



Crisis Management in Communities: Bibliometric Analysis

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Abstract The article analyses scientific publications on crisis management in local communities. The study involved a critical literature review, evaluation, analysis and cartography, which allowed us to identify certain trends. Initially, 437 articles were identified, and after a five-step filtering process, 154 documents remained. The data were collected from the Scopus database. VOSviewer and Biblioshiny were used for bibliometric analysis and visualisation. The vast majority of the articles were published in such scientific journals as the Journal of Contingencies and Crisis Management, Local Government Studies, International Journal of Disaster Risk Reduction, Sustainability (Switzerland). The most cited authors were identified, including Graham, Avery, Park. The main countries where the study was conducted include the United States, China, United Kingdom, Sweden, Germany and Poland. The study notes the growing interest in this topic, the increasing number of scientific publications and the importance of crisis management at the local level. Based on the research, the main problems faced by local communities in crisis management were identified as lack of resilience and preparedness, insufficient communication channels, lack of proactive planning, inadequate use of technology, and insufficient funding. The findings can be useful for a wide range of users, including central and local authorities, international institutions, NGOs and other actors in crisis management at the local level.

Keywords: local communities, local government, crisis management, crisis situations, bibliometric analysis, resilience

1. INTRODUCTION

The problem of managing local communities in times of crisis has become increasingly relevant in recent years. Natural disasters, the COVID-19 pandemic, military conflicts and

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other crises faced by governments and populations of different countries make it necessary to find tools for effective interaction between public authorities and citizens. This problem is being studied by scholars from different countries. The present study aims to systematise scientific approaches to building an optimal mechanism for cooperation between local communities in crisis conditions, taking into account the experience of different countries.

Stoney et al. (2023) note that local governments play an important complementary role with central government. Phillips et al. (2023), Wiśniewski and Szwarc (2023) note the importance and effectiveness of balanced interaction between central and local governments to ensure centralised and distributed control during a crisis. Gao and Zhang (2022), comparing the experience of crisis management on the example of different communities, reveal the factors of effective crisis management, including through the cooperation of central and local authorities. Also, the need for comprehensive interaction between central and local authorities is proved in their studies by Wayenberg et al. (2022); Prebilič (2022); Bourdin et al. (2023), who, based on an analysis of the experience of European countries, prove that the crisis has contributed to closer cooperation between public authorities and key stakeholders. Dorussen et al. (2018), Navarro and Velasco (2022) note the impact of effective interaction between central and local governments based on the division of powers.

The study by Liu and Shi (2021) found many problems in the public crisis management of local governments: imperfect legal systems and a number of problems such as lack of awareness and imperfect early warning mechanism. Matsumoto (2014) notes that since there is a huge asymmetry of information between the central government and local governments affected by a disaster, the usual political power structure between them should be changed so that the latter can take responsibility for managing the recovery and the former can work to support the latter.

Avery et al. (2016) note that local governments are involved in the management of any crisis situation affecting their communities, regardless of the responsible organisation or the nature of the crisis. Fekete et al. (2021) note that local governments and municipalities have played a significant role in preventing crisis response measures and have essentially acted as local crisis managers. Jang et al. (2021) discuss the approaches of local governments to crisis management. Olaniran and Scholl (2018) note that foresight and preparation specific to local communities is imperative and can help prepare local communities for potential crises. Ndlela (2012) emphasises that any effective disaster management requires a joint effort at the local level, and municipalities should seek ways to cooperate and coordinate with other municipalities, share strategic resources, including knowledge repositories, necessary for planning, forecasting and responding to emergencies. Mustari et al. (2021) argue that the strongest aspects of local government regulation are control and supervision, and the weakest is audit.

Sparf et al. (2022) argue that a strong municipal structure can withstand shocks without resorting to extraordinary governance mechanisms. The factors that influence the formation of local community resilience were studied by Knodt et al. (2022), Park et al. (2022), Lee et al. (2022). Li et al. (2023) argue that effective crisis management requires both a holistic package of governance strategies and adaptive governance measures/processes at the local level.

Keyes et al. (2022) outline the need for an integrated approach to identifying challenges, learning outcomes and action strategies that can be useful in considering local government crisis management strategies. Kukovič (2021), Pattyn et al. (2021) analysis shows that there is no single and well-established procedure for overcoming a crisis situation. Jüptner and Klimovský (2022) investigated the features of effective interaction in multi-level management systems. Kuhlmann and Franzke (2022) show how the coordination of pandemic management changed between two types of multi-level governance (central and local) depending on the stage of the crisis. Chen (2023) emphasises the need for an integrated approach to organising effective interaction between central and local governments, involving society in crisis management. Barbehön and Münch (2017) identify different approaches to crisis management that can be applied with due regard to local specifics.

Lalot et al. (2022) note social engagement, interpersonal trust and closer personal relationships, greater political trust and more positive attitudes towards immigrants as a manifestation of a sense of social cohesion in local authorities (at the micro, mezo and macro levels). Guzal-Dec and Zwolińska-Ligaj (2023) argue for the need to take into account the phenomenon of place attachment, which has a significant impact on community resilience. Quetulio-Navarra and Niehof (2023) argue that social capital and community organising experience are crucial in the process of dealing with the crisis. Benson et al. (2022) investigated the role of refugees during crises, who also need to be involved in crisis management.

