

IC - (21001) - ANALYSIS OF LIVING SPACES IN EVACUATION SHELTERS ON COMBINED DISASTERS OF INFECTIOUS DISEASES AND NATURAL DISASTERS -A CASE STUDY OF EVACUATION SHELTERS IN JAPAN-

Takayuki Kumazawa¹

1 - Ibaraki University

Background and objectives

Heavy rains in the Kyushu region of Japan in July 2021 resulted in severe flood damage. In evacuation shelters, appropriate management is required to protect evacuees from the flood and to prevent contraction of infectious diseases. However, the use of living spaces as evacuation shelters during the occurrence of a combination of disasters, such as spread of infectious diseases and natural disasters, has hardly been analyzed in previous studies. In this study, the actual operational conditions for the evacuation shelters established during the heavy rains in the Kyushu region were investigated. Subsequently, the usage of the living spaces in the shelter was analyzed.

Process and methods (for empirical research)

The subject of the survey was the largest shelter established at the Sports Palace (H.S.P.) in Hitoyoshi City, Kumamoto Prefecture, which was used for six months from July 4 to December 28, 2020. During this period, evacuees from smaller shelters in the nearby municipalities were accepted. H.S.P continued operation until all evacuees were evacuated from the disaster area. Using hearsay, the life style in the shelter in relation to foods, goods, public health, living space, management, and other factors was investigated.

Main results (or main arguments in the case of critical reviews)

From the results, it was found that special areas were installed for persons requiring special considerations and those with physical disorders. The areas were partitioned using materials such as cardboard. The partitions were set up to ensure maximum privacy and prevention of infections. The dedicated spaces were analyzed by categorizing them on the basis of bedding, body dimensions, and surrounding spaces. It was concluded that the unit space model based on the distance among the bedding, operating space, and compartment can be used as an index for the living space per person.

Implications for research and practice/policy | Importance and originality of the contribution

The findings of this study also reveal the importance of securing the living spaces considering the common spaces and exclusive spaces in the shelter.

Palavras-chave : evacuation shelters, living spaces, unit space model, natural disaster, uses