

WORKING PAPER

Transforming the informal sector

A review of best practices for the brick sector in the HKH

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Executive summary

The informal sector makes up a significant portion of the economy in the HKH. It provides employment opportunities to a large number of people, including women, from diverse social and economic backgrounds. Despite their important role in the informal economy, jobs in the informal sector are not formally registered or organised. Even if the sectors are registered, the workers are often employed without a proper contract or guarantee of regularity of employment.

The brick sector is one of the many sectors that fall under the informal economy. Brick factories still use traditional methods and technologies that require a lot of labour and energy. The labour demand during the brick-making season is met by internal and regional migrants who temporarily reside in or near the brick factories. These include male and female workers and their families (along with children), as well as unaccompanied child workers.

The brick sector is also responsible for considerable emissions of hazardous pollutants – carbon dioxide (CO₂), black carbon (BC), and suspended particulate matter, among others, which contribute to climate change.

The study documents some of the best practices in the brick industries of the HKH. The goal is to support the transformation of the sector into a clean and modern industry. This report presents 25 best practices related to three specific dimensions of the brick industry – social, regulatory, and technological.

Social dimension: The informal economy encompasses large numbers of male and female workers across the globe. However, these workers are employed without proper livelihoods protection or social promotion. This makes them vulnerable to risk, economic shocks, and crisis. It is thus important to focus on social protection and livelihood diversification, especially since the protection of workers in the informal sector might not be a priority for most of the informal business sector.

A number of organisations have already initiated activities to promote social protection and livelihood diversification for workers. Social protection includes practices that ensure workers' safety, welfare, and benefits, including social insurance and the welfare and safety of women and children. Livelihood diversification includes activities that enhance and diversify livelihoods through skills development and productivity enhancement, among others. Education,

training, and information can help enhance workers' skills and capacity, raise their awareness, and improve their health, safety, and financial literacy.

Regulatory dimension: The governments of South Asia and the HKH have formulated socially inclusive policies and strategies related to labour, social security, and child labour. However, some of these policies are not practical or feasible, and others are only pertinent to specific sectors and not to the informal sector at large. Still, private companies have utilised these policies and laws to implement socially responsible codes of conduct and corporate social responsibility (CSR) strategy to promote the welfare of informal workers. In India, for instance, the Tata Trusts has a comprehensive CSR plan through which it reaches millions of individuals from diverse backgrounds including marginalised groups. Their CSR covers healthcare, nutrition, education, livelihood, water, sanitation and hygiene, and social justice and inclusion, among others. In Nepal, the Better Brick Nepal initiative has been working to improve labour conditions of workers and eliminate child, forced, and bonded labour in brick

kilns since 2013. An incentive-based approach, a robust monitoring and evaluation system, and a mandatory CSR plan are effective ways to promote gender and socially inclusive policies and strategies.

Technological dimension: The technological dimension covers two main indicators – promoting energy-efficient air pollution mitigation technologies and reducing the drudgery of workers, particularly with regard to the brick sector, which is highly polluting. Improvements in technology can mitigate emissions and make the brick industry more energy efficient. Zig-zag technology, for instance, is energy efficient and environmentally friendly; it reduces coal consumption by 20–40 percent, ultimately resulting in reduced air pollution along with economic benefits and health benefits for the workers. In general, the mechanisation of the brick sector would reduce both the cost of brick production and the drudgery of workers. The introduction of clay-mixing machines, for instance, has helped increase the productivity of workers and improved the quality of bricks.

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Abbreviations and acronyms

ADB	Asian Development Bank
AQC	Air Quality Cell
BBN	Better Brick Nepal
BC	Black Carbon
CASE	Clean Air and Sustainable Environment
CCC	Community Child Club
CCWB	Central Child Welfare Board
CDS	Child Development Society
CO	Carbon Monoxide
CO₂	Carbon Dioxide
CoC	Code of Conduct
CPEC	Carpet Export Promotion Council
CSR	Corporate Social Responsibility
DCWB	District Child Welfare Board
DOE	Department of Education
DOL	Department of Labour
ECDC	Early Childhood Education Centres
ETI	The Ethical Trading Initiative
EU	European Union
FCBTK	Fixed Chimney Bull's Trench Kiln
FCDO	Foreign, Commonwealth & Development Office (FCDO)
FCK	Fixed Chimney Kiln
FNBI	Federation of Nepal Brick Industries
FORCES	Forum for Crèche and Childcare Services
GBV	Gender Based Violence
GHG	Green House Gases
HHK	Hybrid Hoffman Kiln
HKH	Hindu Kush Himalaya
ICIMOD	International Centre for Integrated Mountain Development
ICT	Information and Communications Technology
IFC	International Finance Corporation
ILO	International Labour Organization
INR	The Indian Rupee
MC	Mobile Crèches
MCP	Master Craftsperson

MP	Madhya Pradesh
NCAP	National Clean Air Programme
NCEUS	National Commission for Enterprises in the Unorganized Sector
NGO	Non-Governmental Organisation
OBM	Out Board Motor
ODI	Overseas Development Institute
OECD	Organization for Economic Cooperation and Development
OLE	Open Learning Exchange
OSH	Occupational Safety and Health
PM	Particulate Matter
POI	Principles of Implementation
PROMISE	Promoting Business Incubation for Small Entrepreneurs
RGNA	Rapid Gender Need Assessment
RNSF	Research, Network and Support Facility
SAAS	Social Accountability Accreditation Services
SAI	Social Accountability International
SEEP	Self Employment Education Program
SEIP	Skills for Employment Investment Program
SEWA	Self-Employed Women Association
SIFFS	South Indian Federation of Fishermen Societies
SLCPs	Short Lived Climate Pollutants
SOP	Standard Operating Procedure
SPM	Suspended Particulate Matter
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
STAR	Skills Training for Advancing Resources
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNGC	UN Global Compact
UNGPs	UN Guiding Principles on Business and Human Rights
UNICEF	United Nations Children's Emergency Fund
USD	United States Dollar
VSBK	Vertical Shaft Brick Kiln
WEIGO	Women in Informal Employment Globalizing and Organizing
WFTO	World Fair Trade Organization

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SECTION I

Background and rationale

The informal sector¹ is an important part of the global economy as it employs roughly two billion people aged 15 and above. They make up 61 percent of the world's employed population (ILO, 2018c). A large section of the population of the Hindu Kush Himalaya (HKH) is engaged in the informal sector. Within the HKH, Nepal has the largest share of the informal workforce (94 percent), followed by Bangladesh (89 percent), India (88 percent), Myanmar (86 percent), Pakistan (82 percent), and China (54 percent) (ILO, 2018c). These figures alone indicate that the informal sector is of the utmost importance to the economy of the HKH. Except in China, the informal workforce in all HKH countries includes a significant number of female workers (ILO, 2018c).

Despite their important role in the economy, activities within the informal sector are not formally registered or organised. Such activities mostly lie outside the government's control and regulation (ILO, 2004c). Even if the company is registered, the workers are often employed without a proper contract and lack social security. Therefore, they are unable to acquire workers' benefits provided by labour legislation and other social protection schemes (ILO, 2013c). Furthermore, jobs in the informal economy often fail to meet the criteria of decent work (ILO, 2002). Working conditions in the informal sector have long been a cause for concern as they often do not meet the standards of occupational safety and health (OSH); workers have to work long hours and earn low wages. In addition, informal workers have limited access to finance, technology, and the market. They are thus trapped in the informal economy with high exposure to risks (ILO, 2013a; OECD & ILO, 2019).

The brick industry is one of the many industries that fall within the informal sector. Seventy-five percent of the global brick production is concentrated in four countries of the HKH – China (54 percent), India (11 percent), Pakistan (8 percent), and Bangladesh (4 percent) (Wester et al., 2019: 358). Brick industries in India, Bangladesh, and Nepal alone employ over 16 million people (Eil et al., 2020).

Brick industries in the HKH (except China) still use traditional methods and technologies for brick production. Such methods require huge amounts of labour and energy (ICIMOD, 2019b). During the brick-making season, the demand for labour is met by internal and regional migrants who temporarily reside in or near the brick factories; they include individual male and female workers; workers with families along with children; and unaccompanied child workers (ILO et al., 2017).

Although a large number of brick industries have long been operating in the HKH, the brick sector still faces issues related to poor working conditions, long working hours, environmental pollution, and inadequate technologies. These issues are compounded by the informal nature of the brick sector. Male and female brick workers are exposed to various occupational safety and health hazards (long working hours, poor working conditions, labour intensive process, exposure to harmful pollutants, and employment without contract) (ILO et al., 2017). The seasonal nature of brick production prevents workers from receiving the minimum wage determined by the government and other work benefits (Eil et al., 2020). Further, there's a disparity of wages between male and female workers

¹ The informal sector and informal economy imply two different concepts. The informal sector denotes micro enterprises/businesses and workers that are part of the informal economy. (ILO, 2004).

depending on their work and skillsets. Female workers are more vulnerable than male workers as they are exposed to physically demanding tasks and high risks of violence (ILO et al., 2017). Similarly, children who often tag along with their parents to contribute to the family income are highly vulnerable to workplace hazards and poor living conditions. They are deprived of education and exposed to unsafe conditions inside the brick factories. The risk for unaccompanied children is even greater (ILO et al., 2017; World Bank, 2011).

