

Disaster Management on Port

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Abstract: Ports are the spine of the Indian economy and in this period of globalization as gateways of foreign transactions. About 90 % of the trade is being treated by means of the ports. As a result, its effect on the economic system is sizeable which can also be hampered due to natural disasters. The construction of shore structures shall be at better elevations i.e. Higher than the likely stages of hurricane surges. This paper also shows a few measures to be taken which include educating the public about dangers widespread in their area, publicizing the documents related to emergency response and mitigation, preserving and publicizing a present-day action plan for emergency response, and holding and publicizing modern-day evacuation routes. As the location is a considerably vulnerable element to disaster, its impact may be reduced if a zoning map is used at some point in the starting stage. Screen the status of backup generators, communications, and vehicles for all critical public centers. Take a look at generators, communications devices, and vehicles on an ordinary basis, not only for protection, however, to verify that the equipment continues to cope with the needs of important facility enlargement or up-to-date operations. A few technical advancements together with imposing a GIS/GPS setup for the state/metropolis/location, document all systems inside the cyclone-inclined regions, enhance the place's capability to become aware of regions that need future mitigation.

Keywords: port vulnerability, disaster management, management plan, emergency response

1. Introduction

Natural disasters considerably impact the quality of life, health, social lifestyles, and economic development. Climate and environmental changes have increased the threat and magnitude of these disasters. Inadequate disaster prevention, mitigation, preparedness, and alleviation measures negatively affect social mechanisms, lives, property, and financial development.

Transport vulnerability evaluation is essential for prioritizing vital centers, contingency planning, and assessing regional disparities. Ports are a focal point for maritime passenger and freight transportation, and their integration has brought about growth rates surpassing worldwide economic growth. Maritime transportation is quintessential to international exchange, with over 80% of cargo trade facilitated via ships. Long-term influences on ports like Rotterdam, HONG KONG, or Los Angeles or in fact, any port ought to have intense monetary results on worldwide change and countrywide or local stages.

Disasters are events or series that motive casualties, harm, or lack of assets, infrastructure, vital services, or livelihoods on a scale beyond the affected groups' capability. They remind us that development isn't always linear and that discontinuities and dislocations symbolize improvement. India has historically been reactive in its approach to disasters, which specializes in comfort, rehabilitation, and reconstruction efforts. Ports are the spine of the Indian economic system and gateways for foreign transactions, with transport being a pretty strength-green mode of transportation.

The studies emphasize port accidental hazards and economics' contribution to catastrophe studies and mitigation. However, research consciousness on tsunamis,

which are rare or less frequent.

2. Objective

The main objective of this study is to analyze the dynamics and challenges occurring in the port and its infrastructure because of the disasters and hazards prevalent in or around the vicinity of the ports. Apart from that it is equally important to focus on the mitigation by ensuring whether the development in the coastal areas is in tune with the land use plans and strategies formulated.

3. Research Methodology

Research Methodology used for this research paper is secondary. The descriptive method used reviewing various research papers and various Govt reports on DISASTER MANAGEMENT on Sea Port.

4. Literature Review

Cheng-hsien Hsieh (2014) Global environmental changes have led to common occurrences of climatic extremes. The increasingly frequent and high-magnitude natural disasters have brought about giant mortality, injury, and property damage. In response, there were requests to enhance the ability to cope with intense climatic conditions via accelerated cognizance and identity of vulnerability. Disruptions to transportation systems have an effect on the resilience for sustaining each day operations. A number of the various kinds of transportation structures, ports provide big employment and commercial hobby, contributing to national and local improvement. Similarly, ports combine the functions of supply chains consisting of services in logistics, facts, and business, turning into the area of business clusters. Therefore, this study examines the risk of port failures from the angle of vulnerability. Specially, seven

prone factors derived from extant literature and lessons found out from the previous catastrophe cases are evaluated the usage of geographic facts systems. The outcomes reveal that port ability and performance have a huge effect on port vulnerability wherein the efficiency of gantry cranes, hard work productiveness, unfastened exchange area commercial enterprise quantity, and floor get admission to networks play vital roles in port failure. Furthermore, the risks related to port operation are evaluated by means of overlapping a threat map of areas prone to debris flows and tsunami inundation. The hazard maps can assist decision makers in understanding the vulnerability and adopting suitable strategies to minimize catastrophe risks.

Dr. Nilesh Jha (2020) Ports are the infrastructures that play key function inside the monetary development of the country and at the same time are maximum at risk of failures both Natural or man-made. Whilst disaster hits the coastal areas, it leads to the devastation of the onshore in addition to offshore structures and is commonly followed with casualty. Damage to the ports results in secondary damages (because of the nonfunctioning of ports) which can also have an effect on the network and enterprise at huge. Trying to the frequency and impact of disasters that hits the country, there is a need to develop clean reduce strategies to mitigate the disasters to lessen the direct and indirect damages.

5. Findings

The study on ports reveals that disasters will have enormous financial impacts, consisting of damage to structures, machinery, and loss of shipment and business. To prevent these losses, a culture of prevention should be established, with retrofitting and maintenance costing 8-14% of the entire venture fee. Proper care must be taken at some stage in planning, layout, implementation, and construction tiers of port structures. Unsafe raw materials transportation, storage, handling, and usage must not pose a secondary hazard to nearby regions and the environment. Industry and district administration should develop disaster management plans and conduct mock drills to evaluate their effectiveness. Big-scale awareness generation projects must be launched to build information, attitudes, and abilities for safer surroundings. A proactive approach to vulnerabilities through risk control measures and capacity building is needed, with links among the private zone and the community. Warning systems should be properly designed and regularly checked, and officials have to discover technological innovations. Engineers, doctors, social workers, and machinery operators must receive periodic training to work in the course of and after disasters. Networking and communication activities amongst officials are important for achievement and failure of applications. Risk transfer mechanisms, consisting of insurance, should be developed and implemented, and expenses associated with hazard assessment and mitigation have to be optimized.

6. Conclusion

Disasters are inevitable. The reality lies in mentioning “we ought to all be prepared to attempt to survive the contemporary and the approaching disasters.” We cannot rule the character but we can at the least be watchful and

vigilant. The dependent and preplanned preparedness and the wholesome reaction to the disaster will help save the lives. Our fulfillment lies in, as is preached by the top notch humans that existed and exist on this planet “team spirit and unanimity without discords.” Disaster prevention and mitigation training for students in disaster inclined regions will increase disaster prevention and mitigation competencies and has effectiveness on disaster prevention and mitigation. Abilities as compared with academic video screening and manage. Training is an effective method of disaster prevention and mitigation capabilities in college students in disaster prone areas in comparison with educational video screening and manage.

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