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Indonesia Disaster Knowledge Update - August 2022



in collaboration with



UNIVERSITAS GADJAH MADA
FAKULTAS PSIKOLOGI

Research Publications about Disability-inclusive Disaster Management in Indonesia

In August 2022 IDKU edition, CARI! review the landscape of scientific publications about disability-inclusive disaster management research in Indonesia. In this review, we analyze various studies based on how researcher put their views on persons with disabilities and the Social Model of Disability Framework.

The record from identified literature shows that persons with disabilities are often disproportionately affected by disasters due to their different and unequal levels in terms of their capacities to reduce the risk, prepared, respond, and recover from disasters independently. Often, persons with disabilities are socially and spatially isolated, lacking accessible early warning messages and means of effective evacuations, e.g. signs and proper transportation. Failure to involve persons with disabilities in disaster risk reduction efforts has serious consequences, such as the poor design of evacuation buildings that hamper their effective evacuation or the absence of guides/facilitators for persons with disabilities to respond to warning messages.

According to Indonesian Law 8/2016, **Persons with Disabilities** are "any person who experiences physical, intellectual, mental, and/or sensory limitations in the long term which in interacting with the environment may experience obstacles and difficulties to participate fully and effectively with other citizens based on equal rights". There are four types of disabilities:

- Physical disabilities** are disorders of movement function, including amputation, paralyzed or stiff, paraplegic, cerebral palsy, due to stroke, due to leprosy, and small people.
- Intellectual disabilities** are a disturbance in the function of thought because the level of intelligence is below the average, including slow learning, mental disabilities, and down syndrome.
- Mental disability** is a disturbance in the function of thought, emotion, and behavior, including a. psychosocial including schizophrenia, bipolar, depression, anxiety, and personality disorders; and b. Developmental disabilities that affect social interaction skills include autism and hyperactivity.
- Sensory disabilities** are disturbances in one of the functions of the five senses, including visual impairment, hearing disability, and speech disability.

Law 8/2016 in Article No. 20 clearly states that people with disabilities have the right to protection from disasters, which consists of the rights to:

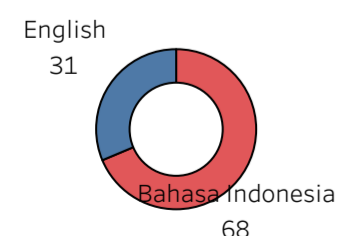
- obtain easily accessible information about a disaster
- gain knowledge about disaster risk reduction
- get priority in the rescue and evacuation process in a disaster situation
- obtain easily accessible rescue and evacuation facilities and means
- get priority, facilities, and facilities that are easily accessible at the refugee camps

Aligned with Sendai Framework, **Head of BNPB 14/2014** about Handling, Protection, and Participation of Persons with Disabilities in Disaster Management, mandates more progressive actions, which state the stakeholders to fulfill the rights and needs according to the aspirations of persons with disabilities. During all disaster risk management phases, persons with disabilities must be actively involved in the planning, implementation, monitoring, and evaluation stages. Hence, their representation at the national and sub-national Disaster Risk Reduction Forum/Platform would be crucial to ensure the inclusion of their agenda.

