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**LESSENING THE RISKS OF  
OCCUPATIONAL HAZARDS  
IN NAVOTAS ICE PLANTATIONS**

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by

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## **Abstract**

Occupational hazards and risks in ice plantations at Navotas City, Metro Manila continue to put a toll on local workers and nearby residents' health and safety year by year since 2021. This paper highlights several incidents of chemical leaks causing fatalities and hospitalizations that blatantly violate United Nations' Sustainable Development Goals. Upon the investigation of these recurring incidents, numerous problems were identified including (a) an unhealthy working environment, (b) lack of protective gears and equipment, and (c) inadequate occupational health and safety training. In addressing these challenges, the authors proposed several sustainable solutions. First, strict compliance with regulations and guidelines regarding hazardous chemicals is positioned as an essential tool in bridging the gap in occupational safety. Second, compulsory occupational safety and health training is recommended to proactively educate workers about potential risks and equip them with the knowledge to handle such situations. Lastly, fair compensation, health insurance, and other safety benefits are also suggested to adequately compensate workers for the occupational risks attached to their jobs. Overall, the authors' evaluation focuses on the implementation of compulsory occupational health and safety training as a sustainable solution to alleviate occupational hazards in Navotas City. This approach ensures the transfer of occupational safety knowledge, skills, and attitudes to workers, leading to a long-lasting improvement in workplace safety. By prioritizing the well-being of workers and adhering to sustainable development principles, the aim is to achieve significant progress in occupational health and safety across local ice plantations in Navotas City.

*Keywords:* Occupational Health and Safety; Ice Plantations; Chemical Hazards; Ammonia Leak; Navotas City.

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## **Situation**

With over 247,543 residents, Navotas City accounts for 1.84% of the total population of the National Capital Region (NCR) as of 2020 (PhilAtlas, 2020). Occupational accidents have been a prevailing issue across multiple areas around the municipality. Rappler, The Philippine Star, and The Philippine Daily Inquirer have documented several chemical leaks from factories that are known to be under the ownership of Mayor Tiangco's family, the incumbent city official of Navotas.

Last February 2021, an ammonia leak killed two workers from the TP Marcelo Ice Plant and Cold Storage. This incident also sent 96 individuals to various local hospitals, leaving their families indebted with woeful hospitalization costs (Rappler, 2021). In the subsequent year, CNN Philippines (2022) reported the closure of Magsimpan Ice Plant in Barangay North Bay Boulevard South due to the same chemical leak incident that killed one nearby resident and caused 15 people to be confined in medical centers. Recently, the same trend occurred as the residents of Barangay North Bay Boulevard North faced the heavy burden of ammonia leak coming from Icy Point Cold Storage. This tragic event reportedly poisoned a 16-year-old-male and left 23 people hospitalized (Abarca, 2023). As these occupational hazards continue to escalate every year in Navotas City, the health and safety of both the ice plant workers and nearby communities remain in jeopardy. Through the lens of the United Nations' Sustainable Development Goals (SDGs), these situations are clear violations of items no. (3) Good Health and Well-being, (11) Sustainable Cities and Communities, and (12) Responsible Consumption and Production.

## **Problem**

Considering that Navotas City is hailed as the Fishing Capital of the Philippines, numerous establishments and businesses are centered on seafood production and ice plants. From this, hazardous chemicals like ammonia are highly evident in various workplaces, factories, and plantations in town. Thus, the occupational health and safety of the workers are always placed in peril. While their other foot is buried underground, their pockets remain empty and reaching for more. This goes to show that there is an ongoing occupational crisis stemming from multiple sources such as the prevailing unhealthy working environment, lack of protective gears and equipment, absence of clear regulations, inadequate training, unfair compensation, and insufficient health insurance and other safety benefits.

## **Unhealthy working environment**

The working environment plays a vital role in an employee's health and safety. Unhealthy working environment occurs when employees are unable to execute their daily tasks due to the physical and mental circumstances. A dangerous working environment for workers

may exist if there is an unsanitary environment, broken machinery and equipment, dealing with hazardous chemicals, pressure on employees and negative work cultures. The World Health Organization (WHO) has issued a warning about the negative effects of an unhealthy working environment on people's physical and emotional health (Philippine News Agency, 2017). Despite being blessed with bountiful fisheries and being recognized as the Fishing Capital of the Philippines, Navotas City, specifically Barangay North Boulevard Bay North, is in agony as they face one of their biggest problems, water pollution (Rodriguez, 2023). There is also a growing problem of environmental sanitation, making the residents more likely to catch different kinds of diseases. These problems also significantly affect nearby establishments, especially ice plants, since Barangay North Boulevard Bay North is where most ice plantations are located. As a consequence of these problems unfavorable conditions in the workplace are most likely to occur. In addition, Minshew's (2023) study revealed that a majority of the participants, specifically 64%, encountered a toxic work atmosphere, with 44% of them attributing the issue to poor leadership. Without proper regulations, there would be an increase in accidents and injuries as hazardous chemicals utilized in the workplace pose a range of health and physical hazards (Occupational Safety and Health Administration, n.d.). Not only does it pose a threat to the workers, but to surrounding individuals and the environment as well. Therefore, a clear standard on handling, managing, and disposing of these chemicals must be accomplished. Anyone is at risk from unhealthy working environments and they may happen anytime, anywhere.

