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Healthy workers, healthy communities, healthy business

Supporting occupational health and safety in Bangladesh

A publication in the German Health Practice Collection

Published by:

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

German Health Practice Collection

Showcasing health and social protection for development

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The German Health Practice (GHPC) aims to share good practices and lessons learned from health and social protection projects around the world. Since 2004, the Collection has helped assemble a vibrant community of practice among health experts, for whom the process for each publication is as important as the publication itself as it is set up to generate a number of learning opportunities: The community works together to define good practice, which is then critically discussed within the community and assessed by independent peer reviewers.

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■ **Front cover photo:** As one of the results of the public-private partnership between GIZ and Western Marine Shipyard Ltd. workers now wear protective work wear, which has drastically reduced the number and severity of accidents at the shipyard.

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Acronyms

BMZ	Federal Ministry for Economic Cooperation and Development, Germany
GDC	German Development Cooperation
GHPC	German Health Practice Collection
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
ILO	International Labour Organization
WHO	World Health Organization

Healthy workers, healthy communities, healthy business

Supporting occupational health and safety in Bangladesh

Executive Summary

This publication describes a public-private partnership between GIZ and Western Marine Shipyard Ltd. (hereafter called Western Marine) in Bangladesh to improve occupational health and safety for the workers and their surrounding community.

Situation

Shipbuilding is an important growth industry for Bangladesh and Western Marine in Chittagong is one of the country's leading shipyards, employing a large workforce. The nature of this work is inherently hazardous, and occupational health issues are a major concern. In February 2011, the shipyard was experiencing a shockingly high injury rate of 1,000 incidents a month in a workforce of 3,500 – in other words, each month there was an almost one in three chance for a worker to be injured.

Approach

In June 2009, a public-private partnership agreement was signed between GIZ and Western Marine aimed primarily at improving the health and fitness of the workforce. Initially the partnership focused on the construction of an on-site shipyard clinic that would primarily address occupational health issues, but it soon became apparent that the high accident rate and safety issues were the major problems for workers and they urgently needed to be addressed. Preventive measures were called for in addition to curative care.

GIZ provided technical assistance and knowledge transfer on internationally accepted standards of occupational health and safety issues. A team of national advisers and international consultants helped Western Marine to conduct an initial assessment of occupational health and safety risks and management policies. A comprehensive occupational health and safety policy was then developed and introduced, with extensive training of all staff, purchase of protective equipment, and the introduction of robust reporting and monitoring systems in accordance with international certification standards. The shipyard and GIZ worked as equal partners and shared the costs of implementing the project.

Results

The most immediate and tangible result of this partnership has been that workplace accidents and injuries at Western Marine reduced dramatically by 99% over a 15-month period, from 1,000 incidents a month in February 2011 to 10 in June 2012. This reduction in accidents has also led to greater productivity.

With the opening of the company clinic, both the shipyard's workers and the surrounding community have better access to health care and health-seeking behaviour has improved.

Western Marine has also recognised that investing in worker's safety and wellbeing has paid off, both in terms of fewer accidents and increased productivity, as well as in terms of opening new markets as a result of the international certification process that the company went through.

Lessons learned

This public-private partnership between Germany and Western Marine clearly demonstrates how the implementation of workplace health and safety standards, combined with social investments for the neighbouring communities, can lead to healthy workers, healthy communities and healthy business too.

A motivated management team is the key to a successful implementation of occupational health and safety in any industry.

The impetus for change needs to come from within an industry, rather than to be externally imposed, if health and safety policies are to be effective and sustainable in the long run. Whereas the recent disasters in the ready-made garment sector in Bangladesh have largely focused international and national attention on better responses to specific hazards such as fire and building safety, it would be much more effective to implement a comprehensive approach covering all aspects of workers' health and safety and an integrated management system – such as the one adopted by Western Marine.

Every level of the organisation needs to be involved if a successful and sustainable occupational health and safety policy is to be implemented. Above all it needs to be entrenched in management systems, be consistent and change mind sets.

Healthy workers mean better business. The partnership between GIZ and Western Marine demonstrates the importance of persuading business managers that independently verified international health and safety certification opens global markets, adds business value and strengthens international credibility.

Prevention is always better than cure. The public-private partnership at Western Marine has significant potential to contribute to a meaningful national debate about a new legal framework for occupational health policies in Bangladesh.

Box 1. Key Messages

Situation. Western Marine shipyard was experiencing a very high accident rate and poor occupational health amongst its workers.

Approach. A public-private partnership between Western Marine and GIZ set out to improve occupational health at the shipyard by establishing a work-place clinic for use by both the workers and the surrounding community. The realisation that safety and accidents were in fact the biggest threats to the workforce led to a comprehensive analysis of risks and the implementation of a comprehensive health and safety policy in accordance with international standards.

Results. An immediate and dramatic reduction in accidents and injuries followed the introduction of protective equipment and health and safety training for all workers. The shipyard's clinic has also improved access to both preventive and curative health services for workers and the local community.

Lessons learned. Investment in protective equipment and comprehensive training for all workers, together with a systematic, proactive approach to health and safety issues, produce impressive results. Management commitment plays a huge role in successful implementation and in ensuring sustainability. This commitment is enhanced by the recognition that good health and safety also makes good business sense. Western Marine's experience serves as a useful template for other industries in Bangladesh and elsewhere.

Context

Healthy workers, healthy communities, healthy business

In a gigantic, cavernous hangar, an Imam recites a short prayer, as workers gather round him. When he has finished his blessing, management representatives wearing white overalls and hard hats mount the platform, pick up the wooden mallets and strike the shiny aluminium keel in unison. A deafening ringing noise ricochets around the yard as everyone applauds and smiles. The keel is the foundation and spine of a ship, around which the hull is built, and this short keel-laying ceremony is good news as it marks the start of work on Western Marine Shipyard's latest order, a passenger ferry destined eventually to ply a lake in Tanzania.

Western Marine is one of Bangladesh's leading shipyards, and shipbuilding is a growth industry for the country, bringing in much needed foreign currency. Export earnings from ship construction were worth US\$ 46.2 million in 2010-11. The government of Bangladesh hopes the sector will contribute 4 to 5% of the national gross domestic product by 2015 and potentially create a million jobs.

Once the brief keel-laying ceremony is over, everyone returns to work on the thirteen other cargo ships, fishing trawlers, passenger ships, ferries and dredgers that Western Marine currently has on its order books, in various stages of construction. Wearing hard hats, the welders and cutters put protective goggles and gloves on before switching their oxy-fuel torches back on, sending out a shower of sparks. Dwarfed by the huge hulk they are working on, other workers climb sturdy scaffolding and put on safety harnesses, before picking up where they left off painting the hull.

As recently as February 2011 conditions at this yard were very different, with a shockingly high injury rate of 1,000 incidents a month in a workforce of 3,500 – in other words, each month there was an almost one in three chance for a worker to be injured.

Such statistics are by no means unique to Western Marine. Shipbuilding is an inherently dangerous industry to work in. Fatalities and serious injuries caused by heavy machinery, dangerous materials and hazardous working environments are all too frequent, especially in developing countries such as Bangladesh. Adding to this are poor levels of worker education and scant knowledge or awareness about hazards and risks, a lack of protective clothing or equipment, and – in some instances – managers who have little respect for employment laws. This explains why injury rates can be so high.

There have been growing concerns about the role of workplace health and safety in Bangladesh following the recent tragic accidents in the country's booming ready-made garment industry, together with negative publicity about the poor conditions in the ship breaking and other industries. As a result, many foreign governments, international buyers and consumers are increasingly concerned about the social and environmental responsibilities of the companies they do business with. In addition there is a global trend, especially in the maritime industry, for health and safety issues to determine access to global markets.



■ *Left: The Imam leads the prayers for the keel-laying ceremony.*

■ *Right: Worker wears a safety harness to work at heights.*

The successful collaboration between Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and Western Marine, with assistance from Bangladesh's Ministry of Health and Family Welfare, is documented as a best practice in the German Health Practice Collection, because it demonstrates how the implementation of workplace health and safety standards, combined with social investments for the neighbouring communities, can tick all the boxes for corporate social responsibility, improve the health and safety of employees and lead to better business too.

Dr Paul Rückert, GIZ's Principal Adviser for health in Bangladesh, says that although GIZ's technical contribution to this partnership was relatively small, it served as a significant catalyst. Occupational health and safety is a very new area for Bangladesh and no other organisation was working on it at the time. Now that there is big concern about industrial health and safety in the country, he hopes that this project will be seen as a model for similar initiatives in other sectors, both in Bangladesh and elsewhere.

As a company, Western Marine has embraced its corporate social responsibilities and recognised that there is a sound business case to be made for investing in international standards of health and safety for their employees in order to compete in global markets. Through a series of relatively simple but highly effective measures, the introduction of these standards has resulted in a dramatic 99% reduction in accidents – from the very high rate of more than 1,000 recorded injuries a month in February 2011, to around ten incidents a month in June 2012. They have also improved the overall health of the shipyard's all-male workforces as well as of women and children in the surrounding community.

