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**Евакуација у природним
катастрофама**



**Задужбина
Андрејевић
2016.**

*Монографију посвећујемо грађанима који су
због последица природних катастрофа били
приморани да напусте своје домове.*

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1. Able, E., & Nelson, M. (1990). *Circles of Care: Work and Identity in Women's Lives*, Albany, NY: SUNY Press.
2. Adem, Ö. (2011). The Relationship between Earthquake Knowledge and Earthquake Attitudes of Disaster Relief Staffs. *Disaster Advances*, 4(1), 19-24.
3. Ajzen, I. (1991). The theory of planned behaviour. *Organisational Behaviour and Human Decision Processes*, 50, 179-211.
4. Ajzen, I. (1998). Models of human social behaviour and their application to health psychology. *Psychology and Health*, 13.
5. Alexander, D. E. (1993). *Natural disasters: Springer Science & Business Media*.
6. Alvear, D., Abreu, O., Cuesta, A., & Alonso, V. (2013). Decision support system for emergency management: Road tunnels. *Tunnelling and Underground Space Technology*, 34, 13-21.
7. Anderson, W. A. (1969). Disaster warning and communication processes in two communities. *Journal of Communication*, 19(2), 92-104.
8. Arya, A. (1993). Training and drills for the general public in emergency response to a major earthquake. *Training and Education for Improving Earthquake Disaster Management in Developing Counties*, 103-114.
9. Bagozzi, R. P. (1992). The self-regulation of attitudes, intentions and behaviour. *Social Psychology Quarterly*, 55, 178-204.
10. Baker, E. J. (1991). Hurricane evacuation behavior. *International Journal of Mass Emergencies and Disasters*, 9(2), 287-310.
11. Baker, E. J. (2011). Household preparedness for the aftermath of hurricanes in Florida. *Applied Geography*, 31(1), 46-52.
12. Balluz, L., Schieve, L., Holmes, T., Kiezak, S., & Malilay, J. (2000). Predictors for people's response to a tornado warning: Arkansas, 1 March 1997. *Disasters*, 24(1), 71-77.
13. Bartlett, G. S., Houts, P. S., Byrnes, L. K., & Miller, R. W. (1983). The near disaster at Three Mile Island. *International Journal of Mass Emergencies and Disasters*, 1(1), 19-42.

14. Bateman, J. M., & Edwards, B. (2002). Gender and evacuation: A closer look at why women are more likely to evacuate for hurricanes. *Natural Hazards Review*, 3(3), 107-117.
15. Becker, J. S., Paton, D., Johnston, D. M., & Ronan, K. R. (2012). A model of household preparedness for earthquakes: how individuals make meaning of earthquake information and how this influences preparedness. *Natural Hazards*, 64(1), 107-137.
16. Bennett, P., & Murphy, S. (1997). *Psychology and Health Promotion*. Buckingham: Open University Press.
17. Bensilum, M., & Purser, D. (2003). Grid flow: An object-oriented building evacuation model combining pre-movement and movement behaviours for performance-based design. *Fire Safety Science*, 7, 941-952.
18. Blaikie, P., Cannon, T., Davis, I., & Wisner, B. (2014). *At Risk II: Natural Hazards, People's Vulnerability and Disasters*. London: Routledge.
19. Bolin, R., & Stanford, L. (2006). *Northridge Earthquake: Vulnerability and Disaster*: Routledge.
20. Burnside, R., Miller, D. S., & Rivera, J. D. (2007). The impact of information and risk perception on the hurricane evacuation decision-making of greater New Orleans residents. *Sociological Spectrum*, 27(6), 727-740.
21. Бабић, Б. (2012). Евакуација и спасавање. Нови Сад, Висока техничка школа струковних студија.
22. Godin, G., & Kok, G. (1996). The theory of planned behaviour: a review of its applications to health-related behaviours. *American Journal of Health Promotion*, 11, 87-97.
23. Gollwitzer, P. M. (1993). Goal achievement: the role of intentions. Paper presented at the European Review of Social Psychology.
24. Guha-Sapir, D., Hargitt, D., & Hoyois, P. (2004). Thirty years of natural disasters 1974-2003: The numbers: Louvain: Presses universitatis.
25. Gravetter, F. J., & Wallnau, L. B. (2004). *Statistics for the behavioral sciences* (6th edn). Belmont, CA: Wadsworth.
26. Gačić, J., Jakovljević, V., & Cvetković, V. (2014). Floods in the Republic of Serbia – vulnerability and human security. In Ivica Đorđević, Marina Glamotchak, Svetlana Stanarević, & Jasmina Gačić (Eds.), *Twenty Years of Human Security: Theoretical Foundations and Practical Applications* (pp. 277-286). Belgrade: University of Belgrade – Faculty of Security Studies pp. 278, 279.
27. Гачић Ј. (2008). Цивилно планирање за ванредне ситуације. *Службени гласник, Београд*, стр. 4, 5, 6.
28. Gačić J., Vošković M., Raković J. (2013): Possibilities of the Republic Serbia for Reducing Vulnerability to Natural Hazards. *Journal of the Geographical Institute „Јован Цвијић“ SASA, Special issue*, 63 (3): 195-212, pp. 169, 197.
29. Драгићевић, С., & Филиповић, Д. (2009). Природни услови и непогоде у планирању и заштити простора. Београд: Универзитет у Београду, Географски факултет.
30. Драгићевић, С., Филиповић, Д., Костадинов, С., Николић, Ј., & Стојановић, Б. (2009). Заштита од природних непогода и технолошких удеса – Стратегија просторног развоја Републике Србије. Београд: Универзитет у Београду, Географски факултет.
31. Dash, N., & Gladwin, H. (2007). Evacuation decision making and behavioral responses: Individual and household. *Natural Hazards Review*, 8(3), 69-77.