Zhang et al. (2022) demonstrated the impact of information policy on public opinion formation based on a case study. Styvén et al. (2016) note that people have different perceptions of the quality of information in crisis communications, which in turn can affect their trust in the government. Fedotov (2023), Lian et al. (2023), Pasha and Jacobson (2022) highlight the importance of anti-crisis communication measures, which require timely and truthful disclosures. Burnside-Lawry and Carvalho (2015), Khan et al. (2022) point out the importance of communication at the local level when planning crisis risk reduction measures. Baranyai et al. (2021) note that, aware of their responsibility, local governments clearly tried to provide information to residents as quickly as possible during the crisis.

Hämpke et al. (2022), based on their research, identify the main requirements for the formation of information messages and communication with the public in the framework of crisis management. Selvaraj and Kuppuswamy (2017) argue that during crises, local community radio stations become the primary source of information for affected communities. Zhu et al. (2023) study shows that public service broadcasting can encourage local governments to improve the effectiveness of communication in society.

Zhao (2021), Graham et al. (2015) note that local governments can do a good job of crisis management in the new media era. Jiang and Tang (2023) conclude that social media is an effective and inexpensive tool to help local governments achieve their crisis management goals. Yavetz and Bronstein (2023), Love et al. (2023) examined the use of social media as a way for local authorities to communicate with the public during emergencies and crises. Zheng (2023), Splendiani and Capriello (2022) argue that transparency is crucial for local governments in managing social media crises based on research. Medina and Diaz (2016) argue that social

media are considered even more effective tools for managing risks or crises at the local level. Panagiotopoulos et al. (2016) note that social media accounts provide an opportunity to quickly disseminate critical information and thus mitigate the effects of emergencies by influencing public response.

Kim and Jeong (2023) conclude that public trust is paramount to the information messages and instructions provided by local governments. Cai (2023) proves that with the growth of public trust in civil servants, life satisfaction of the population significantly improves. Grzyś (2023) draws attention to the role of local communities, which, in the context of general distrust of both local and state authorities, have shown their potential for effective and flexible response to crises through bottom-up initiatives. The article by Gao et al. (2020) examines how bottom-up social protest affects the information openness of local governments and analyses strategies to encourage local governments to act on full disclosure. Sparf (2019), Utasse et al. (2016) point out the need to balance risk and crisis management with bottom-up knowledge.

Hermelin and Persson (2022) note that dialogue between local authorities and industry is important. Varghese and Chennattuserry (2023) note the role of effective stakeholder engagement in shaping the image component after crises. Wang and Mao (2023) prove the effectiveness of cooperation in emergencies at the local level. Davis (2011) examines crisis support work in local government and identifies important issues in terms of capacity, interagency communication, coordination and fragmentation of the overall incident response. Altun (2021) notes that it is important for local authorities to prioritise urban policies based on gender equality. Kato (2023) confirms that the main structural barriers to cooperation between municipalities are inefficiencies, increased costs and liquidity issues that hinder cooperation.

The results of the study by Kwon and Ryu (2020) demonstrate that crisis survivors play an important role as key agents in the effective management of various recovery projects, as well as in strengthening resilience after crises. Patel and Revi (2012) propose to restructure society in such a way that all segments of the population are empowered and involved in community decision-making. Earle (2016) notes that assisting affected populations through existing urban systems also helps to ensure that emergency interventions contribute to long-term urban development goals. Kolmodin et al. (2019) find that households have different trusted objects at different stages of a crisis.

Nukpezah (2017) finds that leadership in crisis management, effective communication, the principles of subsidiarity in both multi-level response and accountability are essential for effective response efforts. Bileviciūtė and Polinceusz (2020), Mehrotra (2018) discuss the complexity of disaster and emergency management, where intra-organisational cooperation is important and depends on cognitive abilities. Liu (2016) concludes that at the local government level, the most important among 14 key factors in crisis recovery are: regular project, recovery assessment, evacuation organisation, order of importance and longitudinal survey. Enander et al. (2010) identified basic tensions between confidentiality and openness, between support and accountability, and between empathy and distance, as well as similarities and differences in attitudes towards managing other types of crises.

Tang et al. (2022) divide the capacity of local governments to manage disasters into four dimensions of a dynamic process: preparedness, early warning, response and recovery. Papamichail and French (2013) suggest that local authorities should develop better disaster management strategies. Monstadt and Schmidt (2019) note that risk reduction and preparedness are usually based on certain scenarios that should be developed in advance. Cepiku et al. (2018) grouped decision-making behaviour in times of crisis into five different models: formal strategic planning, logical incrementalism, a combination of formal strategic planning and logical incrementalism (mixed approach), disjointed incrementalism, and inertia.