The brick sector is responsible for considerable emission of hazardous pollutants. Through the emission of carbon dioxide (CO₂), black carbon (BC), and suspended particulate matter among other harmful pollutants, it negatively contributes to

climate change. The suspended particulates have a detrimental impact not only on the environment but also on workers' health, causing several respiratory, cardiovascular and neurological problems. This exposes male and female brick workers to high health risk (Eil et al., 2020: 75).

In view of the above-mentioned issues, several national, regional and international organisations are working to improve the brick industry in the HKH. However, there has only been gradual progress and the numerous gaps require interventions. In the meantime, it is important to draw lessons from other informal enterprises/businesses relevant to the brick sector, in particular the social, environmental and regulatory dimension. This study is a step in that direction.

SECTION II

Methodology

This compendium of best practices is largely based on a review and analysis of existing literature on the informal sector. Sources include reports by various government and non-government organisations, academic journals, research papers, and other online publications relevant to the brick sector.

2.1 Objectives and analytical framework

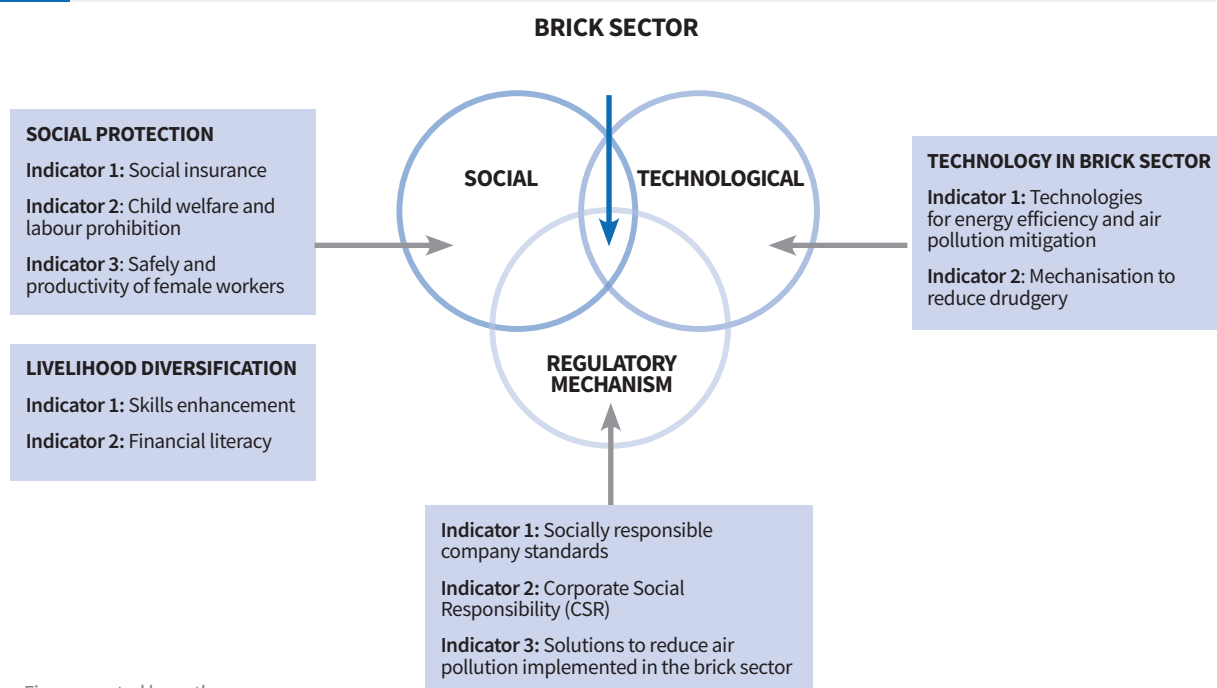
The overall goal of this study is to compile and organise evidence-based best practices in the informal sector. The study focuses on practices that are relevant to the brick sector and fall under three dimensions: (1) social, (2) technological, and (3) regulatory mechanism. While collecting these cases, we assessed how organisations in the HKH are dealing with informal sector employment through their initiatives and policies.

2.2 Identification of best practices

As stated above, the study attempts to gather best practices related to three dimensions of the informal sector – i) social, ii) regulatory mechanism, and iii) technological (Figure 1).

The assessment and compilation of best practices can inform and help improve policy decisions related to employment in the brick sector, as shown in the analytical framework (Figure 1). The 25 practices in this compendium will also serve as examples to encourage improvements in the informal sector at large. Another aim is to highlight the potential for progress and opportunities in the informal economy.

FIGURE 1 ANALYTICAL FRAMEWORK



Source: Figure created by authors

Figure 1 illustrates the analytical framework for the compendium of best practices in the informal sector. It consists of three major dimensions with multiple indicators – social, technological, and regulatory mechanism (explained further in Chapter 4). The social dimension covers best practices that have been

implemented in the HKH; the regulatory mechanism dimension looks at practices of private companies/ organisations that have implemented government policies; and the technological dimension focuses on emerging technologies that have been implemented in the brick sector.

SECTION III

Limitations of the study

A major constraint of the study was the limited documentation of best practices in the informal sector. Another challenge was validating the authenticity of the practices due to inadequate documentation and lack of supporting secondary sources.

SECTION IV

Best practices in the informal sector

The study reviewed best practices related to three dimensions of the informal sector: social; technological; and regulatory. The following sections describe each of the three dimensions.

4.1 Social dimension

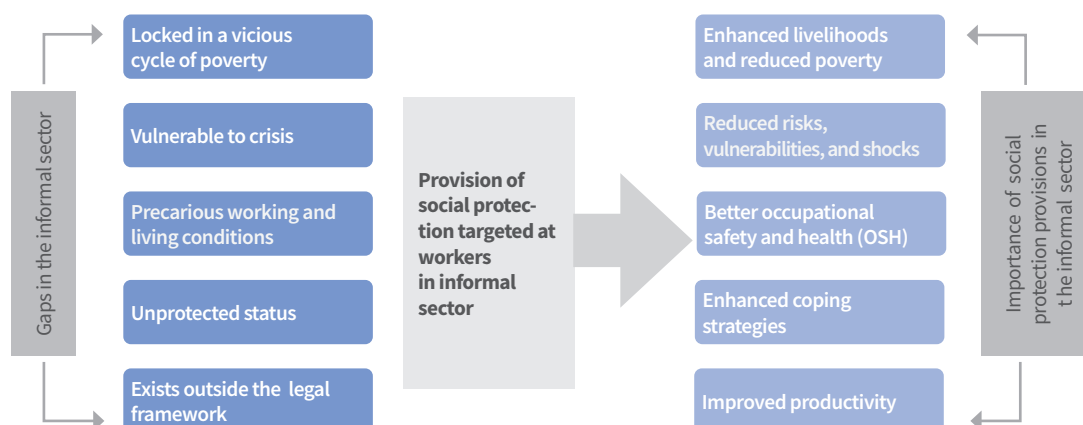
We examined the social dimension of the informal economy with a focus on two areas: social protection, and livelihood diversification. Under social protection, we have included good practices in the informal sector that ensure workers' safety, welfare, and benefit services. Such practices have provided social insurance, promoted the safety and productivity of women workers as well as child welfare, and ensured the employability of workers. Under livelihood diversification, we have included activities that seek to enhance and diversify the livelihoods of informal workers through skills development and the sharing

of information. There are a few overlapping good practices in the two areas.

4.1.1 Social protection

Social protection is crucial for the well-being and social security of informal workers. However, informal workers are among the 55 percent of the global population who lack access to social protection or are only partially protected (ILO, 2017; ILO 2019; ILO, 2004b). They are excluded from social protection measures and face obstacles while trying to access them; for this reason, they are termed the “missing middle” (ILO, 2020a). In the absence of social protection, workers are locked in a cycle of poverty, marginalisation, and vulnerability. This has implications not only for the individual worker but also for the social and economic development of the country (ILO, 2019; ILO 2017; OECD & ILO, 2019; RNSF,

FIGURE 2 IMPACTS OF INADEQUATE SOCIAL PROTECTION MEASURES ON INFORMAL WORKERS



Source: Created by the authors based on a literature review (WEIGO, 2019; OECD & ILO 2019; ILO, 2013a; RNSF, 2018; RNSF & EU, 2017)

2018;ODI, 2016b). Figure 2 shows why social protection measures are important and how the lack of such measures have impacted informal workers.

Social protection for workers is particularly indispensable during times of crisis. This was evident during the recent COVID-19 pandemic when informal workers who lacked access to social protection measures were among those hardest hit by the crisis. Many of them badly suffered the impacts of the pandemic because they lacked the social and financial support that might have helped them cope with the situation. Informal workers were often excluded from COVID relief and support programmes because of the informal nature of their jobs (FAO, 2020; ILO, 2020a).

