The Components of Community Awareness and Preparedness; its Effects on the Reduction of Tsunami Vulnerability and Risk

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The resilience of coastal communities against tsunamis are dependent on preparedness of the communities. Preparedness covers social and structural components which increases with the awareness in the community against tsunamis. Therefore, proper evaluation of all components of preparedness will help communities to reduce the adverse effects of tsunamis and increase the overall resilience of communities. On the other hand, the complexity of the metropolitan life with its social and structural components necessitates explicit vulnerability assessments for proper determination of tsunami risk, and development of proper mitigation strategies and recovery plans.

Assessing the vulnerability and resilience level of a region against tsunamis and efforts for reducing the tsunami risk are the key components of disaster management. Since increasing the awareness of coastal communities against tsunamis is one of the main objectives of disaster management, then it should be considered as one of the parameter in tsunami risk analysis. In the method named MetHuVA (METU - Metropolitan Human Tsunami Vulnerability Assessment) proposed by Cankaya et al., (2016) and Tufekci et al., (2016), the awareness and preparedness level of the community is revealed to be an indispensable parameter with a great effect on tsunami risk. According to the results obtained from those studies, it becomes important that the awareness and preparedness parameter (n) must be analyzed by considering their interaction and all related components. While increasing awareness can be achieved, vulnerability and risk will be reduced.

In this study the components of awareness and preparedness parameter (n) is analyzed in different categories by considering administrative, social, educational, economic and structural preparedness of the coastal communities. Hence the proposed awareness and preparedness parameter can properly be analyzed and further improvements can be achieved in vulnerability and risk analysis.

Furthermore, the components of the awareness and preparedness parameter n, is widely investigated in global and local practices by using the method of categorization to determine different levels for different coastal metropolitan areas with different cultures and with different hazard perception. Moreover, consistency between the theoretical maximum and practical applications of parameter n is estimated, discussed and presented. In the applications mainly the Bakirkoy district of Istanbul is analyzed and the results are presented.