Barbera et al. (2021) point out the crucial role of foresight for local governments facing shocks and crises. Vinet and Levraut (2022) note the importance of crisis planning, which includes a set of preparatory measures in the pre-crisis period. Kosaka et al. (2023), Villemain and Suarez (2023) found that recognising and understanding the crisis forecast can increase the effectiveness of work at the initial stage of crisis response. Hwang et al. (2022), Łukomska-Szarek et al. (2023) emphasise the importance of pre-crisis preparedness over post-crisis preparedness and the need to build trust through systematic monitoring of information.

Braut et al. (2012) note that time frames can be extremely short during crises. Bhattacharyya (2015) also notes that short-term crisis management takes precedence over long-term risk management. Mullin and Rubado (2017) explore the balance between political and problematic incentives for responding to local emergencies, which often require local officials to make decisions that trade off short-term risk reduction with long-term political costs. Noordegraaf and Newman (2011) argue that governance patterns should be understood not only after, but also before emergencies.

Padeiro et al. (2021) note that financial autonomy is a key factor. Gad-El-Hak (2010) emphasises that large-scale natural disasters strain the resources of local communities. Janas and Kucharchik (2015) believe that city governments should make decisions on the use of resources to prevent, eliminate or eliminate the consequences of an emergency. Zafra-Gómez et al. (2013) note that local governments can identify cost-cutting formulas to better cope with the crisis. Yan and Hu (2007) conclude that a number of measures need to be developed: raising risk awareness, risk avoidance attitude and improving the mechanism of financial resources protection; improving the ability to distinguish between risky environments, assessing public risk and vulnerability; improving the relationship between the government and society. Kiseľáková et al. (2018) point out that proposals for financial solutions to preventive measures in crisis situations should be developed at the local level. Kasdan (2016), Łapeta (2012) point out the need to develop the basic elements of financial management in emergency situations.

Yang and Yu (2009) created a model for assessing the effectiveness of local government crisis management capability. Enander et al. (2015) developed a model that describes three main factors of crisis preparedness: personality-related, organisational and performance. Olofsson (2011) developed a model that can be used to develop contingency planning. Laatabi et al. (2022) argue that agent-based modelling and simulation (ABMS) and optimisation are two complementary approaches that can form the basis of a coherent framework for decision-

making. Leone et al. (2013) created maps and indicators that provide local authorities with strategic information to improve their official disaster plans.

Due to crisis situations, the study of the impact of local communities on crisis response and recovery is becoming an important area of research.

The purpose of this article is to conduct a bibliometric analysis of research on crisis management in local communities in order to identify gaps in the literature and to evaluate the scientific discourse on the role of communities in crisis situations and their impact on economic and social development.

Research questions: (i) What are the key research publications that have the greatest impact on local community responses to crises? (ii) Who are the leading authors in the field of research on local communities and crises? (iii) Which countries are most active in studying local communities in the context of crisis management? (iv) What are the main thematic categories covered by research on local community responses to crises? (v) What is the frequency of citation of research articles on the topics under study?

The uniqueness of this article lies in the following aspects: (1) The study makes a significant contribution to the understanding of the challenges faced by local communities in crisis situations and their implications for the development of crisis management strategies. (2) It outlines current research areas related to local communities and crises, with a focus on identifying gaps and suggesting areas for future research. (3) It discusses various aspects of local community interaction and suggests ways to integrate this knowledge into crisis management strategies to increase community resilience and response.

The article is structured as follows: Section 2 describes the methodology for searching and analysing research papers on the response of local communities to crisis situations. Section 3 contains the results of the analysis and the formation of a scientific picture. The most significant works, authors, regions, thematic categories, citations and key terms are described. Section 4 discusses the results obtained. Section 5 contains conclusions, limitations and prospects for further research in this area of study.

2. MATERIALS AND METHODS

The study aims to evaluate research on the response of local communities to crisis situations. This analytical practice involves analysing publications using productivity and network analysis methods based on data obtained from the Scopus database.

To achieve the purpose of the article, a search for scientific publications related to the response of local communities to crisis situations was conducted. The search methodology was structured based on the approach presented in previous studies (e.g., Salas-Navarro et al. (2022)). The search approaches will be developed in accordance with previous research in this area. Search terms are defined based on the conceptual framework of crisis management and

the behaviour of local communities in crisis situations (Table 1). Scopus was chosen as the database for the analysis, as it is a representative and authoritative resource that includes a significant number of scientific publications from various fields, including the social sciences and humanities. This choice of database will ensure an objective and comprehensive analysis of scientific sources that address the problems of crisis management at the level of local communities.

Table 1. List of keywords used for the literature search

Groups	Search for items
Local community	"local communities" OR "local government" OR "local authorities"
Crisis situation	"crisis situations" OR "crisis management" OR "crisis preventions"
Searched Equation	TITLE-ABS-KEY ("local communities" OR "local government" OR "local authorities") AND TITLE-ABS-KEY ("crisis situations" OR "crisis management" OR "crisis preventions") AND PUBYEAR > 2002 AND PUBYEAR < 2024 AND (LIMIT-TO (LANGUAGE,"English")) AND (EXCLUDE (AFFILCOUNTRY,"Russian Federation")) AND (LIMIT-TO (DOCTYPE,"ar") OR LIMIT-TO (DOCTYPE,"ch") OR LIMIT-TO (DOCTYPE,"cp") OR LIMIT-TO (DOCTYPE,"bk")) AND (LIMIT-TO (SUBJAREA,"SOCI") OR LIMIT-TO (SUBJAREA,"BUSI") OR LIMIT-TO (SUBJAREA,"ECON") OR LIMIT-TO (SUBJAREA,"DECI") OR LIMIT-TO (SUBJAREA,"MULT"))

The search of the Scopus database returned four hundred and thirty-seven (437) documents. The articles for research and analysis were selected using five filters. The main stages of selection are shown in Figure 1.