INDICATOR 1

SOCIAL INSURANCE

Social insurance refers to schemes that help people cope with risks associated with unemployment, ill health, disability, work-related injury, and old age (WEIGO, 2019; RNSF & EU, 2017; ADB, 2019). Such schemes include health insurance, old-age insurance, pension, unemployment insurance, disability insurance, provident funds, and maternity benefits (ADB, 2019). Social insurance provided to informal workers can help reduce their poverty and vulnerability, which in turn enhances their productivity and security (ILO & WIEGO, 2013).

However, workers in the informal sector do not have access to social insurance as their employment is often unregistered. Informal workers operate outside the legal framework, are unorganised, and work without job contracts. This lowers their chances of obtaining benefits outlined in government policies (ILO, 2019; OECD & ILO, 2019). Given their low level of literacy, they have limited awareness of their rights and available insurance schemes (ILO, 2019). For example, around 80 percent of informal sector employees in India surveyed by the Asian Development Bank (ADB, 2006) did not know about pension. Female workers are more likely to be excluded from insurance schemes than men (ODI, 2016a). Informal workers have the greatest need for social insurance given their precarious working and living conditions, disadvantaged backgrounds, and comparatively high exposure to risks; yet they are the ones who are deprived of it.

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

Governments of various countries have introduced several schemes targeting workers in the informal sector. Non-governmental organisations (NGOs), private entities, and community organisations have also played a substantial role in promoting social insurance schemes to protect informal workers. Below we highlight two examples gleaned from the literature.

BOX 1: VIMOSEWA FOR THE INFORMAL WOMEN WORKERS

A notable initiative of India's Self-Employed Women Association (SEWA) provides social insurance to female workers in the informal economy such as manual labourers, construction workers, service providers such as cleaners and domestic workers, home-based workers, street vendors and small producers such as artisans. SEWA is composed of 1.5 million women representing 14 states of India who have been working in the informal economy since 1972. SEWA aims to ensure that female workers obtain social (health care, childcare, and shelter) and income security.

SEWA initiated VimoSEWA, also known as SEWA insurance, a form of social insurance that is extended to its union members. It is believed that SEWA is the first organisation to initiate social insurance for informal workers and promote social security, the first step towards organising them. The insurance package covers life, asset, and health. This scheme has been carried out since 1992 in collaboration with national insurance companies. The major goal of SEWA's insurance is to assist its members in times of crisis such as floods, loss of work and income, illness, widowhood, accident, fire, and crisis resulting from natural and human-made calamities. Since female informal workers are largely vulnerable to such crises, SEWA's approach to ensuring social protection is notable. Recent data shows that it successfully provided health care, life insurance, pensions, childcare, and credit to over 32,000 union members in 2019 through an annual individual premium of INR 60. For an additional INR 15 per annum, they could also get life insurance for their husbands as well as widowhood insurance. This kind of insurance package provides workers protection against financial uncertainties and other crises. VimoSEWA also extends maternity benefits to its members. SEWA has implemented successful health insurance schemes for its 215,000 members, most of whom belong to the informal sector. As mentioned earlier, female informal workers work in precarious conditions and are exposed to similar occupational health and safety hazards as male workers but are not given similar priority. SEWA's insurance package is considered one of the best insurance schemes for female workers.

As of 2018, SEWA had established more than 115 cooperatives across India in various sectors where women are involved. For instance, in Gujarat, SEWA has formed 106 cooperatives that are owned and managed by women workers involved in the informal sector. These figures indicate that large numbers of female informal workers have benefitted from SEWA's cooperatives and the social insurance they provide.

Source: RNSF & EU (2017); ILO (2018a); SEWA (n.d.)

BOX 2: INSURANCE SCHEMES TO PROTECT INFORMAL WORKERS IN THE FISHERY SECTOR

South Indian Federation of Fishermen Societies (SIFFS) works in the marine fisheries sector and runs an insurance scheme for small-scale fish workers in India. The organisation works with over 9104 fish workers representing eight districts of South India. Over 65,000 fish workers are affiliated with SIFFS and are accessing various services including social insurance. In view of the nature of work in the fishery sector, the insurance scheme covers death and disability. Most of the workers have enrolled in the insurance scheme with a premium of INR 100 (USD 2) a year. With a contribution of INR 100 from the fish workers, the insurance package offers INR 75,000 (USD 1,500) for accidental death or full disability, and INR 35,000 (USD 700) for a natural death or partial disability. The scheme is connected with Janashree Bima Yojana Social Security Scheme, managed by the Life Insurance Corporation of India. This is a prime example of a contributory scheme with a minimum fee which SIFFS has promoted among fish workers who are at high risk of occupational hazards. In addition, SIFF's social protection programme also includes retirement benefits, credit programmes for services such as repair, maintenance, food credit, and investment in essential fishing equipment. The programme has been designed with a holistic approach, incorporating sectors that provide significant assistance to fish workers.

Source: SIFFS (n.d.)

INDICATOR 2

CHILD WELFARE AND LABOUR PROHIBITION

Statistics from 2020 indicate that an estimated 160 million children (63 million girls and 97 million boys) are involved in child labour across the globe. Of them, 79 million children are engaged in hazardous work activities that are against occupational safety and health (OSH) standards (ILO & UNICEF, 2021). Such work can make children victims of exploitation, enslavement, harm, and abuse. Such children are often separated from their families, which increases their vulnerability (Winrock International, 2008).

Child labour is very common in the informal economy. Informal sectors such as brick kilns, artisanal mining (coal and gold), and the manufacturing sector engage children (ILO, 2018b). Most of these are low productivity jobs (ILO, 2013b). To help meet their basic needs, many families from poor socioeconomic backgrounds involve their children in informal work before they reach the

legal working age (Winrock International, 2008; ILO, 2018b). As informal jobs are unregistered, they fall outside the purview of the government's monitoring system, which creates an enabling environment for the violation of children's rights (ILO, 2018b).

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

Given the global prevalence of child labour, various government and non-governmental agencies have been working to eliminate child labour. ILO (2018b) estimated that the number of children engaged in child labour globally declined to 16 million between 2012 and 2016. Recent statistics from ILO and UNICEF (2021) also suggest there's a declining trend in child labour. Good practices that have contributed in reducing child labour include the social labelling initiative, provision of childcare centres within the industries, promotion of child education, monitoring, and so forth, as shown in Figure 3.

FIGURE 3 CHILD LABOUR ISSUES AND GOOD PRACTICES IN THE INFORMAL SECTOR

CHILD LABOUR ISSUES	EFFECTS	GOOD PRACTICES
<ul style="list-style-type: none"> Forced labour and bonded labour Involves hazardous and strenuous work Low productivity activities Unaccompanied children below the legal working age at high risk Underpaid or no pay 	<ul style="list-style-type: none"> Exploitation and deprivation Abuse, enslavement, and victimisation Health and safety concerns Children at high risk of poverty Violation of basic rights of children Deprivation of education 	<ul style="list-style-type: none"> Awareness and sensitisation programmes Rigorous monitoring and evaluation Market-based incentives and other incentives Education as an alternative to child labour Child care centres and ECDC Social labelling and certification programmes

Source: Created by the authors based on literature review (Winrock International, 2008; ILO, 2018b; ILO & UNICEF, 2021; ILO, 2013b)

BOX 3: SOCIAL LABELLING TO END CHILD LABOUR IN THE CARPET INDUSTRY

Child labour is rampant in the supply chains of the carpet industry. To monitor the situation of child workers in the carpet industry, GoodWeave have initiated a social labelling programme which has gained worldwide prominence. Social labelling involves providing certification to products that have been manufactured without using child labour and that demonstrate a commitment towards eliminating child labour. The goal is to encourage manufacturers to stop employing children under the legal working age.

GoodWeave International, formerly known as Rugmark, is an international social labelling initiative started in 1994 to eliminate harmful child labour in the global supply chain of the rug/carpet industry. Currently, it promotes a child labour free work environment and decent work for informal and marginalised workers employed in the carpet as well as other industries such as textile, apparel, and brick industry. GoodWeave provides certification to producers who meet and comply with GoodWeave's principles against child labour, forced/bonded labour, and working conditions. Their standards also include five progress principles that address a broader set of labour rights comprising no discrimination, health and safety, working hours, wages, and freedom of association, and notably, environmental issues.

Another exemplary practice of this initiative is the replication of the labelling from the carpet industry to other industries such as apparel, home textiles, fashion jewelry, bricks, and tea. As of 2018, GoodWeave had a total of 169 brand partners and conducted 259,330 audits and inspections. As of 2022, it has rescued 9436 children engaged in labour and provided 44,893 children with educational opportunities. It has also reached 88,773 workers in the supply chain.

GoodWeave Foundation has been working in Nepal since 1995, mainly in the carpet industry. More than 50 percent of carpet businesses in Nepal now meet their standards for certification. In 2013, GoodWeave standards were replicated in Nepal's brick industry through Better Brick Nepal (BBN). BBN initiated social labelling through an incentive-based system that seeks to improve the working and living conditions of brick workers and to end child labour.

