



Approaches to Build a Preventative Safety and Health Culture in the BRICS Countries

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Abstract

Occupational Safety and Health is an important component to ensure sustainable and inclusive economic growth in BRICS countries. In view of the transformative economic and demographic changes that these countries are experiencing, the development of OSH national systems and programmes that ensure the implementation of a preventative safety and health culture for all workers should be a top priority within their decent work agendas. Improving OSH governance, implementing measures responding to the specific needs of SMEs and the

informal economy, improving the availability of data, and addressing emerging and persistent risks are key policy areas in that regard.

BRICS countries share common challenges in the process of building a preventative OSH culture. Considering the existing practices, policy makers may take the following policy recommendations in consideration:

- Extend legal OSH protection to all workers independently of their specific employment status.
- Promote OSH compliance by adopting an evidence-based strategic compliance approach to better use available resources, maintain and sustain compliance.
- Exchange information on the various innovative approaches that BRICS countries have implemented to improve compliance with OSH, such as new technologies, digitalisation and automation.
- Strengthen national capacity to systematically collect data, harmonised according to international standards and recommendations.
- Anticipate emerging risks while addressing traditional persistent challenges by the use of data and technology, such as safety applications and big data;
- Build OSH competencies by including OSH education and training in lifelong learning curricula;
- Engage a wider range of stakeholders in promoting OSH and foster cooperation with research institutions and OSH professional bodies.
- Reinforce the role of the government and social partners by strengthening the role of social dialogue on OSH policies, planning and improvement.

Introduction

Occupational Safety and Health (OSH) remains a considerable challenge for ensuring sustainable development. The latest estimates released by the ILO in 2017 showed that 1,000 people die every day from occupational accidents and a further 6,500 from work-related diseases. Globally, the number of deaths attributed to work increased from 2.33 million in 2011 to 2.78 million in 2017. Furthermore, the number of non-fatal occupational injuries was estimated to be 374 million in 2017.

Progress towards OSH in BRICS countries is mixed: while the number of injuries decreased in the Russian Federation, South Africa and Brazil, it seems to have increased in India. In China, the total number of work accidents and fatalities declined.

The contribution of OSH to achieving sustainable development has been recognized in the 2030 Agenda for Sustainable Development. The sustainable development goal (SDG) 8 aims at the promotion of sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. It includes target 8.8 on protecting labour rights and promoting safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment; and indicator 8.8.1 on frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status. SDG 3 also highlights the importance of health as it relates to ensuring healthy lives and promoting well-being for all at all ages, with target 3.9 aiming to substantially reduce the number of deaths and illnesses from hazardous chemicals, and air, water and soil pollution and contamination.²

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¹ Päivi Hämäläinen, Jukka Takala and Tan Boon Kiat, *Global Estimates of Occupational Accidents and Work-related Illnesses 2017*. (Singapore: Workplace Safety and Health Institute, 2017)

² United Nations, "Sustainable Development Goal 8", Sustainable Development Goal Knowledge Platform, February 2020, https://sustainabledevelopment.un.org/sdg8.

In 2019, the International Labour Conference adopted the ILO Centenary Declaration for the Future of Work that recognizes that safe and healthy working conditions are fundamental to decent work (para. II (D)). It also highlights that "all workers should enjoy adequate protection in accordance with the Decent Work Agenda, taking into account safety and health at work" (para. III (B) (iv)).

Achieving safety and health for all workers requires the development of a preventative safety and health culture, in which prevention is prioritized at both national and workplace level and improvement is constantly sought through a systems approach. Although considerable progress has been achieved during the past decades, achieving effective prevention remains a challenge. Managing emerging and persistent risks necessitates a global perspective that allows to share knowledge and experience about the causes and the prevention of harm arising from the diverse types of work.

Building on existing BRICS commitments, available documents and data, this paper addresses the progress towards the achievement of a preventative safety and health culture among BRICS member States. To this effect, it considers existing OSH governance structures and specific measures that have been taken to develop a preventative safety and health culture in the five countries. It also examines main challenges faced in the context of current and future trends of the world of work and ends by providing some reflexions to inform the exchange and cooperation among BRICS member States.

Development of a Preventative Culture through OSH Governance

Globally, considerable progress towards a preventative safety and health culture was made, especially during the last 40 years. A growing number of countries are giving higher priority to OSH and preventing accidents and ill health, in spite of

the many pressures – economic and other – to cut back on such measures.³ Nevertheless, progresses have been uneven due to different capacities between countries and regions to manage health and safety issues in workplaces and of national governments to effectively put in place and enforce safety and health rules⁴.

Although there has been a long-term fall in occupational accidents, in global terms this has been partly offset by the increase in occupational injury fatalities as a result of the growing share of production in rapidly industrialising countries, particularly in Asia⁵. While underreporting of OSH data often undermines its reliability, available estimates suggest that the impact of occupational accidents and work-related diseases varies according to where workers live and work, reflecting inequalities in their exposure to occupational risks. The latest estimates from 2017 note these inequalities: about two-thirds (65 per cent) of global work-related mortality is estimated to occur in Asia, followed by Africa (11.8 per cent), Europe (11.7 per cent), America (10.9 per cent) and Oceania (0.6 per cent). The rates of fatal occupational accidents per 100,000 workers also show important regional differences (Figure 1), with those in Africa and Asia between 4 and 5 times higher than those in Europe⁶.

