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# Indonesia Disaster Knowledge Update - February 2023

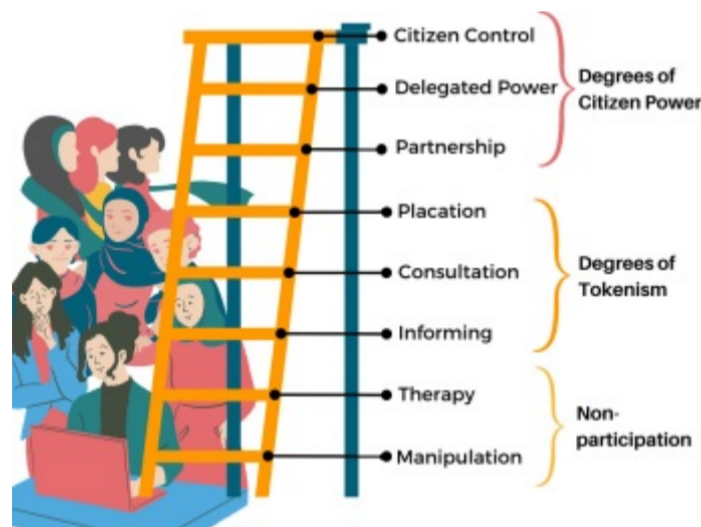


## Research Publication about Women's Participation in Disaster Risk Reduction in Indonesia

**Women's participation** is one of the key priorities in implementing disaster risk management practices. The Oxfam Report (2005) stated that 80% more women and girls get affected directly or indirectly than men and boys during the 2004 Indian Ocean Tsunami. The number of female survivors is also estimated as very low by the ratio of 1:3, which means that every one male death includes three female deaths. Hence, there is a crucial need to ensure the protection of women and girls as well as encouragement for their participation in all disaster phases, including pre, during, and post-disaster.

Therefore, in this IDKU edition, we reviewed the research publication about **women's participation in disaster risk reduction (DRR)** in Indonesia. This review applies **Arnstein's Ladder of Participation** as the analytical lens in reviewing relevant publications. There are eight levels of participation to illustrate the degree of citizens' involvement in the decision-making process. This framework is widely used in various settings, including in disaster management. It will also construct the extent of women's involvement in the disaster phases. It will give recommend how women's participation can be broadened in disaster management practices, including encouraging and nurturing women's leadership in DRR.

Ladder of Citizen Participation (Arnstein, 1969)



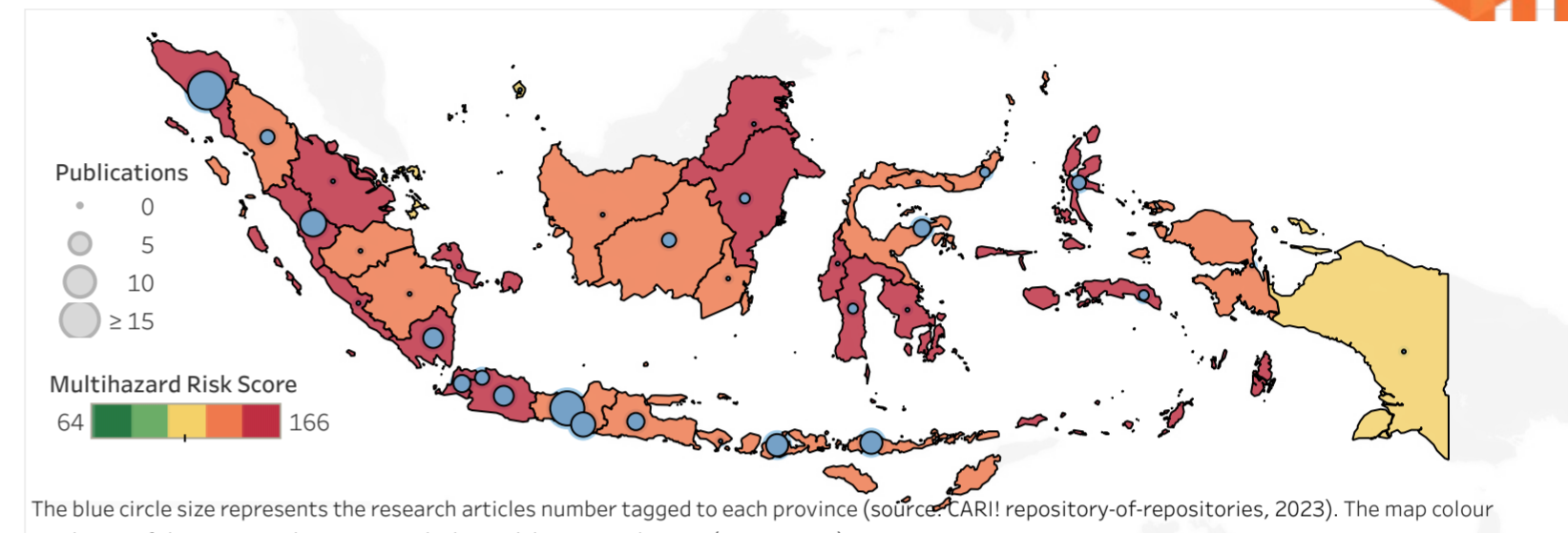
From the bottom of the ladder, **Manipulation** means the illusion of participation when actual power is denied, while **Therapy** means that the experts subject the citizens to clinical group therapy (passive recipients). These two rungs describe levels of **non-participation** that have been contrived by some to substitute for genuine participation. Their real objective is not to enable people to participate in the planning or conducting of programs, but to enable powerholders to educate or cure the participants.