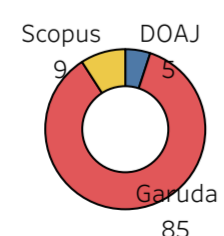
Research Articles Statistics

99 Publications 91 Publishers 98 Authors

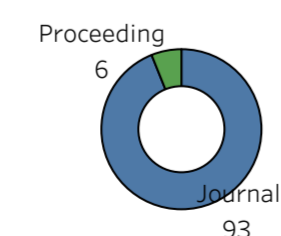
Publication Language



Repository / Indexing

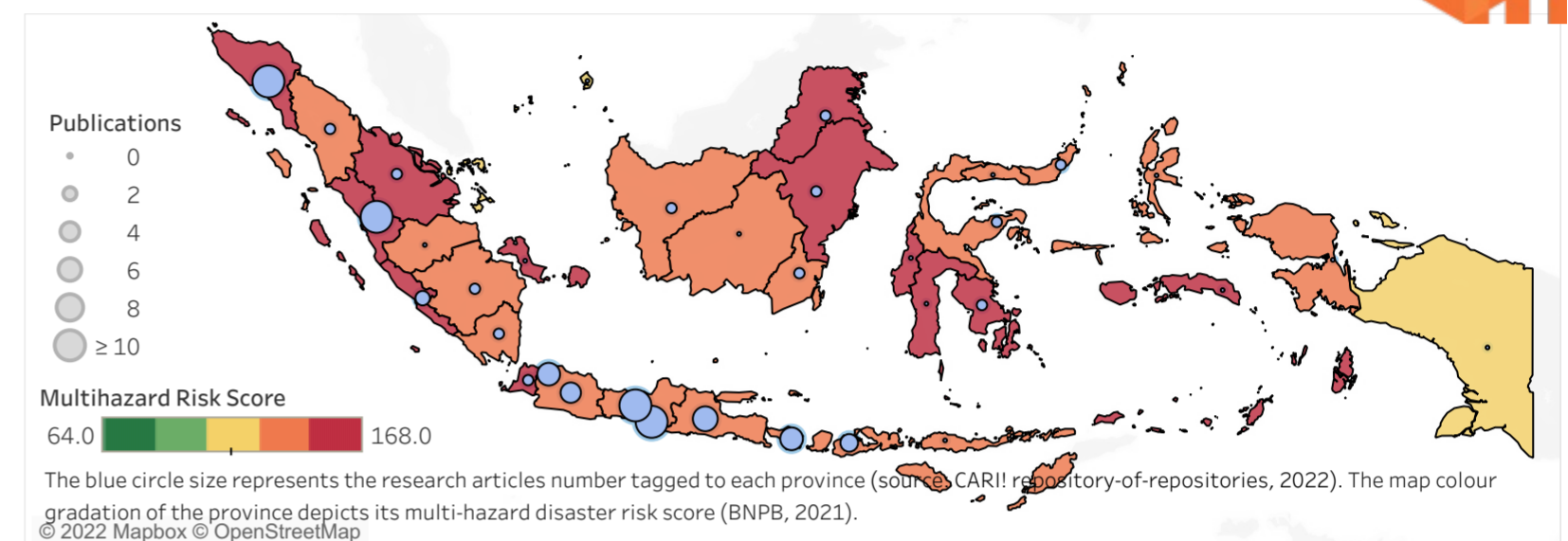


Publication type



In this IDKU, we examined research articles that investigated the disability inclusion aspect of disaster management. The articles were obtained from CARI! Knowledge Engine was sourced from Scopus, DOAJ, and Portal Garuda repositories. Based on the multi-stage filtration process, we applied 153 keywords on related terms about disability, which were consulted by the subject-matter expert. We obtained 99 research articles processed in the subsequent analysis.