Source: GoodWeave (n.d.) and GoodWeave Nepal (n.d.-a)

BOX 4: PROVIDING EDUCATION TO ELIMINATE CHILD LABOUR

Education is a basic human right. There's a large body of evidence that shows a correlation between lack of access to education and child labour. Education is thus considered a viable alternative to child labour. Children with limited access to education are at a higher risk of becoming informal workers. ILO (2018b) indicates that children under 15 years of age are engaged in work or forced labour when they have limited or no access to education (ILO, 2018b). Taking this into account, various organisations working to end child labour have initiated education programmes for children. Two such initiatives are highlighted below.

Bridge school: Brick kilns in Nepal operate on a seasonal basis, and during the brick-making season, brick workers migrate for work along with their families including children. The hazardous working conditions in brick kilns make brick workers' children highly vulnerable. Therefore, access to preschool education and childcare centres is essential for brick workers' children. The Bridge School initiated by Better Brick Nepal provides these services to brick workers' children in an effort to end child labour in the brick industry. Their activities include:

- 1) Running Early Childhood Education Centres (ECEC) on the kiln premises for children under the age of six
- 2) Connecting brick workers' children with the nearest local schools
- 3) Learning programme before and after school on the kiln premises

Easy access to a preschool and an early childcare centre has helped ensure the safety and wellbeing of brick workers' children. Most importantly, the programme ensures that kids get official certificates approved by the Department of Education so that they can transfer the credits when they return to school in their home village. As of 2017, 1026 kids were enrolled in the ECEC programme and 740 were attending local government schools. One of the highlights of this programme is that it works on a cost-sharing basis, with kiln owners contributing for teachers' salaries and the construction of ECECs.

Source: BBN (n.d.)

Formation Carpets: Formation Carpets, registered in 1990, is a Nepali carpet brand certified by GoodWeave Nepal. Formation Carpets established its sister organisation, Hoste Hainse, to ensure good working conditions for its employees and their children with the provision of a daycare and preschool facility. Hoste Hainse also provides full/partial education scholarships and opportunities for the children of carpet workers. Employees and their children are provided complimentary health insurance as well. The education scholarship and insurance act as an incentive for workers to avoid engaging their children in labour. Hoste Hainse has already provided more than 1500 students with scholarships.

Source: ICF (2012); Formation Carpets (n.d.)

BOX 5: ICT-BASED LEARNING PROGRAMME FOR PRIMARY SCHOOL CHILDREN

In March 2019, ICIMOD initiated an information, technology and communication (ICT) based learning programme, in collaboration with Open Learning Exchange (OLE) Nepal. The programme was piloted in Shree Kalika School, Dhading, which brought children from at least three brick kilns. Over 60 percent of the students enrolled in this school were children of seasonal brick kiln workers in the area. The objective was to provide “interactive, creative, and engaging learning” for children whose education is affected by their parents’ seasonal work. OLE provides quality education through “laptop-based integrated learning” using multi-media based digital learning materials such as E-paath. The first phase of the ICT based learning started with the training of teachers on how to use the equipment and provide interactive, creative and engaging learning. OLE also provided monitoring and technical support after the training and implementation of the programme.

Source: Internal annual project progress report (2019)

BOX 6: PROVIDING CARE FOR CHILDREN AT CONSTRUCTION SITES

Initiated in 1969, Mobile Crèches (MC) is an NGO that runs daycare programmes at construction sites and slum areas in three major states of India – New Delhi, Mumbai, and Pune. They operate mobile crèches six days a week, from 9 to 5 pm, through 1000 daycare centres located at building sites and urban slums. The programme reaches 8,67,000 children in the three states. It was launched in partnership with the construction industries and related stakeholders such as NGOs to make construction sites child friendly. MC provides health, nutrition, and early learning and care services to children under 12 years at these sites. MC has been working hard to persuade and negotiate with construction companies to institutionalise “crèches at all sites” through policymaking and partnership with construction workers including migrant workers, contractors, construction industries and real estate developers, and NGOs. It negotiates with builders for necessary infrastructure and funding. MC sets up the crèche, trains the staff, and monitors the functioning of the crèche during the first year to ensure the quality of the services. Later, the builder who is also the partner takes full responsibility for the management and financing of the crèche.

In partnership with 1000 builders, MC has already trained 6500 women based in construction sites as childcare workers. It pioneered the Early Child Care Education (ECCE) programme for migrant workers’ children who have limited access to education. They have also built the capacity of over 51 organisations for providing childcare facilities.

Source: Narang (2010) and Mobile Creches (n.d.)

INDICATOR 3

SAFETY AND PRODUCTIVITY OF FEMALE WORKERS

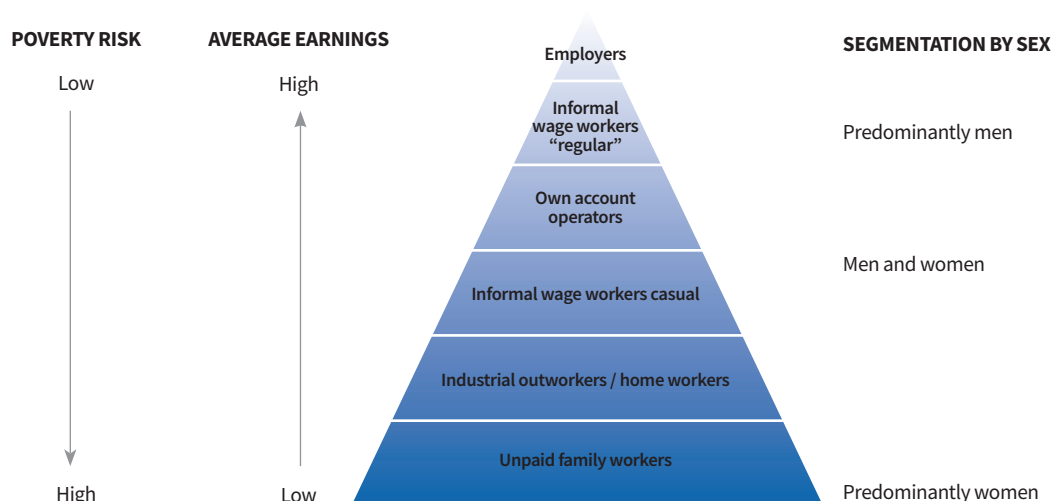
The informal economy provides economic opportunities to large numbers of women worldwide. It is estimated that more than 740 million out of 2 billion women workers are employed in the informal economy (ILO, 2018c). They are mostly engaged in invisible areas with low access to formal wages, no leisure period, limited OSH facilities, and earnings lower than men’s (OECD & ILO, 2019; ADB, 2019; WEIGO, 2016; Chen et al., 2005; WEIGO 2018). Figure 4 illustrates the hierarchy of earnings and poverty risk faced by male and female informal workers (ODI, 2016a).

As illustrated in Figure 4, women earn less than men due to wage inequality and they face a high risk of poverty. They are at the bottom of the wage hierarchy

and make up an overwhelming proportion of casual/ low wage workers as well as unpaid family workers. Men fare better in the informal sector as they earn more than women, make up the majority of “regular” wage workers, and employers/business proprietors are almost always men. This indicates a stark gender disparity in informal employment (Chen et al., 2005).

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

In view of the weak status of female informal workers, various organisations have been working to improve the safety and productivity of women workers. Two such organisations are described below.

FIGURE 4
WIEGO MODEL OF INFORMAL EMPLOYMENT - HIERARCHY OF EARNINGS AND POVERTY RISK


Source: Chen et al., (2005)

BOX 7: A CHILDCARE CENTRE FOR ENHANCING WOMEN'S PRODUCTIVITY

Sangini Mahila Childcare Cooperative is one of the initiatives of the Self-Employed Women Association (SEWA), India. The goal of the initiative is to enhance the productivity of female workers. The cooperative was established in 1986 when the founder of SEWA noticed that female workers were distracted and worried during work and meetings because of their children. To address this issue, SEWA started a full-day childcare centre where women workers could leave their children up to six years of age while they were at work. This allowed the women to focus on their work without worrying about their children and ultimately raised their productivity. The childcare centre operates in accordance with the government's Integrated Child Development Scheme (ICDS). Women associated with SEWA programmes can pay a nominal monthly fee of INR 175 (USD 2.63) for childcare services. SEWA trains their union members as childcare workers and recruits them in the centre.