Then move up to **degrees of tokenism** that allow the have-nots to hear and have a voice. Which is **Informing**, meaning that citizens are informed of their rights and responsibilities, however, no channel is provided for feedback and no power for negotiation. **Consultation** means that citizens' views are sought but decisions are made and restricted to power holders only. **Placation** means that citizens can shape ideas, but the final decision sits with powerholders.

Further up the ladder are **degrees of citizen power** with increasing degrees of decision-making clout. Consist of **Partnership**, which is citizens have direct involvement in decision-making. **Delegated power** means that citizens have capabilities, resources, and responsibilities but the goal is created by the powerholders. Finally, **Citizen power** means that citizens have the power to set the initiative and implement the activity.

References:  
Oxfam report 2005 on the tsunami's impact on women, <https://reliefweb.int/report/indonesia/tsunamis-impact-women>  
Arnstein, S. R.: A Ladder Of Citizen Participation. Journal of the American Institute of Planners, 35(4), 216-224 (1969).

Research Articles Distribution Map

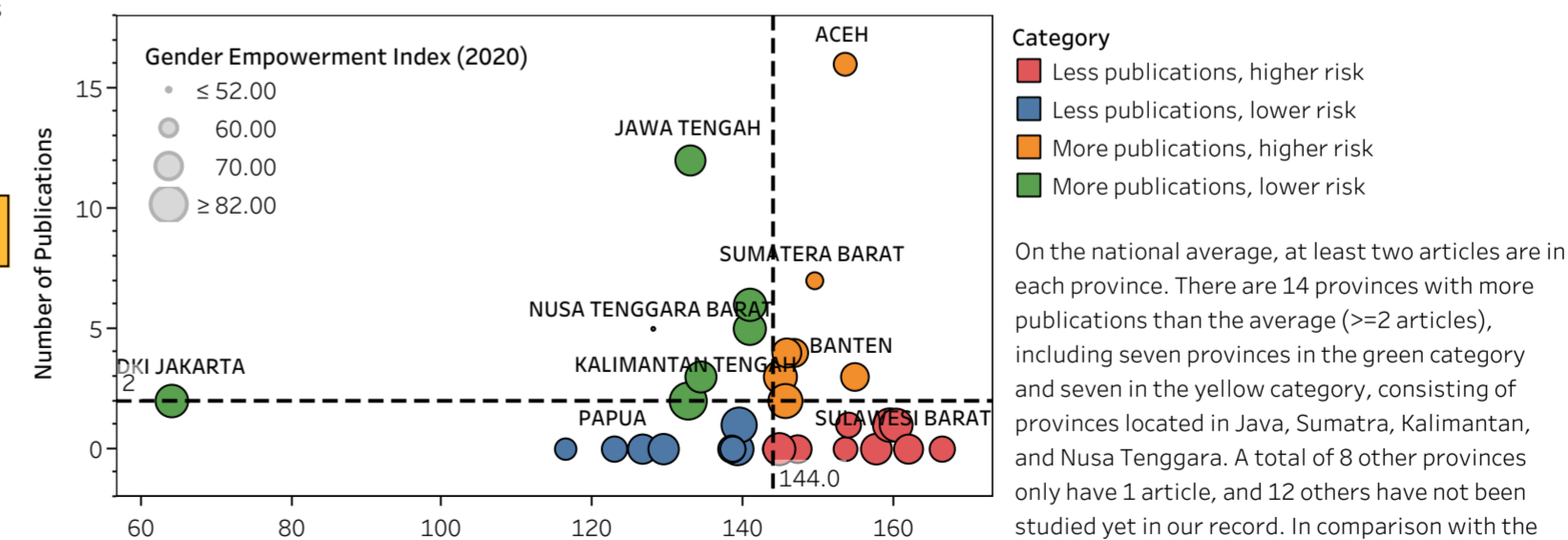


The blue circle size represents the research articles number tagged to each province (source: CARI! repository-of-repositories, 2023). The map colour gradation of the province depicts its multi-hazard disaster risk score (BNPB, 2021).



As can be seen above, the distribution of research articles location is more concentrated in the provinces located in Java and some provinces in Sumatra. In contrast, research studies in the provinces of Kalimantan, Maluku, Papua, and Sulawesi are quite limited. The provinces with the highest number of articles were Aceh (16 articles), followed by Central Java (12 articles). Other provinces have only below ten articles. While looking at the city/regency level, several cities have at least three articles, the cities located in Central Java, DI Yogyakarta, and Aceh provinces. Other cities with two articles were located around West Sumatra, West Nusa Tenggara, Banten, and North Maluku. Spatial gaps in the number of research output per province may be fostered by the higher education or research institution locations, where most are in western and central Indonesia.

Number of Research Articles VS Multihazard Disaster Risk Score by Province



The quadrant plot shows the province's category (marked by different colours) based on the number of research articles (source: CARI!, 2023) and multi-hazard disaster risk score (source: BNPB, 2021). The circle's size depicts the gender empowerment index in the province (source: B...

On the national average, at least two articles are in each province. There are 14 provinces with more publications than the average (>=2 articles), including seven provinces in the green category and seven in the yellow category, consisting of provinces located in Java, Sumatra, Kalimantan, and Nusa Tenggara. A total of 8 other provinces only have 1 article, and 12 others have not been studied yet in our record. In comparison with the score of the gender empowerment index (GEI), there is no clear correlation to the research activity of each province. Some provinces that have low GEI score in fact has more articles than other provinces that have higher GEI score.