32. Davidson, D. J., & Freidenburg, W. R. (1996). Gender and environmental risk concerns: a review and analysis of available research. *Environment and Behavior*, 28, 302-339.
33. De Boer, J. (1990). Definition and classification of disasters: introduction of a disaster severity scale. *The Journal of Emergency Medicine*, 8(5), 591-595.
- Demerath, N. (1957). VII: Some General Propositions: An Interpretative Summary. *Human Organization*, 16(2), 28-29.
34. Dombrowsky, W. R. (1995). Again and Again: Is a Disaster What We Call a Disaster? *International Journal of Mass Emergencies and Disasters*, 13(3), 241-254.
35. Dow, K., & Cutter, S. L. (2002). Emerging hurricane evacuation issues: Hurricane Floyd and South Carolina. *Natural Hazards Review*, 3(1), 12-18.
36. Drabek, T. E. (1969). Social processes in disaster: family evacuation. *Social problems*, 16, 336-349.
37. Drabek, T. E. (1986). *Human system responses to disaster: An inventory of sociological findings*. New York, Springer, 1986. p. 14.
38. Drabek, T. E. (1999). Understanding disaster warning responses. *The Social Science Journal*, 36(3), 515-523.
39. Drabek, T. E., & Boggs, K. S. (1968). Families in disaster: Reactions and relatives. *Journal of Marriage and the Family*, 443-451.
40. Dynes, R. R. (2005). Coming to terms with community disaster. What is a Disaster? *A Dozen Perspectives on the Question*, 109.
41. Ђармати, Ш. А., & Алексић, Ђ. Ј. (2004). *Разорне силе*. Београд: Радничка штампа.
42. Eisenman, D. P., Cordasco, K. M., Asch, S., Golden, J. F., & Glik, D. (2007). Disaster planning and risk communication with vulnerable communities: lessons from Hurricane Katrina. *American Journal of Public Health*, 97, S109-S115.
43. EM-DAT: the OFDA/CRED International Disaster Database. (2003). Centre for Research on the Epidemiology of Disasters – CRED. Приступљено 05.06.2013. године у 15 часова.
44. Enarson, E., & Scanlon, J. (1999). Gender patterns in flood evacuation: A case study in Canada's Red River Valley. *Applied Behavioral Science Review*, 7(2), 103-124.
45. Zhang, Q., Gu, X., Singh, V. P., & Xiao, M. (2014). Flood frequency analysis with consideration of hydrological alterations: Changing properties, causes and implications. *Journal of Hydrology*, 519, 803-813.
46. Закон о ванредним ситуацијама, „Службени гласник РС“, бр. 111/09, 92/11 и 93/12).
47. Закон о заштити од пожара, „Службени гласник РС“, бр. 111/2009 и 20/2015.
48. Ivanov, A., & Cvetković, V. (2014). The role of education in natural disaster risk reduction. *Horizons – International Scientific Journal*, X (16), 115-131.
49. Јаковљевић, В. (2011). *Цивилна заштита у Републици Србији*. Београд: Факултет безбедности, 2011.
50. Јаковљевић, В., Цветковић, В., Гачић, Ј. (2015). *Природне катастрофе и образовање*. Београд: Универзитет у Београду, Факултет безбедности, 2015, стр. 18, 19, 21.
51. Извештај о елементарној непогоди – поплави која је задесила Републику Србију и мерама које су предузете ради спасавања становништва и одбране угрожених места од поплава, Влада Републике Србије, 04.07.2014.

52. Kholoshevnikov, V. V., Samoshin, D. A., & Parfenenko, A. P. (2009). Pre-school and school children building evacuation. State Moscow University of Civil Engineering, Academy of State Fire Service of Russia, Moscow, Russia.
53. Kirschenbaum, A. (2005). Preparing for the inevitable: Environmental risk perceptions and disaster preparedness. *International Journal of Mass Emergencies and Disasters*, 23(2), 97.
54. Kobes, M., Helsloot, I., De Vries, B., & Post, J. G. (2010). Building safety and human behaviour in fire: A literature review. *Fire Safety Journal*, 45(1), 1-11.
55. Kovach, R. L., & Cicerone, R. (1996). Earth's Fury: An Introduction to Natural Hazards and Disasters. *Pure and Applied Geophysics*, 147(3), 588-588.
56. Kuligowski, E. D., Peacock, R. D., & Hoskins, B. L. (2005). A review of building evacuation models: US Department of Commerce, National Institute of Standards and Technology Gaithersburg, MD.
57. Lehman, D. R., & Taylor, S. E. (1987). Date with an earthquake: Coping with a probable, unpredictable disaster. *Personality and Social Psychology Bulletin*, 13, 546-555.
58. Leik R. K., Leik S. A., Ekker K., & Gifford G.A. (1982). Under the Threat of Mount St. Helen's, A Study of Chronic Family Stress. Minneapolis: Family Study Center. University of Minnesota.
59. Lidstone, J. (1996). Disaster education: where we are and where we should be. In J. Lidstone (Ed.) *International perspectives on teaching about hazards and disasters* (pp. 7-18). GB: Cromwell Press.
60. Lindell, M. K., & Perry, R. W. (2000). Household adjustment to earthquake hazard a review of research. *Environment and Behavior*, 32(4), 461-501.
61. Lindell, M. K., Lu, J.C., & Prater, C. S. (2005). Household decision making and evacuation in response to Hurricane Lili. *Natural Hazards Review*, 6(4), 171-179.
62. Mano-Negrin, R., & Sheaffer, Z. (2004). Are women "cooler" than men during crises? Exploring gender differences in perceiving organisational crisis preparedness proneness. *Women in Management Review*, 19(2), 109-122.
63. Marulanda, M. C., Cardona, O. D., & Barbat, A. H. (2010). Revealing the socioeconomic impact of small disasters in Colombia using the DesInventar database. *Disasters*, 34(2), 552-570.
64. Matyas, C., Srinivasan, S., Cahyanto, I., Thapa, B., Pennington-Gray, L., & Villegas, J. (2011). Risk perception and evacuation decisions of Florida tourists under hurricane threats: a stated preference analysis. *Natural Hazards*, 59(2), 871-890.
65. McGee, T. K., McFarlane, B. L., & Varghese, J. (2009). An examination of the influence of hazard experience on wildfire risk perceptions and adoption of mitigation measures. *Society and Natural Resources*, 22(4), 308-323.
66. Mileti, D. S. (1975). *Natural Hazard Warning Systems in the Unites States: A Research Assessment*: University of Colorado Institute of Behavioral Science. The Institute of Behavioral Science, The University of Colorado, Boulder, CO, 1976.
67. Mileti, D. S., Drabek, T. E., & Haas, J. E. (1975). *Human systems in extreme environments: A sociological perspective* (Vol. 21): Institute of Behavioral Science, University of Colorado.
68. Mishra, S., & Suar, D. (2007). Do lessons people learn determine disaster cognition and preparedness? *Psychology & Developing Societies*, 19(2), 143-159.