Source: ILO (2018b)

BOX 8: GENDER SENSITIVITY CONTRACT IN THE CONSTRUCTION SECTOR

Women make up a large proportion of workforce in the construction sector, and they face numerous health and safety risks. The construction sector is traditionally a male-dominated work area (USAID, 2015). Rural Access Programme, phase three (RAP3) (2013-2017), promoted female workers' safety and health in the road construction and maintenance sector in Province 6 of Nepal. The programme employed 9000 people from Mugu and Humla districts out of which 40 percent were female workers. Two actions under this project can be categorised as best practices. First, the project appointed women as community leaders in remote areas. The goal was to draw women out of their overshadowed roles to become leaders, both to empower them as well as to increase their productivity. Secondly, in collaboration with industry partners and the Contractors Association of Nepal, this project included a sub-clause on "non-discrimination and equal opportunities" in work contracts. Contractors were required to comply with this gender-sensitive sub-clause and implement gender-based violence and harassment prevention measures during the construction period, which helped create a safe working environment for female workers. The sub-clause further stated that the contractor shall provide gender and inclusion orientation to its workforce. The orientation focused on creating a conducive work environment for all genders and eliminating gender-based violence, harassment, and human trafficking. Furthermore, the orientation covered sexually transmitted diseases (STDs)/sexually transmitted infections (STIs) and preventative measures to be taken by all workers. This model can be replicated in other sectors to create a safe environment for female workers.

Source: DFID & ICED (2018); ICE (n.d) and RAP (n.d.)

4.1.2 Livelihood diversification

Livelihood diversification entails building a diverse portfolio of income sources to supplement or replace existing livelihoods (Tropenbos International, 2005). It helps buffer households against economic shocks and uncertainties associated with climate change (Tropenbos International, 2005; ILO, 2012).

Workers in the informal sector face a high risk of losing their job and income source, as they lack social protection such as insurance and other benefits (FAO, 2020). This, combined with their low earnings, makes it very difficult for them to break out of the cycle of poverty. They have little or no means of coping with contingencies such as illness, injury, climate disaster, etc (Lim, 2015). Livelihood diversification is hence an important coping strategy for informal workers. This study looks at activities that provide informal workers opportunities to diversify their livelihood options.

INDICATOR 1 SKILLS ENHANCEMENT

The informal sector employs workers with diverse skill sets, ranging from unskilled, low-skilled, and semi-skilled, to highly skilled. These skill sets determine the kind of work they get and the wages they earn. Skills enhancement is thus crucial for improving the productivity of informal workers and diversifying their employment opportunities (Hofmann, 2020). It empowers workers by increasing their productivity as well as the quality of their work (RNSF, 2018).

On-the-job training and traditional apprenticeships are the main methods of skills acquisition in the informal economy. However, most informal workers have limited access to skills enhancement opportunities because of their low education level and poor socio-economic backgrounds, the unaffordability of the training cost, and the opportunity cost as attending a training programme would mean a loss of wages during that time (Hofmann, 2020). Therefore, informal workers generally obtain skills informally rather than through education and training, but such skills are not well recognised in the market and the workers continue to be at a disadvantage (RNSF, 2018).

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

Below we describe four activities that have helped enhance the skills of informal workers in Bangladesh, India, and Nepal. They include a) a childcare training programme in India; b) an alternative skills development programme for fish workers in India; c) a vocational training programme for brick workers in Nepal.

BOX 9: APPRENTICESHIP PROGRAMME

BRAC's Skills Training for Advancing Resources (STAR) uses the concept of apprenticeship to enhance workers' skills. STAR programme largely focuses on the informal sector, providing vocational skills such as tailoring, mobile and motorcycle servicing, beauty salon, electronics, graphic design, IT technician, screen printing, along with soft skills related to financial literacy, labour rights, customer relations, and social awareness. The programme is based on principles of social inclusion and includes people from disadvantaged and minority groups, particularly people with disability, and transgender people. According to their recent records, 2764 persons with disabilities and 205 transgender people account for almost a tenth of STAR graduates. Women are also encouraged to join male-dominated trades and professions. The STAR apprentice model is cost-effective compared to programmes at training institutes. It builds the skills and capacity of workers and increases their chances of earning better incomes. The employment rate of STAR graduates is 90 percent. Furthermore, the programme is linked to an incubation programme called Promoting Business Incubation for Small Entrepreneurs (PROMISE), which assists STAR graduates in developing their ventures and fosters entrepreneurship.

This apprenticeship programme benefits the informal sector in two ways. First, it provides informal workers a platform for developing and upgrading their skills. Second, it supports and encourages trainers/entrepreneurs to build workers' capacity, which in turn raises productivity and contributes to overall economic growth.

Source: BRAC (n.d.)

BOX 10: SKILLS DEVELOPMENT TRAINING FOR WOMEN COOPERATIVE MEMBERS

The cooperatives formed by SEWA place great emphasis on education, training and information to support their union members, many of whom are informal workers in India. They provide various kinds of skills development training to diversify the workers' income sources. Shree SEWA Homecare, Megha, Ruaab, and Sangini are just a few among many cooperatives under SEWA that train their union members in a wide range of activities such as childcare, teaching, administrative work, etc. Some of the trained female workers can then find work opportunities within the cooperative or in other cooperatives under SEWA. Skills training enhances the women's confidence and professional growth as well as expands their livelihood options.

Source: ILO (2018a)

BOX 11: LIVELIHOOD PROMOTION IN THE FISHERY SECTOR

The South Indian Federation of Fishermen Societies (SIFFS) is an NGO that works with fish workers in India. The organisation runs a skills development programme to promote alternative employment opportunities. The fisheries sector in India is an informal sector that is highly vulnerable to climate change. Climate change and sea level rise increasingly threatens the sustainability of the sector as well as the livelihood of fish workers. Livelihood diversification is necessary for providing alternative income sources to fish workers. With that in view, SIFFS provides carpentry training and out-board motor (OBM) maintenance training to fish workers. To ensure employment, the trainees are connected to entities such as SIFFS OBM Workshops and SIFFS Boat Building Network. This programme was initiated as an effort to mitigate the risk of livelihood loss faced by fish workers.

Source: SIFFS (n.d.)

BOX 12: SEEP PROGRAMME AT BRICK FACTORIES

A project implemented by Save the Children and Child Development Society from 2013 to 2016 aimed to eliminate child labour in brick factories in Nepal. Entitled 'Protection of Children Working in Brick Kilns in Nepal', the project also sought to provide additional livelihood opportunities to households through its Self-Employment Education Programme (SEEP) in three source villages of brick workers – Bhaktapur, Kavre, and Ramechhap – so that children could stay home and continue their education.

The project recognised that to eliminate child labour in the kilns, it is important to create livelihood opportunities in the source village of brick workers. The families were encouraged to earn their livelihoods from different sources at the source village rather than relying solely on brick making. The programme trained a total of 410 women in weaving, cooking, livestock rearing, and other activities. Of them, 291 mothers decided to stay back in their village and use the skills they had obtained to supplement their livelihood. Families who completed the training were also provided support for income generation. Notably, 800 children of women trained by the programme stayed in the village and continued their education instead of migrating during the brick-making season.

Additionally, vocational training was provided to adolescents aged 16-18 years who worked at brick kilns. Majority of them had a history of irregular education resulting from migration during the brick working season. Depending on their skills and interests, they received basic and advanced training for one to six months, in jobs such as mobile repair, motorbike mechanics, tailoring, driving, cooking, etc. They also received financial support of NPR 20,000 to start their business and purchase equipment. The training built their capacity to engage in other kinds of work rather than depending wholly on brick-making.

Source: Save the children (2016)

INDICATOR 2 FINANCIAL LITERACY

Financial literacy refers to basic financial understanding and skills for managing financial resources. It enables people to manage, spend, save, and invest their resources effectively (Askar et al., 2020). Financial literacy is particularly important for lower income households as it enables them to assess their financial status and develop coping strategies to deal with crises (Carevic, 2019).

Majority of informal workers belong to poor households with low financial literacy. Despite working long hours on labour intensive jobs, they earn low wages. They do not earn enough to invest in other livelihood activities, and they are prone to making poor financial choices with little or no savings. Lack

of financial literacy leads to undesired economic consequences for the families of workers (Askar et al., 2020). Furthermore, informal workers are prone to debt bondages because of unstable income and lack of savings. Financial literacy programmes are hence necessary for informal workers who are vulnerable to economic or external shocks. Such programmes can improve financial management skills and lift households out of poverty.

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

Several organisations have been working to promote the financial literacy of informal workers. This study highlights two such programmes by ICIMOD and SEWA-India.

BOX 13: MICROFINANCE FOR PROMOTING FINANCIAL LITERACY

SEWA-India carries out a microfinance programme to support women workers who largely belong to the informal sector. The programme aims to develop financial literacy through trainings on a range of topics such as financial products, business management, and the banking system. The microfinance programme also provides loans to SEWA union members. This effective model was adopted on a global scale by Women's World Banking.

The work of one of SEWA's cooperatives is worth highlighting. In 1985 Swashrayee Mahila Sakh Sahakari Sanstha Maryadit, Indore (SEWA Madhya Pradesh or SEWA MP) started working with female informal workers including beedi workers, incense-stick rollers, street vendors, forest workers, tendu leaf pickers, construction workers, domestic workers, sewing workers, and agricultural workers. It has a total membership of 350,890 female workers.

SEWA Madhya Pradesh developed a financial literacy programme in partnership with the Indian School of Micro Finance for Women. The cooperative provides intensive training to enhance money handling skills, use of ATMs, loans, banking, and identification of fake currency. The training method involves the use of practical games, stories and visuals, so the training can be delivered to diverse groups of female workers including those with little or no schooling.