In August 2012, Western Marine was the first shipyard in Bangladesh to be awarded OHSAS 18001 and ISO 14001 certification, internationally recognised standards for occupational health and safety management systems. Along with the ISO 9001 certification they had already been awarded, it means that a strong integrated management system has now been established and an occupational health and safety policy is firmly embedded in the company's practices and systems. Safety is now a priority: like the keel of a ship it is the foundation of all of Western Marine's work.

Bangladesh: from 'basket case' to boom economy

Once famously dismissed by Henry Kissinger, the former US Secretary of State, as a perpetual economic 'basket case', Bangladesh only came into being as an independent country in 1971, when the two parts of Pakistan split after a bitter war which created millions of refugees. Today, the country is still one of the world's poorest and most densely populated, with some 155 million people crammed into the delta of the Ganges and the Brahmaputra, an area regularly swept by devastating floods and cyclones. Poverty remains widespread, with almost half of the population living on less than a dollar a day.

In the last decade Bangladesh has made remarkable progress, and enjoyed an impressive track record on growth and development, with the economy growing at an average of 6% annually. According to the World Bank, more than 15 million Bangladeshis have been lifted out of poverty since 1992, and now enjoy increased life expectancy, literacy, and better nutrition. The country has also made excellent progress towards meeting the Millennium Development Goals, and achieved some of the largest reductions in early deaths of infants, children and childbearing women worldwide.

Bangladesh is ambitious to become a middle-income country by 2021 and is trying to diversify its economy through private sector growth, making industrial development and exports a priority. According to the Bangladesh Export Promotion Bureau, total exports rose by 11% to more than US\$ 27 billion in the 2012-13 fiscal year. During the same period it also received a record US\$ 14.46 billion from remittances sent home by millions of Bangladeshis working in the Middle East, Asia and Europe, and these have also greatly strengthened the economy.

Low wages and duty-free access to Western markets have helped Bangladesh to become the world's second-largest exporter of ready-made garments after China. These exports totalled US\$ 21.5 billion for the financial year ending in June 2013, and accounted for 80% of export earnings, an increase of 13% over the previous year, with almost two-thirds of products going to Europe.

Despite these considerable achievements, some 47 million Bangladeshis still live in persistent poverty, with little access to health or other services. Additionally, in this low-wage economy, millions of others live on the edge and could slip back into poverty if they lose their jobs or are affected by natural disasters or industrial accidents.

In Europe, of course, efforts to safeguard workers' health and safety started in the 19th century and were mostly driven by the Trade Union movement. In Bangladesh there were legal restrictions on forming unions in most industries until May 2013, and before the recent tragedies in the garment industry there was little interest in occupational health and safety. The 24th of April 2013 changed all that. When the eight-floor Rana Plaza garment factory collapsed with the loss of more than 1,100 lives and some 2,500 workers injured, it was one of the worst industrial accidents the world has ever witnessed. Together with the fatalities from several disastrous fires in other garment factories, these shocking incidents made headlines around the world, and highlighted the unsafe working conditions in the industry. As a result, international buyers are increasingly demanding better health and safety checks and workers have been protesting on the streets to demand better conditions. This growing debate about health and safety has extended to other industries too.

Shipbuilding is seen as a golden opportunity for Bangladesh to diversify away from its current dependence on the ready-made garment industry, provided it is properly managed. Building ships is not new in Bangladesh: historically thousands of locally-built ships have plied the country's complex network of delta rivers and some 90% of its cargo and 20% of passengers depend on water transport. What is new is the rapid rise of an export-oriented industry drawing on Bangladesh's low labour costs. Since 2008, many of the country's shipyards have been competing on international markets, and they have manufactured and exported small- and medium-sized ferries, cargo vessels, and ocean-going multi-purpose ships worth more than US\$ 500 million, mostly for the highly competitive European market. Bangladesh now hopes to challenge the world's shipbuilding giants, China, Japan and South Korea.

Shipbuilding is, however, an inherently dangerous industry to work in and fatalities and serious injuries caused by heavy machinery, dangerous materials and hazardous working environments are all too frequent.

Box 2. Western Marine Shipyard Ltd.

Western Marine is a relatively new company, under the umbrella of the wider Western Marine Group, and the current shipyard was built in 2000 on the bank of the Karnapuli River in the southern port of Chittagong.

With a population of over 6.5 million, Chittagong is the second most populous city in Bangladesh and one of the fastest growing cities in the world. It is also the country's principal seaport and an important industrial, financial and commercial hub. Ship construction and ship breaking are the main employers in the city, either directly or indirectly.

Western Marine employs between 1,000 and 3,500 workers, depending on the current order book. In August 2013 it employed 570 permanent employees and 1,612 contractors, a total of 2,182 employees.

So far Western Marine has largely concentrated on the market for small ocean-faring vessels with a deadweight tonnage of less than 25,000, and has exported ships, tugs, tankers, trawlers and dredgers to several different European countries, including Germany and Denmark. At the end of 2010, it constructed the largest vessels ever made in Bangladesh, sending out a message to the global shipbuilding market that it is now a serious player. Already the second largest player in Bangladesh's rapidly growing shipbuilding industry, it has plans for rapid expansion, building vessels for both the domestic and international markets.

Mohammed Saiful Islam, Western Marine's Chairman, says the management of the shipyard recognises that the world of shipbuilding is changing fast, with new opportunities and challenges. 'We understand that no matter how skilled our human resources are – in the end it is a firmly established management system that puts everything in a synchronised motion that matters. This system is exactly like the rudder on a ship; no matter how much you look after the vessel's other moving parts, you may end up lost at sea.'



■ Western Marine Shipyard

Occupational health and safety: the international perspective

A safe and healthy work environment is a fundamental human right, according to the Seoul Declaration on Safety and Health at Work, signed by participants at the 18th World Congress on Safety and Health at Work held in Seoul, South Korea in 2008. Businesses accordingly have a moral responsibility to care for their workers.

Nevertheless, according to the International Labour Organization (ILO) globally over two million people die every year as a result of work-related diseases and 321,000 people die each year from occupational accidents (ILO 2013). There are also about 160 million non-fatal work-related diseases and 317 million non-fatal occupational accidents every year, however these numbers are probably vastly under-estimated due to poor reporting systems in many developing countries, where deaths and injuries take a particularly heavy toll. On the basis of the data that is available, it means that a worker dies from a work-related accident or disease every fifteen seconds.

‘Occupational safety and health is vital to the dignity of work... Decent work must be safe work, and we are a long way from achieving that goal.’

Juan Somavia, former ILO Director-General

The stark reality is that most of the world’s workforce lacks legal protection from work-related accidents or illnesses, has no rights to compensation and little access to occupational health services.

However, there is now a growing recognition that health and safety is not merely a matter of worker’s rights: it is also an important development issue. Historically many international development programmes in the health sector have largely focused on infectious diseases and reproductive health. However, the Millennium Development Goals review in 2010 identified non-communicable diseases – which include occupational health and safety issues – as a core development priority that needs to be addressed urgently in the post-2015 development framework. In this context, a healthy and productive workforce is an important prerequisite for economic development and employers have a crucial role to play.

The World Health Organization (WHO) framework on occupational health defines a healthy workplace as one in which managers and workers continually collaborate to improve procedures that protect and promote the health, safety and well-being of the entire workforce (Burton 2010). The framework outlines five key components of a successful and sustainable occupational health and safety policy. These are:

- Leadership commitment and engagement
- Involving workers and their representatives
- Adherence to business ethics and laws
- Using a systematic and comprehensive process to ensure effectiveness and constant improvement
- Ensuring that the policy is sustainable.

A healthy workplace therefore depends on many factors, apart from immediate physical work conditions. It includes health, safety and well-being concerns in the psycho-social work environment (including how the workplace is organised and run), and the personal health resources available to the workplace. It can also depend on the broader context of where workers come from: if they live in communities with poor standards of health, nutrition or hygiene, their health will also be affected. Hungry, sick or injured workers reduce productivity.

In many emerging manufacturing countries such as Bangladesh, occupational health and safety is often a low- or non-existent priority, competing with other urgent economic, political and social challenges. High levels of unemployment mean labour and – all too often – lives are cheap. On the other hand, one worker often supports a large extended family, so if he or she is killed or injured, the effects for whole families and communities can be absolutely devastating. Fatalities or accidents mean victims and their families suffer not only loss of income, but also possible catastrophic out of pocket health care expenditure that can push them further into poverty. Better occupational health and safety has an impact not only on the lives of individual workers but on the well-being and development potential of entire communities, and even countries.

‘Workers in Bangladesh are not generally very safety-conscious. They think it is a burden to take safety precautions, such as putting on helmets, and safety footwear. Initially they were very reluctant. We had a lot of casualties before – both major accidents and a high rate of minor accidents.’