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³ International Labour Office, Safety and Health at Work: a Vision for Sustainable Prevention. Global Forum for Prevention, 24-27 August 2014, Frankfurt, Germany. (Geneva: ILO, 2014)

⁴ International Labour Office, Safety and Health at the Heart of the Future of Work. (Geneva: ILO, 2019).

⁵ Jukka Takala et al. "Global Estimates of the Burden of Injury and Illness at Work in 2012", *Journal of Occupational and Environmental Hygiene*, 11 (4): 326-337.

⁶ Päivi Hämäläinen, Jukka Takala and Tan Boon Kiat, *Global Estimates 2017*.

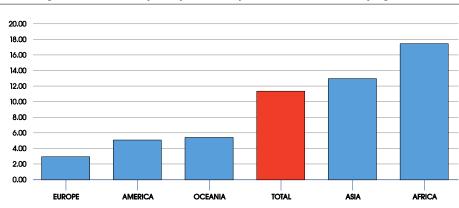


Figure 1: Accident fatality rates per 100,000 persons in the labour force, by region, 2014

Source: Päivi Hämäläinen, Jukka Takala and Tan Boon Kiat, Global Estimates 2017.

Regarding occupational exposure to risks factors, there is some evidence that the relative contributions are changing. Of 18 risk factors measured in the Global Burden of Disease Survey 2016, only occupational exposure to asbestos had fallen between 1990 and 2016 while all others increased (by almost 7 per cent)⁷. Recent research indicates that worldwide about 20 per cent of lower back and neck pain and 25 per cent of hearing loss in adults are attributable to occupational exposures (WHO, 2018). This suggests both that occupational exposures to traditional and well-known harmful physical, chemical, and biological agents continue to occur on a large scale, and that there is still some way to go before the trend of increasing levels of occupational exposure to such risk factors is reversed globally⁸.

The major changes occurring during the past decades in the world of work -- a rapid outsourcing of manufacturing and industrial processes to low-wage countries; the growth of micro, small and medium-sized enterprises; increased importance of supply chain relations; demographic changes, especially international migration, and diverse forms of work driven by technology --

⁷ E. Gakidou et al. "Global, regional and national comparative risk assessment of 84 behavioural, environmental and occupational metabolic risks or clusters of risks, 1990-2016: a systematic analysis of the Global Burden of Disease Study 2016", *The Lancet*, 390 (10100): 1345-1422.

⁸ International Labour Office, Safety and Health at the Heart of the Future of Work.

impact OSH. Outsourcing of industrial processes to low-wage countries often outsources also the risks related to the specific production processes. Markets in these countries are usually not prepared to provide the necessary safety equipment and expertise to manage occupational risks. Major OSH deficits exist in SMEs for several reasons, such as lack of information, specialized staff or resources. The same is true in relation to migrant workers or non-standard-forms of employment, such as temporary workers, who may fall outside the general obligation of the employer to ensure safe and healthy working conditions. They often lack knowledge of the risks they face in workplaces as there isn't the same type of investment in training as for other workers.

The BRICS countries have not been exempt from those changes. During the past decades, they have witnessed noteworthy changes in their productive structure and labour markets such as a significant move out of agricultural employment - which has fallen by almost 13 percentage points between 2006 and 2017 - towards services which have risen by almost 14 percentage points over the same period (with a massive shift in China). Despite the downward trend of informal employment rates in recent years (with the exception of Russia), the phenomenon remains extensive, ranging from the relatively moderate rates of 34 per cent of the employed in South Africa, 35.9 per cent in the Russian Federation through to 46 per cent in Brazil, 54.4 per cent in China and reaching 88.2 per cent of the employed in India⁹. These trends should be considered when analysing the OSH situation in BRICS countries. In many cases, OSH standards do not apply to the informal sector. When they do, they are rarely enforced as informal economic units are invisible to the authorities as businesses are not declared.

Available data in ILOSTAT¹⁰ for SDG indicator 8.8.1. on fatal and non-fatal occupational injuries per 100,000 workers¹¹ showed a decreased of the number

⁹ International Labour Office, "BRICS Summary: Youth Employment", BRICS Brief Series. (Geneva: ILO; 2018).

¹⁰ International Labour Organization, https://ilostat.ilo.org/data/.

¹¹ Data is available in ILOSTAT for Brazil, Russian Federation and India.

of injuries in the Russian Federation during the past 20 years, while the number of injuries seems to be increasing in India and appears not to have significant changes in Brazil. In China, the total number of work accidents and fatalities declined by 22.5 and 16.8 percent, respectively, between 2010 and 2015. In South Africa, the number of reported injuries also decreased during the period from 2006 (226,689 injuries) to 2011 (93,946 injuries). 13

While the data on occupational accidents showed that the situation seems to have generally improved during the past two decades, challenges related to the coverage (especially the informal sector), the accuracy (due to under-reporting) and the comparability of data need to be considered. Other aspects related with the report on SDG indicator 8.8.1 would need to be included, namely data regarding migrant status and sex disaggregated data.

Available data on occupational diseases shows that BRICS countries present a combined pattern of traditional occupational diseases and emerging ones. For example, in China, pneumoconiosis still accounts for 88.3 per cent of all reported diseases in 2016¹⁴, while in India, cases of silicosis, noise-induced hearing loss, lead poisoning and byssinosis have been reported during the period of 2011-2015.¹⁵ For the period 2018-2019, in South Africa, noise induced hearing loss, dermatitis, and occupational asthma were among the diseases with the highest numbers of cases reported.¹⁶

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¹² China Academy of Safety Science and Technology, *National Profile Report on Occupational Safety and Health in China*. (Beijing: ILO, 2018).

