



## Exploring The Role of Environmental Health in the Private Sector

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### Abstract

Aligning economic growth with sustainable development is a significant concern for countries committed to the United Nations Sustainable Development Goals (UN SDGs). Environmental health issues, such as exposure to environmental chemicals and increasing levels of particulate matter, as well as urban health and several other related issues, must be addressed to achieve the UN SDGs. Therefore, it is crucial for countries to prioritize and utilize the expertise of environmental health practitioners and roles in the private sector. The objective of this article is to emphasize the importance of environmental health in the private sector. A Focus Group Discussion was conducted among experts to delve into the roles of environmental health practitioners and discuss various environmental health issues and challenges within the private sector. The discussion revealed three key points: (1) Environmental health roles vary across different fields, (2) Benefits and challenges associated with implementing environmental policies, and (3) The costs associated with environmental health. Overall, this article highlights that the presence of environmental health practitioners, and their roles may expand in the private sector, despite certain limitations in implementing the environmental health policies and associated costs.

**Keywords:** health risk, industry, health impacts

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## INTRODUCTION

Environmental health encompasses various aspects of human health, including quality of life, influenced by the physical, chemical, biological, social, and psychosocial factors of the environment (Kasmani et al., 2021). It also includes the planning, implementation, and evaluation of the impact of environmental factors in the workplace on both workers and public health. Malaysia, in line with its

commitment to the 1992 Rio Earth Summit Declaration, pledged to protect human health affected by environmental quality. Additionally, at the 2012 UN Conference on Sustainable Development, the Minister of Natural Resources and Environment of Malaysia emphasized Malaysia's sustainability goals, such as maintaining at least 50% of its land as forests, reducing carbon emissions, and promoting green technology (Minister of Natural Resources and the Environment, Malaysia, 2012). In pursuit of these goals, Malaysia, like many other countries, has developed the National Environmental Health Action

Plan (NEHAP), which aims to enhance national environmental health and define the roles and responsibilities of all stakeholders.

NEHAP Malaysia has identified the top 10 priority list of environmental health issues as listed by NEHAP Malaysia as follows: Urban Health, Human Exposure to Environmental Chemicals, Exposure to Ionized and Non-Ionizing Radiation, and Malaysian Particulate Matter and Ozone Levels (NEHAP, 2019). These priority areas serve as a valuable reference for scholars, researchers, and professionals when making decisions regarding future research directions. Environmental health professionals, business owners, and industry managers, as well as academics, and researchers, should pay attention to these priorities when auditing and use them as a guide when conducting audits and assessments of environmental health in the workplace.

The recent COVID-19 pandemic has demonstrated the potential for infections to occur among workers in the workplace, with an increasing number of cases becoming a significant concern. These infections can have detrimental effects on businesses, necessitating careful planning and implementation by management to prevent and reduce the number of cases. It is crucial for individuals with knowledge of environmental health to take the lead in initiating the planning and implementation of strategies to address this matter and other environmental health issues. Therefore, the primary objective of this article is to strongly assert the importance of environmental health is needed in the industries. Additionally, the article aims to achieve several other objectives, which will be supported and demonstrated by the conclusion.

- i. To identify the roles of environmental health in the private sector; and;
- ii. To discuss potential environmental and health hazards in the industry.

#### Framework on Environmental Health

Figure 1 depicts the Driving Force -Pressure-State-Exposure-Effect-Action (DPSEEA) framework, also known as the 'health and environment cause and effect framework,' as a hierarchical model relating measurable indicators to diseases caused by the environment. It also presents the six elements of the environment-health chain that can be implemented to mitigate environmental health consequences.

Based on Briggs' (2017) definition, the first "D" in the framework stands for driving forces. These driving forces are variables that act as both fundamental causes and influences in the processes being studied. The "E" represents the Effects, indicating that these exposures have a detrimental impact on an individual's health. Lastly, the "P" stands for Policy, which refers to the various efforts aimed at reducing emissions and addressing the identified issues. Conceptual frameworks can also establish connections between individual monitoring programs and support the development of new indicators, policies, and programs (Edokpolo et al., 2019).

#### Strategic Plan for Environmental Health

In the context of this strategy, environmental health hazards encompass all environmental, physical, chemical, biological, work-related, and behavioral factors. The focus is on areas of the environment that can undergo significant changes (World Health Organization, 2020). The goal of this strategy is to ensure safe, supportive, and equitable environments for health by 2030, in alignment with the United Nations Sustainable Development Goals (UN SDGs). It provides a vision and a roadmap for how the global health community and the world's response to environmental health risks and challenges. Action needs to be directed towards upstream determinants of health, environment, and climate change determinants in an integrated and mainstreamed approach across all sectors.