69. Mohamed Shaluf, I. (2007a). Disaster Types. *Disaster Prevention and Management: An International Journal*, 16(5), 704-717.
70. Mulilis, J. P., Duval, T. S., & Rogers, R. (2003). The Effect of a Swarm of Local Tornadoes on Tornado Preparedness: A Quasi-Comparable Cohort Investigation. *Journal of Applied Social Psychology*, 33(8), 1716-1725.
71. Murphy, B. L. (2007). Locating social capital in resilient community-level emergency management. *Natural Hazards*, 41(2), 297-315.
72. Muttarak, R., & Pothisiri, W. (2013). The role of education on disaster preparedness: case study of 2012 Indian Ocean earthquakes on Thailand's Andaman Coast. *Ecology and Society*, 18(4), 51-67.
73. Млађан, Д. (2015). Безбедност у ванредним ситауцијама. Београд: Криминалистичко-полицијска академија.
74. Млађан, Д. (2009). Спречавање и сузбијање пожара, хаварија и експлозија. Београд: Криминалистичко-полицијска академија.
75. Mladan, D., & Cvetković, V. (2013). Classification of emergency situations. In Ž. Nikač (Ed.), *International scientific conference Archibald Reiss days* (pp. 275-291). Belgrade: The Academy of Criminalistic and Police Studies.
76. Мијалковић, С. (2015). Национална безбедност. Београд: Криминалистичко-полицијска академија.
77. Милојковић, Б. (2014). Геотопографско обезбеђење употребе јединица полиције у акцијама заштите и спасавања од поплава у мају 2014. године. *Безбедност*, 56 (3), стр. 6.
78. Nelson, H. E., & Mowrer, F. W. (2002). Emergency movement. In P. J. DiNenno (Ed.), *SFPE Handbook of Fire Protection Engineering* (3rd ed.). Bethesda, USA: Society of Fire Protection Engineers.
79. Noel, G. E. (1990). The role of women in health-related aspects of emergency management: a Caribbean perspective. Paper presented at the *The Gendered Terrain of Disaster: Through the Eyes of Women*, Westport, Conn.
80. Olympia, R. P., Rivera, R., Heverley, S., Anyanwu, U., & Gregorits, M. (2010). Natural disasters and mass-casualty events affecting children and families: a description of emergency preparedness and the role of the primary care physician. *Clinical Pediatrics*.
81. Paton, D. (2003a). Disaster preparedness: a social-cognitive perspective. *Disaster Prevention and Management*, 12(3), 210-216.
82. Paton, D. (2003b). Stress in disaster response: a risk management approach. *Disaster Prevention and Management*, 12(3), 203-209.
83. Peacock, W. G., Brody, S. D., & Highfield, W. (2005). Hurricane risk perceptions among Florida's single family homeowners. *Landscape and Urban Planning*, 73(2), 120-135.
84. Perry, R. (1990). Evacuation warning compliance among elderly citizens. *Disaster Management*, 3(2), 94-96.
85. Perry, R. W. (1979). Evacuation decision-making in natural disasters. *Mass Emergencies*, 4(1), 25-38.
86. Perry, R. W., & Greene, M. (1983). Citizen response to volcanic eruptions: the case of Mt. St. Helen's: Ardent Media.
87. Perry, R. W., & Lindell, M. K. (1991). The effects of ethnicity on evacuation decision-making. *International Journal of Mass Emergencies and Disasters*, 9(1), 47-68.