Along with the training package, the cooperative under SEWA has developed innovative programmes to promote regular savings among its women group. It is worth noting that only members who save regularly are eligible for loans. This approach motivates informal workers to cultivate a habit of saving. This not only promotes responsible financial behaviour among female informal workers but also helps in building their economic resilience against vulnerabilities and crises.

Source: ILO (2018a); Jhabvala & Harvey (2016)

BOX 14: FINANCIAL LITERACY AMONG BRICK WORKERS

In 2019, ICIMOD's Air Pollution Solution Initiative provided financial literacy training to 194 brick workers (male and female) of seven showcase brick kilns in provinces 1, 2, 3, 5 and 7. The goal was to raise the workers' awareness and enhance their skills for managing their financial resources. As brick workers migrate with their family members during the brick-making season, the training adopted the "family approach," focusing on married couples and young kiln workers. Building financial literacy at the family level enables them to make sound financial decisions at the household level. The trainees learned to assess their spending patterns, identify ways to reduce expenses, weigh the risks, and make more responsible choices. Based on the training, a manual on financial literacy was developed to upgrade financial literacy in other sectors. Following this, a Training of Trainers (ToT) was conducted in July 2022 with 36 accountants from various brick factories representing 24 districts of Nepal. The ToT successfully built the accountants' capacity to provide financial literacy training to brick workers in their respective factories.

Source: Internal annual project progress report (2019)

Conclusion and recommendations

Although the informal sector employs large numbers of workers, the workers lack social protection and benefits provided by legal provisions. This makes male and female workers in the informal economy vulnerable to economic shocks and crises. It is therefore important to focus on social protection and livelihood diversification for workers in the informal sector. A number of organisations have been working to address such issues in the informal sector. Some of their programmes have been presented above as examples of best practices in the informal sector. Non-profit organisations and private entities have played a substantial role in mitigating the problems and creating opportunities for informal workers.

Based on the findings of our review, we make the following recommendations for improving the condition of workers in the informal sector:

Social protection and livelihoods promotion for workers: Initiatives of non-profit organisations have played an important role in bringing positive changes in the informal economy. Their programmes in social insurance, childcare, and livelihood promotion have helped improve the situation of workers. Efforts should be made to boost and give continuity to such initiatives. To encourage them, government and non-governmental bodies can provide incentive packages to organisations that have taken steps towards

addressing the shortcomings of the informal economy and improving the livelihoods of workers. Such incentives can come in the form of subsidy packages and tax exemption. This would encourage more actors including entrepreneurs of the informal economy to play a transformative role.

Skill enhancement training for workers: Skill enhancement is crucial for building the capacity of informal workers, raising their productivity, and improving their livelihoods. For instance, within the brick sector, there are high and low skilled workers. Firepersons, stackers, and molders are considered high-skilled workers and tend to earn higher wages, whereas transporters are considered low-skilled workers and are paid lower wages. Workers' skills can be enhanced through skill enhancement training, and they can thus be upgraded from low-skilled to high-skilled jobs. Trained and skilled workers are in a better position to ask for fair wages and protect their rights. Government and non-government organisations should continue their efforts to enhance workers' skills and expand such efforts more widely within the informal sector.

Creating an enabling environment for workers: Workers' unions and non-profit organisations have played an impactful and commendable role in improving the working conditions for informal workers. Federations and unions such as SEWA and SIFFS provide social insurance and training to a large number of workers. They also connect workers to essential services (e.g., social protection, childcare, etc.) that benefit informal workers and their families. Such unions and organisations should be encouraged and supported in their efforts to improve the lives of informal workers.

Translating policies into practice: As the informal sector makes a huge economic contribution in several HKH countries, there are already legal provisions and policies related to the sector. One example is the National Commission for Enterprises in the Unorganised Sector (NCEUS) in India. However, provisions for protecting the rights of informal workers often do not get implemented on the ground. Translating policy into practice is very important for bringing positive change in the informal economy. Also, as the specific characteristics of the informal economy varies from country to country, it is necessary to formulate provisions and policy according to the national context. Similarly, such policies must be developed in consultation with stakeholders including informal workers.

Prioritising workers: Policies in the informal sector should highlight and prioritise workers. There should be institutional and legal mechanisms that specifically address the needs of informal workers, who are often found outside the policy framework. When

informal workers benefit from targeted policies and programmes, it will induce a ripple effect. As many informal workers belong to poor households, livelihood interventions targeted at them will contribute to overall poverty reduction and empowerment.

Measuring the social impact: Governments in most countries require businesses to conduct a social and environmental impact assessment prior to commencement. However, such assessments barely take social impact into consideration. Social impact can be in the form of livelihood enhancement, workers' occupational safety and health, decent pay, equal opportunity, productivity through skill development opportunities, and so forth. While measuring the impact of businesses in the informal economy, it is important to take social gains into consideration.

4.2 Regulatory mechanism

As discussed earlier in 4.1, informal workers face several challenges owing to the informal nature of their work and their marginalised backgrounds. Their unprotected status and unregulated jobs add to their plight. Informal sectors such as the brick industry fall outside the purview of government policies and strategies.

However, businesses in the informal sector have developed their own measures such as company standards, social code of conduct (CoC), and corporate social responsibility (CSR) to promote the welfare of informal workers. As regulatory standards are still being established, there is limited documentation of such practices in available literature. Therefore, best practices presented in this section are fewer compared to those under social dimension.

INDICATOR 1

SOCIALLY RESPONSIVE COMPANY STANDARDS

Socially responsive company standards refer to standards that aim to improve the working conditions of male and female workers and provide welfare benefits. Socially responsive company standards are developed by individual employers or an association of businesses in accordance with national laws, acts, and policies. This section discusses two types of socially responsive company standards developed by non-profit and private entities – code of conduct (CoC) and business certification.

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

A number of organisations have stepped forward to promote socially responsible business practices in the informal sector. Some of their best practices are discussed below:

BOX 15: SOCIAL CODE OF CONDUCT (COC) FOR THE BRICK SECTOR OF NEPAL

The social code of conduct (CoC) for the brick sector was prepared and adopted in 2019 by the Federation of Nepal Brick Industries (FNBI). ICIMOD and MinErgy Pvt. Ltd supported the preparation of the CoC. The CoC was in accordance with the Government of Nepal's Labour Act (2017), Occupational Safety and Health (OSH) Directive for Brick Industry (2017), and the Act Relating to Children (2018).

The CoC includes socially responsible practices aimed at promoting ethical labour practices and enhancing the productivity of workers. The social CoC framework consists of four core principles with 20 domains. As shown in Figure 5, the 20 domains seek to improve the working and living conditions and ensure the welfare of male and female brick workers and their children.

Standard Operating Procedure (SOP) guidelines have also been prepared to implement the CoC in the brick industry. The SOP guidelines adopted for the implementation of CoC are an added bonus. Brick entrepreneurs are being trained on how to utilise the SOP. They begin by undertaking a self-assessment to learn the status of brick factories in various indicators/domains. The self-assessment is conducted using the KoBo mobile app which provides sets of questions that help brick entrepreneurs to recognise the gaps in their operating practices and identify areas of improvement.

Source: FNBI (2020)

BOX 16: BBN STANDARDS FOR “BETTER BRICKS”

In 2013, GoodWeave's social labelling approach was replicated in Nepal's brick industry through the initiative Better Brick Nepal (BBN). The goal was to improve the working conditions and eliminate child, forced, and bonded labour in brick kilns. Bricks produced in accordance with BBN's labour standards are certified and labelled 'Better Bricks'. BBN's certification standards are based on internationally accepted norms related to child rights and workers' rights – the UN Convention on the Rights of the Child, and the conventions of the International Labour Organization (ILO). The five principles that guide BBN's standards are:

Principle 1: No child labour is allowed

Principle 2: No forced or bonded labour is allowed

Principle 3: Remuneration and working hours

Principle 4: Workplace safety and health

Principle 5: No harsh or inhumane treatment

Source: GoodWeave Nepal (n.d.-b)

FIGURE 5 SOCIAL COC AND ITS CORE PRINCIPLES AND DOMAINS

Principle1: Effective end to child labour	Principle2: Transparent employment conditions	Principle3: Basic services and facilities in workplace	Principle 4: Safe workplace for women workers
Domain 1.1 Children under 14 years of age and unaccompanied by legal guardian shall not be engaged in labour	Domain 2.1 Ensuring employment conditions with necessary official and verified documentation	Domain 3.1 Safe housing provision	Domain 4.1 Adoption of a grievance and conflict management mechanism
Domain 1.2 Children under 14 years of age and unaccompanied by a legal guardian shall not be engaged in labour	Domain 2.2 Wages paid into bank account	Domain 3.2 Provision for separate toilet facilities for men and women workers	Domain 4.2 Separate living quarters for men and women workers who are single or join the industry without their spouses or partners
Domain 1.3 Children between 15 and 18 years of age shall be engaged in labour only under pre-scribed special circumstances	Domain 2.3 Provision for minimum wages	Domain 3.3 Access to clean water	Domain 4.3 Access to health care services for pregnant women
	Domain 2.4 Internal labour audit completed by push end (mid-january)	Domain 3.4 Access to first aid facilities	Domain 4.4 Access to child day care centre
		Domain 3.6 Provision for occupational safety and health	
		Domain 3.7 Insurance against personal accident	
		Domain 3.8 Provision for medical insurance	