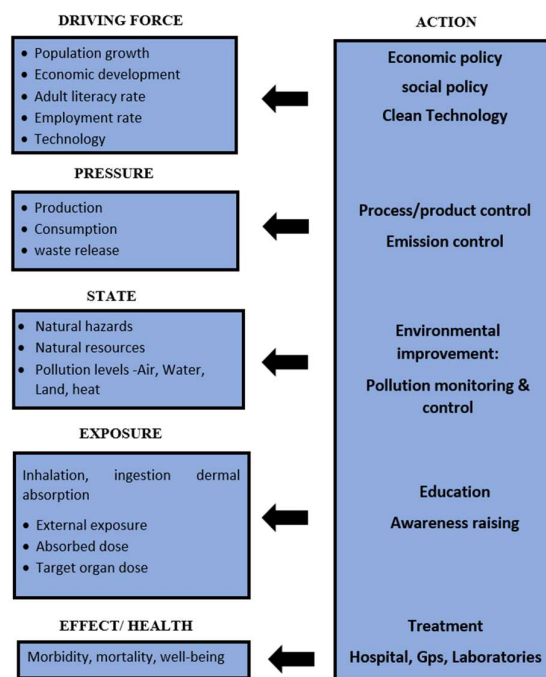


Figure 1. The DPSEEA framework

According to WHO (2020), Strategy 1 emphasizes the need for effective and equitable action on factors contributing to environmental threats to human health. Scaling up effective primary prevention activities involving all major players from all industries is crucial. Strategy 2 focuses on incorporating health perspectives and data systematically into policies across all sectors to maximize the health benefits of environmental protection. Strategy 3 involves the healthcare sector taking the lead and coordinating efforts with other industries impacting the environment and human health to improve overall well-being. Strategy 4 highlights the importance of comprehensive approaches, including interdisciplinary and interdepartmental cooperation, to build governance structures, agreements, and political will that can achieve positive results across impacted sectors. Currently, sectors are often driven primarily motivated by their own objectives and enhancing governance frameworks to enable long-term health protective action, increasing leadership and demand for health, and fostering powerful political movements and enabling agreements are essential. Strategy 5 aims to ensure that evidence-based information is available in all relevant areas to support decision-making on health-protective actions, considering health impacts, economic implications, efficacy, and co-benefits of solutions. Strategy 6 emphasises the monitoring the execution of primary prevention efforts by creating healthier and safer environments as a guide for further actions.

In the Environmental Health (EH) Australia Strategic Plan 2016-2020, the organization has outlined its corporate goals. These goals include the growth of the EH Officer workforce, raising the professional standards of environmental health practitioners, continuous enhancement of governance procedures to better serve its members and advance environmental health, and promoting higher environmental health standards among the Australian population. To achieve these goals, there is a need to improve environmental health standards in the Australian populace. Thus, the improvement of environmental health advocacy should be through the establishment of environmental health policy positions, policy networks and linkages, and advocacy mechanisms (Environmental Health Australia, 2020). By

focusing on these strategies, EH Australia aims to strengthen the environmental health profession and promote the well-being of the Australian population through improved environmental health policies and standards.

**Exploring Environmental Health**

In exploring the environmental health, perspectives from the professionals in the environmental health (EH) field, focus group discussions (FGD), entitled “Exploring the Environmental Health Roles in Private Industry,” revealed three themes: (1) Environmental Health Roles by Field, (2) Implementation of Environmental Policy, and (3) The Cost of Environmental Health implementation. This section quotes panellists' responses. Figure 2 presents the focus group's three topics and subtopics.

Topics	Subtopics
<b>i.</b> Environmental Health Roles in different fields	Constructing and elevating the knowledge and experience of individuals in: <ul style="list-style-type: none"> <li>a. Environmental health industrial practitioners</li> <li>b. Environmental health academicians</li> </ul>
<b>ii.</b> Implementation of Environmental Policy	Environmental policy implementation effectiveness and consistency: <ul style="list-style-type: none"> <li>a. Implementation of environmental policy in Malaysia's industry</li> <li>b. Environmental policy implementation in Malaysia and other countries.</li> </ul>
<b>iii.</b> The Cost of Environmental Health Implementation	Environmental implementation and its costs: <ul style="list-style-type: none"> <li>a. Essential environmental lecture required by the industry</li> <li>b. Environmental health practitioners' roles in encouraging the company to fund this venture</li> </ul>

Figure 2. The emerging topics

**i. Environmental Health Roles Vary by Field**

Participants viewed EH professionalism in two fields, which are from the EH industrial practitioners and EH academicians. Prof. Dr. Zaleha binti Md Isa from Universiti Kebangsaan Malaysia (UKM), invited as an academician's panellist in the FGD, has an interesting view on EH academicians' role. She said that:

*“Academics prepare students to be effective EH professionals. They revise the syllabus every 5 years to meet MQA (Malaysian Qualifications Agency) requirements and the current market needs. This syllabus revision involves both academics and industrial EH practitioners.”*

In addition, Dr. Roszita binti Ibrahim, a senior lecturer from UKM, stated that, Environmental health professionals who work in the public sector and those who work in the private sector share no significant distinguishing roles. She said that:

*“Public and private environmental health professionals are similar. Environmental Quality Act 1974 regulates private and public sector environmental health professions (No. 127 of 1974). This act defined pollution prevention, abatement, control, and environmental enhancement. It also promotes pollution prevention, abatement, control, and environmental enhancement.”*