¹³ International Labour Office, *Decent Work Country Profile: South Africa*. (Geneva: ILO, 2014).

¹⁴ China Academy of Safety Science and Technology, National Profile Report on OSH.

¹⁵ Directorate General Factory Advice Service and Labour Institutes and International Labour Office, *National Occupational Safety and Health Profile*. (Unpublished)

¹⁶ Department of Employment and Labour of the Republic of South Africa, *State of Occupational Safety and Health in South Africa*, February 2020, http://www.labour.gov.za/DocumentCenter/Pages/Home.aspx

National OSH Policies

The Occupational Safety and Health Convention, 1981 (No. 155) and the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) provide clear principles and measures to build a preventative safety and health culture. The Annex to the Recommendation concerning the Promotional Framework for Occupational Safety and Health, 1981 (No. 197) lists other ILO instruments that are relevant to such promotional framework, in particular the Labour Inspection Convention, 1947 (No. 81) and the Labour Inspection (Agriculture) Convention, 1969 (No. 129). The ratification of these instruments among the BRICS (table 1 in annex) shows that Conventions No. 155 and No. 81 have the highest number of ratifications, while Convention No.129 has no ratifications. Convention No. 187 has been ratified only by the Russian Federation. Other conventions addressing occupational risks in hazardous sectors are also low on ratification, one example being the Safety and Health in Agriculture Convention, 2001 (No. 184) with no ratifications yet.

Convention No.187 (Article 2) has three foundational concepts:

- 1. a national policy,
- 2. a national system and
- 3. a national programme on OSH.

Convention No. 155, and its Recommendation No.164, had already introduced a policy-based approach focused on prevention by defining the concept of a national policy on *occupational safety, occupational health and the working environment* (Article 4 (1)). Convention No. 187 re-emphasises that the national policy is a key mechanism for the promotion of a safe and healthy working environment and underlines the importance of a national programme for the implementation of such a policy (ILO, 2017).

Brazil, the Russian Federation, India and China have developed occupational safety and health policies during the past decades. These policies promote a

preventative approach, which represents a strategic shift in the governance of occupational safety and health. In Russia, for example, in accordance with the Concept of Demographic Policy of the Russian Federation¹⁷, approved in 2007, the reduction of occupational accidents and diseases requires the establishment of a system of identification, evaluation and control of occupational risks. These policies have been accompanied by the development of national programmes in China, Brazil and the Russian Federation.

Regulatory OSH frameworks

Modern regulatory OSH frameworks consist of a comprehensive corpus of legal instruments of varying scope and at different levels of legislative hierarchy. These usually include: the Constitution; general labour laws or codes; general overarching OSH laws; specific risk-based and industry-based laws; laws applicable to the production of products; machinery and substances; their implementing regulations and technical safety standards and codes of practice and guidelines. OSH provisions can also be found in other branches of law, such as social security laws, public health laws, production and import of machinery and other work components, and industry licencing.

There has been a steady increase worldwide of enactment of overarching OSH laws . LEGOSH¹⁸ shows that a growing number of countries, which traditionally regulated OSH in their general Labour Laws or Codes have now developed separate stand-alone laws dealing specifically with OSH. These have been complemented by various regulations and technical standards, as well as sectorial and risk-based OSH legislation. The graph above reflects the

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¹⁷ The Government of Russian Federation, "Demographic Policy of the Russian Federation up to 2025", Decree of the President of the Russian Federation, No. 1351, October 9, 2007.

¹⁸ International Labour Office, LEGOSH, February 2020, https://www.ilo.org/dyn/legosh/en/f?p=14100:1000:0::NO:::

evolution of enactments of stand-alone OSH Laws in the over 130 countries available in LEGOSH as of December 2017.

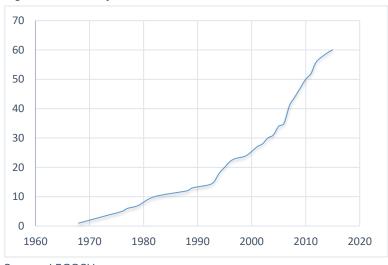


Figure 1 Number of countries with a stand-alone OSH law

Source: LEGOSH.

https://www.ilo.org/dyn/legosh/en/f?p=14100:1000:0::NO:::

While OSH policies in the BRICS have a broad coverage, including all workers, national legislative OSH frameworks show differences in the scope of application. Among the BRICS countries, only South Africa has a framework OSH law¹⁹. While India has scattered and outdated sectoral OSH laws, the country has been making efforts to review and update its regulatory OSH framework over the last years. The *Occupational Safety, Health and Working Conditions Code* was introduced to Parliament in 2019 and would merge existing OSH laws into one stand-alone framework OSH law. The Parliament Committee that examined the Bill has recently flagged a number of areas for improvement²⁰. In the Russian Federation, OSH and labour inspection are mainly regulated in the Labour Code

¹⁹ Further assessment is needed to determine whether this law is applicable to absolutely all branches of economic activity and all categories of workers (or whether there may be some exceptions), however overall its scope appears to intend universal coverage.