Arifur Rahman Khan,
Western Marine’s Technical Director

According to ILO’s Global Strategy, international collaboration is a key factor in intensifying preventive efforts and mobilising resources to promote occupational safety and health at work. Innovative initiatives, such as the public-private partnership between GIZ and Western Marine documented here are therefore effective strategies if occupational health and safety issues are to be addressed and the rising burden of non-communicable or chronic diseases such as heart attacks and strokes, cancers, chronic respiratory diseases and diabetes is to be tackled, in accordance with WHO priorities.

Bangladesh-German co-operation in health

Bangladesh is a priority partner country for German development cooperation. This partnership dates back over four decades to 1972, a year after independence, when the country faced extensive social, political and economic problems. A total of €2.5 billion (in the form of grants) have been committed so far for German-Bangladesh bilateral financial and technical cooperation, focusing on three key areas: energy efficiency and renewable energies, the rule of law, justice and local good governance and health.¹ In all these priority areas the focus is on providing technical assistance to contribute to the country’s social and economic development, and particularly to improvements in the lives and well-being of vulnerable populations.

The health project which initiated this public-private partnership ran from 2008 to 2012. It supported the city corporations in four cities on different topics ranging from improving their health information systems and introducing quality management for health facilities to developing micro insurance schemes and in setting up HIV prevention services. In Chittagong, the focus of collaboration was on occupational health and safety. The official partner ministry for this project was the Ministry of Local Government, Rural Development and Co-operatives, which is responsible for all city corporations. For the implementation in Chittagong, however, GIZ also worked with the Ministry of Health and Family Welfare.

GIZ’s Principal Advisor for this project at the time, Dr Andrea Knigge, recognised that in health, as in other areas, the private sector has an important role to play. From a development perspective, working in partnership with and through private companies can deliver effective cooperation and results, and in turn, the private companies receive a transfer of expertise and technical advice that enables them to tap into new markets. The project therefore sought to engage with private companies to improve access to primary health care and preventative services. As the main employer in the Chittagong area, the shipbuilding industry and companies such as Western Marine provided an entry point for contributing to the improvement of these overall health targets.

¹ As of 2014, the focus will shift from health to adaptation to climate change in urban areas.

The approach

The agreement

On 1 June 2009 a two-and-a-half year integrated public-private partnership agreement was signed between GIZ and Western Marine². Later, it was extended to run for a further year until October 2012. The main purpose of the agreement was to ensure a fit and healthy workforce, through (a) the provision of accessible health services in an on-site clinic at the shipyard and (b) the establishment of a company-wide occupational health and safety system. The shipyard and GIZ would work as equal partners and share the costs of implementing the project.

Western Marine would pay for land, construction and infrastructure for a new clinic, and for the protective equipment, training and salaries needed for the running of its occupational health and safety system. GIZ agreed to pay for the new clinic's design and equipment, as well as for the development – with the help of experienced international consultants – of an occupational health and safety system and of a monitoring and evaluation system for it.

For the provision of primary health care services to the workers and the surrounding communities, GIZ facilitated Western Marine's negotiations with the Ministry of Health's Directorate General of Health Services and with the Directorate General of Family Planning. In memoranda of understanding between them, it was envisaged that the first directorate would provide a doctor, equipment and medicines for the new clinic and that the second would provide a nurse/midwife for it.

For the implementation of internationally accepted standards of occupational health, the shipyard agreed to appoint a medically-trained occupational health and safety adviser, whilst GIZ would provide technical assistance and knowledge transfer on occupational health and safety issues through a team of national advisers and international consultants. This team would help Western Marine to conduct an assessment of occupational health and safety risks and management policies as starting point for the development and introduction of a comprehensive occupational health and safety policy.

Sakhawat Hossain, the Managing Director of Western Marine said that it was the realisation that 'healthy workers are productive workers' that had led him to sign the agreement. He hoped that this partnership would become a benchmark for health and safety in shipbuilding and a good example of corporate social responsibility in Bangladesh. Western Marine was keen to obtain technical assistance from GIZ that would enable it to fulfil its corporate social responsibility obligations and, with an eye on potentially rapid future expansion, increase its eligibility for bidding for new international tenders.

The first step: Building a clinic for the shipyard

In 2009, an international consultant carried out an assessment of primary health care delivery and access in the existing 18 public health facilities in the three districts adjacent to Western Marine. On the basis of his findings, it was decided that Western Marine's health centre should complement and improve existing services by providing general primary healthcare, including antenatal and postnatal care as well as family planning services.

The Kolagoan health centre officially opened on 1 June 2010, a year after the public-private partnership agreement between Western Marine, Ministry of Health and Family Welfare and GIZ had been signed. The purpose-built clinic is situated within the shipyard, right next to the workers' canteen and mosque. Whilst the clinic's emergency room is designed to cope with minor injuries, and only for use by the workers, the general facilities are available to approximately 26,000 people from the surrounding community, where many of the workers and their families live.

As set out in Western Marine's memoranda of understanding with the Ministry of Health, a nurse/midwife was seconded to the clinic and has provided services to mothers and children in the community ever since. The secondment of a government-funded doctor, however, did not work out as planned: There was a high turnover of three doctors in less than two years who attended the clinic irregularly and then stopped coming altogether.

² Further information on BMZ's approach to public-private partnerships can be found at www.bmz.de/en/issues/Cooperation/germany/ppp.html.

During 2010 and 2011, GIZ initiated contacts with the Civil Surgeon and the Director of Health of the Ministry of Health and Family Welfare to discuss the situation and were informed that a doctor could not be provided for the clinic because there was a shortage of doctors countrywide. The Civil Surgeon was also apparently not convinced that a government doctor should be placed in a private facility, even if the clinic complemented the services of the Ministry of Health and Family Welfare.

During the first months, these staffing constraints and the shipyard's persistently high accident rates meant that the medically trained occupational health adviser was so busy providing treatment to injured workers at the clinic that he never got around to doing what Western Marine had employed him for, i.e. a preventive analysis of health and safety issues. Only after this analysis and a comprehensive overhaul of Western Marine's workplace safety system had finally been undertaken, did the situation of the clinic change.

Today, Western Marine's management knows that the dramatic improvements in its workers' health and safety could never have been achieved merely by setting up its own clinic. A more comprehensive and systemic approach was required, as described in the remainder of this chapter. And yet, the shipyard's clinic has its merits: It is one of the first public-privately run primary health care centres in Bangladesh, providing free healthcare to a company's workforce, as well as to the surrounding community. The clinic team consists of a part-time doctor, employed by Western Marine to serve both the workers and the surrounding community, a government-employed nurse and two full-time army-trained paramedics. Given the stark reduction of workplace injuries, the Kolagoan clinic team is now well able to respond to the healthcare needs of both the workforce and the local community.

The breakthrough: Assessing occupational risks and hazards

In 2010, the death of a welder who was electrocuted whilst working without protective equipment led to a change in focus of the partnership: Something had to happen there and then. As a first step, an international occupational health and safety consultant was asked to assess the number and type of injuries and work-related ill-health as well as the systems in place for the prevention of occupational accidents and injuries.

Department by department, and in close co-operation with shipyard managers and GIZ technical advisers, he recorded the names of all the workers and the type of work they were engaged in and then analysed the kind of risks and hazards each worker was exposed to. Risks he found included:

- intense noise and damage to worker's hearing
- eye injuries
- exposure to chemicals and fumes
- falling in the water and drowning
- burns and electric shocks
- injuries from lifting heavy objects
- working in enclosed spaces with inadequate ventilation or lack of oxygen
- the presence of dangerous gases and the risks of suffocation.

Several environmental issues such as drainage of toxic chemicals and sewage into the river, and the disposal of hazardous chemicals were also addressed.



■ Working in enclosed spaces can be hazardous.

His conclusions were unambiguous:

- Western Marine's injury rate was very high (with eye injuries being a particular problem)
- Virtually all the injuries were easily avoidable
- Hardly any standards and procedures existed to prevent such incidents.

In response to this assessment and the consultant's recommendations, Western Marine and GIZ agreed to tackle the following tasks:

- Supporting a holistic quality management approach towards occupational health and safety, which can be maintained and managed by the shipyard
- Providing strategic direction to the management and occupational health and safety programme management team
- Convincing the shipyard's senior management and worker representatives that investment in occupational health and safety makes good business sense
- Defining milestones and setting objectives that comply with international standards
- Introducing simple and effective preventive measures to ensure safety, through training and awareness campaigns and the distribution of protective clothing and equipment.

Introducing personal protective equipment

Up until that point, the shipyard had provided little personal protective equipment. Permanent workers had been given an annual allowance of 500 Bangladeshi taka (less than five Euro) to buy steel-capped protective boots, but since new boots cost around 4,000 taka, this was not nearly enough and many workers used ineffective second hand boots, or none at all.