### **Lack of protective gears and equipment**

One of the primary goals of any company is to generate profit (Maverick, 2022). As a result, most organizations cut costs in order to maximize their profits and that includes compromising the safety of their employees by not providing their necessary gears and equipment or by giving them low quality knock off. Consequently, the workers are exposed to hazardous chemicals in their work environment thus not only putting the members health at risk but also to surrounding individuals. Likewise, in ice plantations where numerous budgets are allocated for machinery and production equipment, investment in protective gears for employees seems to be at the bottom of business priorities.

According to Zafar (2023), one the most common causes of workplace accidents is the inadequate Safety Gear. These gears and equipment protect workers from a range of dangers

such as chemical exposure. The lack of personal protective equipment (PPE) increases the cases of workplace injuries, making the workers more susceptible to injuries.

### **Inadequate Occupational Health and Safety Training**

Through a systematically planned occupational safety and health compulsory training, employees are given the opportunity to develop knowledge, skills, and attitudes aligned with occupational safety and health standards, which if maintained, prevents workplace accidents (Aziz & Osman, 2019, p. 210). Over the past two years (2022 and 2021), numerous reports of occupational accidents garnering death tolls and hospitalization are documented from Ice plantations located in Navotas City. This signifies an evident need for occupational health and safety training that must be undergone by all employees not just by those engaged in hazardous activities but also by every worker in town. According to Lu (2021), workers in agriculture, forestry, and fishing are also subjected to compromised respiratory health due to chemicals wherein chronic symptoms such as “cough, difficulty breathing, breathlessness, and presence of pulmonary secretions” accounted for 39.4%, 15.6%, 14.9% 13.3% of reported health cases respectively.

### **Solutions**

As discussed in the comprehensive review of problems involving the condition of occupational health and safety in labor areas located in Navotas City, it is highly recommended to propose a set of sustainable parameters in delivering a solution. Thus, through a humanitarian approach in line with the United Nations Sustainable Development Goals, the following solutions are suggested:

#### **Strict compliance to regulations**

Businesses and individuals must strictly abide by the laws and guidelines involving the use of hazardous chemicals. To ensure compliance, obtaining the necessary permits, conducting regular inspections and maintenance, and keeping thorough records must be done. Through maintenance, the entity could assess potential risk and could therefore implement preventive

measures. This approach helps prevent accidents, ensures the safety of its members, and avoids any deficiencies.

### **Compulsory Occupational Safety and Health Training**

To ensure the safety of workers, it is important to take a proactive approach which involves providing training programs and emergency response preparedness. It plays a significant role in safeguarding the well-being of the employees by preventing accidents, injuries, or any occupational diseases. This action also ensures employees are well aware of the potential risks involved in their workplace and it allows them to have knowledge on how to handle such situations.

### **Fair compensation, health insurance, and other safety benefits.**

Considering the daily risks encountered by workers in their respective workplaces, it is essential to provide them with appropriate compensation and benefits. These individuals expose themselves to potential dangers while carrying out their duties in factories and plantations where hazardous chemicals are utilized. Hence, it becomes crucial to ensure that their salaries and safety measures adequately compensate for the risks they undertake.

### **Evaluation**

Putting sustainability and development atop the primary concerns of this case, the group decided to propose the systematic implementation of Occupational Safety and Health's (OSH) compulsory training to lessen the risks of occupational hazards in Navotas City.

### **Compulsory Occupational Safety and Health Training**

In a study by Aziz and Osman (2019), the employees' transfer of learning from training procedures to actual practices makes occupational health and safety effective. Thus, promoting this course of action is more sustainable compared to the other presented solutions, because it allows workers to carry a handful of occupational safety knowledge, skills, and attitude for their entire lifetime of work. The continuous participation of workers combined with the company's persistent efforts in developing a systematic occupational safety and health training may lower

the risks of recurring occupational accidents. With this in mind, this solution can be considered as a major step-forward in achieving the long overdue workplace safety and health development across local companies like the plantations in Navotas City.

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