²⁰ Outlook, February 2020, https://www.outlookindia.com/newsscroll/parl-panel-seeks-more-clarity-on-occupational-safety-code-provisions-for-workers-welfare/1731731.

of 2001; however, it appears that a Draft OSH Act is under development²¹. In China, OSH is mainly regulated in the Law on Work Safety of 2002 (amended in 2014) and the Law on Prevention and Control of Occupational Diseases of 2001. In Brazil, the core legislative instrument governing OSH is the Decree-Law No. 5452 on the Consolidation of Labour Laws. The Government of Brazil announced a plan to implement a general review of the regulatory norms²².

The regulatory framework of most BRICS countries feature preventive principles. They all also include a system of defined rights and duties, however, further analysis would be needed to determine whether these encompass all requirements enshrined in International Labour Standards on OSH. The Russian Federation has even adopted the ILO-OSH 2001 Guidelines on Occupational Safety and Health as a voluntary standard (GOST 12.0.230-2007).

OSH Compliance Mechanisms

The Labour Inspection Convention, 1947 (No. 81) requires member States to maintain a system of labour inspection in industrial and commercial workplaces. An effective Labour Inspectorate is an essential component of national OSH systems, required as well by the Occupational Safety and Health Convention, 1981 (No. 155) and the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187).

All countries in the BRICS group have established a system of labour inspection. For example, Brazil has not only a Labour Inspectorate being acknowledged for

²¹International Labour Office, NORMLEX, February 2020,https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:13100:0::NO:13100:P13100 COMMENT ID:32

^{55423:}NO. ²²Kelly Oliveira, "Governo faz revisao de normas de seguranca e saúde no trabalho". Agência Brasil, February 2020, http://agenciabrasil.ebc.com.br/economia/noticia/2019-09/governo-faz-revisao-de-normas-de-seguranca-e-saude-no-trabalho.

good practices²³, but also specialized Labour Courts and Labour Prosecution Offices that are responsible for labour and OSH law compliance.

Some countries from the BRICS group have taken an innovative strategic approach towards compliance with labour and OSH laws. For example, in Brazil, the Federal Labour Prosecution Office (FLPO) has taken the initiative to create a data science lab, called "Decent Work Smartlab"²⁴. This is a knowledge management platform that pulls together scarcely used publicly available data to cross-match and analyse it with the aim of generating disaggregated timeseries data on labour contracts, supply chains, social protection programmes, OSH violations, and court cases. Moreover, it collects data on population, labour, agricultural and educational censuses and surveys²⁵. Generated results allow public authorities to better identify the areas with the highest risk for noncompliance behaviour, and therefore allow them to target and prioritise their interventions.

In China, recent developments include the adoption of measures for safety evaluation, testing and inspection institutions²⁶, and the MoU signed by the ILO and the Ministry of Emergency Management, responsible for work safety inspection, on South-South Cooperation on Work Safety under the Framework of the Belt and Road Initiative²⁷.

In recent years, the Russian Federal Service for Labour and Employment (Rostrud) has undertaken a number of initiatives. For example, it launched a

²³ International Labour Office, "The good practices of labour inspection in Brazil: for the promotion of decent work", https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/---ilo brasilia/documents/publication/wcms 233523.pdf.

²⁴ Iniciativa Smartlab, February 2020, https://smartlabbr.org/.

²⁵ Luis Fabiano de Assis, "The Decent Work Smartlab: A knowledge Management Initiative", Delta 8.7, February 2020, https://delta87.org/2018/08/the-decent-work-smartlab-a-knowledge-management-initiative-in-brazil/.

²⁶ Ministry of Emergency Management of the People's Republic of China; February 2020, https://www.mem.gov.cn/gk/tzgg/bl/201904/t20190402_244977.shtml.

²⁷ International Labour Organization, "ILO broadens Cooperation with Its Chinese Partners under the Belt and Road Initiative, ILO, February 2020, https://www.ilo.org/beijing/information-resources/public-information/press-releases/WCMS 695356/lang--en/index.htm.

public evaluation allowing citizens to assess the work of the Labour Inspectorate regarding its responses to claims, with the aim of producing related studies and informing managerial decisions. Rostrud has been also exploring how to make use of new technologies to improve its services, including automation and digitalisation by means of creating a labour inspection actions management system, performance indicators subsystem, interdepartmental connectivity, and electronic services for customers. The Russian Federation has also engaged with the ILO to pilot the use of the Strategic Compliance for Institutions of Work intervention model.

Coordination, Cooperation and Consultation Mechanisms

Occupational safety and health requires the intervention of multiple disciplines and the involvement of all stakeholders. The institutional arrangements necessary to turn the national OSH policy into action reflect this complexity. They fulfil the complementary functions of administration and enforcement, consultation, coordination and cooperation, and knowledge generation and dissemination. Article 6 of Convention No. 155 provides that the formulation of the national policy shall indicate the respective functions and responsibilities in respect of OSH and the working environment of public authorities, employers, workers and others, taking account of both the complementary character of such responsibilities and national conditions and practice. Article 4 of Convention No. 187 establishes that the national system for occupational safety and health shall include, where appropriate: "(a) a national tripartite advisory body, or bodies, addressing occupational safety and health issues". The ILO Committee of Experts on Application of Conventions and Recommendations (CEACR) recalled that consultations with the social partners are essential for the functioning of the

national OSH system and highlighted the potential of these institutions as a forum for consultations and periodic review.²⁸

National tripartite bodies may also be referred to as national tripartite councils, committees or commissions. They are composed of representatives from the government, workers' and employers' organizations and are typically awarded an advisory role. In China, the Russian Federation and India, national tripartite bodies established to deal with labour issues also include OSH matters.