With support from the consultant, the shipyard drew up a procurement plan for the protective equipment required in different work areas. These included personal protective equipment, such as hard hats, protective boots and overalls, goggles, gloves and ear-protectors. Stable scaffolding and safety harnesses for working at heights were also provided, and large ventilation fans installed in enclosed work areas.

Next, the workforce was trained in the use of the protective equipment and notices were put up around the shipyard – in English, Bangla and also pictorial signs for illiterate workers – reminding workers to wear it at all times. Lockers were also provided for storing the equipment when not in use, and a central storeroom was set up to keep spare equipment and replenish supplies when necessary.

Initially some of the workers were reluctant or resistant to wearing the protective clothing or equipment: the hard hats, boots, goggles, gloves and so on were hot and uncomfortable in Chittagong's humid, high temperatures. However, the policy was strictly enforced and workers who persisted in health and safety violations, or forgot or refused to wear



■ *Left: A welder wears protective goggles and clothing.*

■ *Right: Hard hats and gloves protect workers from injuries.*

protective clothing received verbal warnings, were sent for further training, fined or even lost their jobs. This consistency paid off: Immediately both the number and the severity of injuries began to plummet.

Taking a quality management approach to occupational health and safety

Systems and procedures are central to any successful occupational health and safety policy, if standards are to be consistently maintained as staff come and go. Working with the GIZ consultant, it was agreed that the Western Marine management team would draw up an occupational health and safety policy with yearly objectives and targets. Using a quality management approach, the policy would be reviewed annually by an external independent auditing agency and inter-departmental audits would be conducted every six months, to verify that all the company's systems were working properly.

With GIZ support, the shipyard recruited and employed an occupational health and safety adviser, a doctor who had health and safety experience, whose job was to ensure that health and safety issues were properly addressed, closely monitored and recorded. Strict reporting procedures were established, ensuring that every incident or accident was immediately recorded and investigated, the causes analysed and corrective or preventive measures implemented. Where necessary, working procedures were changed to prevent further incidents.

The adviser was also responsible for rolling out extensive training for all managers and workers on health and safety issues. A team of 24 specially-trained inspectors were deployed in all areas of the shipyard to ensure that the new policy was rigorously adhered to and monitored in all work areas. Given the dramatic reduction in injury rates and the fact that the procedures are by now well established in all departments, the number of inspectors was eventually reduced from 24 to 12, depending on the current volume of work. Every new employee receives occupational health and safety training as part of his job induction and is issued with the personal protective equipment needed to fulfil his tasks safely.

The push for certification

In the process of identifying risks and implementing systems, the international consultants and the shipyard's management team used assessment tools from the OHSAS 18001 and ISO 14001 protocols, internationally recognised standards for occupational health and safety and management systems. It was not originally envisaged that the shipyard would actually apply for these certificates, rather than merely use them as a tool to guide the new occupational health and safety policy. However, the Western Marine management quickly realised that it had already been implementing many of the processes involved in OHSAS 18001 – such as having a policy, risk assessors, compliance, operational controls and minimum standards

and that applying for certification would be a logical next step. If its applications were successful, Western Marine would be the first shipyard and one of very few companies in Bangladesh which held these two certificates in addition to the ISO 9001 quality management certificate which it had obtained in 2008. Since certification is increasingly becoming a condition of eligibility to bid for international shipping tenders, there was a strong business case for enrolling in the certification process. From this point onwards, the project changed from a GIZ-driven collaboration to a company-driven policy, which is good for the workers and makes business sense.

The OHSAS 18001 protocols are designed to set up an effective and robust occupational health and safety management system whilst the ISO 14001 standard ensures that a company adheres to responsible environmental policies as part of its corporate social responsibility. Both protect and promote the rights of all workers and involve them in the implementation of consistent tasks and functions to promote occupational health and safety, track hazards and incidents and highlight overall performance that can be measured over time. The certificates recognise management systems rather than a product, and the certification process ensures a continuous cycle of planning, doing, checking and acting. The aim of the certificates is to demonstrate that

a company meets its responsibilities to ensure optimum occupational health and safety, determines what to do if a problem arises, deals with the root cause of problems, and keeps records to use as a tool to monitor and improve the system.

In July 2011 Western Marine officially launched a health and safety policy – a requirement of OHSAS 18001 – at a ceremony at the shipyard attended by all the management and workers, as well as representatives from GIZ, ILO and other organisations.

“The policy of Western Marine is to maintain quality standards for the customer, to maintain the health and safety standards and to maintain international environmental standards... Our policy is communicated from the top management to the entire organisation, so that everyone is following this.’

Captain Abdur Razzak Bhuiyan,
Western Marine Commercial Director and management representative for the quality management system.



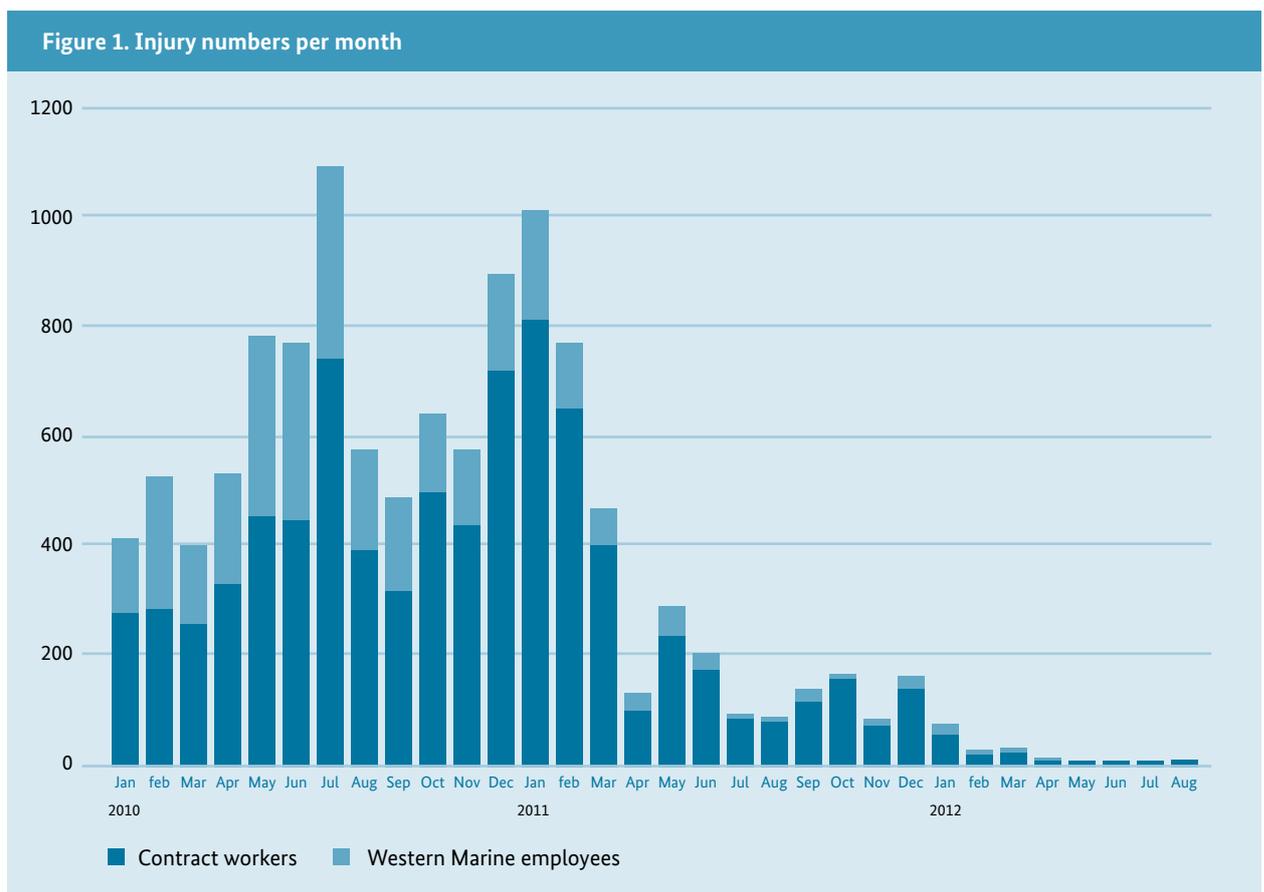
■ One of the ships under construction at Western Marine.

Results of the partnership between Western Marine and GIZ

Workplace accidents and injuries are dramatically reduced

The most tangible result of the partnership between Western Marine and GIZ was a rapid and dramatic reduction of 99% in the number of accidents and injuries at the shipyard over a 15-month period, from 1,000 incidents a month in February 2011 to 10 in June 2012.