88. Perry, R. W., Lindell, M. K., & Greene, M. R. (1981). Evacuation planning in emergency management.
89. Perry, R. W., Lindell, M. K., & Greene, M. R. (1982). Crisis communications: Ethnic differentials in interpreting and acting on disaster warnings. *Social Behavior and Personality: An International Journal*, 10(1), 97-104.
90. Phillips, B. D. (1990). Gender as a variable in emergency response. Paper presented at the The Loma Prieta Earthquake: Studies in Short Term Impacts., Boulder CO.
91. Pine, J. (2008). *Natural hazards analysis: reducing the impact of disasters*: CRC Press.
92. Porfiriev, B. N. (1995). Disaster and disaster areas: methodological issues of definition and delineation. *International Journal of Mass Emergencies and Disasters*, 13(3), 285-304.
93. Preston, J. (2015). *City Evacuations: An Interdisciplinary Approach*. Springer.
94. Proulx, G. (2003). Recollection, identification and perceived urgency of the temporal-three evacuation signal. *Journal of Fire Protection Engineering*, 13, 67-82.
95. Palm, R. (1995). Communicating to a diverse population. Paper presented at the National Science and Technology Conference on Risk Assessment and Decision Making for Natural Hazards, Wash.C.
96. Palm, R., & Carroll, J. (1998). *Illusions of safety: Culture and earthquake hazard response in California and Japan*: Westview Press.
97. Papamichail, K. N., & French, S. (2005). Design and evaluation of an intelligent decision support system for nuclear emergencies. *Decision Support Systems*, 41(1), 84-111.
98. Reddick, C. (2011). Information technology and emergency management: preparedness and planning in US states. *Disasters*, 35(1), 45-61.
99. Rogers, G. O. (1997). The dynamics of risk perception: How does perceived risk respond to risk events? *Risk Analysis*, 17(6), 745-757.
100. Ronchi, E., Reneke, P. A., & Peacock, R. D. (2014). A method for the analysis of behavioural uncertainty in evacuation modelling. *Fire Technology*, 50, 1545-1571.
101. Rowland, J. L., White, G. W., Fox, M. H., & Rooney, C. (2007). Emergency Response Training Practices for People With Disabilities Analysis of Some Current Practices and Recommendations for Future Training Programs. *Journal of Disability Policy Studies*, 17(4), 216-222.
102. Russell, L. A., Goltz, J. D., & Bourque, L. B. (1995). Preparedness and hazard mitigation actions before and after two earthquakes. *Environment and Behavior*, 27(6), 744-770.
103. Russo, M. R. (2013). *Emergency Management Professional Development: Linking Information Communication. Technology Use and Research Approaches for Community Education and Professional Development*, Santos, G., & Aguirre, B. E. (2005, July). A critical review of emergency evacuation simulation models. NIST Special Publication 1032 about the Workshop on Building Occupant Movement During Fire Emergencies.
104. Sattler, D. N., Kaiser, C. F., & Hittner, J. B. (2000). Disaster Preparedness: Relationships Among Prior Experience, Personal Characteristics, and Distress. *Journal of Applied Social Psychology*, 30(7), 1396-1420.

105. Shaw, R., Kobayashi, K. S. H., & Kobayashi, M. (2004). Linking experience, education, perception and earthquake preparedness. *Disaster Prevention and Management*, 13(1), 39-49.
106. Shiwaku, K., & Shaw, R. (2008). Proactive co-learning: a new paradigm in disaster education. *Disaster Prevention and Management*, 17(2), 183-198.
107. Siegrist, M., & Gutscher, H. (2006). Flooding risks: A comparison of lay people's perceptions and experts' assessments in Switzerland. *Risk Analysis*, 26(4), 971-979.
108. Smith, D. L., & Notaro, S. J. (2009). Personal emergency preparedness for people with disabilities from the 2006–2007 Behavioral Risk Factor Surveillance System. *Disability and Health Journal*, 2(2), 86-94.
109. Sorensen, J. H. (2000). Hazard warning systems: Review of 20 years of progress. *Natural Hazards Review*, 1(2), 119-125.
110. Spittal, M. J., McClure, J., Siegert, R. J., & Walkey, F. H. (2008). Predictors of two types of earthquake preparation: survival activities and mitigation activities. *Environment and Behavior*, vol. 40 no. 6, 798-817.
111. SRPS TP 21:2003 – Техничка препорука за грађевинске техничке мере заштите од пожара стамбених, пословних и јавних зграда.
112. Stanley Jaya Kumar, G. (2000). Disaster management and social development. *International Journal of Sociology and Social Policy*, 20(7), 66-81.
113. Szalay, L. B., Inn, A., Vilov, S. K., & Strohl, J. B. (1996). *Regional and Demographic Variations in Public Perceptions Related to Emergency Preparedness*. Bethesda, Md.: Institute for Comparative Social and Cultural Studies Inc.
114. Tekeli-Yeşil, S., Dedeoğlu, N., Tanner, M., Braun-Fahrlaender, C., & Obrist, B. (2010). Individual preparedness and mitigation actions for a predicted earthquake in Istanbul. *Disasters*, 34(4), 910-930.
115. Tobin, G. A., & Whiteford, L. M. (2002). Community resilience and volcano hazard: the eruption of Tungurahua and evacuation of the faldas in Ecuador. *Disasters*, 26(1), 28-48.
116. Tomio, J., Sato, H., Matsuda, Y., Koga, T., & Mizumura, H. (2014). Household and Community Disaster Preparedness in Japanese Provincial City: A Population-Based Household Survey. *Advances in Anthropology*, 2014.
117. Turner, R. H., Nigg, J. M., & Young, B. S. (1981). *Community response to earthquake threat in southern California*. Los Angeles: Institute for Social Science Research. University of California.
118. Уредба о спровођењу евакуације „Службени гласник РС“, број 22 од 31. марта 2011.
119. Falkiner, L. (2006). Impact analysis of the Canadian Red Cross Expect the Unexpected Program. Institute for Catastrophic Loss Reduction. Retrieved October, 31.
120. Faupel, C. E., Kelley, S. P., & Petee, T. (1992). The impact of disaster education on household preparedness for Hurricane Hugo. *International Journal of Mass Emergencies and Disasters*, 10(1), 5-24.
121. FEMA (2001). *Understanding Your Risks: Identifying Hazards and Estimating Losses*. Federal Emergency Management Agency. Washington, DC.
122. FEMA (2009). *Personal Preparedness in America: Findings from the Citizen Corps National Survey*.

