



## REVIEW ON THE MANIFESTATION OF RURAL HOLLOWING

**Norhafiza binti Abdullah**

Department of Real Estate, Faculty of Built Environment and Surveying  
Universiti Teknologi Malaysia, Johor  
Malaysia

**Ainur Zaireen Zainudin\***

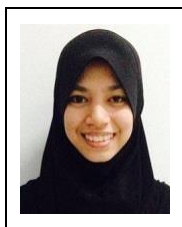
Department of Real Estate, Faculty of Built Environment and Surveying  
Universiti Teknologi Malaysia, Johor  
Malaysia

**Nurul Hawani Idris**

Department of Geoinformation, Faculty of Built Environment and Surveying  
Universiti Teknologi Malaysia, Johor  
Malaysia

\*Corresponding author's Email: [ainurzaireen@utm.my](mailto:ainurzaireen@utm.my)

### Author's Biography



*Norhafiza binti Abdullah.*  
*2nd-year Ph.D. candidate in Land Administration and Development, UTM.*  
*BSc in Land Administration and Development from UTM (2017).*



*Dr. Ainur Zaireen Zainudin*  
*Senior Lecturer since June 2004 at Universiti Teknologi Malaysia (UTM).*  
*Ph.D. in Land Administration and Development from UTM (2013).*  
*MSocSc in Development Science from the National University of Malaysia (2007).*  
*BSc in Land Administration and Development from UTM (2001).*



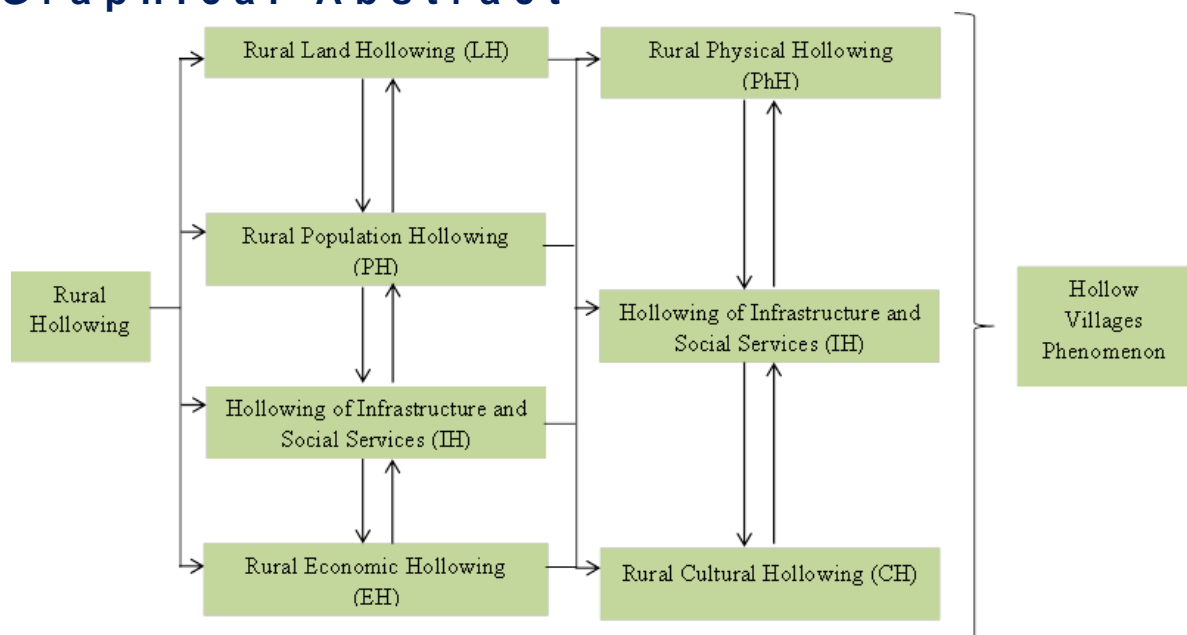
*Sr. Dr. Nurul Hazwani Idris*  
*Senior Lecturer since January 2014 at Universiti Teknologi Malaysia, (UTM).*  
*PhD in Geography from the University of Nottingham, UK (2014).*  
*MSc in Geoinformatics from UTM (2007).*  
*BSc in Geoinformatics (Science) from UTM (2003).*

## Research Highlights

The research that been highlighted in this study are according to the strings of the population reduction that migrated to urban areas have had a profound impact. Its effect has led to rural hollowing phenomena. Rural hollowing is a widespread phenomenon of population loss, vacant houses and land abandonment that recently happened in many developed countries. In describing the rural hollowing phenomena there is no precise definition that can be utilized as there are various manifestations that need to be addressed in determining whether the area has been involved with rural hollowing phenomena, or still in early stages. The purpose of this study is to review recent research on the manifestation of rural hollowing phenomenon around the world. The review made mainly in accordance with point researchers findings particularly on the Phenomenon of Rural Hollowing in rural China, Iran, Europe, and other developed countries or regions. The review is particularly useful especially in Malaysia, and need for further research in Malaysia according to the problems of vacant and idle houses in the rural area.