Whilst the opening of the clinic in June 2010 did not change the accident rates, Figure 1 clearly shows the immediate impact of the introduction of preventive measures and staff training from March 2011 onwards. In late 2011, two fatal burn accidents occurred, but there have been no fatalities or serious injuries since. This is a significant achievement and one that the partnership is justifiably very proud of. Data collected in the year since the end of the collaboration with GIZ show that the low accident statistics have been maintained for the shipyard's staff. For the last 3 years there have been no fatal accidents.



Source: GIZ supported Multi-disciplinary HIV/AIDS Programme & Western Marine Shipyard



■ The monthly injury rates are publicly posted in the shipyard for all the workers to see.

The implementation of any successful occupational health and safety system involves a change of mindset and working culture for everyone involved – particularly when the concept is relatively new and unfamiliar. A culture of health and safety has now been firmly established at Western Marine and systems for monitoring and evaluating the process have been put in place.

However, Table 1 shows that although the injury rate remains low overall, short-term contracted labourers are more at risk of having an accident. These are temporary or day-labourers, hired by contractors and the responsibility for providing personal protective equipment rests with the contractors. The temporary workers are briefed by the Western Marine’s safety representatives each day before starting work, but they are generally not at the yard long enough to receive any meaningful training.

Table 1. Injuries on duty, January to August 2013

Month (2013)	Injuries			Accident Investigation Done
	Permanent workers	Contractors	All	
January	0	10	10	10
February	0	19	19	19
March	3	9	12	12
April	6	13	19	19
May	2	9	11	11
June	2	12	14	14
July	0	9	9	9
August	1	9	10	10

Source: Monthly Clinic Report PHCC, August 2013



■ *Mohammed Liton, the clinic's senior officer, compiles medical records.*

The challenge now facing the shipyard is to ensure that occupational health and safety standards are applied to all workers, permanent and contracted employees alike. Abu Mohammed Fazle Rashid, Deputy Managing Director of Western Marine, says that the shipyard is trying to enforce the responsibilities of the contractors to take the same care of temporary workers as the yard takes of its permanent workers.

Workers' healthcare and health-seeking behaviour is improved

Now that all the workers are more aware of health and safety requirements and accident rates have reduced so dramatically, the shipyard doctor can also focus more on treatment and on conducting regular health checks for workers. These check-ups can identify specific work-related problems, such as hearing loss caused by a noisy work environment or

respiratory problems caused by poor ventilation, which can then be addressed in a timely manner. Each new member of staff is given a thorough medical check on joining the company. Regular annual check-ups are given throughout the period of employment, and when a worker leaves the company. If work-related health problems are found, workers are referred to Chittagong hospitals for further treatment at the shipyard's expense.

Clinic records also show that the workers' health-seeking behaviour is much improved. In addition to using the clinic for minor injuries, they attend it for routine consultations as well as for health problems that are not related to their work. The shipyard's doctor speaks the local language, which is a big advantage in dealing both with workers and local people. 'People are very happy with him', says a senior manager. 'He's very visible around the shipyard, and the workers feel comfortable going to see him.'

Western Marine has recognised the value of investing in workers’ wellbeing

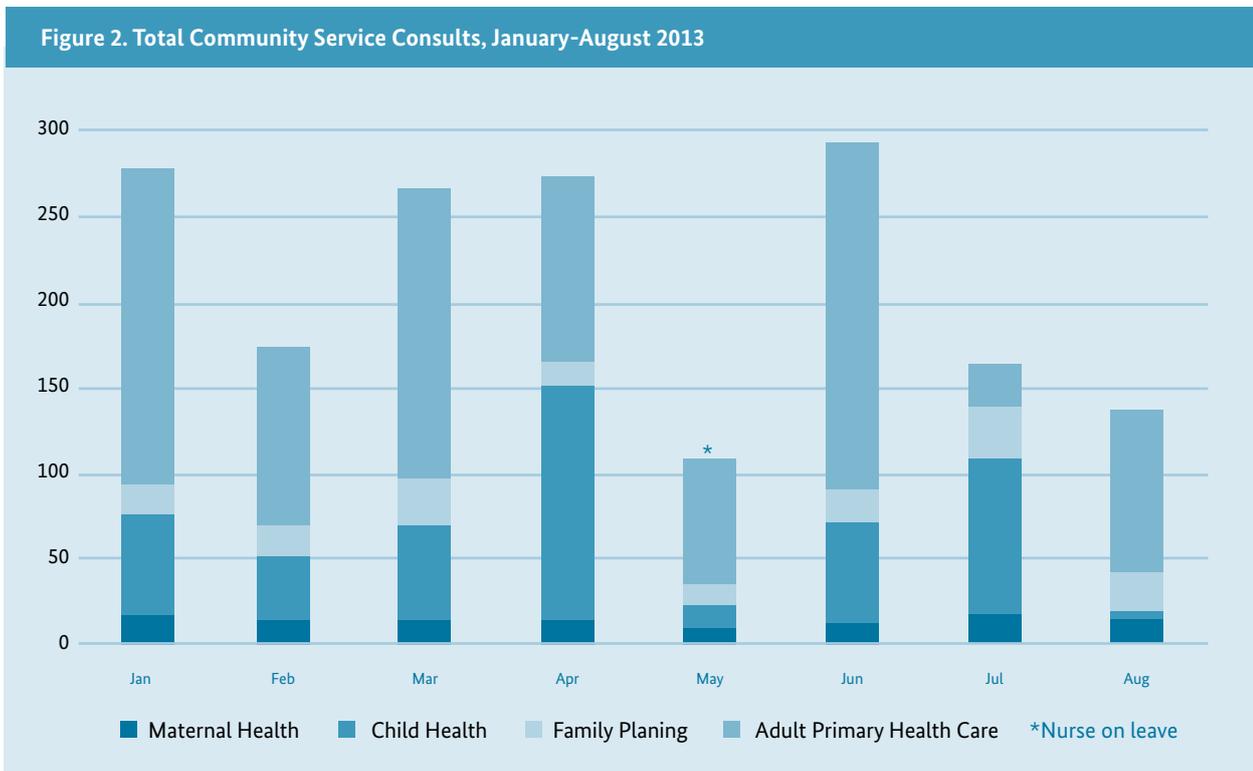
Another example for Western Marine’s attitude towards its workers’ wellbeing is the fact that in addition to providing medical care it also feeds all its workers. An on-site kitchen prepares a free lunch for everyone, from management to shop floor. The company recognises that ensuring that workers are well fed and healthy ultimately reduces health care costs, increases productivity, results in less turnover of staff and therefore ensures that skills, knowledge and experience are retained. By contrast, studies have shown that poor nutrition is one of the main reasons why garment workers rarely work beyond the age of 40: they are physically unable to do the job anymore. Western Marine’s workers also work regular hours and are given a morning and afternoon break in addition to the lunch break. Again, this is part of Western Marine’s preventative approach – prevention is better than cure – and a recognition that the health of employees has a direct effect on the productivity – people who feel well, work well.

Surrounding communities have better access to healthcare

Since the Western Marine clinic opened, there has not only been a significant improvement in the health and safety of shipyard workers, but also better access to health care for community members, who make good use of the facilities. Since the accident rate has been so dramatically reduced and he has more time, the Western Marine-employed doctor also attends to patients from the local community. Focus group studies conducted amongst patients show that they think the shipyard clinic offers better facilities and more convenient access than other available facilities. It is also cheaper to use since patients no longer have to pay transport costs or cross the river to Chittagong to get to a health facility.

Women and children from the local community in particular make good use of these services, so that the clinic sees on average about 70 patients a day. Recent data from the clinic has also shown that injured workers from neighbouring shipyards have begun to also use the clinic.

Figure 2. Total Community Service Consults, January-August 2013



Source: GIZ supported Multi-disciplinary HIV/AIDS Programme & Western Marine Shipyard



■ Women and children from the local community make use of the primary health care clinic.

Box 3. Family welfare at the shipyard



■ Nurse Biswas with one of her patients from the local community

Nurse Anjali Biswas runs a family welfare clinic at the health centre every Saturday and Tuesday from 9 am to 2 pm, dealing with post-natal care, family planning, childhood diseases and general ailments. She sees an average of 74 people – mostly women from the local community – in each session. She's employed by the Ministry of Health and Family Welfare and spends the rest of the week running a government family welfare centre. There is a wider range of services – including birth attendance – available at the government facility she says, but the shipyard clinic is better and cleaner: 'It's a nicer place to work.'

One of the patients she's seeing today is Husne Ara Begum, who has come to have her blood pressure measured and to get birth control pills. She says it is easier to come to the shipyard's clinic because it is much closer to where she lives, and she doesn't have to pay transport costs to get there. She also thinks the clinic is cleaner and better and she says she's very happy with the service she has received since the health centre opened.

Western Marine obtained both the OHSAS 18001 and the ISO 14001 certificates

The huge drive for certification resulted in the shipyard being awarded its prized OHSAS 18001 certificate, the world’s most recognised occupational health and safety management systems standard, in August 2012 – a record six months after starting the process. It has also acquired ISO 14001, the internationally recognised standard for environmental management of businesses. Efforts to reduce environmental waste have led to a better understanding of how the company uses materials, and manages energy. This in turn has reduced operational costs and has improved efficiency.