## Research Articles Statistics

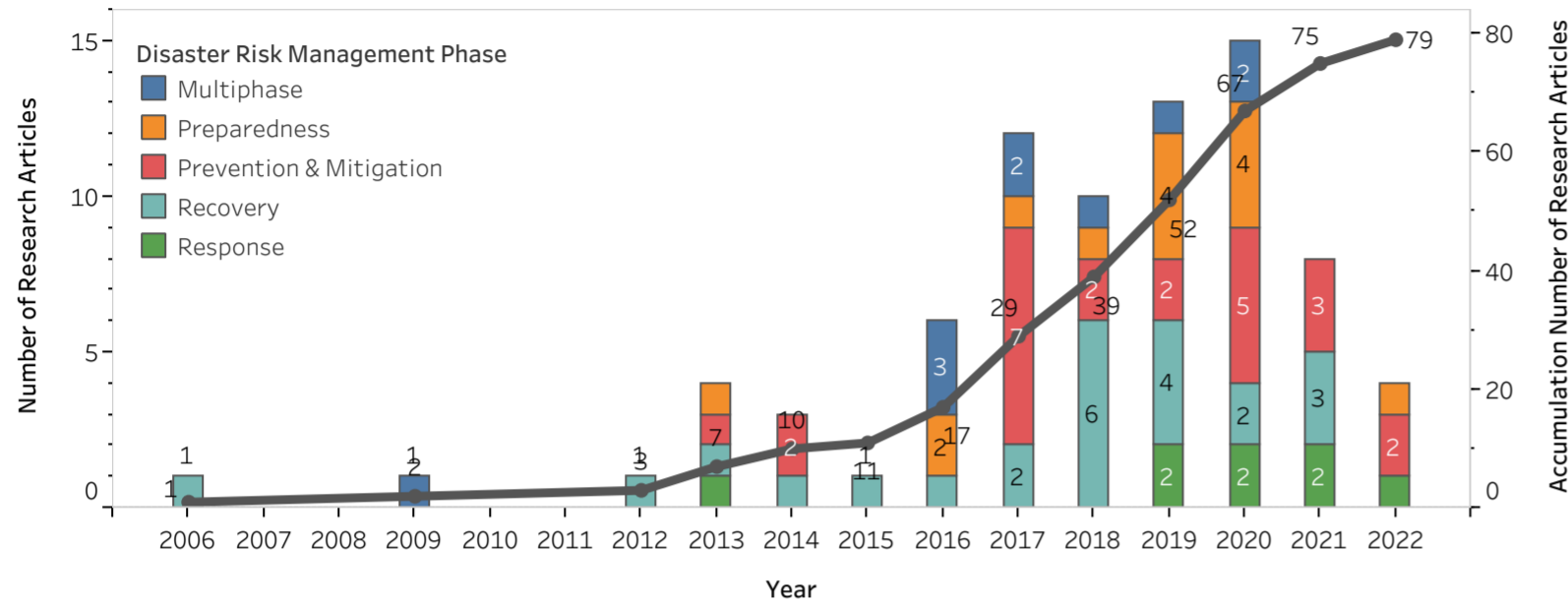
79 Publications, 71 Publishers, 79 Authors. Statistics on language (English: 31, Bahasa Indonesia: 48), repository/indexing (Scopus: 15, DOAJ: 7, Garuda: 57), and publication type (Proceeding: 6, Review: 1, Article journal: 71).

We examined research articles related women's participation in disasters in Indonesia. The scientific articles were obtained from CARI! Knowledge Engine sourced from Scopus, DOAJ, and Portal Garuda repositories. All journal articles, proceedings, reviews, and book chapters were included in this analysis. Also, only articles written in English and Bahasa Indonesia were included. In total, we selected 79 research articles from 71 journal publishers to be reviewed in the subsequent analysis.

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## Trend of Research Articles Number



The left axis is for a stacked bar chart showing the number of published research articles each year, and the right axis is for a line chart showing the cumulative number of research articles. The color code in the stacked bar chart indicates the studied disaster risk management phase. Based on our record, the earliest research articles about women's participation in DRR in Indonesia were published in 2006, which studied about recovery phase after the tsunami Aceh of 2004. Then, one article was published again in 2009, encompassing all disaster risk management phases. After that, only in 2012 and so on. Research on women's participation in DRR exists annually. In 2020, 15 articles were published, marking 2020 as the peak of the productive year so far. The general trend is the number of research articles keeps increasing each year, and the study topic becomes more varied in terms of the disaster risk management phase.

