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Resilience in informal settlements with an emphasis on the physical dimension (Nakhel Nakhda and Talaband neighborhoods, Bandar Abbas city)

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Abstract

Background and Aim: One of the most important requirements for dealing with the physical problems of cities is to improve the level of resilience of urban areas in case of possible accidents. Resilience is a new concept in urban planning that refers to the ability of people, groups and objects to return to their original conditions or better.

Methods: The current research is descriptive-analytical and applied, which uses 11criteria to measure physical resilience. The weight of the criteria using Fuller's hierarchical triangle method shows that the ownership status (0.21), the number of households in a residential unit (0.18) and the employment status of the head of the household (0.165) are the most important in measuring the level of resilience in Nakhda and Talaband neighborhoods. The combination of criteria with the simple weighted sum method in 5 floors shows the level of resilience in Nakhel Nakhda and Talaband neighborhoods, which review of the findings shows that 46% of the area of the neighborhood is at a high and very high level of resilience, while only 28% of It houses the population, and on the other hand, 30% of the mentioned neighborhoods are located at the low and very low level of resilience, which includes 42% of the population.

Findings and Conclusion: The final map, which is calculated in five levels from very low to very high, shows that 30% of Nakhel Nakhda and Talaband neighborhoods are located at low and very low resilience levels, it can be argued that the characteristics Physical factors play a very important role in the resilience of informal settlements, and any change in physical criteria can significantly affect the resilience of the neighborhood.

Keywords: physical, informal settlement, resilience, Bandar Abbas.

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References

Adger, W. N. Hughes, T. P., Folke, C., Carpenter, S. R., & Rockström, J., (2005). Socialecological resilience to coastal disasters, Science, US National Library of Medicine National Institutes of Health, 309 (5737), 1036-1039.

Agudelo, V., and Claudia, M., (2012), Harvesting Urban Resources Towards More Resilient Cities, In: Resources, Conservation and Recycling, Vol. 64, No. 5, PP. 3-12.

Ahmadinia, Farid, Boghran, Mehsa (2014). Urban resilience: coping with crisis, experiences and solutions, the first international conference on natural hazards and environmental crises in Iran, solutions and challenges, Ardabil. (in Persian)

Ainuddin, S. Routray, Jayant Kumar (2012), Community resilience framework for an earthquake prone area in Baluchistan, International Journal of Disaster Risk Reduction, 2, 25-36.

Amaratunga, D., & Haigh, R. (2011). Post-disaster Reconstruction of the Built Environment: Rebuilding for resilience. John Wiley & Sons.

Asgharpour Mohammad Javad, (2010), "multi-criteria decision making" Tehran University Press. (in Persian)

Atai, Mohammad, (2010), "multi-criteria decision-making", Shah rood University of Technology Publications, first edition. (in Persian)

Badii Qaraqieh, Ruqieh, and Arbabi, Azadeh. (2021). Empowerment of informal settlements with emphasis on social capital approach (case study: Islamshahr city). Quarterly Journal of Urban and Regional Sustainable Development Studies, 3(3), 1-23. (in Persian)

Bonanno, G.A., Romero, S.A., Klein, S.I., (2015)." The temporal elements of psychological resilience": an integrative framework for the study of individuals, families, and communities. Psychol. Inq. 26, 139–169.

Dadashpour, Hashem, & Adeli, Zainab. (2014). Measurement of resilience capacities in Qazvin urban complex. Crisis Management, 4(2), 73-84. (in Persian)

Doyle, A. (2015). urban resilience: the regeneration of the Dublin Docklands. Urban Design and Planning. 169: 175–184. (In English)

Exner, A., Politti, E., Schriefl, E., Erker, S., Stangl, R., Baud, S., Warmuth, H., Matzenberger, J., Kranzl, L., Paulesich, R., Windhaber, M., Supper, S., Stoglehner, G., (2016). Measuring regional resilience towards fossil fuel supply constraints. Adaptability and vulnerability in socio-ecological transformations - the case of Austria. Energy Policy 91, 128-137. (In English)

Folke, C., Carpenter, S., Elmqvist, T., Gunderson, L., Holling, C.S., Walker, B., (2002). Resilience and sustainable development: building adaptive capacity in a world of transformations. AMBIO A J. Hum. Environ. 31, 437-440. (In English)

Gasparini, P. & Manfredi, G. & Asprone, D. (2014) Resilince sustainability in relation to natural disasters, Springer International, 3(1), pp.1-150. (In English)