Along with the integrated management system certificate it had already achieved, Western Marine is now the first shipyard and one of few companies in Bangladesh to have achieved all three certificates, and they are proudly displayed in the company’s headquarters in Chittagong.

In order to be awarded these certificates Western Marine had to be independently assessed and audited by Bureau Veritas, an external inspection team. Golam Kibria, the head of the Bureau Veritas auditing team in Dhaka³, says that achieving the OHSAS 18001 certificate is ‘the best form of corporate social responsibility because it promotes life and the safety of human beings.’ He says that Western Marine was able to go through the certification process in record time because of what he describes as ‘the fusion of inspiration’ provided by GIZ and the exceptional commitment to the process once the shipyard’s senior management recognised that it made good business sense.

Abu Mohammed Fazle Rashid, Deputy Managing Director of Western Marine Services Ltd. says that the results of the partnership had exceeded the shipyard’s expectations and produced unexpected benefits such as better productivity and fewer stoppages due to accidents and injuries.



■ The OHSAS 18001 certificate is proudly displayed at Western Marine’s headquarters

3 Bureau Veritas is a private agency independently auditing and verifying the criteria for globally recognised certificates. It was established in 1828 after some 10,000 ships sunk in storm, affecting many wealthy businessmen, who decided subsequently to set up a Ships Classification Society. Today, the International Maritime Organization requires class certification for all ships, which have many inherent hazards – sinking, rolling, cargo hazards etc. Since Bureau Veritas was already certifying the ships being built by Western Marine, it already had a close working relationship with the yard.

Health and safety systems are upheld despite the economic downturn

GIZ's assistance basically ended when the shipyard attained the OHSAS and ISO certificates. Whilst being highly appreciative of the technical assistance they had received from GIZ, some senior managers felt that Western Marine would have really benefitted from the continued support from the international consultants. However, Arifur Rahman Khan, the shipyard's Technical Director says the collaboration with GIZ helped Western Marine to take occupational health and safety to another level. 'We have more legal bindings now, so it is more forceful. If you want to keep the certification you have to keep up standards.'

Over the past two years the shipyard has seen its order book shrink due to the global economic downturn, and the lack of cash flow has had a huge impact on staffing levels. The occupational health adviser's post was not renewed at the end of his two-year contract, and the number of safety supervisors has been reduced, raising important questions about sustainability. However, Western Marine's senior management maintains that the health and safety systems and procedures are now strongly entrenched in their working practices and management culture. 'The policy is system-based not man-based,' says Captain Bhuiyan, Western Marine's Commercial Director. 'Today I am here – tomorrow I may not be here. But if the system is running properly, the next man will come with proper qualifications and he will run the system. That is the beauty of the quality management system – it is system-based.'

The independent annual audit conducted by Bureau Veritas in November 2013 confirmed this confidence: Western Marine retained its occupational health and safety certification.

Investing in healthier workers has paid off

The total budget for the 40-month partnership was €515,000, with Western Marine meeting 48.5 % (€250,000) of the costs, and GIZ the remaining 51.5 % (€265,000).

While its results have been impressive and obvious in terms of lives saved, fewer accidents and better access to general health care for both workers and the larger community, the question remains whether the changes have been economically efficient and resulted in better business.

'We say: If you think training and safety is expensive, try an accident. We avoid accidents by spending money on training and safety.'

Captain Abdur Razzak Bhuiyan,
Western Marine Commercial Director and management
representative for the quality management system.

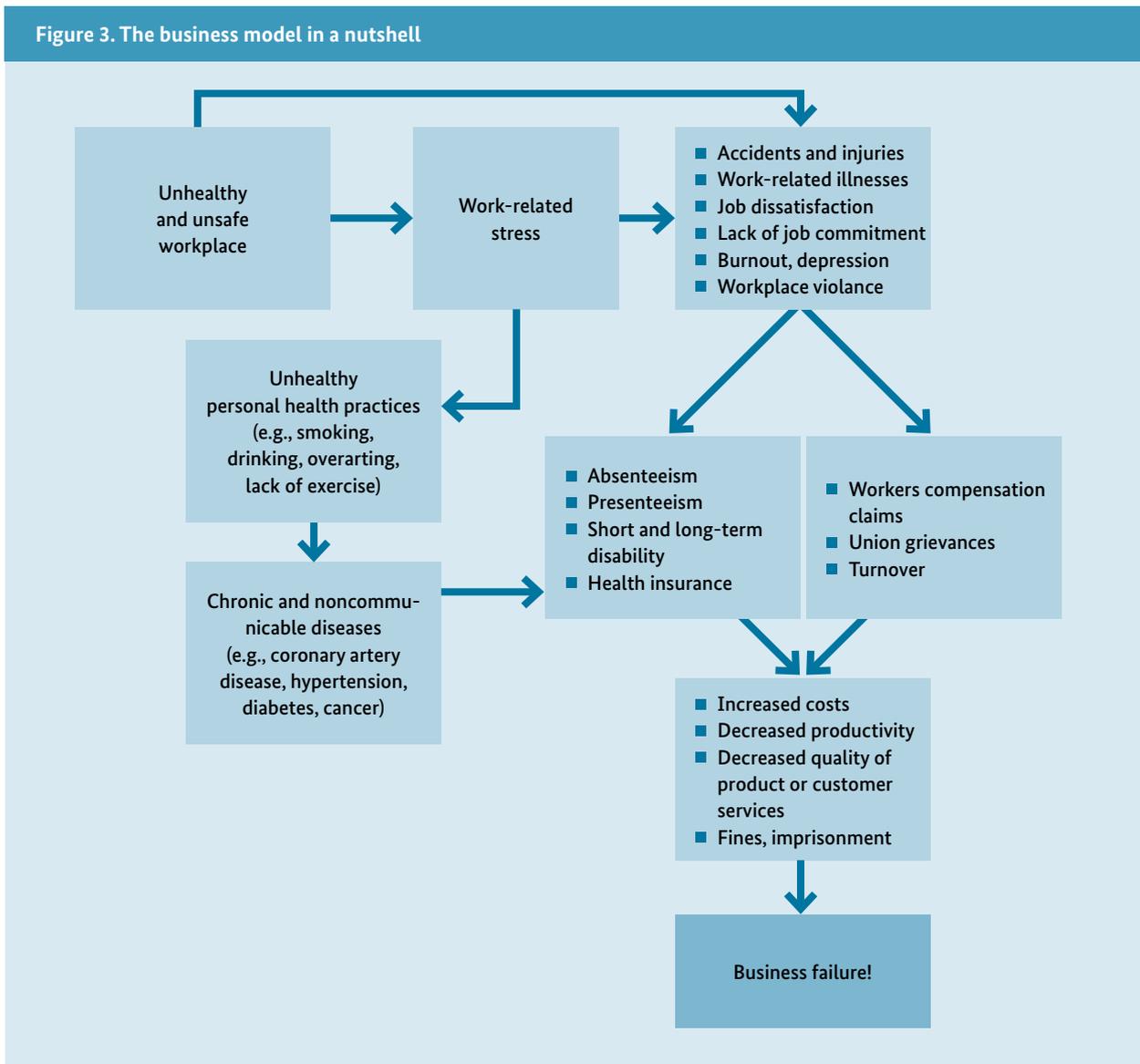
In contrast to the reduction in direct costs, disruption and lost working time caused by injuries and accidents, intangible benefits have been much harder to quantify. These include access to and a competitive edge in new or larger markets, easier or cheaper access to bank loans, or making the company more attractive to a more committed and motivated workforce, thus reducing recruitment and training costs.

A cost-benefit analysis of the occupational health and safety interventions at Western Marine conducted in May 2013 was the first time a calculation of the returns of investments into health and safety at a company had been attempted in the developing world, and the first ever to have been done in the construction or shipbuilding industry. It tried to compare the costs and monetary benefits of implementing health and safety policies and obtaining certification at Western Marine, using the available data.

The cost-benefit analysis showed that Western Marine’s treatment costs per worker at the clinic had declined from more than €15,000 a year in 2010 to only €341 in 2012.

Whilst this result is in itself impressive, the cost-benefit analysis failed to put accurate financial values to the process of certification and all the cost-savings it produced, firstly because there was insufficient data available from the time pre-dating the project. Secondly, the projected cost-benefit advantages had not yet fully materialised due to the recent slump in demand from Europe for new ships as a result of the financial crisis, which had hit the yard badly.

Even though some of the anticipated business benefits of the new occupational health and safety policy and certification have yet to materialise, Western Marine’s management still believes investment in these systems and infrastructures made good business sense and had resulted in better productivity. Less time lost to injuries means more time for building ships, and a trained workforce that quickly recognised the benefits of safer working conditions and on-site health care, resulted in improved commitment and morale.