123. Finnis, K. K., Johnston, D. M., Ronan, K. R., & White, J. D. (2010). Hazard perceptions and preparedness of Taranaki youth. *Disaster Prevention and Management: An International Journal*, 19(2), 175-184.
124. Fischer, H. W., Stine, G. F., Stoker, B. L., Trowbridge, M. L., & Drain, E. M. (1995). Evacuation behaviour: why do some evacuate, while others do not? A case study of the Ephrata, Pennsylvania (USA) evacuation. *Disaster Prevention and Management: An International Journal*, 4(4), 30-36.
125. Foster, H. (1980). *Disaster planning: the preservation of life and property*. Springer. New York.
126. Fothergill, A. (1996). Gender, risk, and disaster. *International Journal of Mass Emergencies and Disasters*, 14(1), 33-56.
127. Fothergill, A. (1998). The neglect of gender in disaster work: an overview of the literature. *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT, Praeger Publishers. pp. 11-25.
128. Fox, M. H., White, G. W., Rooney, C., & Rowland, J. L. (2007). Disaster Preparedness and Response for Persons With Mobility Impairments Results From the University of Kansas Nobody Left Behind Study. *Journal of Disability Policy Studies*, 17(4), 196-205.
129. Fritz, C. (1957). Disasters Compared in Six American Communities. *Human Organization*, 16(2), 6-9.
130. Fruin, John J. (1987) *Pedestrian Planning and Design*. (Revised Edition). Elevator World, Inc, Mobile, AL.
131. Haas, J.E., Cochrane, H. and Eddy, D. (1974). The consequences of large-scale evacuation following disaster: the Darwin Australia cyclone disaster of December 25, 1974", *Natural Hazards Research Working Paper*.
132. Hamins, A., & McGrattan, K. (2007). Verification and validation of selected fire models for nuclear power plant applications (No. NUREG-1824). Gaithersburg, MD: National Institute of Standards and Technology.
133. Hasegawa, R. (2013). Disaster evacuation from Japan's 2011 Tsunami disaster and the Fukushima nuclear accident. *IDDRI Study No. 5*.
134. Haulle, E. (2012). Evaluating earthquake disaster risk management in schools in Rungwe Volcanic Province in Tanzania: original research. *Jambá: Journal of Disaster Risk Studies*, 4(1), 1-7.
135. Heath, R. L., & Palenchar, M. (2000). Community relations and risk communication: A longitudinal study of the impact of emergency response messages. *Journal of public relations research*, 12(2), 131-161.
136. Helsloot, I., & Ruitenbergh, A. (2004). Citizen response to disasters: a survey of literature and some practical implications. *Journal of Contingencies and Crisis Management*, 12(3), 98-111.
137. Henderson, L. J. (2004). Emergency and disaster: pervasive risk and public bureaucracy in developing nations. *Public Organization Review*, 4(2), 103-119.
138. Horney, J., Snider, C., Malone, S., Gammons, L., & Ramsey, S. (2008). Factors associated with hurricane preparedness: Results of a pre-hurricane assessment. *J Disaster Res*, 3(2), 1-7.
139. Цветковић, В. (2016в). Страх и поплаве у Србији: спремност грађана за реаговање на природне катастрофе. *Зборник Матице српске за друштвена истраживања*, 155 (2/2016).
140. Цветковић, В. (2015). Феноменологија природних катастрофа – теоријско одређење и класификација природних катастрофа. *Безбједност, полиција и грађани*, 3-4, 311-335, стр. 312, 314, 315.

141. Цветковић, В. (2016б). Полиција и природне катастрофе. Београд: Задужбина Андрејевић, стр. 7, 9, 14.
142. Цветковић, В. (2013). Интервентно-спасилачке службе у ванредним ситуацијама. Београд: Задужбина Андрејевић, стр. 8, 9.
143. Цветковић, В. (2015). Спремност грађана за реаговање на природну катастрофу изазвану поплавом у Републици Србији. (Докторска дисертација), Универзитет у Београду, Факултет безбедности, стр. 13, 23, 26, 73, 104, 105.
144. Цветковић, В. (2016а). Утицај демографских фактора на очекивање помоћи од полиције у природним катастрофама. Српска наука данас / Serbian Science Today, 1(1), 8-17, стр. 8.
145. Цветковић, В., Гачић, Ј., Јаковљевић, В. (2015). Утицај статуса регулисане војне обавезе на спремност грађана за реаговање на природну катастрофу изазвану поплавом у Републици Србији. *Ecologica*, 22(80), стр. 584;
146. Цветковић, В. (2016г). Повезаност успеха у средњој школи и спремности грађана за реаговање на природну катастрофу изазвану поплавом. *Безбједност, полиција и грађани*, 2-3.
147. Цветковић, В., Гачић, Ј., & Петровић, Д. (2015). Спремност студената Криминалистичко-полицијске академије за реаговање на природну катастрофу изазвану поплавом у Републици Србији. *Ecologica*, 22(78), 302-308, стр. 303, 304, 305.
148. Цветковић, В., Милојковић, Б., & Стојковић, Д. (2014). Анализа геопросторне и временске дистрибуције земљотреса као природних катастрофа. *Војно дело*, 2/2014, 166-185, стр. 167.
149. Cveticovic, V., & Mijalkovic, S. (2013). Spatial and temporal distribution of geophysical disasters. *Journal of the Geographical Institute Jovan Cvijic, SASA*, 63(3), 345-359, стр. 346, 348.
150. Cveticović, V. (2014а). Spatial and temporal distribution of floods like natural emergency situations. *International scientific conference Archibald Reiss days* (pp. 371-389). Belgrade: The Academy of Criminalistics and Police Studies, pp. 372, 373.
151. Цветковић, В., Вучић, С., & Гачић, Ј. (2015). Климатске промене и национална одбрана. *Војно дело*, 2015(5), 181-203, стр. 182, 183.
152. Cveticović, V. (2014б). Analysis of spatial and temporal distribution of volcanic eruptions as natural disasters. *NBP – Žurnal za kriminalistiku i pravo*, 2/2014, 153-171, стр. 153.
153. Cveticović, V. (2015). Faktori uticaja na znanje i percepciju učenika srednjih škola u Beogradu o prirodnim katastrofama izazvanim klizištima. *Bezbednost, LVII(1/2015)*, 32-51, стр. 32.
154. Cveticović, V., & Dragicević, S. (2014). Spatial and temporal distribution of natural disasters. *Journal of the Geographical Institute Jovan Cvijic, SASA*, 64(3), 293-309, стр. 293.
155. Cveticović, V., & Stanišić, J. (2015). Relationship between demographic and environmental factors with knowledge of secondary school students on natural disasters., *SASA. Journal of the Geographical Institute Jovan Cvijic*, 65(3), 323-340, стр. 323.
156. Cveticović, V., Dragičević, S., Petrović, M., Mijaković, S., Jakovljević, V., & Gačić, J. (2015). Knowledge and perception of secondary school students in

Belgrade about earthquakes as natural disasters. *Polish Journal of Environmental Studies*, 24(4), 1553-1561, crp. 1553.