This study indicates that to describe rural hollowing phenomenon has various forms of manifestation. Rural hollowing considered the conditions of rural land, population, economic, physical, infrastructure and social services; and cultural in order to categorize that villages becoming hollowing or not.

## Graphical Abstract



## Research Objectives

The purpose of this paper is to review recent research on the manifestation of rural hollowing phenomenon around the world. In this regard, is revise done based on two objectives: Firstly, to identify the manifestation of rural hollowing and secondly to examine the characteristics of each manifestation. This paper provides an exciting opportunity to advance our knowledge of rural hollowing phenomenon that happens nowadays.



## Results

The review found that the problems of rural hollowing manifest themselves in the following aspect: land hollowing (LH); population hollowing (PH); economic hollowing (EH); physical hollowing (PhH); hollowing of infrastructure and social services (IH); and cultural hollowing (CH) (Li, 2014; Liu et al., 2010; Long et al., 2012; Sun et al., 2011; Thorbeck et al., 2014; Yin et al., 2016; Yunjie, 2017). Each of the manifestations has its own characteristics in order to categorize each of the manifestations of rural hollowing.

## Findings

The findings from this literary reading indicate that there are many manifestations that have been used by other researchers in explaining the definitions, causes, and effects of rural hollowing phenomena, especially in China. However, there is no specific manifestation that every researcher use in solving rural hollowing issues. From the findings of the present invention, there are six manifestations that have been discussed, namely: [1] Rural Land Hollowing; [2] Rural Population Hollowing; [3] Rural Economic Hollowing; [4] Rural Physical Hollowing; [5] Hollowing of Infrastructure and Social Services; and [6] Rural Cultural Hollowing. These six manifestations show the relationship between one manifestation and another manifestation. The researcher concluded that the best manifestation in describing this rural hollowing problem is Rural Land Hollowing, Rural Population Hollowing and Rural Economic Hollowing.

## Acknowledgement

This study is a part of ongoing PhD research is registered with Universiti Teknologi Malaysia (UTM). The authors are gratefully acknowledged and extend our special thanks to School of Graduate Studies (SPS), UTM for funding this research through Zamalah Scholarship.

## References

- Li, S., 2014. The Renewal of Hollow Village. Master Sci. Program. Spat. Plan. with an Emphas. Urban Des. China Eur. Blekinge Inst. Technol. (BTH).
- Liu, Y., Liu, Y., Chen, Y., Long, H., 2010. The Process and Driving Forces of Rural Hollowing in China Under Rapid Urbanization. *J. Geogr. Sci.* 20, 876–888. <https://doi.org/10.1007/s11442-010-0817-2>
- Long, H., Li, Y., Liu, Y., Woods, M., Zou, J., 2012. Accelerated Restructuring in Rural China fueled by ‘ increasing vs decreasing balance ’ Land-use Policy for Dealing with Hollowed Villages. *Land use policy* 29, 11–22. <https://doi.org/10.1016/j.landusepol.2011.04.003>
- Sun, H., Liu, Y., Xu, K., 2011. Hollow Villages and Rural Restructuring in Major Rural Regions of China: A case study of Yucheng City, Shandong Province. *Chinese Geogr. Sci.* 21, 354–363. <https://doi.org/10.1007/s11769-011-0474-0>
- Thorbeck, D., Isalou, A.A., Bayat, M., 2014. Rural Growth and Decay: Analysis of Physical-Spatial Transformation of Rural Area in Iran. *Int. J. Archit. Urban Dev.* 4, 25–32.
- Yin, K., Wen, M., Zhang, F., Yuan, C., Chen, Q., Zhang, X., 2016. Research on the evaluation method of rural hollowing based on RS and GIS technology: a case study of the Ningxia Hui autonomous region in China. *Proc. SPIE* 10005, 100050P. <https://doi.org/10.1117/12.2241946>
- Yunjie, Y., 2017. From Hollowing Area to Livable Rural Area. Msc Thesis Landsc. Archit. Wageningen Univ.