Research Articles Distribution Map

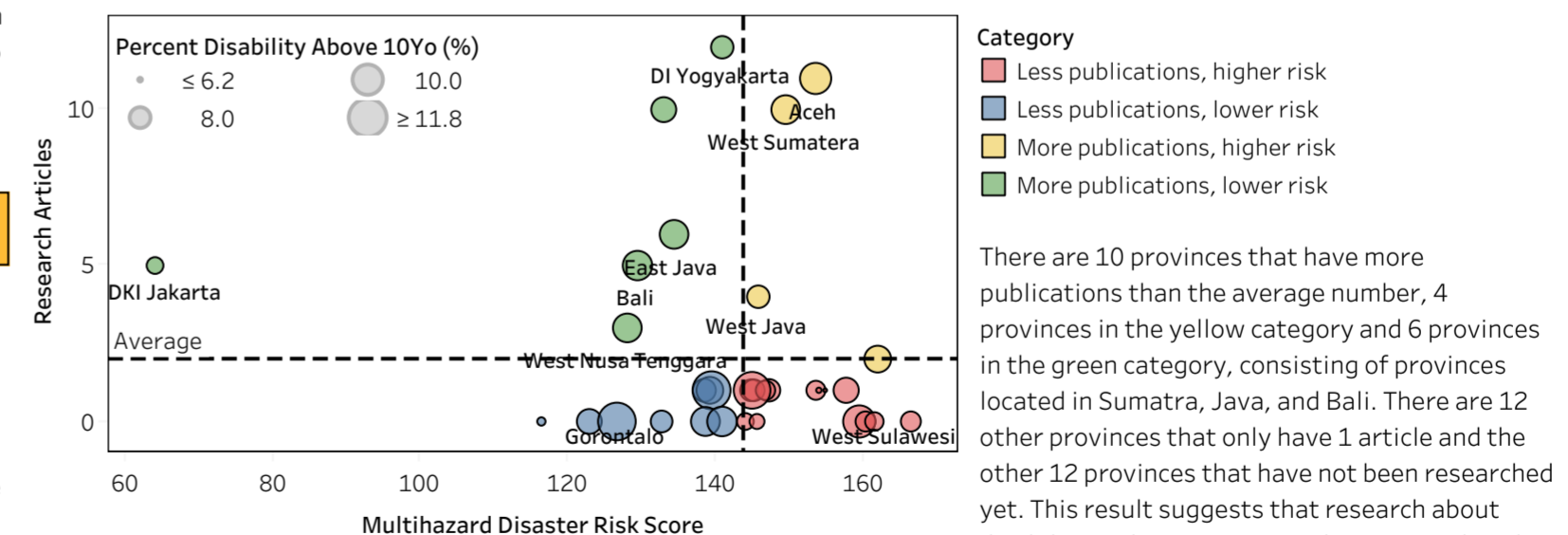


As can be seen from the map, research on disability in disasters in Indonesia is still skewed towards several provinces in the country. The provinces with the highest number of research were DI Yogyakarta (12 articles) and Aceh (11 articles). Provinces in Sumatra Island and Java Island tend to have a higher number of publications, while other provinces, especially in the north-central and eastern region, have a more limited number of publications. We found that some provinces based on our dataset have no research publications at all such as Papua and Maluku provinces.

The word cloud shows the most frequently studied cities/regencies. Padang city (7 articles) and Banda Aceh city (5 articles) topped the rankings with more than 4 publications. Meanwhile, others that already have publications but in a very limited number are cities/regencies that are located in Sumatra and Java.

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Research Articles VS Multihazard Disaster Risk Score by Province



The quadrant plot shows the province's category (represented by different colours) based on the number of research articles and multi-hazard disaster risk score (source: BNPB, 2021). The circle's size depicts the province's percentage of persons with disabilities per total population above 10 years old (source: Ministry of Health, 2018).