157. Cvetković, V., & Ivanov, A. (2014). Comparative analysis of national strategies for protection and rescue in emergencies in Serbia and Montenegro with emphasis on Croatia. In C. T. Mojanoski (Ed.), *International conference: Macedonia and the Balkans, a hundred years after the world war I – security and euroatlantic integrations* (pp. 200-216). Skopje: University St. Kliment Ohridski – Bitola, Faculty of Security, pp. 201.

158. Cvetković, V. (2014). The impacts of climate changes on the risk of natural disasters. In T. Batkovski (Ed.), *International yearbook of the Faculty of Security* (pp. 51-62). Skopje: Faculty of Security, pp. 51.

159. Cvetković, V. (2014). Zaštita kritične infrastrukture od posledica prirodnih katastrofa. *Sedma međunarodna znanstveno-stručna konferencija „Dani kriznog upravljanja”*, (1281-1295), Veleučilište Velika Gorica, Hrvatska, str. 1282.

160. Cretikos, M., Eastwood, K., Dalton, C., Merritt, T., Tuyl, F., Winn, L., & Durrheim, D. (2008). Household disaster preparedness and information sources: Rapid cluster survey after a storm in New South Wales, Australia. *BMC Public Health*, 8(1), 195-202.

161. Capote, J. A., Alvear, D., Abreu, O., Cuesta, A., & Alonso, V. (2013). A real-time stochastic evacuation model for road tunnels. *Safety Science*, 52, 73-80.

162. Cretikos, M., Eastwood, K., Dalton, C., Merritt, T., Tuyl, F., Winn, L., & Durrheim, D. (2008). Household disaster preparedness and information sources: Rapid cluster survey after a storm in New South Wales, Australia. *BMC Public Health*, 8(1), 195.

163. Cuesta, A. (2013). Exploring the current egress models capabilities for simulating evacuation of children through stairs. *Proceedings of INTERFLAM 2013*, 1013-1022.

164. Cuesta, A., Abreu, O., & Alvear, D. (2015). *Evacuation Modeling Trends*. Springer.

165. Quarantelli, E. L. (2005). Catastrophes are different from disasters: some implications for crisis planning and managing drawn from Katrina. *Understanding Katrina: Perspectives from the social sciences*.

166. Wachinger, G., Renn, O., Begg, C., & Kuhlicke, C. (2013). The risk perception paradox – implications for governance and communication of natural hazards. *Risk Analysis*, 33(6), 1049-1065.

167. Weinstein, N. D. (1989). Effects of personal experience on self-protective behavior. *Psychological Bulletin*, 105(1), 31.

Evacuation in natural disasters

The monograph presents the extensive results of a quantitative survey on citizens' evacuation in natural disasters caused by floods. The first part of the scientific monograph examines influences of demographic (gender, age, level of education, success in high school and parenthood), socio-economic (employment, income level, marital status, military duty and distance from house/apartment) and psychological characteristics (fear, previous experience, risk perception, motivation, and level of religiosity) of citizens on decision making to consent to be evacuated. Firstly, respondents were asked: "Would they consent to the evacuation in case of natural disasters caused by floods when it is recommended by the authorities?"

Based on the results, 86.7% of respondents would consent to evacuation while 8.4% of respondents would not. After that, we have come to the result that of the total number of respondents, 23.1% state that some of their family members cannot evacuate independently, 11.5% are not sure whether or not there is anyone, 60.2% state that there is nobody who can evacuate independently.

Examination of the correlation between demographic characteristics of citizens and making a decision on consent to evacuation was conditioned by the following survey question: "Would women, young citizens, people with university degrees and with excellent achievements in secondary school evacuate due to a natural disaster caused by flood rather than men, senior citizens, people with completed primary school and with good achievements in secondary school?" Based on the results we have found out that: there is no statistically significant relationship between sex and decision on consent to evacuation; there is a statistically significant relationship between the age of respondents and the decision on consent to evacuation – respondents aged 68 to 78 years in the highest percentage would make a decision to consent to be evacuated; there is a statistically significant relationship between the success achieved in high school and deciding to consent to the evacuation – respondents with the achieved very good and excellent grades in higher percentage would evacuate than the respondents with achieved sufficient and good results.

Examination of the correlation between socio-economic characteristics of citizens and making a decision to consent to the evacuation was conditioned by the following survey question: “Would the citizens who are employed, married, have high incomes and live along the river evacuate due to natural disasters caused by a flood rather than the citizens who are unemployed, unmarried, have low incomes and do not live by the river?” Based on the results we have found out that there is a statistically significant relationship between employment status of the respondents and decision to consent to the evacuation – employed respondents would rather make a decision to evacuate than the unemployed respondents; there is a statistically significant relationship between the income level of the respondents and making a decision on consent to evacuation – in the highest percentage a decision on consent to evacuate would be made by the respondents with household incomes from RSD 60.000 to 90.000; there is no statistically significant relationship between marital status of the respondents and making a decision on consent to evacuation; there is a statistically significant relationship between the distance of house/apartment from the river and making a decision to consent to the evacuation – citizens who live in a house/apartment along the river would rather be evacuated than those who live further away from the river.