During the FGD, Dr. Subra discussed the most concerning environmental issue in Malaysia. Based on a survey conducted in 2019, the top three most concerning environmental issues in Malaysia were climate change, air pollution, water pollution and deforestation. Dr. Subra mentioned that:

*“The environmental health in public eyes had become very apparent after the COVID-19 pandemic hit Malaysia especially to the private sector. The lack of the information related to prevention and control of infectious diseases in relation to the Standard Operating Procedures (SOPs) is very apparent in the private sector. They were going through many difficulties when passing the task to the various staff in the industry. Thus increase the demand for Environmental Health Sectors services in the Private sectors. This includes communicable disease control (CDC) & Non-CDC, Environmental sanitation, disinfection, Water safety, water treatment, food safety and food hygiene, environmental health education and social media, etc.”*

**ii. Implementation of Environmental Health Policy**

Another topic that became apparent throughout the course of the conversation was the application of environmental health policy. Prof. Dr. Zaleha binti Md Isa added that:

*“Malaysia has our own specialty in implementing the environmental health policy. Malaysia collaborates with other countries to handle regional air pollution issues such as haze. At the core of Malaysia's national environmental policy is the Environmental Quality Act (EQA) of 1974, which aimed to prevent and control pollution and set up a system to punish those who harm the environment.”*

Every country implements their own environmental health policy, and it shows that every country is committed to the laws, regulations and policy mechanisms concerning environmental health issues (Omar et al, 2021).. Puan Salina shared on the general information of the policy that was implemented in her company. According to Puan Salina:

*“Our company had implemented Safety, Health and Environmental Policy which had been approved the by the higher up in a few years back. Enviroverks (M) Sdn Bhd, is a local company that perform indoor environmental services, starting from the consultation on indoor environmental quality up to the sanitization, ventilation check etc. For me policy is important because it is part of the management commitment towards the compliance of legal requirements on Safety, Health and Environmental and the management must become a body to commit to the importance of Safety, Health and Environment.”*

Apart from the implementation of the environment policy, participants also talked about the people or specialised units that were devoted to the management of environmental health in the industry. Puan Salina provided a more in-depth explanation based on her company. Puan Salina said that:

*“For a small company like mine and other certain companies, there are certain limitations, for example, a smaller number of workers, so we do not have any specialized units or department that are devoted in managing the environmental health. Therefore, as an environmental worker, I had taken the initiative to propose the program to the higher management.”*

The discussion continued with participants from the industry. Dr. Subra talked about employee awareness on a company's environmental health policy. Dr. Subra mentioned that:

*“The policy is not governing legal compliance. They are volunteering compliance. A company will shut off the policy for management system purposes so that the top management can give instruction to the staff on whatever work needs to be done. In the beginning of the*

2019, there were no policies in line with Environmental Health, they mostly investigated occupational safety and health, and suddenly most companies caught off guard during the pandemic. The problem was we cannot create a new policy during the pandemic. The company needs to use the existing policy and try to manage it. So, the alternative is by getting environmental officers that were available. Therefore, the environmental workers responsible for creating the policies and making sure the policies communicated to all the workers.”

### iii. The Cost of Environmental Health

Environmental health is very essential in every field. Hence, an academicians that was invited to give talks in the private sector, Prof. Dr. Zaleha binti Md Isa, also offered her insights on the lecture deliverance by academicians in the private sector. She mentioned that:

“Lecturers are invited to deliver lectures based on their expertise.”

Then, Dr. Roszita binti Ibrahim added that:

“Environmental health is particularly important to varying fields. There is no specific type of lectures that private employee chooses to attend.”

With the fact that environmental health is essential in every field, the EH industry plays its role in in persuading companies to financially support this venture (Syed Mohd Nizam et al., 2021). Hence, Puan Salina provides more insights on the environmental health worker roles play in persuading companies to offer financial support in implementing environmental policies. Puan Salina mentioned that:

“In order to obtain the trust when proposing to the management, first thing they would like to see is the value for money. Therefore, in any organization, we need to show the management the advantages in managing environmental health.”

## CONCLUSION

The desire for economic growth often creates a conflict between environmental and worker health concerns, particularly in poor countries experiencing rapid population growth and rising expectations for improved living conditions. The workplace serves as a hub for various activities in daily life, including social and physical interactions. Policymakers, employers, and workers have the ability to influence working conditions, management practices, health services, lifestyle choices, diet, planned activities, safety measures, and risk mitigation for the benefit of both employers and workers. When developing environmental health policies, all these factors need to be taken into consideration. This becomes increasingly important as more individuals are employed in the knowledge-based industries and as society ages, resulting in a decrease in the number of available workers for unskilled labour. Consequently, health goals must extend to all aspects of society, encompassing both the environment and occupational health.

Environmental health officers play a crucial role in monitoring and enforcing health and hygiene regulations. They also investigate incidents such as pollution, noise problems, toxic contamination, pest infestations, and food poisoning outbreaks. Environmental threats stemming from industrial activities can have

various detrimental effects on human health, including respiratory, lung, and cardiovascular diseases, and in severe cases, can even result in death. Despite the challenges related to the cost of environmental health and the limitations in implementing policies, environmental health practitioners and their roles have the potential to expand in the private sector in the near future.

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