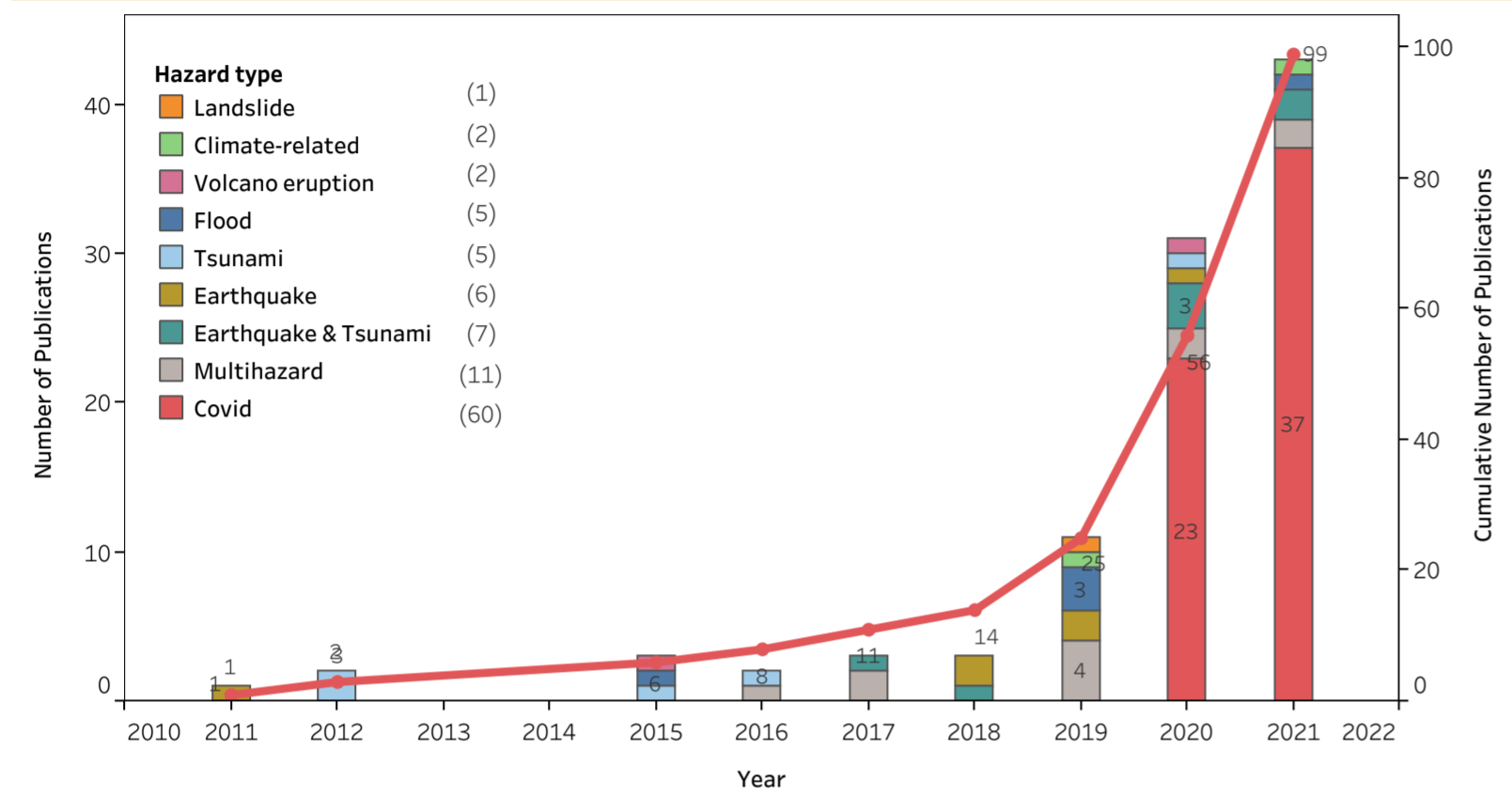
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Growth of Research Publication

Top Research Articles



People with disabilities as key actors in community-based disaster risk reduction
 Pertiwi P., Llewellyn, G., Villeneuve, M. | Disability and Society
 Published on November 26, 2019 | Cited by 12 articles

Post-traumatic stress disorder among survivors two years after the 2010 Mount Merapi volcano eruption: A survey study
 Warsini S. et al | Nursing and Health Sciences
 Published on January 1, 2015 | Cited by 9 articles

Disability representation in Indonesian disaster risk reduction regulatory frameworks
 Pertiwi P., Llewellyn, G., Villeneuve, M. | International Journal of Disaster Risk Reduction
 Published on May 1, 2020 | Cited by 3 articles

Factors associated with post-traumatic stress disorder (PTSD) following natural disaster among Indonesian elderly
 Aurizki, G.E., Efendi, F., Indarwati, R. | Working with Older People
 Published on October 24, 2019 | Cited by 2 articles

The relationship of the role of teachers in the implemented curriculum of school-based disaster preparedness in vulnerability in school teachers with disabilities in Malang city, Indonesia
 Fathoni, M., Yusuf, A., Sumartono, W.C. | Indian Journal of Public Health Research and Development
 Published on August 1, 2019 | Cited by 2 articles