Examining the correlation between demographic and socio-economic characteristics imposed the following survey question: “Would the citizen who have a fear, previous experience, who expect flooding in the coming year and who are absolutely religious evacuate rather than the citizens who do not have fear, previous experience, who do not expect a flood in the coming year and who are absolutely not religious.” Based on the results we have found out that there is a statistically significant relationship between the fear of natural disasters caused by floods and making a decision on consent to evacuation – respondents who fear of natural disasters caused by floods would rather be evacuated than the respondents who do not fear; there is no statistically significant relationship between prior experience of natural disasters caused by floods and making a decision on consent to evacuation; there is a statistically significant relationship between the fear of natural disasters caused by floods and making a decision to consent to the evacuation – citizens who think that they will be probably affected by floods in the next five years, in a slightly higher percentage, decide to consent to evacuate; there is a statistically significant relationship between the level of religiosity of the respondents and making a decision on consent to evacuation – irreligious citizens in higher percentage would make a decision on consent to evacuation compared to religious citizens.

Respondents were asked: “Do they know the escape routes that can be used to go to theirs or public shelters?” The results show that 19.7% of respondents know, while much more, that is, 52% do not know the escape routes.

Examination of the correlation between demographic characteristics of citizens and familiarity with escape routes was conditioned by the following survey question: “Do women, young people, people with university degrees and with excellent achievements in secondary school better know the escape routes in the case of natural disasters than men, senior citizens, people with completed primary school and with good achievements in secondary school?” The results show that: there is no statistically significant difference between men’s and women’s results in terms of familiarity with escape routes used in natural disasters; the

mean value of the familiarity with escape routes used in natural disasters caused by floods statistically significantly and mutually differs among citizens between 18 and 28 years of age and citizens between 68 and 78 years of age. Citizens between 18 and 28 years of age scored higher levels of familiarity with escape routes than respondents between 68 and 78 years of age; the mean value of the familiarity with escape routes used in natural disasters caused by floods statistically significantly and mutually differs among the respondents who have university degrees and respondents who have completed high school. Citizens who have completed high school scored a lower level of familiarity with escape routes than respondents who have university degrees; the mean value of familiarity with escape routes in natural disasters caused by floods statistically significantly and mutually differs for people with sufficient achievements in high school and citizens with very good achievements. Respondents who finished high school with honors, to a greater extent know escape routes than respondents with sufficient achievements.

Examination of the correlation between socio-economic characteristics of people and familiarity with escape routes was conditioned by the following survey question: "Do citizens who are employed, married, with high incomes and live along the river better know escape routes implemented due to natural disasters caused by floods than citizens who are unemployed, unmarried, with low incomes and do not live by the river?" The results show that: there is no statistically significant difference between men's and women's results in terms of familiarity with escape routes used in natural disasters; the mean value of familiarity with escape routes in natural disasters caused by floods statistically significantly and mutually differs among citizens with household incomes below RSD 25.000 and citizens with household incomes over RSD 90.000. Citizens with household incomes over RSD 90.000 showed a higher level of familiarity with escape routes than respondents with household incomes below RSD 25.000; the mean value of familiarity with escape routes in natural disasters caused by floods statistically significantly and mutually differs among citizens who are widowed and those who are in a relationship. Individuals who are widowed showed higher levels of familiarity with escape routes than respondents who are in a relationship; there is no statistically significant difference between the mean values of those groups of the distance of house/apartment from the river and familiarity with escape routes in natural disasters.

Examination of the correlation between psychological characteristics of citizens and familiarity with escape routes was conditioned by the following survey question: "Would citizens who have a fear, previous experience, who expect flooding in the coming year and who are absolutely religious evacuate rather than citizens who have no fear, previous experience, do not expect a flood over the next year and who are absolutely irreligious?" Based on the results: there is no statistically significant difference between the mean values of those groups who are afraid and familiarity with escape routes in natural disasters; there is no statistically significant difference between the results in respondents who have and those who have no previous experience in terms of familiarity with escape routes used in natural disasters; the mean value of familiarity with escape routes in natural disasters caused by floods statistically significantly and mutually differs between citizens who believe that it is absolutely unlikely they could be affected by a natural disaster and those who believe that it is absolutely

likely to be affected by a natural disaster; the mean value of familiarity with escape routes in natural disasters caused by floods statistically significantly and mutually differs between respondents who are to some extent irreligious and respondents who are to some extent religious. Citizens who are to some extent irreligious showed a higher level of familiarity with escape routes than respondents who are to some extent religious.

The further survey examines the method of evacuation selected by citizens. In this regard, the citizens were asked, where they would evacuate during the floods. The results show that 33.4% of respondents would evacuate to the upper floors of the house, 32% would move to friends' premises, 11.9% to shelters, 8.6% to neighbors' premises and 3% to rented apartments. Examination of the correlation of demographic characteristics of citizens and ways of implementation of evacuation was conditioned by the following survey question: "Would women, young people, people with university degrees and with excellent achievements in secondary school evacuate to upper floors of the house due to natural disasters caused by floods rather than men, senior citizens, people with completed primary school and with good achievements in secondary school?" The results show that: there is no statistically significant difference in results between men and women in the way of implementation of evacuation used in natural disasters; there is a statistically significant relationship between age and mode of implementation of evacuation. Data suggest that respondents over 58 years of age in the highest percentage would evacuate to the upper floors and shelters while respondents aged 48 to 58 years in a slightly higher percentage would evacuate to their neighbors' premises; there is a statistically significant relationship between the level of education and ways of implementation of evacuation. If we analyze the results we find that respondents with master and doctoral degrees in the highest percentage would evacuate to the upper floors and rented apartments; there is a statistically significant relationship between the age of respondents and making a decision on consent to evacuation. Respondents with good achievements in the highest percentage would evacuate to the upper floors of the house, neighbors' premises while the respondents with sufficient achievements would evacuate to friends' premises.

