

Governance, Social Policy and Communication

Text analysis of disaster prevention policy documents for the older and vulnerable populations — Analysis of Japanese national and local government documents K. Ishihara, S. Ishihara. *Gerontechnology* 25(s)

Purpose Protecting older adults and other people requiring assistance during disasters has become a central concern in Japan's disaster risk management (DRM). Recent reforms and guidance have emphasized early evacuation messaging, individualized support arrangements, and the operational readiness of shelters and care facilities. This analysis examines how these themes are distributed across national and local policies.

Method We assembled a focused collection of 10 publicly available Japanese policy documents, including six national documents—such as Cabinet Office disaster guidance on evacuation information, welfare shelters, and support for people requiring assistance; Cabinet Office materials on a cloud-based victim support system; Ministry of Health, Labour and Welfare (MHLW) materials on “disaster management × welfare coordination”; and an MHLW business continuity planning (BCP) guideline for long-term care services—and four local government documents, including evacuation planning guidance and plans for people requiring assistance from Kobe, Sendai, Otsu, and Yamaguchi. Keyword extraction was performed using ChatGPT 5.2-Pro. We constructed a document × keyword contingency table (v3) with 62 features. Features consisted of (i) an expanded set of policy-issue keywords (e.g., persons requiring assistance, individualized evacuation planning, welfare shelters, shelter environment, BCP, technology terms, and concepts such as participation and reasonable accommodation), and (ii) 25 automatically extracted frequent terms (heuristic extraction of salient multi-character tokens; e.g., “level,” “warning,” “issuance,” “water level,” “sediment disaster,” “secure emergency safety”). Correspondence Analysis (CA) was used to produce a two-dimensional biplot. **Results and Discussion** The first two CA dimensions accounted for 68.4% of the total inertia (Dim1: 43.6%, Dim2: 24.8%), enabling a coherent two-dimensional interpretation. Dim1 primarily contrasted (left side) an evacuation-information and hazard-judgement discourse—characterized by high contributions from terms such as *issuance*, *warning*, *level*, and *water level*—with (right side) an individualized support discourse, strongly associated with *persons requiring assistance*, *individualized evacuation plans*, *evacuation support*, and *registries (lists)*. The Cabinet Office “Evacuation Information Guideline” anchored the negative side of Dim1 and contributed most to that axis, while the revised Cabinet Office guideline on support for persons requiring assistance anchored the positive side. Dim2 separated (lower side) an operational/shelter management discourse from (upper side) a planning-and-support network discourse. Terms with high contributions to the negative side included *shelter*, *welfare shelter*, and *supplies*, alongside environmental/health-related terms such as *toilet* and *infectious disease*, and operational preparedness terms including *BCP*. The Cabinet Office welfare shelter guideline strongly structured Dim2, and the MHLW long-term care BCP guideline aligned with the operational side, whereas documents focusing on individualized plans and support coordination aligned with the positive side. The results suggest that Japan's “older adults × DRM” policy discourse is segmented into at least three practical foci: (1) hazard-aware evacuation information and issuance, (2) individualized support mechanisms (registries and individualized evacuation plans), and (3) shelter/facility operations (welfare shelters, supplies, health risks, and BCP). Positions of local governments differ in their historical backgrounds. Kobe is home to one of Japan's oldest international ports and was struck by a severe earthquake in 1995. *Multi-lingual* is closer to Kobe. Sendai also experienced a massive earthquake and subsequent tsunami in 2011. They have emphasized welfare specialists, care managers, social service agencies, and shelters.

References: MHLW documents

https://www.bousai.go.jp/oukyu/hinanjouhou/r3_hinanjouhou_guideline/pdf/hinan_guideline.pdf

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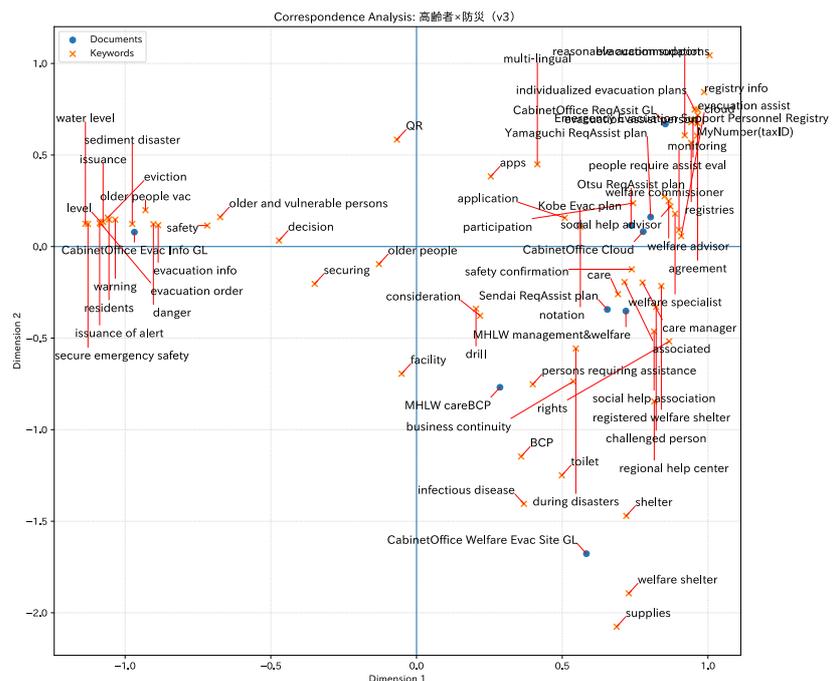


Figure 1: Correspondence analysis of national and local government disaster prevention documents on older and vulnerable populations