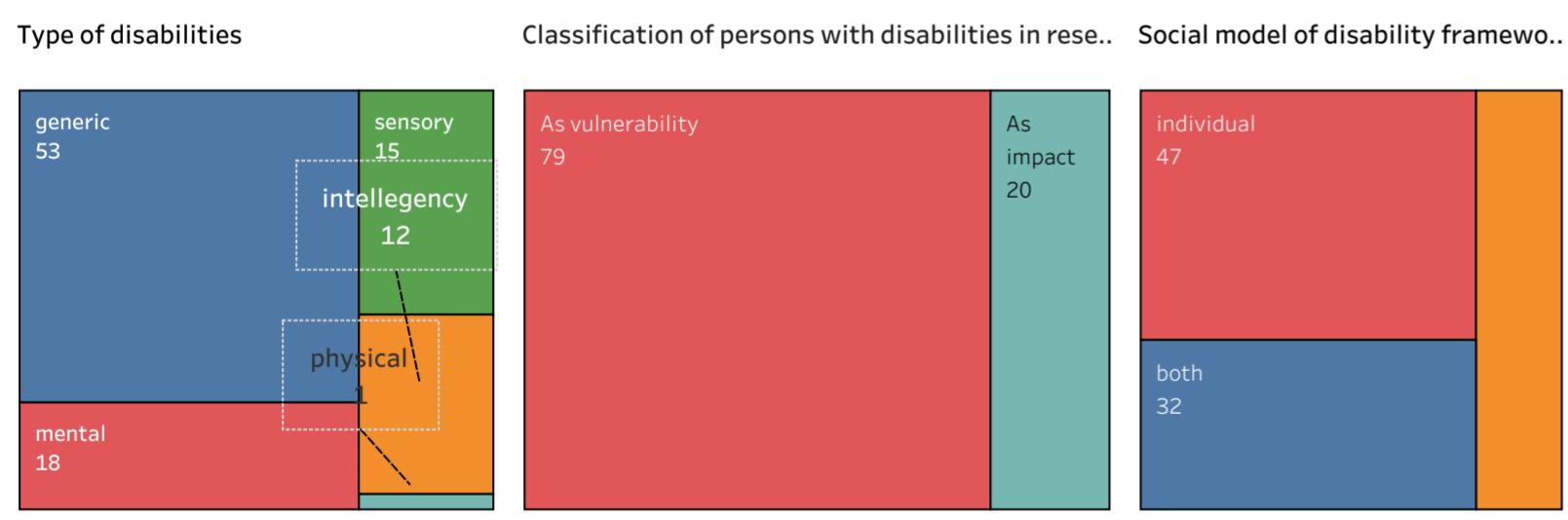
The list above is the top-five research articles on themes related to disability-inclusive disaster risk management in Indonesia, which ranked by the number of citations from 2011 to 2022. The record is sourced from the Scopus directory.

Based on the available records in our CARI! KM Engine, only in 2011, a research article that studied disability in disaster context found. From 2015 onwards, research articles on disability have been published continuously every year. From 2011-2019, researchers studied disability in the context of tsunamis or in consideration of more than one hazard. In 2020 and 2021, the overall research publication number has increased significantly mainly due focus on the COVID-19 pandemic.