Many countries expand the tripartite composition so as to include representatives from OSH associations and academic institutions as well as from various public authorities with competences in OSH, in particular the labour inspectorate and the social security institution. This seems to be the case in Brazil, while the other BRICS countries appear to have representatives from a variety of ministries with OSH competencies (table 2 in annex).

Cooperation at the enterprise level

Article 19 of Convention No. 155 stipulates that there shall be arrangements at the level of the undertaking under which representatives of workers in the undertaking co-operate with the employer in the field of occupational safety and health. Article 20 of the same convention further emphasizes that co-operation between management and workers and/or their representatives within the undertaking shall be an essential element of organisational and other measures at the level of the undertaking. Paragraph 12 of Recommendation No. 164 refers to a variety of different mechanisms for worker representation at the level of the undertaking, including the appointment of workers' safety delegates and the

²⁸ International Labour Office, *General Survey on the occupational safety and health instruments concerning the promotional framework, construction, mines and agriculture, Report of the Committee of Experts on the Application of Conventions and* Recommendations, *International Labour Conference*, 106th Session. (Geneva: ILO, 2017), par.146.

establishment of workers' safety and health committees, and joint safety and health committees.

All BRICS countries have some sort of workplace cooperation arrangements on OSH, namely a joint OSH committee at enterprise level. These committees have an important role in promoting a preventative culture at the workplace as defined in Article 1(d) of Convention No. 187, by supporting the identification of hazards, risk assessment and following up on the control measures to be taken and providing information to workers among others (more information on the activities performed by these committees in BRICS is provided in table 3 in annex).

When the requirement to establish a workplace OSH committee results from the law, it is usually applicable only to workplaces beyond a specific number of workers, which normally leaves behind the smallest productive units and the informal ones. For example, in Brazil, an "Internal Accident Prevention Commission" is required in workplaces that have more than 20 employees, while in South Africa the workforce size that would require the establishment of a workplace OSH committee appears to be 100 or 200 workers, depending on the nature of the company. On the other hand, in China, India and the Russian Federation no minimum workforce size appears to be foreseen for the creation of workplace OSH committees. In India, a safety committee shall be set up in every factory where a hazardous process takes place, or where hazardous substances are used or handled, while in the Russian Federation, an OSH committee shall be created on the initiative of employees or their representative body or the employer.

Specific Measures to Develop a Safe and Healthy Working Environment for All

In addition to the specific principles, Convention No. 187 and Recommendation No. 197 provide concrete indications on the measures that should be taken to develop a national preventative safety and health culture. Such measures include: raising OSH awareness through national campaigns; introducing OSH concepts into education and vocational training; providing information and advice to employers, workers and their respective organizations; facilitating the exchange of OSH data; and measures to address the constraints faced by microenterprises, SMEs and contractors, among others. The following sub-sections present concrete and practical examples of how BRICS are putting in place such measures. The cases presented are not exhaustive and do not embody the diversity of practices implemented by BRICS, but were selected to inspire the discussion on trends and opportunities for continual improvement.

Awareness Raising on OSH

Society as a whole plays an important role in promoting a safety and health culture, as it is a product of both collective and individual values, attitudes, perceptions, competences and practices. Globally, many countries have reported to implement public and workplace campaigns,²⁹ which can include radio and television communications, public conferences, seminars or public festivities.

The World Day for Safety and Health at Work, on April 28th, offers an opportunity to carry out these types on activities. All BRICS countries have reported

²⁹ International Labour Office, *General Survey Concerning the Occupational Safety and Health Convention, 1981* (No. 155), the Occupational Safety and Health Recommendation, 1981 (no. 164), and the Protocol of 2002 to the Occupational Safety and Health Convention, 1981. Report of the Committee of Experts on the Application of Conventions and Recommendations, International Labour Conference, 98th Session. (Geneva: ILO, 2009).

celebrations on occasion of this World Day. In the Russian Federation, the All-Russian Week of Occupational Safety takes place every April in Sochi. It includes exhibitions on security measures and occupational safety personal protective equipment, distribution of brochures, booklets and other literature on these issues.³⁰

Other types of campaigns have been put in place in a regular manner in BRICS countries. Since 2002, China devotes a week to promote the Law on the Prevention and Control of Occupational Diseases. This activity gives the opportunity to the public to access information on the national legislation and allows interaction with the national authorities to raise questions.

In terms of promotional materials, internet has been used in BRICS countries to facilitate the promotion and access to campaigns' information at the workplace level. In this sense, considering the important penetration of and use of mobile phones in BRICS, digital technology could become an ally to reach workers from the informal economy or those that are in settings where national institutions may not have a strong physical presence.

Introducing OSH into Education and Vocational Training

Integrating OSH into general education and into vocational training programs can help build safer and healthier future generations of workers. Training and educating workers on OSH at every level is a highly effective method of building OSH awareness, knowledge and skills among workers and employers,

³⁰ The Government of Russian Federation, Sixth National Report on the implementation of the European Social Charter, Articles 3, 11,12 and 14 for the period 01/01/2012-31/12/2015. (Ministry of Labour and Social Protection of the Russian Federation: 2016).

particularly young workers. At enterprise levels, OSH training should include not only safety representatives, but also managers and employers.

