A brief report on

ENVIRONMENTAL & OCCUPATIONAL HEALTH

World Health Organization
Islamic Republic of Iran

جمهوری اسلامی ایران
وزارت بهداشت، درمان و آموزش پزشکی

TEHRAN | NOVEMBER 2022

SITUATION, STRATEGIES, PROGRAMS, CHALLENGES, AND JOINT PRIORITIES OF THE MINISTRY OF HEALTH AND MEDICAL EDUCATION (MOHME), AND THE WORLD HEALTH ORGANIZATION (WHO), IN ISLAMIC REPUBLIC OF IRAN

Introduction

Offical visit of the Director Expert of the Centre for Environmental & Ocupational Health of MOHME to the Centre for Environmental Health Action (CEHA)

Environmental and occupational health is among the priorities and areas of work of Ministry of Health and Medical Education (MOHME) and WHO country office Iran. This document is to report on the situation, challenges, and gaps of the country on each of the jointly prioritized topics, as well as the MOHME and WHO strategic priorities. It is prepared following the joint discussions occurred during the official (hybrid) visit of the director and experts of Center for Environmental and Occupational Health (CEOH) of MOHME to the regional Center for Environmental Health Action (CEHA) of the Eastern Mediterranean (EMR) in May 2022.

The strategic priorities of WHO and MOHME include: 1) strengthening, updating, and implementing national policies, strategies, regulations, and management practices; 2) strengthening multi-sectoral collaborations; 3) Upscaling national surveillance, data and information systems, and monitoring and evaluation, reporting, joint studies, cooperation frameworks and networks toward evidence and data-driven decision making; and 4) resource mobilization and utilizing international funds. Accordingly, the country's framework of action on health and the environment for 2022–2027 developed and being launched on **29 November 2022.**

Climate Change / Air Pollution (and Sand and Dust Storm)

Status: Iran experiences an increase in frequency and intensity of climate change impacts, including air- and water pollution, soil erosion, sea-level rise, spread of climate-sensitive diseases, loss of biodiversity, and natural disasters including storms, flash-floods, extreme temperatures and drought. Air pollution and sand and dust storms are contributing to climate change, while also exacerbated by its impacts, through drought, desertification, and soil salinity, as well as decreasing in water resources.

Challenges and gaps

- Governance and leadership, such as in intersectoral collaborations
- Evidence and implementation, such as integrated monitoring and early warning; climate-informed emergency preparedness; lack of evidence and research on the impacts of climate change.

Chemical Safety / Food Safety

Status: the percentage of workers exposed to chemicals is (34%), factories with chemical issues is (28%), and factories with controlled chemicals is (8.7%). the chemicals responsible for chemical events, include chlorine (23%), sulfuric acid (17%), ammonium (15%), gasoline and petrol (10%), hydrogen sulfide (10%), methane (7.5%) and other chemicals (15%). The root causes of chemical events are mainly due to defective equipment (45%).

Challenges and gaps

- Control mechanisms, especially in small workplaces
- Effective maintenance of equipments, such as for defective equipments
- Application of International Health Regulations (IHR) for chemical safety management
- Food safety monitoring systems, such as for contamination and fraud detection

Water, Sanitation, and Hygiene (WASH) / Waste Management

Status: Water supply and sanitation in Iran have some important improvements, especially in terms of increased access to urban water supply, while important challenges remain, particularly concerning sanitation and service provision in rural areas.

The average per capita of hospital waste generation per bed, is 3.5 kg/day. According to Article 13 of the Waste Management Law of Iran, mixing medical wastes with other wastes, discharging of unsensitized wastes into the environment, and recycling of the infected materials are prohibited.

Challenges and gaps

- Monitoring mechanisms, e.g., hospital and sensitive waste management monitoring
- Guidelines and regulations, including for labeling and case-specific classification of wastes

Occupational Health and Safety

Status: The most common occupational diseases reported in industry and mining are musculoskeletal disorders, lung disorders, and noise-induced hearing loss. Miners are exposed to several airborne particles, exposure to silica is a major occupational health problem, even when the worker does not continue working in the mine.