How Researchers Study Disability in Disaster

Top Keywords of Disability

Top Investigated Topics



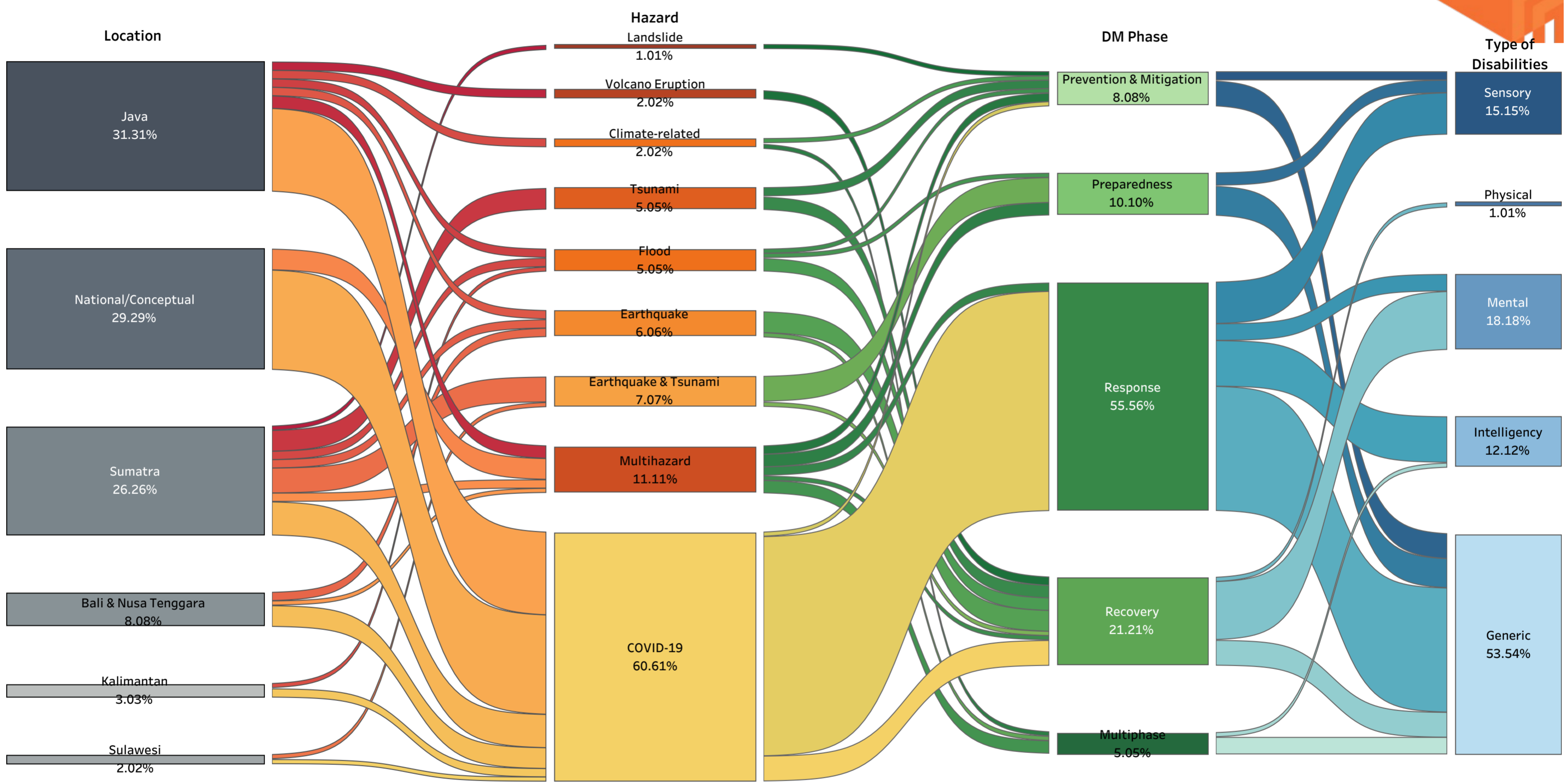
Research publications about disability in disaster contexts mostly studied multiple types of disabilities (generic). The specific type of disability which frequently studied is mental, sensory, and intellectual disabilities. On the contrary, physical disability-related was the least studied. From the researcher's point of view, most research considers persons with disabilities as primarily the vulnerability factors to disaster risk [Oliver, 1996], while the rest focuses their analysis on the impact of the disaster on persons with disabilities. Using the lens of the Social Model of Disability Framework, we found that most research focused on the individual level, i.e. each person as the unit of analysis, followed by research that considers both individual and community levels, or community level.

Based on the list of keywords used, "Anak berkebutuhan khusus (Children with special needs)" is the most frequent word founds in literature. On specific themes within the sub-phase of disaster risk management, public education, hazard assessment, and infrastructure improvement are the most frequently researched topics.

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Sankey Diagram of Publications: Location to Hazard type to Disaster Management Phase to Type of Disabilities



The Sankey diagram is visualized proportionally to the number of publications. The larger size of the box and the wider lines indicate a greater number of publications accounted for them. The Sankey diagram illustrates the distribution of scientific publications and their relations across locations, type of hazards, disaster management phase, and type of disabilities studied.

From Sankey above, we can see that the Java region is ranked at the top with the largest number of publications, where most of the research is related to COVID-19 hazards, focused on the analysis of the emergency response phase, and consider the whole type of disabilities (generic). National-scale or conceptual research occupies the second position with the most publications and this type of research is also mainly about the COVID-19 pandemic. Regardless of their hazards, all studies tend to focus on activities relevant to the response phase. However, a substantial amount of research on disabilities is studied in the context of recovery activities. Research on the response phase tends to investigate more than one type of disability. Accordingly, this IDKU recommends more research activities in locations with fewer records (e.g. Sulawesi or Kalimantan), in other types of hazards and type of disability and their mechanics in affecting the risk of persons with disabilities. Research that could shed light on the know-how for disability-inclusive prevention, mitigation, and preparedness is urgently needed as well.