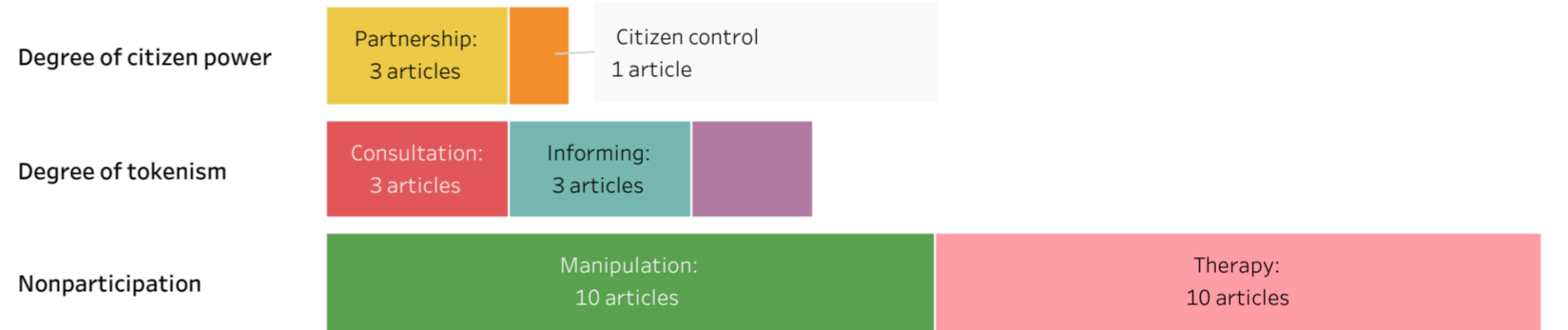
## Top Main Author Affiliations

- Charles Darwin University
- Universitas Negeri Malang
- Universitas Brawijaya
- Universitas Sam Ratulangi
- Universitas Palangka Raya
- Universitas Sari Mutiara
- Universitas Islam Indonesia
- Universitas Multimedia Nusantara
- STIKES Duta Gama Klaten
- Universitas Aisyah Pringsewu
- Universitas Tribhuwana Tunggaladewi
- Dinas Kesehatan Banda Aceh
- Lembaga Ilmu Pengetahuan Indonesia
- IAIN Kudus
- UIN Walisongo
- Poltekkes F
- STIKES Imelda
- Universitas Muhammadiyah Yogyakarta
- Universitas Muhammadiyah Kaltim
- UPN Veteran Jakarta
- Universitas Muhammadiyah Surakarta
- UIN Ar-Raniry
- Universitas Gadjah Mada
- Universitas Airlangga
- Universitas Syiah Kuala
- Institut Pertanian Bogor
- Universitas Muhammadiyah Sidoarjo
- Pusat Penelitian dan Pengembangan Perubahan Iklim dan Kebijakan
- Universitas Diponegoro
- Poltekkes Tanjung Karang
- Universitas Andalas
- University of Helsinki
- Urban and Regional Development Institute
- Universitas Negeri Yogyakarta
- Universitas Kristen Indonesia Maluku
- Universitas Atma Jaya Yogyakarta
- Universitas Udayana
- Universitas Sultan Ageng Tirtayasa
- Universitas Nusa Cendana
- UIN Syech M.D
- Universitas Widya Mataram
- Universitas Pendidikan Indonesia
- Universitas Negeri Padang
- University for Peace
- STIPOL Raja Haji Tanjung Pinang
- Universitas Negeri Jakarta
- ITB Ahmad Dahlan Jakarta
- Universitas Sebelas Maret
- Universitas Padjadjaran
- Universitas Ahmad Dahlan
- Universitas Teuku Umar

Based on the main author's affiliation, Universitas Syiah Kuala contributed the most productive university with six articles on this topic. Followed by UGM with five articles. Other prominent universities with several recorded articles are Institut Pertanian Bogor, Universitas Airlangga, Universitas Andalas, UIN Walisongo, and UIN Ar-Raniry. Overall, there are 54 affiliations, dominated by Indonesia-based institutes, and only two foreign affiliations exist in this review corpus.

## Review on Women Participation & Recommendations for strengthening leadership

Research Articles by Ladder of Citizen Participation (n=32)



Our analysis on the ladder of citizen participation is limited to only 32 articles from all articles corpus that we have reviewed in an SLR by Febe et al. (2023). Most research articles show that the women group still has no participation, with 20 publications, divided equally within the manipulation and therapy groups. Up to the degree of tokenism, fewer articles were studied, including those classified in the informing, consultation, and placation rung. Only a very limited number of articles were studied on the degree of citizen power, namely three research on partnerships and only one on citizen control rungs. The same consistent pattern is found in all corpus articles (79 articles), which indicates that most studies still put women as a subject of treatment or intervention. There is only 2 article that explicitly mentioned "leadership" in their abstract article. In contrast to the article that explicitly mentioned terms such as "engagement", "follower", "assistant", or "involvement" which were mentioned more often.