Huck, A., Monstadt, J., and Driessen, P. (2020). Building urban and infrastructure resilience through connectivity: An institutional perspective on disaster risk management in Christchurch, New Zealand, Cities, 98: 1-10. (In English)

Klein, R. J. & Nicholls, R. J. & Thomalla, F. (2003) The resilience of coastal megacities to weatherrelated hazards. Building Safer Cities, pp.101-120. (In English)

Kontokosta, E., and Malik, A., 2018, The Resilience to Emergencies and Disasters Index: Applying Big Data to Benchmark and Validate Neighborhood Resilience Capacity, Sustainable Cities and Society, 36. 272-285. (In English)

León, J., March, A. (2014), Urban morphology as a tool for supporting tsunami rapid resilience: A case study of Talcahuano, Chile, Habitat International, Volume 43, 250–262. (In English)

Lotfi Hamdollah, Nouri Kermani Ali, Ziyari Karamatullah. Analysis of erosive and physical resilience factors in the worn-out fabric of Ilam city. Environmental erosion research 1401; 12 (2): 251-230. (in Persian)

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). "The construct of resilience: a critical evaluation and guidelines for future work". Child Development, 71(3), 543–562. (In English)

Maguire, Brigit and Cartwright, Sophie, (2008), BRS Publication Sales, assessing a community's capacity to manage change: A resilience approach to social assessment. (In English)

Mahmoudzadeh, Hassan, Nazari, Masoumeh, & Harishchian, Mehdi. (2021). Measuring and evaluating the resilience of worn-out urban fabric against earthquakes, case study: Shahrekord. Journal of Geographical Survey of Space, 11(41), 163-182 (in Persian)

Maleki, Saeed, Amanpour, Saeed, Safaipour, Massoud, Pourmousavi, Seyyednader, & Maudet, Elias. (2016). Evaluating the spectrum of physical resilience of cities against earthquakes using planning models (case example of Ilam city), Physical Development Planning, 4(1), 9-20. (in Persian)

Marana P, Eden C, Eriksson H, Grimes C, Hernantes J, Hawick S, Pyrko I., (2019). Towards a resilience management Guideline-Cities as a starting point for societal resilience. Sustainable Cities and Society, 101531. (In English)

Mayunga, Joseph S (2007), Understanding and applying the concept of community disaster resilience: a capital-base approach, a draft working paper prepared for the summer academy for social vulnerability are resilience building, Munich, Germany. (In English)

Mehrdanesh, Gona, Azadizadeh, Namdar. (2019). Topic: The concept of urban resilience, future management and planning of cities (Corona 19). Geography and Human Relations, 3(1), 132-161. (in Persian)

Namjoo, Forough, Samadzadeh, Rasoul, & Masoumi, Mohammad Taghi. (2019). Measuring urban resilience against earthquake risk (case study: Tabriz metropolis). Geography and Environmental Hazards, 9(4), 201-219. (in Persian)

OXFORD advance learner's dictionary(2005) .7th ed., Oxford university press. (In English)

Portahari, Mehdi (2009), the application of multi-criteria decision-making methods in geography, first edition, organization for the study and editing of university humanities books (Alavi, Seyed Ali, Ebrahimi, Mohammad, Najaf, Pour Mahmoudabad, Bahman, and Khalidi, Abdullah. (2016). Evaluation of the vulnerability of the worn-out fabric of Minab city against earthquakes. Crisis Management, 5(9), 71-82. (in Persian)

Rafiyan, Mojtaba and others (2013). Conceptual explanation of resilience and its indexing in community-based disaster management, Modares Quarterly of Human Sciences-Planning and Space Planning, No. 4, 19-41. (in Persian)

Shamai, Ali, Sasanpour, Farzaneh, & Ali-Hosseini, Rahman. (2018). Spatial analysis of urban resilience in the neighborhoods of the central part of Tabriz city. Urban Planning Geography Research, 7(2), 349-374. (in Persian)

Sharifi, A., and Yamagata, Y., (2018), Resilience Oriented Urban Planning, Global Carbon Project Tsukuba International Office National Institute for Environmental Studies Tsukuba Japan, Part of the Lecture Notes in Energy Book Series., LNEN, Vol. 65. PP. 3-27. (In English)

Wang, C.Y., Guo, J., and Kuo, M.F. (2020). The building of social resilience in Sichuan after the Wenchuan earthquake: A perspective of the socio-government interactions, Safety science, 126: 1-8. (In English)

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