Source: FNBI (2020)

BOX 17: ETHICAL TRADE INITIATIVE

The Ethical Trading Initiative (ETI) is a UK-based alliance of companies, trade unions, and NGOs that promote decent work and workers' rights around the world. ETI has reached 15 million workers since 1998. It promotes ethical trade where businesses take responsibility to improve the working conditions, protect their workers' rights, and ensure the workers are free from exploitation and discrimination. ETI brings together corporate and trade union members together to tackle issues in the work sector and supply chain that cannot be addressed by individual company's efforts. Eighty-nine percent of ETI members improved their ethical trade score. According to 2019 records, ETI has 97 corporate members from apparel and textile, food, farming and fisheries, and other general merchandise industries, including those that fall within the informal sector; and it reaches over 15 million workers in 124 countries annually. In Bangladesh alone, ETI's initiative aimed at tackling poor employment practices reached 53,681 workers. Members of ETI are encouraged to incorporate ethical business practices to address supply chain issues and comply with the ETI Base Code, and to report to ETI annually. ETI harnesses the expertise, skills, and resources of its alliance members to identify these issues and develop innovative, long-lasting solutions for its members. ETI Base Code is comprised of codes that address the overall issues of workers – Employment is freely chosen; Freedom of association and the right to collective bargaining are respected; Working conditions are safe and hygienic; Child labour shall not be used; Living wages are paid; Working hours are not excessive; No discrimination is practiced; Regular employment is provided; No harsh or inhumane treatment is allowed.

ETI implements the Base Code according to its principles of implementation (POI) framework, which covers four main topics:

1. Commitment
2. Identify labour rights issues
3. Prevent, mitigate and remedy
4. Track and communicate

Source: ETI (n.d.)

BOX 18: WORLD FAIR TRADE ORGANIZATION

World Fair Trade Organization (WFTO) is a global community of social enterprises that promotes and practises "Fair Trade" in 76 countries, reaching 1000 social enterprises and 1500 shops.

The WFTO standard is based on the following 10 principles of fair trade. These principles are in line with ILO conventions:

1. Opportunities for economically disadvantaged producers
2. Transparency and accountability
3. Fair trading practices
4. Fair payment
5. No child labour and forced labour
6. Non-discrimination, gender equality, freedom of association
7. Good working conditions
8. Capacity building
9. Promote fair trade
10. Respect for the environment

Businesses must meet these criteria to join WFTO. Members also have to meet other requirements to show improvement over time. Demonstrating compliance earns fair trade enterprises the designation "Guaranteed Fair Trade". The WFTO carries out verification and monitoring to ensure these principles are upheld. Enterprises certified "guaranteed fair trade" earn a good reputation in the market and are provided with business opportunities. Procurement and tender notices include WFTO certification as one of the criteria. This encourages businesses to comply with WFTO standards, which in turn benefit workers.

Fair trade organisations have had direct impact on the livelihoods of 965,700 people around the world. More than half of them (74 percent) are women.

Source: WFTO (n.d.)

INDICATOR 2

CORPORATE SOCIAL RESPONSIBILITY (CSR)

The concept of corporate social responsibility (CSR) allows companies to balance economic, social and environmental imperatives while conducting business. As the initiatives of many big international companies (Google, Toms, Starbucks, etc.) have shown, CSR contributes to efforts to bring change in communities and sectors. As part of their CSR, many businesses and corporate houses run programmes in education, health, and environment, focusing on issues such as fair trade, child labour, sustainable production, etc. In Nepal, companies are legally obligated to include

CSR in their business model. For instance, Industrial Enterprise Act 2016 has made it mandatory for all industries and companies with annual business transactions exceeding NPR 150 million to contribute at least 1 percent of their annual profit to CSR activities.

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

There are various CSR plans targeted at people from poor and disadvantaged backgrounds, which include informal workers. The CSR plan presented below is an example that illustrates some of the best practices in this area:

BOX 19: CSR INITIATIVE OF TATA

Tata Trusts is the CSR programme of the leading Indian multinational company Tata Group. The programme began in 1892, twenty-four years after the establishment of the industry. As part of the programme, the company provided primary education classes for children of women workers at Tata mills, medical assistance to all its employees, and pensions, provident fund, maternity benefit allowance, and workers' compensation in the event of an injury or accident. Currently Tata Trusts carries out CSR activities under 15 themes: Healthcare, Nutrition, Education, Livelihood, Water, Sanitation and Hygiene, Digital Transformation, Migration, and Urban Habitat, Social Justice and Inclusion, Environment and Energy, Skill Development, Sports, Arts and Culture, Disaster Relief and Rehabilitation, Institutions and Individual Grant Programmes. The company's extensive CSR programme reaches millions of people across India, including those from marginalised backgrounds.

One of the programmes under Migration and Urban Habitat targets migrant brick workers, with a focus on children's education and health, and the health of female workers. Realising that brick workers' children had poor access to education, health services, and meals, Tata Trusts set up two centres named Udaan Kendra to provide daycare facilities and health services to young mothers, infants, and children in the Sri Ganganagar district of Rajasthan. Setting up the centres involved some challenges. The company had to lobby brick entrepreneurs and convince them to allow non-profit organisations to get involved and intervene in issues within brick factories. The establishment of Udaan Kendra helped many workers' children overcome malnourishment and access preschool facilities, allowing them to avoid the hazardous brick-making environment. The programme has thus helped reduce child labour. The centres also helped pregnant women at brick kilns to access prenatal care and infants to access immunisation. They facilitate the enrolment of pregnant women in government schemes and enable them to access benefits. To achieve these outcomes, Udaan Kendra runs a sensitisation programme for brick workers on the importance of schooling, prenatal care for pregnant women, and childcare. This is one of the many CSR activities of Tata Trusts that has benefitted informal workers and their families.

Source: Tata Trusts (n.d.)

INDICATOR 3

SOLUTIONS TO REDUCE AIR POLLUTION IMPLEMENTED IN THE BRICK SECTOR

The brick sector is considered a major contributor of emissions in the HKH. The governments of HKH countries have been trying to reduce air pollution in their respective countries. For instance, some countries in the HKH have switched from traditional brick technologies to energy efficient technology to improve the brick sector. Furthermore, governments have introduced laws and policies to reduce emissions. However, many of these policies remain confined to paper in the absence of implementation.

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

One example of policy implementation in the brick sector that helped decrease air pollution is highlighted below:

BOX 20: ZIGZAG TECHNOLOGY INTERVENTION IN PUNJAB, PAKISTAN

Zigzag technology has been widely recognised as environmentally friendly and energy efficient technology that reduces coal consumption by 20 percent, CO₂ emissions by 20 percent and black carbon emissions by 75 percent. On top of this, it produces better quality bricks, benefitting both the entrepreneurs and the environment. Therefore, zigzag became popular among brick industries in Pakistan and other countries. In 2019 the Punjab government in Pakistan announced a ban on conventional kilns and urged brick entrepreneurs to adopt zigzag technology. Since August 2020, the Punjab government has been offering interest-free loans to entrepreneurs who would convert traditional brick kilns to zigzag technology. In April 2021 *The Express Tribune* reported that 85.81 percent of brick kilns in all 36 districts of Punjab have converted to zigzag technology. 6967 out of 8119 brick kilns have adopted zigzag. This is a solid example of how the government's regulatory mechanism can help mitigate air pollution caused by the brick sector.

Source: ILO (2020b) and The Express Tribune (2021)

Conclusion and recommendations

Regulatory mechanisms can help mitigate social and environmental problems without hindering economic growth in both the formal and informal sectors. If implemented properly, laws and policies can bring about long-term positive change. Based on our review of literature, we make the following recommendations for the regulation of the informal sector:

An incentive-based approach for monitoring and evaluation: Regulatory mechanisms are impactful when implemented and monitored rigorously. There have been many efforts to introduce policies, codes of conduct, and operating procedures geared towards ensuring the safety and well-being of workers. The key challenge, however, is implementation. A robust monitoring and evaluation system is essential for tracking the progress and identifying gaps in implementation. It can also put pressure on entrepreneurs to comply with labour laws and policies. An incentive-based approach (e.g., subsidies such as bank loans) would be particularly effective in encouraging stakeholders to adopt socially responsible practices in the informal sector. Such incentives would motivate employers to implement legal provisions that benefit workers and their families.