We also found that a few articles correspond to the degree of citizen power that already acknowledges the position of women leadership, especially in women-based community organizations such as religious-based communities, traditional markets, and small-medium enterprises. It is discouraging that most research on women still considers them only as a subject of capacity-building interventions without giving them proper space to voice their opinion accordingly. Studies still position women in the stage of non-participation where their power and capacity to be involved in disaster risk management efforts are being neglected.

The SFDRR's (Sendai Framework for Disaster Risk Reduction) 2015-2030 Guiding Principle D stated that "women and their participation are critical to effectively managing disaster risk and designing, resourcing and implementing gender-responsive disaster risk reduction policies, plans and programme and adequate capacity building measures need to be taken to empower women for preparedness as well as build their capacity for alternate livelihood means in post-disaster situations". Reflecting on that principle, there is a need to conduct more studies to examine women's role in disaster risk management practices in the higher stage of participation, viz degree of tokenism or degree of citizen power. This can be done by conducting strategies and principles based on the national, regional, and international context and frameworks. Furthermore, more research and action that can increase the quantity and quality of women's leadership and its positive outcomes in disaster risk management is urgently needed in Indonesia.

## Top Research Articles

### Post-tsunami reconstruction in Indonesia: Negotiating normativity through gender mainstreaming initiatives in Aceh

Jauhola M. | Post-Tsunami Reconstruction in Indonesia: Negotiating Normativity through Gender Mainstreaming Initiatives in Aceh  
Published on 2013-01-01 | Cited by 28 articles

### Sustaining a transformative disaster risk reduction strategy: Grandmothers' telling and singing tsunami stories for over 100 years saving lives on Simeulue Island

Sutton SA, Paton D, Buergelt P, Sagala S, Meilianda E | International Journal of Environmental Research and Public Health  
Published on 2020-11-01 | Cited by 10 articles

### Gender mainstreaming as a strategy to achieve sustainable post-disaster reconstruction

Yumarni T, Amaratunga D | Built Environment Project and Asset Management  
Published on 2018-11-12 | Cited by 8 articles