BRICS countries have put in place a variety of mechanisms to extend the coverage and quality of OSH education and training. Measures to certify OSH trainers and professionals have been put in place in most of the countries and accreditations for OSH trainings are available for workers, especially for those working in most hazardous sectors. While these measures represent an important step towards ensuring quality training, it may benefit mainly workers from the formal economy and specific sectors. Ensuring access to OSH training and education during the life cycle, particularly during the core education stages, is a need to ensure a preventative culture. In this sense, there are interesting initiatives developed by some BRICS countries that could be replicated and extended. In the Russian Federation, a Decree³¹ put in place a series of measure aiming at promoting healthy lifestyle of children and adolescents.

In Brazil the creation of a National Day for Occupational Safety and Health at Schools³², with the dissemination of material prepared to raise awareness and stimulate prevention among teachers, students and young workers³³, is a good practice that might be considered for replication.

In India, the National Policy on Safety, Health and Environment at Workplace, foresees the integration of OSH in the curriculum "by suitably incorporating teaching inputs on safety, health and environment at work place in schools, technical, medical, professional and vocational courses and distance education programme" (Article 4.4.7). Although safety is not part of any school syllabus, in

³¹ Decree of the President of the Russian Federation № 761, June 1, 2012 N "On the National Action Strategy for Children for 2012-2017"

³² Brazil. Federal Law No. 12.645, May 16th, 2012.

³³ Fundacentro, Seguranca e Saude nas Escolas, February 2020, http://www.fundacentro.gov.br/dia-10-de-outubro/dia-nacional-de-seg-e-saude-nas-escolas.

certain states, lectures in schools were organised and the students invited to participate in safety exhibitions.

Exchange of data on OSH

The collection, evaluation and dissemination of statistical data on OSH is indispensable for measuring progress and deriving targeted policy responses at country and international levels. National statistic offices shall ensure the production and publication of annual statistics on occupational accidents and diseases, ideally including supplementary information (e.g. migrant status) and disaggregated by gender. For this purpose, it is indispensable to harmonize and share data among collecting institutions and make it publicly available. Measures towards this goal are necessary to ensure that countries will be able to report on the progress achieved under indicator 8.8.1 of SDG 8.

Challenges related with the collection and analysis of data in BRICS countries are, as in many other countries, related with the coverage of workers and sectors that are not under the OSH or the employment injury insurance legal frameworks, such as workers operating in the informal economy, seasonal workers or, in certain cases, self-employed. Also, the reporting of occupational diseases continues to be undermined by a lack of specific and accurate diagnosis or by limited recording obligations at enterprise level.

To overcome reporting and data collection constraints, different data sources can be used. An example of exchange of information through different source to improve data is the Digital Observatory of Health and Safety at Work³⁴ developed by Brazil. The Observatory is an online tool that provides, in real time, data on occupational health issues in Brazil. The data collected comes from different sources, including information from the General Registry of Employed and

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³⁴ Iniciativa Smartlab, https://smartlabbr.org/sst

Unemployed Workers and the Annual Report of Social Information, both from the Ministry of Economy; the social and demographic data provided by the Brazilian Institute for Geography and Statistics; and the economic statistics provided by the Institute for Applied Economic Research, among others.

The Digital Observatory of Health and Safety at Work provides data on a wide geographical scale on the number of notifications of work-related accidents, the amount of social security benefits granted and spent due to occupational and safety issues, and the number of working days lost due to work-related accidents, among other things.

Specific measures for Micro, Small and Medium Enterprises

The main constraints in establishing a preventative OSH culture are the difficulties in reaching certain categories of workers and some specific economic sectors. Micro, small and medium enterprises (MSMEs, whether formal or informal, in particular, face more difficulties to develop and implement OSH management systems.

In China, small- and medium-sized enterprises (SMEs) represent about 80 per cent of employment. Barriers to comply with OSH regulation in these enterprises are linked to lack of competencies, financial constraints and low perception of existing risks. Some districts have put in place measures to support SMEs to overcome these constraints. The Fangshan District, for example, has established an enterprise safety management information system for the use of all enterprises in the city. The information system highlights three major functions:

1) provision of customized services according to the actual situation of the enterprise, such as identification of risks and provision of a list of safety inspection procedures;

2) support compliance by providing a checklist of common risks identified in SMEs to assist enterprises to carry out an internal evaluation using a mobile phone application; and 3) an intelligent system that

offers guidance and has automatic reminder functions to promptly follow-up on the concerns found.

In India, the Contract Labour (Regulation and Abolition) Act, 1970, regulates contractors' work. Contract workers working in registered factories and establishments are provided with the same facilities as other workers. Interesting initiatives have been developed in certain states such as Karnataka and Kerala, to provide training to contractors. In Kerala, safety training programmes for contract workers are conducted by using the mobile safety training vehicle – a mobile unit providing training across the State – as part of the outreach programme.

Suggested improvements to progress in the development of an OSH culture in BRICS

Occupational Safety and Health is an important component to ensure sustainable and inclusive economic growth in BRICS countries. In view of the transformative economic and demographic changes that these countries have experienced during the past decades, the development of OSH national systems and programmes that ensure the implementation of a preventative safety and health culture for all workers should be part of the main priorities within their decent work agendas. Improving OSH governance, implementing measures responding to the specific needs of SMEs and the informal economy and addressing emerging and persistent risks are priority policy areas in that regard.