Corporate Social Responsibility (CSR) for promoting social welfare: CSR is a strategy that combines the efforts of public and private actors to benefit workers, many of whom belong to vulnerable and disadvantaged groups. It ensures that companies that profit using the labour of communities and environmental resources give something back to the community and the environment. The government could introduce policies to make CSR budget mandatory for all private companies. This would boost CSR activities and aid the government's welfare programmes and bring positive change in the lives of male and female workers in the informal sector.

4.3 Technological dimension

Technology significantly reduces the amount of time and labour required to perform a task. Many brick kilns have adopted modern technologies to produce better quality bricks as well as to reduce the workers' drudgery and lower emissions. Below we present a few such examples, with a focus on two indicators – environmentally friendly technologies, and mechanisation for reducing drudgery.

INDICATOR 1

TECHNOLOGIES FOR ENERGY EFFICIENCY AND AIR POLLUTION MITIGATION

Brick kilns produce emissions that have negative impacts on the environment. The brick sector contributes up to 91 percent of the total Particulate Matter (PM) emissions in some parts of South Asia (Eil et al., 2020). For instance, brick industries in the Kathmandu Valley, Nepal are considered the third-largest source of suspended particulate matter (SPM) and PM₁₀ emissions². Traditional brick-making methods, i.e., Fixed Chimney Bull's Trench Kilns (FCBTK) and the Down Draught Kilns, are known to contribute the highest number of pollutants (ILO et al., 2017). Therefore, many brick factories have adopted alternative technologies that are more energy efficient and produce fewer emissions.

BOX 21: ZIGZAG FIRING TECHNOLOGY

Zigzag technology is regarded as energy efficient and environment-friendly as it reduces coal consumption by 20–40 percent during the baking process. It reduces CO2 emissions by 20 percent and black carbon emissions by 75 percent compared to the FCBTK, which dominates the South Asian brick industry.

A distinct feature of zigzag technology is the zigzag arrangement of bricks during the stacking process. Such an arrangement improves airflow compared to the straight path of the FCBTK kiln. Zigzag firing technology increases air velocities in the kiln, improving combustion of fuel and heat transfer. It is a continuous moving fire kiln in which the bricks are warmed, fired, and cooled simultaneously because of better airflow in different parts of the kiln.

Also, in a zigzag kiln, coal is fed in smaller quantities with a longer fuel feeding zone. This results in the emission of smaller coal particles. The combustion of coal is cleaner and complete, leading to reduced emissions compared to a traditional kiln. This method involves lower energy consumption and is more cost effective. At the same time, it produces better quality bricks. Improved airflow and uniform heat distribution in zigzag technology allows for the production of a high percentage of A-class bricks, which is one of the factors that motivate brick entrepreneurs; 80–90 percent of bricks produced in a zigzag kiln are of A-class quality compared to 50–60 percent in conventional kilns. Hence, zigzag technology benefits both the environment and brick producers.

Sources: Lalchandani & Maitheln (2013); Brick Guru (n.d.); MinErgy & FNBI (2015)

² ICIMOD's factsheet 'Brick sector in Nepal'.

BOX 22: BIOMASS PELLETS

The brick-making technology and the firing process largely determine the emissions in the brick sector. Generally, coal, which is used for brick firing and baking, is one of the major contributors of black carbon, sulphur dioxide, carbon dioxide, and particulate matter emissions. In 2018, annual coal consumption for brick firing was 504,750 tonnes in Nepal and 13 million tonnes in Pakistan³. In Bangladesh, annual coal consumption for firing bricks was 5.68 million tonnes in 2017 and 3.65 million tonnes in 2019, and similarly, 29–35 million tonnes in India in 2017. Such massive coal consumption significantly increases air pollution. In addition, coal is costly for some of the countries. For instance, Nepal has to import coal from India, Indonesia, and the United States, and it annually spends USD 153.7 million on coal imports for brick firing. Coal prices have increased by more than 200 percent and in 2018 alone, its price increased by almost 40 percent. On top of this, supply of coal is irregular. Given the environmental impact, high cost, and irregular supply of coal, biomass pellets have been recognised as an alternative fuel for firing.

The use of biomass pellets has gradually increased in the HKH. Biomass pellets are produced in an eco-friendly manner by compacting loose biomass such as sawdust, crop waste, tree branches, rice husks, straw, and bagasse. The natural resource residue used for the production is part of the natural carbon cycle, which makes it net carbon neutral with no increase in greenhouse gas emission upon its generation. Since pellets are products of natural residue, they can also reduce the irregularities in supply in comparison to coal. Furthermore, biomass pellets also induce clean burn with no negative impact on health and air quality. Hence, the use of biomass pellets can be considered a feasible and sustainable alternative to coal.

Source: ICIMOD (2021) and Prajapati et al. (2019)

BOX 23: THE USE OF LIQUEFIED PETROLEUM GAS (LPG) FOR INITIAL FIRING

Initial firing in the brick-making process consumes a substantial amount of fuel and emits a lot of pollutants. Coal mixed with other biomass fuels such as mustard stalks, hog plum (lapsi) seeds, sawdust, and rice husks are used for baking the bricks. Initial firing is time-consuming as well. Advanced kilns use electricity for initial firing, but this is not possible in most kilns in South Asia, where conventional firing methods are far more prevalent. Therefore, liquefied petroleum gas (LPG) firing is considered a practical option for initial firing in South Asia. LPG is a cleaner alternative than firewood. It results in good combustion as well as decreases fuel consumption, reducing energy costs. When only 50 percent of firewood is substituted with LPG for initial firing, fuel costs can be reduced by 60 percent, and with 100 percent use of LPG, the cost is reduced by 75 percent. LPG produces significantly fewer emissions and increases work efficiency as it provides instantaneous heat, improving the production quality. Therefore, it is a cost-effective and environmentally friendly fuel option for initial firing.

Source: ICIMOD (2019a)

INDICATOR 2

MECHANISATION TO REDUCE DRUDGERY

Brick industries in all HKH countries except China use traditional technologies, which require a lot of time and labour. These technologies are also costly and harmful to the environment. In this context, mechanisation of brick production could help reduce the cost of production as well as the drudgery of male and female workers. It can also help increase workers' productivity, raise the quality of the bricks, and generate more profits. In recent times many brick factories in the HKH have started adopting newer technologies, indicating a gradual transition of the brick sector into a semi-mechanised industry.

BEST PRACTICES: TURNING CHALLENGES INTO OPPORTUNITIES

Below we present a few examples of improved technologies being used at the brick factories we visited.

BOX 24: MECHANISATION OF CLAY PREPARATION

Mixing clay for brick making is a labour-intensive process, but in most brick kilns, workers have to mix clay manually as entrepreneurs do not want to invest in a machine. Shivam Brick Industry, located in Dhunebesi, Dhading district of Nepal, an exception in that regard. It uses a clay mixing machine, which has made the brick making process simpler and easier. The machine produces good quality clay which is ideal for brick moulding. Mixing and moulding clay is a critical step in brick production as it determines the quality of the bricks. Large numbers of female workers carry out this work at brick kilns. The introduction of a clay mixing machine at Shivam Brick Industry has made the brick-making process more efficient and less labour intensive. It is a gender-friendly technology that has enhanced the productivity of female workers and improved the quality of bricks. Notably, since the factory adopted this technology, brick workers from neighbouring factories have also joined Shivam Bricks factory. This is just one example of how mechanisation benefits both workers and entrepreneurs in the brick sector.

Source: Field observation, Dhading (2021)

³ ICIMOD's factsheet 'Brick sector in Nepal'.

BOX 25: MECHANISATION OF RAW BRICK MAKING

OPC Brick Factory, Nepalgunj uses the BMM 300 SnPC machine for making raw bricks. This machine has increased efficiency as it can be operated by fewer workers with high skills, and the pace of production is faster compared to a traditional kiln. The machine produces a large number of raw bricks within a short time. The adoption of this technology has led to the production of high-quality raw bricks in the OPC brick factory.

Source: Field observation, Dhading (2021)

Conclusion and recommendations

The brick sector has enormous potential for growth through the application of technologies. Technology can enhance the productivity of workers and the quality of bricks. China, for instance, uses advanced technologies for brick production, which makes it the largest producer of bricks both in the HKH and globally. The other countries in the HKH are still trying to catch up and are making gradual progress in transforming their brick industries. Based on our review of literature on the brick sector, we make the following recommendations for upgrading technologies and mechanising brick production:

Subsidies for bridging the technology gap: The high cost of mechanisation is the main reason why entrepreneurs continue to depend on labour intensive methods rather than adopting technologies. To address this issue, other sectors such as agriculture

have introduced concepts such as “technology loan” and “technology equipment finance.” These loans and technology financing programmes support the purchase of technologies relevant to the concerned sector. Such loans could be introduced in the brick sector to encourage entrepreneurs to mechanise brick production. The use of environmentally friendly technologies can also be promoted through subsidies and tax exemption, which is a common practice in many countries across the world.

Skill development of workers for effective mechanisation: To gain optimal benefits from technologies, it is important to have workers who can operate and maintain such technologies. This would involve training workers and developing their skills. Mechanisation and workers’ skill-building should be carried out simultaneously to transform the brick sector into a clean and modern industry.

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