Challenges and gaps

- Awareness among workers, such as on occupational accidents and diseases
- Control measures in workplaces and industries, especially the ones with outdated technology

Other relevant subjects

- Developing a national strategy on health and environment (jointly with MOHME)
- Enhancement of environmental sustainability and resilience of cooling systems, and improving energy efficiency in the health sector

Strategic Area	Country Strategic Directions	Country Strategic Actions
Climate change and health	**Strengthening implementation of the national health and climate change plans, policies, and strategies**	• Climate change and health vulnerability and adaptation assessments towards a national health adaptation plan • Climate resilience and environmental sustainability of healthcare facilities assessments towards adaptive, climate-resilient, and environmentally sustainable healthcare facilities • Estimating carbon footprint of the health system, and healthcare facilities and reducing towards net zero
	Strengthening multisectoral collaboration on climate change and health	• Capacity building, improving resilience, and establishing climate-informed networks of communities, health care workers, health system, and disasters and emergencies responses • Developing hazard-based early warning systems that also consider predictions and impacts
	Upscaling national surveillance, data and information systems, and monitoring and evaluation, reporting, joint studies, cooperation frameworks and networks toward evidence and data-driven decision making for health and climate change	• Assessing the health co-benefits of national climate mitigation policies • Climate hazard and risk profiling and assessments at local levels, considering climate scenarios • Conducting training on Climate-Related tools such as CarbonH • Assessing impact of climate change on provision of WASH services
	Mobilizing international funds according to Nationally Determined Contribution (NDC) and health commitments, including the Green Climate Fund (GCF) for Iran	• Regional experience-sharing and networking on the conducted projects and lessons learned in Iran
Air pollution and Sand and Dust Storms	**Strengthening multisectoral collaboration on air pollution**	• Technical support and advocacy for developing national and regional networks for sand and dust storm health impact assessment • Technical support for measuring and determining the air quality economic burden of diseases • Promoting evidence-based studies on concentration of Hazardous air pollutants (HAPs) (BTEX, asbestos, benzo-alpha-pyrene and lead) in ambient air of other metropolitan & Industrial areas
	Upscaling national surveillance, data and information systems, and monitoring and evaluation, reporting, joint studies, cooperation frameworks and networks toward evidence and data-driven decision making for air pollution and sand and dust	• Facilitating and supporting Iranian expertise on AQ standards and source apportionment studies shared with other regional countries • Technical support for evidence generation and analysis on the health impact of sand and dust storms

Strategic Area	Country Strategic Directions	Country Strategic Actions
Food Safety	**Strengthening intersectoral partnerships for managing and minimizing food safety risks**	• Piloting assessment tools such as FAO-WHO food safety and FDA Total Diet S tudy (to update the status of Iran) • Upscaling surveillance and response to foodborne diseases Facilitating for Iran's knowledge-sharing on Food Safety auditing and fraud detection system and mechanisms to other countries of the region
	Upscaling national surveillance, data and information systems, and monitoring and evaluation, reporting, joint studies, cooperation frameworks and networks toward evidence and data-driven decision making, including good agricultural practices and risk-based food safety management systems	• Strengthening estimation of burden of foodborne diseases • Strengthening/upscaling food safety monitoring programs (such as GEMS Database) • Strengthening national programs on food safety management and food risk analysis • Introducing advanced analysis methods or technology for food quality, safety and authenticity assessment (such as food contamination and food fraud)
Chemical Safety	**Strengthening intersectoral collaborations on addressing chemical risks in all sectors**	• Scaling up and proceeding with intervention recommendations of the assessment of WASH in HCFs on waste management • Learning from other countries' experience on healthcare waste management (and resource mobilization experiences) • Operationalizing policies on safe and efficient recycling, monitoring and surveillance of toxic exposure (including microplastics and E-waste management) • Operationalizing solutions of HCWM services in other facilities including dental units, home care nursing services, and LTCFs in cooperation with the relevant departments
	Upscaling national surveillance, data and information systems, and monitoring and evaluation, reporting, joint studies, cooperation frameworks and networks toward evidence and data-driven decision making on waste management	• Facilitating for ILO training on chemicals at work places • Protecting the health of workers from chemical risks at informal occupations and small workshops • Addressing the defective equipment issues that cause leakages and chemical risks in workplaces with focus on low-cost control measures • Establishing a national network of established poison centers and joining the regional ones in order to benefit mutual exchanges • Addressing weaknesses identified in effective surveillance system for chemical accidents and low levels of safety in chemical plants and warehouses, according to the International Health Regulations (IHR)

