

ROLE OF WATER MANAGEMENT IN DISASTER PREPAREDNESS AND RESPONSE

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Abstract: A comprehensive understanding of community water issues and vulnerabilities is essential for effective disaster preparation, with planning and response linked to sound water management practices. This research focused on into the relationship between water management performance and catastrophe impact, covering diverse scenarios such as floods, earthquakes, droughts, storms, and dam collapses. Data collection was done through primary and secondary sources. The analysis employed descriptive statistics, correlation, and regression techniques, revealing complex data patterns that shows the potential of robust water management measures to reduce disaster damage. Key components of community preparation include early warning systems, contingency planning, development of water-resilient infrastructure, facilitating timely evacuation and precautionary measures. Early warning systems contribute significantly to disaster preparedness by utilizing water management techniques for monitoring variables, such as water levels and rainfall. Comprehensive community plans should encompass emergency water, sanitation, and hygiene measures with detailed contingency plans specifying the strategic deployment of water tankers in the event of water outages. Investment in water-resilient, flood- and storm-resistant facilities strengthens overall disaster resilience. Water management remains crucial for emergency water supply, restoration, and the prevention of waterborne illnesses after a catastrophe. Emergency measures encompass the use of water tankers, bottled water, and filtration systems to ensure the provision of safe drinking water in compliance with regulations. Post-catastrophe, communities systematically assess infrastructure damages, restore water supply and treatment facilities through repairs, and rigorous water quality evaluations. Mitigating sewage and pollutant contamination is vital to prevent waterborne infections, emphasizing the importance of clean drinking water and sanitation education. This study emphasized the indispensable role of water management in disaster preparedness and response. Effective water management strategies significantly reduce disaster susceptibility and enhance recovery. In conclusion, water management methods contribute substantially to community resilience by aiding in disaster planning, response, and recovery.

Keywords: Disaster resilience; Hygiene; Sanitation; Water borne infection