The first filter concerned deleted articles published before 2003 and after 2023, as well as those not in English (66 documents were found).

The next step was to remove scientific research published and associated with the Russian Federation and Belarus. This decision was made in connection with the war and aggression launched by Russia against Ukraine. As a result, 4 documents were excluded. This does not significantly affect the results of the study, as these articles account for less than 1% of all publications.

The third filter excluded all the following types of publications: Review, Note and Conference review. As a result, 19 papers were excluded.

The next step was to exclude certain subject areas that were not relevant to the research area: Social Sciences; Business, Management and Accounting; Economics, Econometrics and Finance; Decision Sciences; Multidisciplinary. As a result of this filter, 93 documents were excluded.

The fifth filter was to analyse the documents in accordance with the research topic by title, abstract, and main review. As a result, 154 documents were obtained, on the basis of which the main research was conducted.

The bibliometric analysis of this study is based on the main theoretical approaches to crisis management, in particular, systems theory and resilience models, which emphasise the importance of local preparedness and the ability of communities to respond to emergencies. In addition, an important aspect is the theory of community participation, which proves the effectiveness of crisis management through the involvement of local authorities and public structures in the decision-making process, which ensures a more sustainable and adaptive approach to crisis response.

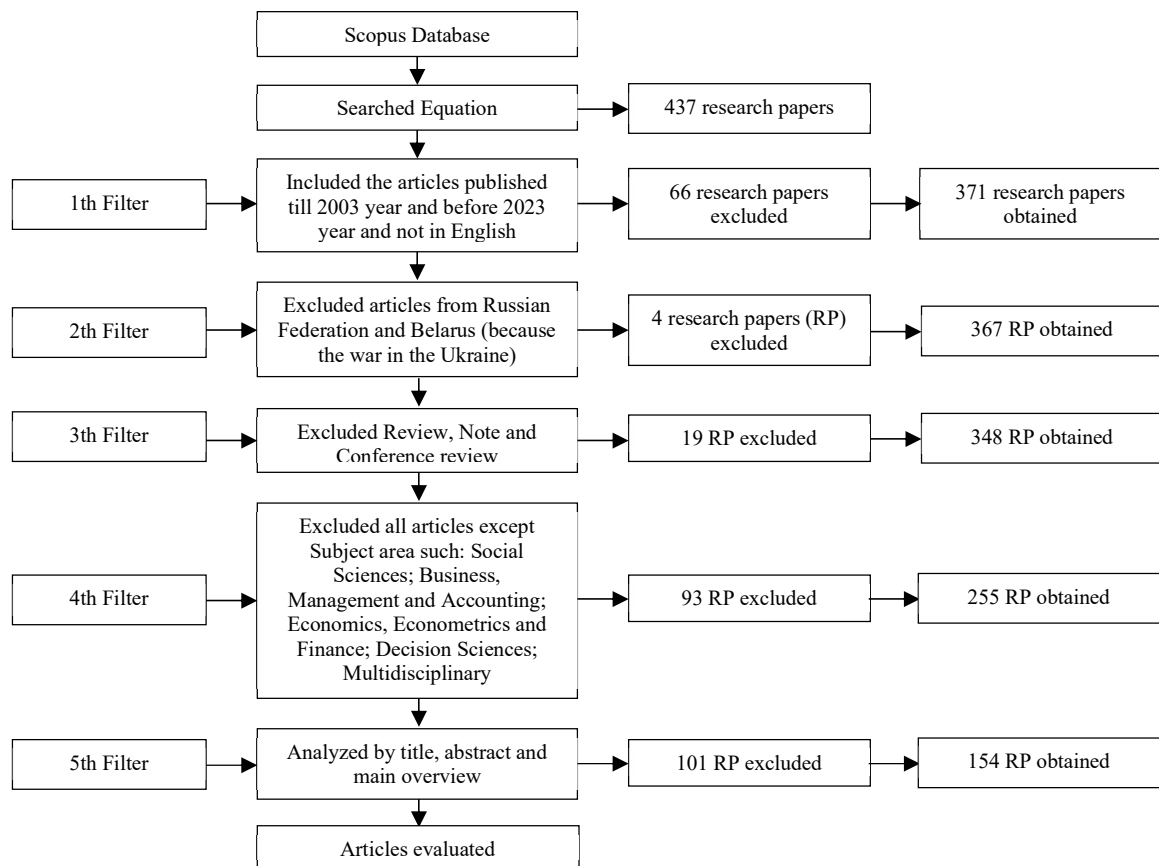


Figure 1. Research methodology

3. RESULTS

3.1 Publications by Year

This study examines articles published over the past 20 years, from 2003 to 2023. The number of papers per year is shown in Figure 2. The number of publications began to grow in 2013, and the highest peak was observed in 2022, when 50 scientific documents were published. The ARIMA model was used to forecast the volume of documents and analyse publication trends.