Strategic Area	Country Strategic Directions	Country Strategic Actions
WASH	**Upscaling national surveillance, data and information systems, and monitoring and evaluation, toward evidence and data-driven decision making on WASH indicators**	• Integration of the WASH in HCFs assessment with the climate resilience and environmentally sustainable HCFs towards decision-making • Knowledge-sharing of Iran on Water and Sanitation Safety Plan and management mechanisms to other countries
	Strengthening, updating, and implementing national policies, strategies, regulations, and management practices	• Developing a costed road map and taking the WASH in HCFs assessments to the next levels via establishing a national committee
Waste Management	**Upscaling national surveillance, data and information systems, and monitoring and evaluation, reporting, joint studies, cooperation frameworks and networks toward evidence and data-driven decision making on waste management**	• Scaling up and proceeding with intervention recommendations of the assessment of WASH in HCFs on waste management • Learning from other countries' experience on healthcare waste management (and resource mobilization experiences) • Operationalizing policies on safe and efficient recycling, monitoring and surveillance of toxic exposure (including microplastics and E-waste) • Operationalizing solutions of HCWM services in other facilities including dental units, home care nursing services, and LTCFs in cooperation with the relevant departments
Occupational Health	**Strengthening, updating, and implementing occupational health and workplace environment policies and strategies**	• Strengthening of national policies for health at work; promotion of healthy work and work environments involving employer, worker, and government collaboration • Developing a national action plan for occupational and worker's health, based on risk factors, such as climate change, remote work, etc. • Promoting and strengthening community engagement, and awareness raising among various target groups
	Upscaling national surveillance, data and information systems, and monitoring and evaluation, reporting, joint studies, cooperation frameworks and networks toward evidence and data-driven	• Tailored programmes for monitoring the health and wellbeing of healthcare workers (e.g., waste handlers) and other workers such as carpet weavers through the close supervision, developing relevant indicators, using softwares (localized to the context of Iran), development of guidelines and conducting workshops, and integrating the health information systems for employees • Scaling-up of the tool developed for assessing the implementation of the Global Plan of Action on Workers' Health in the EMR and piloted in Iran and promoting the methodology and framework of the occupational health national profile of Iran • Estimating exposure (permissible levels and assessments) to occupational risk factors among workers and burden of occupational diseases • Sharing healthy work practices to develop updated training curricula to improve human resource knowledge, including occupational health physicians and occupational hygienists
Other	**Placing environmental health concerns at the heart of developmental actions and inter-sectoral collaborations**	• Upscaling enhancement of environmental sustainability and resilience of cooling systems (joint with UNIDO and CDC of MOHME); and improve energy efficiency in the health sector (with help of all stakeholders) • Health impact assessment of non-mainstreamed environmental pollutions (such as sound pollution) and for large-scale development projects, policies and programs • Documentation of environmental and occupational health during COVID-19 success stories • Developing a national strategy and plan of action on health and environment and climate change (jointly with MOHME)

A brief report on

ENVIRONMENTAL
& OCCUPATIONAL
HEALTH

World Health
Organization
Islamic Republic of Iran

جمهوری اسلامی ایران
وزارت بهداشت، درمان و آموزش پزشکی