The review of the current OSH situation in BRICS countries shows common challenges in the process of building a preventative culture and different response levels. Although some progress has been made, the increasing complexity of the world of work nowadays requires that we not only learn from the past while foresighting the future, but also to sharing knowledge and

experience, first increasing collaboration among diverse OSH national stakeholders and second between countries.

Considering the existing practices, policy makers may take the following policy recommendations in consideration:

- Extend legal OSH protection to all workers independently of their specific employment status. Legislative approaches to deal with this challenge may include broadening the scope of application of OSH legislation by extending the concepts of "employer" and "employee" to consider other occupational categories. In addition, the employer's general OSH duty could be expanded to cover persons who are not in an employment relationship with that employer. Alternatively, 'joint and several liability schemes' could be introduced, under which all employers who have some degree of control over any given worker may be held responsible for non-compliance with the rights of such worker and related damages.
- Promote OSH compliance by adopting an evidence-based strategic compliance approach to better use available resources, maintain and sustain compliance.
- Exchange information on the various innovative approaches that BRICS
 countries have implemented to improve compliance with OSH, such as
 new technologies, digitalisation and automation. New collaboration
 modalities could be explored for more experienced countries to provide
 support to others who are committed to adopt such approaches.
- Strengthen national capacity to systematically collect data, harmonised according to international standards and recommendations, such as the International Conference of Labour Statisticians and the SDG framework.
- Anticipate emerging risks while addressing traditional persistent challenges by the use of data and technology, such as safety applications and big data;

- Build OSH competencies by including OSH education and training in both formal and informal – lifelong learning curricula. This could help workers and employers to adapt to new, emerging, and persistent safety and health risks and improve OSH outcomes at work;
- Engage a wider range of stakeholders in promoting OSH and prevention and foster cooperation with research institutions and OSH professional bodies.
- Reinforce the role of the government and social partners by strengthening the role of social dialogue on OSH policies, planning and improvement.

Annexes

Annex 1: Ratification of OSH related Convention by BRICS Countries

Country/ratifications	Brazil	China	India	Russian Fed.	South Africa
Labour Inspection Convention, 1947 (No. 81)	✓		✓	✓	✓
Protocol of 1995 to the Labour Inspection Convention, 1947				✓	
(No. 81)					
Radiation Protection Convention, 1960 (No. 115)	✓		✓	✓	
Hygiene (Commerce and Offices) Convention, 1964 (No. 120)	✓			✓	
Employment Injury Benefits Convention, 1964 (No. 121)					
Labour Inspection (Agriculture) Convention, 1969 (No. 129)					
Occupational Cancer Convention, 1974 (No. 139)	✓			✓	
Working Environment (Air Pollution, Noise and Vibration)	✓			✓	
Convention, 1977 (No. 148)					
Occupational Safety and Health (Dock Work) Convention,					
1979 (No. 152)					
Occupational Safety and Health Convention, 1981 (No. 155)	✓	✓		✓	✓
Protocol of 2002 to the Occupational Safety and Health					
Convention, 1981 (No. 155)					
Occupational Health Services Convention, 1985 (No. 161)	✓				
Asbestos Convention, 1986 (No. 162)	✓			✓	
Safety and Health in Construction Convention, 1988 (No. 167)	✓	✓		✓	
Chemicals Convention, 1990 (No. 170)	✓	✓			

Country/ratifications	Brazil	China	India	Russian Fed.	South Africa
Prevention of Major Industrial Accidents Convention, 1993	✓		✓	✓	
(No. 174)					
Safety and Health in Mines Convention, 1995 (No. 176)	✓			✓	✓
Safety and Health in Agriculture Convention, 2001 (No. 184)					
Promotional Framework for Occupational Safety and Health				✓	
Convention, 2006 (No. 187)					

Annex 2: National tripartite advisory bodies on labour and OSH matters in BRICS

Country	National tripartite advisory body	Composition	Functions
Brazil ³⁵	Permanent Joint Tripartite Commission	Representatives from: - Labour Secretariat; - Social Security Secretariat - Special Secretariat for Productivity, Employment and Competitiveness; - Jorge Duprat Figueiredo Foundation for Safety and Medicine at Work - Ministry of Health - employers and workers organizations	 propose actions in the areas of safety and health at work; propose measures to make compatibility between worker protection and the country's economic development; stimulate dialogue between workers and employers in order to improve working conditions; prepare studies and, when requested, participate in the process of reviewing regulatory standards for health and safety at work; and prepare studies and monitor research and scientific events related to the prevention of accidents and occupational diseases.
China ³⁶	Work Safety Committee of	Representatives from:	 lead and coordinate its members to carry out OSH work; analyse the national OSH situation;

³⁵ Decree No. 9.944 of 30 July 2019 that establishes the National Labour Council and the National Tripartite Permanent Commission ³⁶ China's National Profile Report on OSH, 2018

Country	National tripartite advisory body	Composition	Functions
	the State Council (There is also a National Labour Relations Coordination Council)	 Ministry of Human Resources and Social Security National Health Commission Ministry of Emergency Management the All-China Federation of Trade Unions other government departments 	 adopt work plans and resolve issues; organize national work safety inspections
India ³⁷	Indian Labour Conference (There are also a Tripartite Committee in Docks and a Tripartite	Representatives from: - Central trade union organisations - Central organisations of employers; - State Governments and Union Territories	Advise the Government on the issues concerning working population of the country