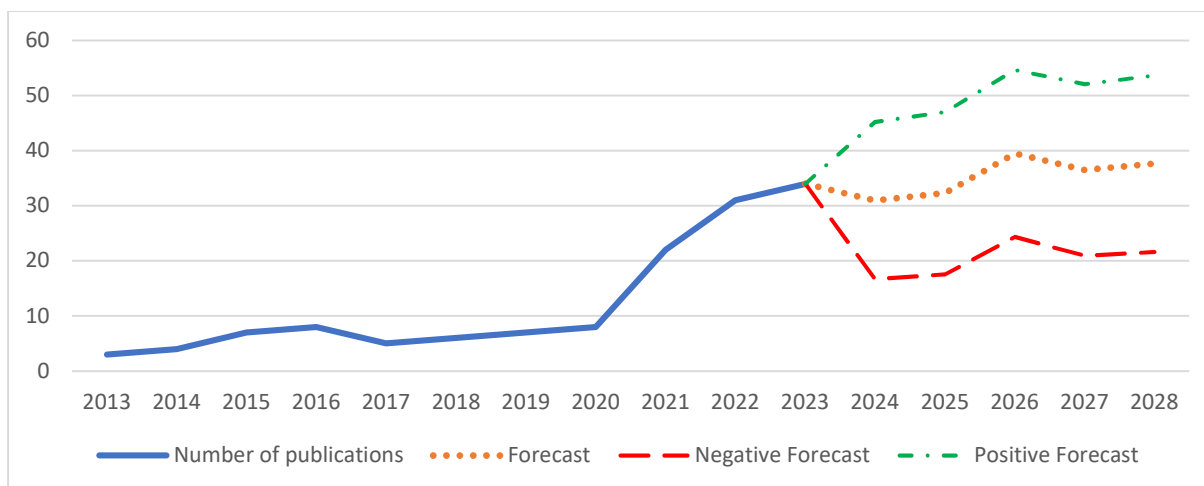


Figure 2. Number of research publications and cumulative total by year with a forecast by 2024 until 2028

3.2 Journals

A total of 154 research documents were published in 87 journals. The growing interest in studying the response of local communities to crisis situations demonstrates the relevance and importance of this issue in academic circles. In terms of quantitative indicators, 73 journals (84%) published 1 article, 9 journals (10%) published 2-3 articles, and 5 journals (6%) published more than 4 articles.

In addition, the top 5 most productive journals were identified by the number of published articles on local communities and crisis situations. Table 2 shows the top 5 most productive journals, as well as information about the publisher, Impact Score 2022-2023, h-Index 2022-2023 and Rank 2022-2023, Subject Area, Categories, Scope.

The top 5 journals published 33 research documents, which is 21% of the total number of articles in the study. Most articles were published in the Journal of Contingencies and Crisis Management - 13 articles, Local Government Studies (6 articles), International Journal of Disaster Risk Reduction (5 articles), Sustainability (5 articles), International Review of Administrative Sciences (4 articles).

If we analyse the Publishers, the top 2 journals include: Wiley-Blackwell - 1 journals with 13 articles, Local Government Studies - 1 journals with 6 articles.

Subject categories that cross in the top 5 journals: Management, Monitoring, Sociology and Political Science, Policy and Law. These subject categories have a fairly high citation rate, as well as a high quartile.

3.3 Authors

The study identified the top 10 most productive authors with the largest number of publications (Table 3).

The first place is taken by Park, South Korea, with 3 publications (1 as the first author). Enander and Sparf have published 2 publications each, and are also first authors of 2 publications. Other authors of the top 10 have 2 publications each, but are the first authors of 1 or none.

Table 2. Top 5 most productive journals on local communities and crisis situations

Nº	Journal	Publisher	Nº of Publ	Impact Score 2022-2023	h-Index 2022-2023	Rank 2022-2023	Subject Area, Categories, Scope
1	Journal of Contingencies and Crisis Management	Wiley-Blackwell	13	0.962	61	4486	Management Information Systems (Q1); Management, Monitoring, Policy and Law (Q1)
2	Local Government Studies	Taylor & Francis	6	2.37	50	6284	Development (Q1); Sociology and Political Science (Q1)
3	International Journal of Disaster Risk Reduction	Elsevier	5	5.51	70	3414	Geology (Q1); Geotechnical Engineering and Engineering Geology (Q1); Safety Research (Q1)
4	Sustainability (Switzerland)	Multidisciplinary Digital Publishing Institute (MDPI)	5	4.39	136	7613	Geography, Planning and Development (Q1); Computer Networks and Communications (Q2); Energy Engineering and Power Technology (Q2); Environmental Science (miscellaneous) (Q2); Hardware and Architecture (Q2); Management, Monitoring, Policy and Law (Q2); Renewable Energy, Sustainability and the Environment (Q2)
5	International Review of Administrative Sciences	SAGE	4	3.31	65	4259	Public Administration (Q1); Sociology and Political Science (Q1)

Table 3. Top 10 most productive authors on local communities and crisis situations

No.	Name of Author	Country of Author	Number of Publication	Number of Publications as the First Author
1	Park	South Korea	3	1
2	Enander	Sweden	2	2
3	Sparf	Norway	2	2
4	Avery	United States	2	1
5	Jang	United States	2	1
6	Keyes	United States	2	1
7	Leone	France	2	1
8	Vinet	France	2	1
9	Graham	United States	2	0
10	Shi	United States	2	0

Figure 3 shows the top 5 authors productions over time.