Source: WHO 2010

2014 will be a critical year for recovery, and the shipyard hopes that the new order from Tanzania mentioned at the beginning of this report is a sign of better business prospects to come. 'When the upturn comes,' says Abu Mohammed Fazle Rashid, the company's Deputy Managing Director, 'we are confident that Western Marine will be in a good position to get new business.' New orders from the Pacific region that came in at the end of 2013 seem to justify his optimism.

Many of the environmental changes implemented also resulted in unforeseen cost benefits. For example, better 'housekeeping' meant that whereas previously scrap metal was just left lying around and wasted, under the new regulations it had to be gathered up in one place. It proved to be

such a substantial amount that Western Marine were able to sell it off for recycling, recovering one tenth of the original price.

The Western Marine Group feel so confident about the future of shipbuilding in Bangladesh, they have ambitious plans to expand further, and have purchased more land to build a new yard that will enable them to build bigger ships of a deadweight tonnage of 30,000 and above. Occupational health and safety will be incorporated from the design and planning stages of this new yard, and Mr Rashid says the existing health and safety structure could manage both yards, saving some further costs and manpower.



■ *Neighbouring shipyards do not have the same standards of health and safety.*

Box 4. What do the workers think?

To get to Western Marine from the sprawling chaos of Chittagong, a fleet of the company's water taxis transports hundreds of workers across the wide Karnapuli River to the yard every morning, and back again at the end of the day. These water taxis weave in and out at speed, through the hundreds of ships moored in this vast and busy port, under the concrete spans of a huge bridge, and eventually slow down to moor at the shipyard's neat landing pier. One by one the workers disembark, their feet clattering on the wooden pier, and head off to prepare for the day's work ahead.

All of the workers spoken to in researching this report were highly appreciative of the efforts that had been made by both Western Marine management and GIZ to improve health and safety in the shipyard. Kemal Hasan, a welder who has worked at the shipyard for several years, says that conditions have improved enormously in the last three years. He has a scar on his hand from an old burn, but now he always works with gloves, protective overalls and a face mask – whereas previously he had none. Initially he found it awkward and hot to wear the protective equipment, but now he has got used to it, and can see that it prevents a lot of the injuries that previously occurred.



■ Chittagong harbour

His helper Mohammed Rabet only joined the shipyard recently, but says he received safety training and health checks when he first arrived, and has learnt a lot about keeping himself safe in the work area. He says the workers have to take frequent breaks, and are told to stop work if they feel dizzy or unwell. He goes to the clinic if he has any problems, but apart from a minor ankle injury when he once slipped, he has had no serious problems.

Both men say they can be more productive under the new occupational health and safety regime, as there are now fewer stoppages due to injuries. They also feel that morale amongst the workers is better and they want to continue working for Western Marine, because they know that conditions here are far better than elsewhere, so there is little incentive to move.

If Kemal and Mohammed, or any of the other workers, do have any health and safety concerns, company policy encourages them to discuss them with safety representatives and line managers, who can then bring them up at the monthly health and safety committee meetings. This is attended by the company's technical director (who reports directly to the managing director, and presents all findings at a monthly management meeting), the doctor, the quality control director, the occupational health and safety adviser, and one safety representative. Workers are encouraged to be proactive in planning and improving, managing and maintaining the company's occupational health and safety policy.

A short walk to the small shipyard located next to Western Marine illustrates why Kemal, Mohammed and their colleagues are so keen to stay: here, an old German tanker is being refurbished and repainted. Two welders are busy removing the ship's old name from the side of the ship, balancing precariously on high, wobbly scaffolding with no protective harness, no hard hats and no protective goggles as their welding torches shower sparks everywhere. The ground is littered with scrap metal and rubbish, that has just been dropped anywhere, and live electricity wires trail across the dirt. It is a stark contrast to the ordered efficiency at Western Marine.

Lessons learned

This public-private partnership between GIZ and Western Marine clearly demonstrates how the implementation of workplace health and safety standards, combined with social investments for the neighbouring communities, can lead to healthy workers, healthy communities and healthy business too. But what have been the main lessons learned from this partnership?

Change must come from within. The principal lesson is that a motivated management team is the key to success in implementing occupational health and safety in any industry. The impetus for change is much more effective if it comes from within the industry rather than being externally imposed. Once a company has recognised that a comprehensive occupational health and safety system is not only a moral imperative for employers, but makes sound business sense too, top management will provide strong, continued support to it, which is vital for facilitating long-term success.

Occupational health and safety policies must be applied at all layers of an organisation. The experience of working with Western Marine in the partnership reinforced GIZ's belief that an effective occupational health and safety policy has to be applied systematically at all layers of an organisation. Everyone from senior management to the shop floor has to be made aware of health and safety issues, through training and frequent drills, and the policy must cover everything, from fire extinguishers to construction codes, from preventive health checks to protective clothing. Above all, it needs to change mindsets.

It takes more than fire and construction safety. After the recent series of disasters in the ready-made garment sector in Bangladesh, international and national attention has mainly focused on better responses to fire hazards, on construction safety, and on setting up external inspectors. However, these inspectors cannot be everywhere at once and will have limited impact. This shows that key industries as well as international development partners still need to understand that occupational health and safety require a comprehensive approach and an integrated management system – such as the one implemented at Western Marine – covering all aspects of their workers' health and safety.

Certification opens global markets. GIZ also recognises the importance of persuading business managers that independently verified international certification opens global markets, adds business value and strengthens their inter-

national credibility. Independent annual evaluations ensure that standards have to be strictly maintained and, as a result, make the approach more credible and sustainable.

International certificates such as OHSAS result in a more cohesive business management approach and in business growth. They ensure companies' continuous compliance with legal requirements for fire safety, electrical safety and for their workers' health. Adhering to international certificates also ensures that companies are prepared for audits and inspection from institutions, buyers, customers, certification bodies at all times – there will be no 'nasty surprises'. Finally, and significantly, Bangladeshi businesses would gain a much better global reputation if more companies adhered to international occupational health and safety standards.

Western Marine's experience can inform Bangladesh's occupational health and safety laws. Occupational health and safety is not yet well anchored in Bangladesh's existing labour laws and as a consequence, companies do not yet feel compelled to implement the required systems. Moves to update and enhance the existing legislation are necessary to provide a framework for improving the health of workers – and to build better business for the companies. The systems and policies developed by the public-private partnership at Western Marine have significant potential to contribute to a meaningful debate about national occupational health policies in Bangladesh.

Prevention is better than cure. Companies routinely invest in curative care facilities for their injured workers and forget that this cannot reduce the incidence of workers' injuries. As the example of Western Marine has shown, a strong policy of occupational health and safety is a much wiser investment and will quickly help companies save human resources costs at all levels.

As a result of these lessons learned, GIZ is now developing a generic online occupational health and safety 'tool box', that can be used in any other industrial sector in Bangladesh, and in other countries as well. Some of these documents are already available on different websites, but this will be the first time they will be all in one place and freely available. The toolbox will form the basis of a comprehensive training in occupational health and safety which GIZ will provide for representatives from different Bangladeshi industries in 2014, helping them to prepare for OHSAS certification.

Outlook

Preparing, designing and implementing occupational health and safety for individual industries is a big challenge for Bangladesh. It takes time to design specific systems for various industries, with different working conditions and workers' demands. However, A.K.M Shahiduzzaman, an ILO programme officer in Bangladesh, who assesses the effect of trade on employment practices, believes the occupational health and safety system adopted at Western Marine with GIZ's assistance serves as a successful example of how other industries in Bangladesh could take up such initiative. This experience can be readily scaled up to other shipyards in the first instance, and can be applied to other sectors such as the rapidly expanding garment and leather industries – which urgently need to address workers' safety issues.

Abu Mohammed Fazle Rashid, Western Marine's Deputy Managing Director also believes the lessons learned at the shipyard can definitely be applied in other industries. He indicated that a number of managers from the garment and tannery industries have already visited Western Marine to learn about its policies. At present, the shipyard is also training colleagues from the wider Western Marine group of industries and would be happy to assist other sectors in Bangladesh as well.

Ship-breaking

The 70 ship-breaking yards along the coastline of Bangladesh are worth an annual turnover of around US\$ 1.5 billion. Around 200,000 workers are employed in the industry to salvage steel, iron and other valuable metals. They have some of the worst working conditions in the country and it is extremely dangerous work, handling toxic materials, such as asbestos, lead and arsenic, together with the risks from gas explosions, falling metal and other hazards. The life expectancy of workers at these yards is thought to be 20 years lower than in other industries. According to the Chittagong-based watchdog Young Power in Social Action at least one fatality occurs each week on average. So far, attempts to demand better conditions for the workers and adequate compensation for injuries have had little success.

