of the three plants, participants included 17 members of Hong Kong-based labor rights NGOs. The four-day training was conducted entirely inside a 30,000-worker, Taiwanese-owned factory producing sports shoes for Adidas.

On the last day of the training, participants from the three factories met separately to draw up plans for the joint health and safety committees, and to develop a list of start-up activities in each facility. The Hong Kong-based NGOs also met to coordinate future activities, and to increase attention to OHS issues in their publications and campaigns.

In 2002, two of the MHSSN instructors visited one of the factories, Kong Tai Shoes (KTS) in Shenzhen, to evaluate progress in establishing the health and safety committee. Four of the worker members of the committee were also members of the factory's union's executive committee, who had been elected by the 5,000 workers in the facility in a democratic, multi-candidate election required by Reebok, the plant's customer.

The post-training evaluation at KTS indicated that health and safety committee's worker members had been active in conducting monthly inspections of the facility, identifying and implementing hazard controls, investigating incidents causing injuries and illnesses, and in conducting peer training with co-workers on a variety of OHS topics.

The Dominican Republic

In 2010, Knights Apparel of Spartanburg, SC, worked with the US-based Workers Rights Consortium (WRC) to establish the first genuinely "no sweat" garment factory in the Americas, Alta Gracia. The factory, an hour's drive into the countryside from the capital Santo Domingo, pays three times the prevailing garment wage in the DR, has a member-controlled union, and has a functioning joint health and safety committee (as required by Dominican law).

The MHSSN was asked by plant management and the union, via the WRC, to conduct a pre-operation safety inspection of the facility, which was an abandoned garment factory in an export processing zone (EPZ). MHSSN volunteers conducted a series of site visits before and after the opening of the factory, identifying hazards and verifying the required corrections in 2010 and 2011 (Brown, 2010a; MHSSN, 2015).

In June 2010, MHSSN members conducted a training with all members of the joint health and safety committee on site, and also a training with members of the trade union's federation that represents workers at other EPZ factories operating as part of global garment supply chains.

A Georgetown University research evaluation of the Alta Gracia factory in August 2014 confirmed that joint health and safety committee continued to function effectively in identifying and correcting new hazards and continuing to conduct its own trainings and educational activities (Kline and Soule, 2014).

Bangladesh

Years of terrible industrial disasters in Bangladesh – factory fires and building collapses – finally culminated in the Rana Plaza building collapse in April 2013 that killed 1,138 workers and injured 2,000 more (Brown, 2010; Brown, 2015; Claeson, 2015; ILRF, 2012; SOMO, 2013).

Arising from the disaster was a new form for protecting workers' health and safety in the ready made garment industry – the Bangladesh Accord on Fire and Building Safety. The Accord is a legally-binding agreement between 190 international clothing brands and retailers and two international unions (Industriall and Uni-Global) and their Bangladesh affiliates for a five-year program to find and fix electrical, fire and building structure hazards in approximately 1,800 garment factories with more than 2 million workers (Bangladesh Accord, 2013).

In October 2014, MHSSN members conducted a series of trainings and technical assistance sessions with the Dhaka staff of the Accord and with the leadership of the 14 unions (the Industrial Bangladesh Council or IBC unions) participating in the Accord. The MHSSN instructors were also able to accompany four Accord engineers on a follow-up inspection of a four-story, 750-worker factory in Dhaka.

The training of Accord staff – engineers and "case handlers" handling worker complaints – covered key OHS concepts and issues, as well as information on how to take and effectively investigate worker complaints. The IBC union training was focused on effective participation in joint factory health and safety committees (now required by Bangladeshi law), as well as information on basic OHS concepts in hazard recognition, evaluation and control.

The factory health and safety committees will be initiated in the second half of 2015, and Accord and IBC participants in the MHSSN trainings will be centrally involved in workshops and other trainings to build the capacity of both worker and management members of the committees (Bangladesh Accord, 2015).

At the same time, the MHSSN is working with three other California OHS organizations (the California Collaborative) to support an initiative to establish a "Worker-Community OHS Academy" that would provide training, information and materials to workers and their organizations in a variety of industrial sectors, as well as to community-based organizations made up of workers.

This grassroots effort is designed to increase the capacity of worker and community organizations in the area of OHS so as to reach workers who may not belong to trade unions or other institutions currently involved in the national and international efforts to improve working conditions in Bangladesh. The Bangladesh Accord, unless renewed, is set to expire in May 2018.

Limitations of MHSSN's Work

The MHSSN is a small, voluntary network of occupational health and safety professionals who have donated their time and expertise over the last two decades to empower workers in global supply chains so that the workers can speak and act themselves to improve working conditions in their workplaces and industries.

This work does not exist in a vacuum, however, and it has been affected by larger political and economic changes beyond the Network's control.

For example, the violence and periodic economic crises in Mexico has meant that MHSSN volunteers have been unable to work in the country since 2007, and the maquila workers themselves have not been able to take OHS issues into their workplaces, at certain periods of time, for fear of losing their jobs at times of economic retrenchment. The miners at the Cananea mine lost their strike over health and safety issues, and conditions for the replacement workers have deteriorated since the strike was broken.

The KTS factory in China experienced a change of ownership in 2003, and the new owners of the plant were not as interested in worker participation as the previous owner and greatly curtailed the activities of the plant's Health and Safety Committee.

Conclusion

Nonetheless, the MHSSN's work has set a useful example of how occupational health and safety professionals can use their skills and knowledge to strengthen the capacity of supply chain workers and their organizations to understand and act on OHS principles to protect their own lives and their co-workers' health and safety as well.

The combination of participatory, interactive teaching methods, accessible materials, follow-up and ongoing technical assistance has made it possible for workers and their organizations in specific locations of global supply chains to increase their activity to protect workers' fundamental right to a safe and healthful workplace.

Over the last 20 years, the MHSSN has learned the importance of being able to conduct a series of follow-up trainings (one-off events yield little results) and ongoing technical assistance; and that there is a very limited supply of accessible OHS materials appropriate for grassroots worker organizations in the sea of OHS publications that exist on the internet.

The obstacles to putting on more trainings, developing accessible materials and providing ongoing professional-quality technical assistance is not lack of interest on the part of professional OHS volunteers in the MHSSN or among base-level worker organizations, but rather a lack of financial resources.

The international union movement – from global federations to local unions – could play a key role in providing the resources – financial, human and technical – needed to replicate and scale up the successes of the MHSSN in developing OHS capacity in base-level worker organizations.

Among the contributions that unions could make are:

- providing funds to support initial and follow-up trainings;
- providing funds and qualified personnel to support ongoing technical assistance;
- providing funds for the development of accessible, literacy- and culturallyappropriate OHS materials;
- providing qualified personnel to collaborate and partner with local worker organizations in the development of accessible OHS materials;
- establishing "sister organization" relationships with base-level worker organizations in countries and/or industrial sectors where global supply chains exist and are growing; and
- establishing and supporting worker-community OHS training and assistance centers in producer countries that would provide on-going, institutionalized support for local worker efforts to improve working conditions in multiple industries and global supply chains.

Given the ever-more savage working conditions in global supply chains, and the failure of CSR and other top-down management systems to protect workers, the development and strengthening of a workers-centered approach to improving working conditions

globally is essential. Global organized labor can play a critical role in preventing 19th century working conditions from being imposed on the 21st century's workforce, and in ensuring that every working person can return home at the end of their shift safe and sound.

Author contact information:

Garrett Brown Maquiladora Health & Safety Support Network P.O. Box 124 Berkeley, CA 94701 USA garrettdbrown@comcast.net

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