



54ème colloque
ASRDLF

5-7 juillet 2017, Athènes, Grèce



15th conference
ERSA-GR



Les défis de développement pour les villes et les régions dans une Europe en mutation

The interrelation between spatial planning policies and safety in the multi-risk insular setting of Santorini

Mlle Xenia KATSIGIANNI

Harokopio University Architect Engineer

Dios 10 Vrilissia 15235 Athens Greece

ka.xenia@gmail.com 0030 6973009249

Référence à la session / reference to the session

B9 - Urban and territorial risk

Résumé / Summary

Statement of the problem and aim of the study:

While the interrelation between spatial planning regulations and safety policies has been indicated in a number of studies (i.e. Delladetsima et al., 2014; Sapountzaki et al., 2011; Sutanta et al., 2010), little work has been conducted on the integration of multi-hazard approaches of safety in statutory and administrative framework of spatial planning (Greiving & Fleischhauer, 2006; Schmidt-Thomé, 2006). The present paper aims to explore the relation between planning legislation and the notion of safety in a Greek multi-hazard insular context. The all-encompassing hazardscape of Santorini is the topic of our examination as it embodies an immense variety of natural and human-induced risks alongside an uncontrolled mass tourism development. Volcanic hazards, earthquakes, landslides as well as their interactions and cascade effects are amplified by human interventions in natural landscape, resulting from the rapid growth of tourism industry and the subsequent construction activity. Moreover, the highest property and land values are observed in areas of high volcanic, seismic and landslide risk (Lekkas, 2009; Vougioukalakis, 1996), where the built environment is characterized by high density. The existing regulatory frameworks further aggravate the hazardous potential of spatial development.

Viewing spatial planning as an interdisciplinary and multi-level process, which aspires to coordinate socioeconomic and environmental changes taking place in given territories, naturally triggered hazards and social decisions with spatial impacts should be taken into consideration in planning legislation. In Greece, where 'planning policies are usually developed as an ex-post regulatory and corrective mechanism aimed at legitimizing pre-existing unauthorized structures' (Getimis, 1992: 244), there is a substantial need for a systemic incorporation of safety elements in spatial planning policies concerning multi-risk territories. In this respect, the present study sought to answer the following questions: Are safety principles and hazard-related information integrated into the legislative framework of spatial and urban planning concerning the multi-hazard insular setting of Santorini? Is knowledge acquired through the experience of catastrophic events triggered by distinct natural hazards absorbed in the modifications of planning legislation, since the

devastating earthquake that occurred in Santorini in 1956?

Methodology:

In order to explore the interrelationship between the legislative framework of spatial planning and safety principles, the methodological approach suggested by Delladetsima et al. (2014) was employed in the study. It refers to a) an evaluative appraisal of the legislative framework and planning policies in terms of safety criteria and risk mitigation practices, and b) an analysis of catastrophic events (e.g. earthquakes, landslides), which occurred in Santorini, in relation to knowledge acquired when dealing with disaster situations. The analysis includes legislation concerning Regional Planning, Sectoral Planning (Tourism Development Planning, Emergency Planning etc.), Local City Planning, Master Plans and Building Codes enacted and reformed since the catastrophic earthquake of 1956. In addition, interviews were conducted with local stakeholders (from urban services and Municipality) and representatives of various institutional tiers involved in planning processes and legislation reforms in order to be able to provide a better analysis of the relevant planning laws.

Results and contributions:

The paper argues that the planning legislation and related reforms concerning Santorini are characterized by lack of safety criteria. Planning provisions and legislative frameworks including General Law for Planning Settlements (FEK 124A/97), Zones of Building Control (ZOE-FEK 139/90 & 144/12), Master Plan of Fira (FEK 802D/91), General and Local Building Codes had been formulated decades ago and the following reforms do not take into consideration the developmental trends and the population growth noticed since then. Ministerial Decrees appear as ultimate attempts to solve hazardous circumstances caused by illegal constructions in high-risk zones (FEK 174/11) although the absence of control mechanisms and disjointed administrative structures perpetuate the problem.

Although legislative reforms often arise as a consequence of the experience of catastrophic events and subsequent recovery policies (Delladetsima et al., 2014; Delladetsima, 2009), the case of Santorini shows that planning practices impede the absorbance of knowledge acquired through the experience of disastrous events. Catastrophic incidents caused by landslides in vulnerable Caldera slopes and in the seasonally overcrowded Red Beach as well as the increase in the seismicity rate do not seem to be taken into consideration in planning-related legislation reforms. The prevailing positivistic approaches of risk management are focused on the scientific monitoring of the Santorini volcano, undermining prevention strategies.

Bibliographie / Bibliography

Delladetsima P.M. (2009). *Safe Cities*, Athens: Exandas

Delladetsimas P. M., Fuchs S., Hamdouch A., Palka G., Serrini K., & Thaler T. (2014). Emerging new risk environment and disaster mitigation planning in European cities: Insights from three case studies in Austria, France and Greece. *Journées Internationales Du Risque*.

Getimis P. (1992). Social conflicts and the limits of urban policies in Greece. In: Dunford, M. & Kafkalas, G. (Eds) *Cities and Regions in the New Europe*. London: Belhaaven Press. pp. 239-254

Greiving S., Fleischhauer M., & Lückenkötter J. (2006). A methodology for an integrated risk assessment of spatially relevant hazards. *Journal of environmental planning and management*, 49(1), pp. 1-19.

Lekkas E. (2009). Landslide hazard and risk in geologically active areas. The case of the caldera of the Santorini (Thera) volcano island complex (Greece). In *Proceedings of the 7th Asian Regional Conference of IAEG*. Chengdu, China.

Sapountzaki K., Wanczura S., Casertano G., Greiving S., Xanthopoulos G., & Ferrara F. F. (2011). Disconnected policies and actors and the missing role of spatial planning throughout the risk management cycle. *Natural Hazards*, 59(3), pp. 1445–1474. doi:10.1007/s11069-011-9843-3

Schmidt-Thomé P. (2006). Integration of natural hazards, risk and climate change into spatial planning practices by Philipp Schmidt-Thomé. Academic Dissertation. University of Helsinki.

Sutanta H., Bishop I., & Rajabifard A. (2010). Integrating Spatial Planning and Disaster Risk Reduction at the Local Level in the Context of Spatially Enabled Government. In *Spatially Enabling Society Research, Emerging Trends and Critical Assessment*, Leuven University Press, pp. 55-68.

Vougioukalakis G. E. (1994). Volcanic hazard estimation of Santorini, Aegean Sea, Greece. The Mitigation of Volcanic Hazards, *Proceedings of the course*, EUR, 16804, pp. 471-484.