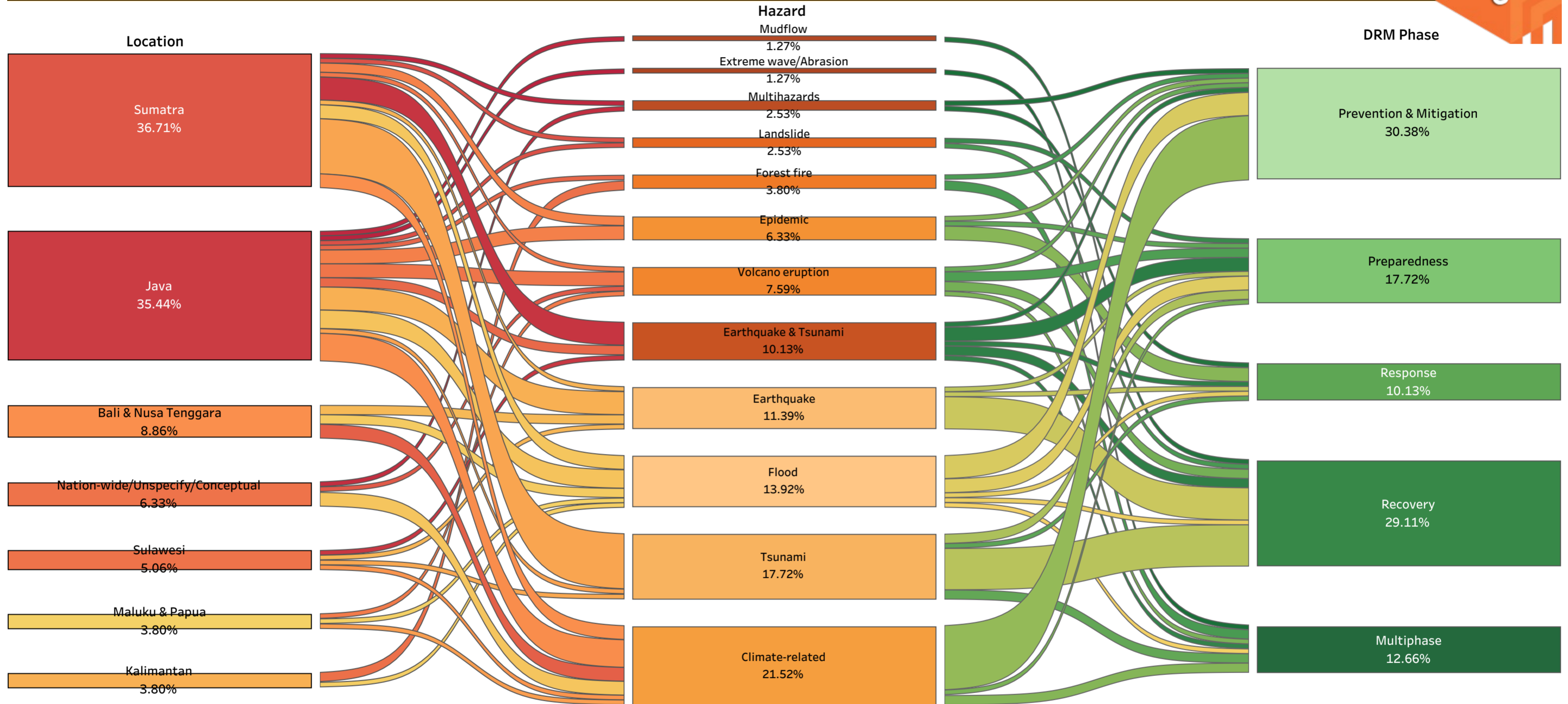
### The Role of Women in the Management of Flood Disasters in Bima District, Nusa Tenggara Barat

Sopiawati N, Hatuti | IOP Conference Series: Earth and Environmental Science  
Published on 2019-12-12 | Cited by 5 articles

The list above is the top four research articles about women's participation in DRR in Indonesia based on the citation number as of February 2023 recorded by Scopus. The top two articles studied in Aceh province specifically on tsunami disasters, one focusing on post-tsunami reconstruction and the other one focusing on preventive measures. The following two articles, also researched post-disaster reconstruction and gender mainstreaming, and wider participation of women in flood disaster management.



Sankey Diagram of Publications: Research Location to Hazard Type to Disaster Risk Management Phase



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 research articles and their relations across studied location, hazard type, and disaster management phase.

The above Sankey diagram is used to identify the co-analysis relationship between the research location by region, the studied hazard type, and the studied disaster risk management phase of each research article on women’s participation in DRR. More than a third of all articles (36.7 % or 29 articles) conducted research on Sumatra region and the majority of them studied together in relation to tsunami hazard types. The second position is Java Region (35.4 % or 28 articles) which generally tend to examine climate-related and earthquake hazard. Other regions comprised the rest, which tends to study in relation to climate-related hazards, except Kalimantan which dominantly studied forest fire hazards. By hazard types, climate-related hazards become the most studied hazard, followed by tsunami, flood, earthquakes, etc. Climate-related and flood hazards are majorly studied with the prevention and mitigation phase, while tsunami and earthquake hazards tend to be studied together with the recovery phase. Earthquake and tsunami hazards together tend to investigate in the preparedness phase, and epidemic hazards tend to be studied in the response phase. Based on the overall proportion, prevention and mitigation phase was the most studied phase with 24 articles, closely followed by recovery phase with 23 articles, while other phases such as preparedness, multiphase, and response phase quite lag behind in number. In summary, we found that there are still niche studies to do about women’s participation specifically in the preparedness and response phase settings, also women’s active participation in the central and eastern Indonesian community. For example, future studies could do research on the assessment of women’s preparedness level, strategies to increase capacity among them, and how women’s essential needs are accommodated in emergency situations across different disaster types and applied to diverse social backgrounds of women in Indonesia.