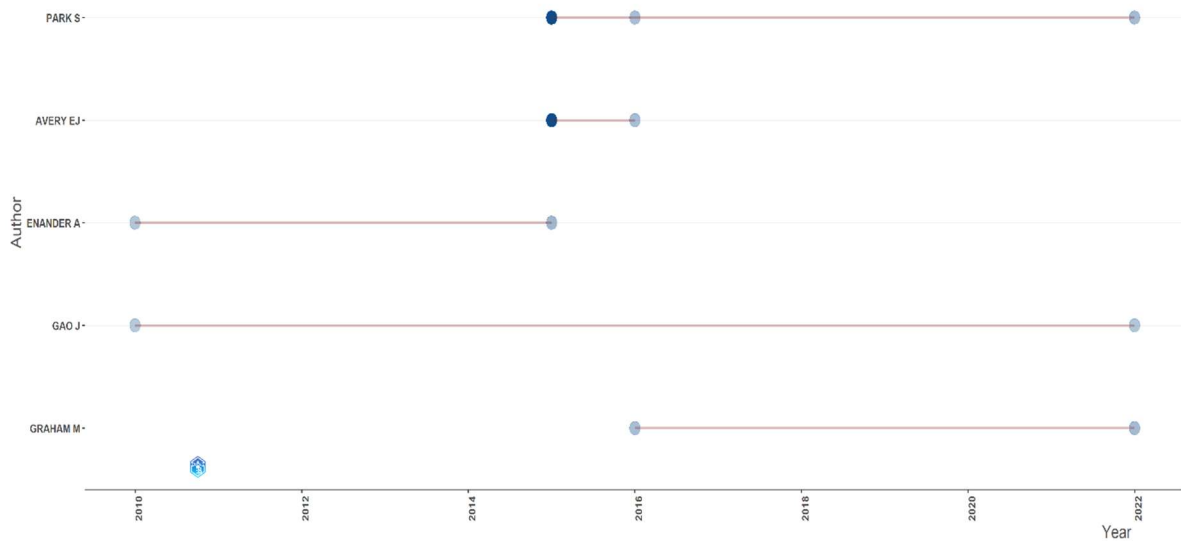


Figure 3. Top 5 authors productions over time (created with Biblioshiny)

3.4 Countries, Institutions, Organizations

The analysis determined the number of publications by country (see Figure 4). The country with the largest number of publications on the subject under study is the United States - 24 publications and 15.58% of the total number of articles analysed. China is in second place with 17 articles (11.03%). This is followed by the United Kingdom - 15 articles (9.74%), Sweden - 13 articles (8.44%), Germany and Poland - 10 articles (6.49%), the Netherlands - 8 articles (5.84%), France and Italy - 8 articles (5.19%), and Australia - 5 articles (4.55%).

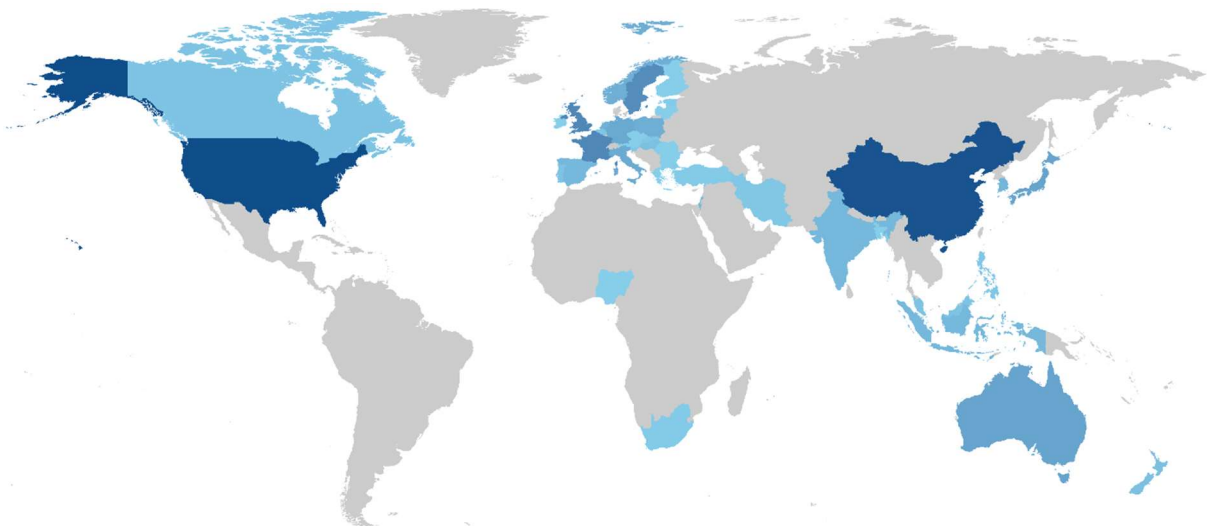


Figure 4. Countries' Scientific Production in research* (created with Biblioshiny)

*The intensity and saturation of the colour reflects the higher number of publications from this country.