In 2011 Bangladesh recognised the ship-breaking sector as a 'separate industry, considering its huge potential and economic benefits', and placed it under the Ministry of Industries. The government is now planning to set up an oversight board to develop the country's shipbuilding and ship-breaking industries, but there remains an urgent need to address long-standing concerns about health and safety. The collaboration between Western Marine, GIZ and the Ministry of Health and Family Welfare could provide a useful template for the industry to adopt.

The ready-made garment industry

As already mentioned, Bangladesh has become synonymous with ready-made garments and – in the wake of the Rana Plaza disaster in April 2013 and several fatal fires – the terrible cost of fast fashion. Since the April tragedy, Bangladesh has come under intense international pressure to overhaul labour laws and working conditions. There has never been a stronger impetus for effective occupational health and safety measures, such as those successfully demonstrated at Western Marine.

On October 23rd 2013, a 'Better Work Programme' was announced, as part of a wider US\$ 24.21 million package aimed at improving working conditions in the country's ready-made garment sector. This three-and-a-half year initiative will be overseen by the ILO, in support of the government's Action Plan on Fire and Safety. It is aimed at improving working conditions in the ready-made garment sector and ensuring the rights and safety of workers. The programme will provide technical support for building and fire safety assessments, strengthen and support inspections and build occupational safety and health awareness, capacity and systems.

Although such initiatives are welcome and needed, the lessons learned from the partnership with Western Marine suggest that meaningful impetus for change must come from the owners and managers of the industry themselves, not just externally from government inspectors, who are few in numbers and cannot respond effectively to all eventualities.

The current focus on the working conditions of women in the garment factories is a step in the right direction but needs to consider the longer term effects on their health and more importantly to expand the focus to other workers who are at more severe risks of exposure to chemicals, heat and steam environments, and very compromised health and hygiene conditions. These usually happen during the initial stages of garment fabrication, i.e. the knitting, dyeing, cutting and printing processes. An initial approach to addressing these issues would include carrying out comprehensive health risk assessments of all work areas, instituting accurate workplace monitoring processes and maintaining comprehensive hazard identification and risk assessments – as is routinely being done by Western Marine.

GIZ has also been working with Bangladesh's garment industry since 2005 through another project to promote social and environmental standards, build monitoring teams to conduct internal audits of factories and improve awareness of health and safety issues. Magnus Schmid, GIZ's programme coordinator for the Promotion of Social and Environmental Standards in industry says, 'The time has come for more incentives to comply. Now is the time to "sell" certification.'

Conditions in the shipyard obviously differ from those in the ready-made garment sector, and the issues may even vary from factory to factory – but the overall safety issues such as toxic emissions, exposure to dangerous chemicals and fire hazards are common, and the concepts are similar. Western Marine's clinic and health services could certainly serve as a model for larger garment factories, as could the quality systems for occupational health and safety put in place by the shipyard's managers.

Tanneries

Less notorious but no less grim are the working conditions in Bangladesh's booming leather industry. An estimated 206 tanneries are concentrated in one area – Hazaribagh, a crowded and heavily polluted neighbourhood in south-west Dhaka, which a recent study put amongst the ten most polluted areas in the world. According to government figures cited in an October 2012 report from Human Rights, in the absence of any waste-treatment facility, the tanneries dump a large amount of untreated waste into the Buriganga River every day. These chemicals in the water and soil are taking their toll on the health of the 180,000 people who live in the area, causing painful skin rashes and respiratory problems. Conditions are even worse for the 16,000-or more tannery workers, whose exposures to dangerous chemicals are said to have reduced life expectancy to below 50.

Again, although each industry has different working conditions and problems, there are many synergies from the occupational health and safety experience at Western Marine that could be readily applied in this sector too – if the management commitment exists.

'If we look after our people, we'll get better work from them. The people are happy, we are happy... that's the best thing.'

Abu Mohammed Fazle Rashid,
Deputy Managing Director of Western Marine

Peer Review

The German Health Practice Collection has established eight criteria that programmes and projects must meet to qualify for publication as part of this series (Box 5).

The two expert peer reviewers of this report concluded that the approach adopted by the German-Western Marine partnership had been highly effective and impressive in terms of lowering accident rates and improving health and safety. Although the initial financial and expert support provided by the GIZ had acted as a catalyst, the shipyard's strong managerial commitment and recognition that there was a good business imperative for investing in health and safety had been crucial for success. One reviewer found the 'bold and visionary management decision' made by Western Marine to co-operate with external partners to improve the health and safety of its employees, to be very innovative in a low-resource setting: 'One can only congratulate the management of Western Marine Shipyard Ltd. for its foresight and leadership.'

Both reviewers considered the experiences at Western Marine to be transferable not only to other shipyards, but also to other industries, provided the management commitment and resources were available.

Since Western Marine's workforce is composed entirely of men, there was no specific gender-sensitive component in the project. However, the reviewers found that women's needs – both workers' wives and members of the general community living around the shipyard – are catered for through the provision of and better access to health care facilities and services by the Western Marine clinic. The process of training and consulting workers had empowered them to take their concerns to management and get them addressed.

The expert reviewers felt the measures taken had generally been cost-effective and well monitored and evaluated, by visible and documented internal mechanisms as well as by ongoing external third party audits. These provide the basis for further improvement and continuous learning, and the robust occupational health and safety systems now in place at the shipyard ensure that the policy will be sustainable.

Box 5. Publication process of the German Health Practice Collection

Each year, experts working in GDC-supported initiatives propose projects that they regard as good or promising practice to the Managing Editor at ghpc@giz.de. Proposals are posted on the Collection website and several specialist fora to allow GDC experts and the interested public to compare and rate them. Informed by this initial assessment, an editorial board of GDC experts and BMZ officers select those most worthy of publication. Reports are written by professional writers following on-site visits, working with the local partners and GDC personnel who jointly implement the projects. Draft reports are peer reviewed by independent scholars and practitioners, emphasising eight criteria:

- Effectiveness
- Transferability
- Participatory and empowering approach
- Gender awareness
- Quality of monitoring and evaluation
- Innovation
- Comparative cost-effectiveness
- Sustainability.

'A lot of effort and resources have been put into the improvement of health and safety in the Western Marine Shipyard Ltd. and the results are impressive.'

A peer reviewer



■ *Ships built at Western Marine.*

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Acknowledgements

The Federal Ministry for Economic Cooperation and Development (BMZ), Germany, would like to thank the many individuals and institutions who have contributed to the success of the public-private partnership between Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Western Marine Shipyard Ltd. in Bangladesh to improve occupational health and safety.

The writer was able to visit Western Marine in Chittagong and observe at first hand the impact this collaboration has had on work practices there. The management and workers were most generous with their time and facilitated a free and open observation of and discussion about the work practices and management systems that have been adopted as a result of the two-and-a-half year partnership with GIZ.

In particular, we thank the following individuals at Western Marine Shipyard Ltd. who contributed their time and expertise to this publication:

- Md. Sakhawat Hossain, Managing Director
- Saiful Islam, Chairman
- Engr. Abu Md. Fazle Rashid, Deputy Managing Director
- Naimur Rashid, Director of Quality Control
- Arifur Rahman Khan, Technical Director
- Capt. Abdur Razzak Bhuiyan, Commercial Director
- Md. Shariat Ullah Liton, Executive and Data Analyst
- Dr Md. Alamgir, Doctor and Health Adviser
- Anjoli Biswas, Nurse
- Md. Ibrahim, Senior Safety Director
- and the many other workers and employees who gave their views.

We would also like to thank: Dr Andy Thomson, International Occupational Health and Safety Consultant, Md. Golam Kibria, Country Manager, Bureau Veritas Bangladesh and A.K.M. Shahiduzzaman, National Programme Officer, ILO Bangladesh.

The GIZ Bangladesh Health team in Dhaka provided significant assistance throughout the development of this publication. Particular thanks go to Dr Paul Rückert, Karsten van der Oord, Syed Moazzem Hussain, Dr Andrea Knigge, and Kelvin Hui, as well as Shohana Islam for her logistical support. Magnus Schmid, Morshed Manjur and Aminul Hasan of the GIZ Promotion of Social and Environmental Standards team also gave valuable input.

Special thanks also go to Evelyn Kortum and Norbert Wagner, the two external peer reviewers who have read this publication, provided valuable comments and approved it as describing an example of promising practice.

This publication was written by Ruth Evans. Photographs were taken by the writer, Karsten van der Oord and Western Marine.

Published by

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

German Health Practice Collection

Registered offices

Bonn and Eschborn, Germany

Programme to Foster Innovation, Learning and Evidence
in HIV and Health Programmes of German Development Cooperation (PROFILE)

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Writer

Ruth Evans

Design and layout

www.design-werk.com

Printed by

intentdesign.net

Photographs

Cover, p. 9, 18, 19, 21, 22, 26; © GIZ/Ruth Evans
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As at: March 2014

GIZ is responsible for the content of this publication.

On behalf of

Federal Ministry for Economic Cooperation and Development (BMZ);
Health; population policy

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