Examination of the correlation between socio-economic characteristics of citizens and ways of implementation of evacuation was conditioned by the following survey question: "Would the citizens who are employed, married, with high incomes and who live along the river evacuate to the upper floors of the house due to natural disasters caused by floods rather than the citizens who are unemployed, unmarried, with low incomes and do not live by the river?" Based on the results, it was found that there was a statistically significant difference between the results of those employed and unemployed respondents in the way of implementation of evacuation used in natural disasters. Unemployed respondents to a higher percentage would evacuate to shelters and rented apartments; there is a statistically significant relationship between the income level and ways of implementation of evacuation. Based on the results the citizens with the household income between RSD 25.000 and RSD 60.000 in the highest percentage would evacuate to the upper floors; there is a statistically significant relationship between the age of respondents and the way of implementation of evacuation. Based on the results, the respondents who are engaged in the highest percentage would evacuate to the upper floors; there is a statistically significant

relationship between the distance of house/apartment from the river and ways of implementation of evacuation. Data suggest that respondents who live in the house/apartment up to 2 km away from the river in a slightly higher percentage would evacuate to the upper floors of the house.

Examination of the correlation between psychological characteristics of citizens and ways of implementation of evacuation was conditioned by the following survey question: "Would the citizens who have a fear, previous experience, expect a flood over the next year and who are absolutely religious evacuate rather than citizens who do not have fear, previous experience, do not expect a flood over the next year and who are absolutely irreligious?" Based on the results it was found that there was a statistically significant relationship between the fear of natural disasters caused by flood and making a decision on consent to evacuation. Results indicate that respondents who have fear in a higher percentage would evacuate to the upper floors of the house while the respondents who have no fear in the higher percentage would evacuate to friends' premises; there is a statistically significant relationship between previous experience and ways of implementation of evacuation. Data suggest that respondents who have previous experience of natural disasters would evacuate in a slightly different manner than those who have no prior experience; there is a statistically significant relationship between perceived risk and ways of implementation of evacuation. Respondents who believe that to some extent it is likely to be affected by a natural disaster in the highest percentage would evacuate to the upper floors. On the other hand, respondents who believe that it is neither likely nor unlikely, in a slightly higher percentage would evacuate to their neighbors' premises. In terms of respondents who believe that to some extent it is unlikely to be affected by a natural disaster, in the highest percentage would evacuate to friends' premises. Finally, the respondents who state that it is absolutely likely that they could be affected by a natural disaster; there is a statistically significant relationship between risk perception of the respondents and making a decision on consent to evacuation. Based on the results, the respondents who are absolutely religious in the highest percentage would evacuate to the upper floors.

Lastly, respondents were asked: "Do they know the location of a nearby shelter that can be used in cases of natural disasters?" Survey results indicate that 56.4% of respondents do not know the location of nearby shelters, 25.7% neither know nor do not know and 14.8% of respondents know the location of nearby shelters. Examination of the correlation between demographic characteristics of citizens and awareness of location of nearby shelters was conditioned by the following survey question: "Do women, young people, citizens with university degrees and with excellent achievements in secondary school better know the location of nearby shelters for implementation of evacuation in natural disasters than men, senior citizens, citizens with completed primary school and with good achievements in secondary school?" Based on the results, it has been found that: there is no statistically significant difference between men and women in the way of implementation of evacuation used in natural disasters; the mean value of knowing the location of nearby shelters statistically significantly and mutually differs between citizens aged 18 and 28 years and citizens aged 48 to 58 years. Citizens who are aged between 18 and 28 years showed a higher level of awareness of the location of nearby shelters than respondents who are aged between 48 to 58 years; the mean value of awareness of the location of nearby

shelters statistically significantly and mutually differs between the citizens with secondary/three-year schools and citizens with university degrees. Citizens with university degrees showed a higher level of awareness of the location of nearby shelters; the mean value of awareness of the location of nearby shelters statistically significantly and mutually differs between the citizens with good achievements in high school and citizens with excellent achievements. Respondents who finished high school with honors, to a slightly greater extent know the location of nearby shelters than respondents with the achieved good success.

Examination of the correlation between socio-economic characteristics of citizens and ways of implementation of evacuation was conditioned by the following survey question: "Would the citizens who are employed, married, with high incomes and who live along the river evacuate to the upper floors of the house due to natural disasters caused a flood rather than citizens who are unemployed, unmarried, have low incomes and do not live by the river?" The results indicate that: there was no statistically significant difference in results between employed and unemployed respondents in terms of awareness of the location of nearby shelters used in the cases of natural disasters; there was no statistically significant difference between the mean values of those groups of income and awareness of the location of nearby shelters; the mean value of awareness of the location of a nearby shelter in natural disasters caused by flooding statistically significantly and mutually differs between the citizens who are widowed and respondents who are not in a relationship. Citizens who are widowed showed a lower level of awareness of the location of nearby shelters than respondents who are not in a relationship; there was no statistically significant difference between the mean values of groups of awareness of the escape routes in natural disasters.

Examining the correlation between psychological characteristics of citizens and ways of implementation of evacuation was conditioned by the following survey question: "Do the citizens who have a fear, previous experience, expect a flood over the next year and who are absolutely religious better know the location of nearby shelters than citizens who have no fear, previous experience, do not expect a flood over the next year and who are absolutely irreligious?"

Based on the obtained results, the following conclusions have been drawn.

- There was no statistically significant difference between the mean values of those groups and familiarity with escape routes in natural disasters.
- There was no statistically significant difference between the results in respondents who have and those who have no previous experience in terms of awareness of the location of nearby shelters used in natural disasters.
- The mean value of awareness of the location of nearby shelters statistically significant and mutually differs for people who believe that it is absolutely unlikely they could be affected by a natural disaster and those who believe that it is neither likely nor unlikely they could be affected by a natural disaster.
- The mean value of awareness of the location of nearby shelters statistically significant and mutually differs between respondents who are absolutely irreligious and respondents who are to some extent religious.
- Citizens who are absolutely irreligious showed a higher level of awareness of the location of nearby shelters than respondents who are to some extent religious.