Figure 5 shows the collaboration between the different countries that collaborate on articles in the research area. There are 4 clusters of collaborating countries.

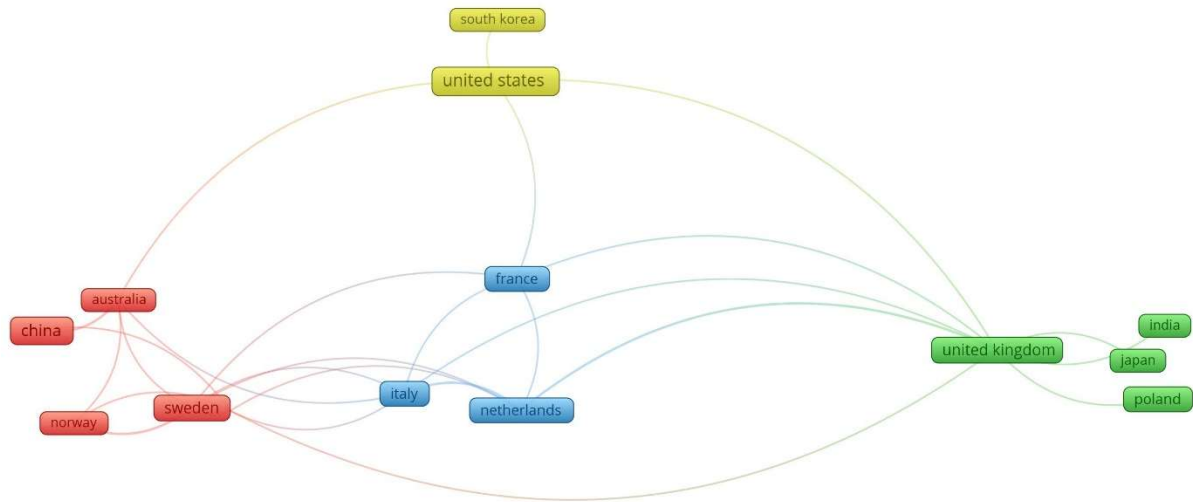


Figure 5. Cooperation between countries in research on local communities and crisis situations (created using VOSviewer)

Figure 6 shows an analysis of corresponding author's countries.

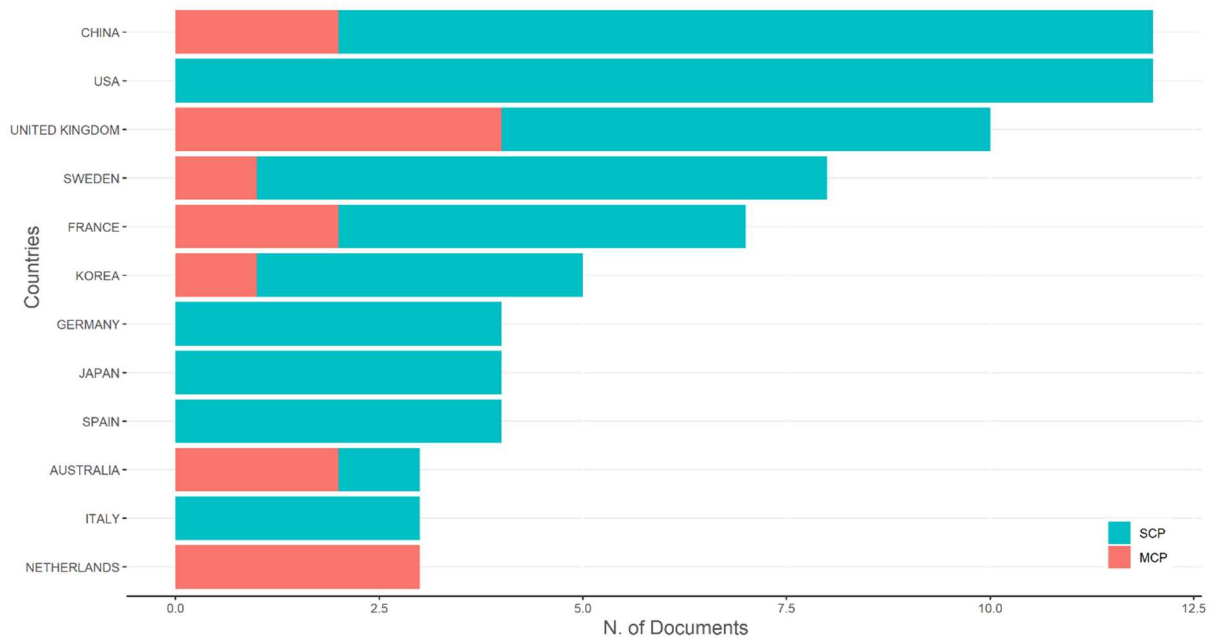


Figure 6. Analysis of corresponding author's countries* (created with Biblioshiny)
* SCP - Single Country Publications, MCP - Multiple Country Publications

The universities with the largest number of articles were also studied (see Table 4). There are 8 institutions in the top 10 with 3 publications on the subject matter under study. The

number of articles published by the top 10 universities and institutions is 18.2% of the total number of articles studied. The remaining 81.8% are publications with one (58%) and two articles per institution.