³⁷ Draft national OSH profile 2019

Country	National tripartite advisory body	Composition	Functions
	Conference on Safety in Mines)	 Central Ministries/Departments concerned with the agenda items 	
Russian Federation ³⁸	Commission on regulation of social - labour relations	Representatives from: - all Russian associations of trade unions; - all Russian associations of employers; and - the Government of the Russian Federation	 participate in collective bargaining and the drafting process of agreements between the national associations of trade unions, employers and the Government; provide consultations on the issues related to drafting of federal laws and other normative legal acts of the Russian Federation regulating relations in the field of employment, labour migration, social security; coordinate the parties' positions in the key areas of social policy; disseminate the experience of social partnerships. provide opinion in the process of drafting of documents on OSH by the Federal Executive bodies

³⁸ LEGOSH, 2015

Country	National tripartite advisory body	Composition		Functions
South	Council for	Representatives from the:	_	advise the Minister on matters relating to OSH;
Africa ³⁹	Occupational	 Inspection authority; 	_	do research and conduct investigations;
	Health and	 Department of Manpower; 	_	advise the Department on the formulation and
	Safety	 Workmen's compensation 		publication of standards, specifications or other
		institution;		forms of guidance on OSH;
	(There is also a	– Ministry for National Health	_	advise the Department on the promotion of
	Mine Health and	and Welfare;		education and training in OSH as well the collection
	Safety Council)	 Ministry of Mineral and 		and dissemination of information on OSH;
		Energy Affairs;	_	advise the Department on any matter regarding the
		– Employers' organizations		performance of its functions
		and trade unions		

³⁹ LEGOSH, 2013

Annex 3: Workplace OSH committees in BRICS

Country I	Regulated by law	Size of enterprises that are required to have a workplace OSH committee	Functions
Brazil ⁴⁰		An Internal Accident Prevention Commission (CIPA) shall be established in companies with more than 20 employees and the rest of companies shall appoint a person to receive the relevant training ⁴¹ .	 identify the risks of the work process, and draw up the risk map; prepare a work plan that will enable preventive action; participate in the implementation and quality control of the necessary prevention measures; carry out periodic checks on working environments; carrying out, at each meeting, an evaluation of the fulfilment of the goals set in its work plan; provide to workers information on OSH; request work stoppage in case of a serious and imminent risk; collaborate in the development and implementation of OSH programs; disseminate and promote compliance with regulations and collective bargaining agreements

Decree-Law No. 5452 on the Consolidation of Labour Laws, Articles 162-165
 Rule 5 on the Internal Accident Prevention Commission http://trabalho.gov.br/images/Documentos/SST/NR/NR5.pdf

Country	Regulated by law	Size of enterprises that are required to have a workplace OSH committee	Functions
China ⁴²	√	All enterprises shall establish a work safety committee.	No information available.
India ⁴³	•	The Factories Act, 1948 lays down that, the occupier shall, in every factory where a hazardous process takes place, or where hazardous substances are used or handled, set up a safety committee consisting of equal number of representatives of workers and management. Most state Government has extended this provision in their Rules to every factory where in 250 workers or more are ordinary employed.	 Functions of the safety committee in factories: promote co-operation between workers and management in maintaining proper safety and health at work; review periodically the measures taken in that behalf Functions of the safety committee in ports: investigate into the causes of accidents and unsafe practices in dock work and to suggest remedial measures; stimulate interest, of employers and workers in safety by organising safety weeks, safety competitions, talks and film shows on safety, preparing posters or taking similar other measures; check unsafe practices and detect unsafe conditions recommend remedial measures for their rectification;

⁴² LEGOSH, 2013, China's National Profile Report on OSH, 2018, https://www.mem.gov.cn/gk/gwgg/agwzlfl/tz 01/201503/t20150319 235768.shtml ⁴³ LEGOSH, 2013, Draft national OSH profile 2019

Country	Regulated by law	Size of enterprises that are required to have a workplace OSH committee	Functions
		The Dock Workers (Safety, Health and Welfare) Act, 1986 stipulates that at every port there shall be constituted a safety committee	 organise training programmes for the supervisory staff and workers; look into the health hazards associated with handling different types of cargoes and to suggest remedial measures Including use of proper personal protective equipment; and suggest measures for improving welfare amenities inside the docks and other miscellaneous aspects of safety, health and welfare in dock work.
Russian Federation ⁴⁴	•	The OSH Committee shall be created on the initiative of employees or their representative body or the employer.	 organize joint actions by the employer and workers to ensure compliance with OSH requirements; prevent occupational injuries and diseases; organize examinations of working and safety and health conditions at workplaces; inform workers of the results of the these examinations; collect proposals on OSH for collective agreements

⁴⁴ LEGOSH, 2015

Country	Regulated by law	Size of enterprises that are required to have a workplace OSH committee	Functions
South Africa ⁴⁵		OSH committees are established in workplaces where two or more OSH representatives have been designated. These shall be designated in workplaces with more than 20 employees. The number of OSH representatives for a workplace shall in the case of shops and offices be at least one OSH representative for every 100 employees or part thereof, and in the case of all other workplaces at least one OSH representative per every 50 employees or part thereof.	 make recommendations to the employer or to an inspector regarding any OSH matter; discuss any incident at the workplace; write a report on the incident to an inspector; and perform such other functions as may be prescribed

⁴⁵ LEGOSH, 2013