Table 4. Top 10 most productive institutions on local communities and crisis situations

No.	Affiliation	Country	Articles
1	Częstochowa University Of Technology	Poland	3
2	University of Central Oklahoma	United States	3
3	Renmin University of China	China	3
4	The University of Tennessee	United States	3
5	Université Paris 1 Panthéon-Sorbonne	France	3
6	Waseda University	Japan	3
7	Lunds Universitet	Sweden	3
8	Mid Sweden University	Sweden	3
9	Norwegian Centre for Transport Research	Norway	2
10	Karlstads Universitet	Sweden	2

Table 5 shows the top 10 institutions that funded the most publications on the topics studied. The countries with the highest number of institutions sponsoring research related to local communities and crises are Korea with 2 institutions (8 articles), Taiwan (4 articles) and China (4 articles).

Table 5. Breakdown of articles by institutions that funded publications

No.	Funding	Country	Articles
1	Ministry of Education	Korea	4
2	Ministry of Science and Technology	Taiwan	4
3	National Natural Science Foundation	China	4
4	National Research Foundation	Korea	4
5	Fundação para a Ciência e a Tecnologia	Portugal	2
6	Horizon 2020 Framework Programme	EU	2
7	Japan Society for the Promotion of Science	Japan	2
8	Academic Senate, University of California	United States	1
9	Agentúra na Podporu Výskumu a Vývoja	Slovakia	1
10	Besöksnärings- och forsknings- och utvecklingsfond	Sweden	1

3.5 Analysis of Subject Categories

The analysis revealed thematic categories in the articles on the research topic (Figure 7). The results show that the largest categories are: Social Sciences (80%), Business, Management and Accounting (28%), and Environmental Science (24%).

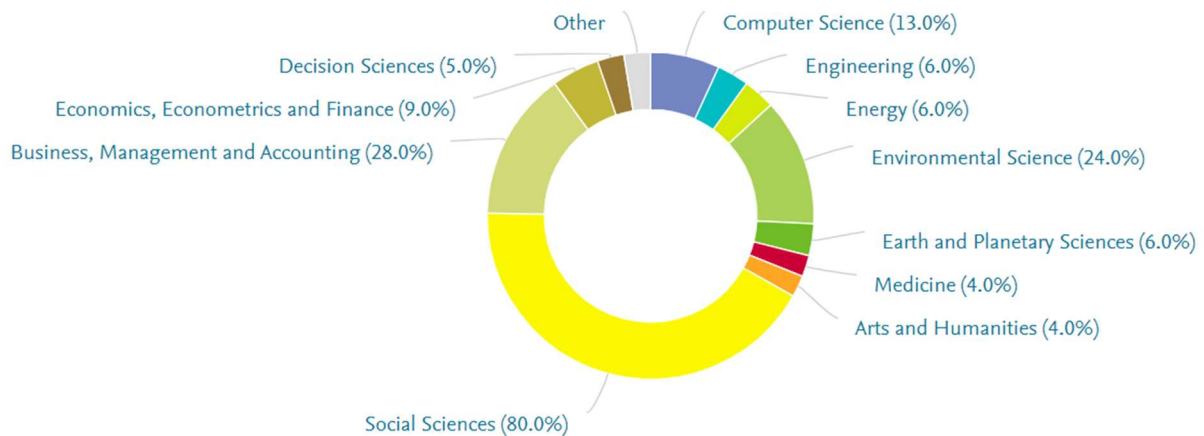


Figure 7. Thematic categories by articles on local communities and crisis situations (Scopus DataBase)

3.6 Analysis of Citations

The most cited articles are presented in Table 6. The table also contains information on FWCI, country, institution, journal title, and SciVal Topic. The article with the highest number of citations is Graham et al. (2015) on "The role of social media in local government crisis communications". This article has 196 citations.

Table 6. Top 10 publications with the highest number of citations on local communities and crisis situations

No.	Authors Title	Times Cited	FWCI	Country	Journal	SciVal Topic
1	Graham et al. (2015) The role of social media in local government crisis communications	196	6.87	United States	Public Relations Review	Image Repair; Social Media; Organizational Crisis
2	Panagiotopoulos et al. (2016) Social media in emergency management: Twitter as a tool for communicating risks to the public	176	4.67	United Kingdom	Technological Forecasting and Social Change	Satellite Networks; Disasters; Wireless Network
3	Zafra-Gómez et al. (2013) Reducing costs in times of crisis: Delivery forms in small and medium sized local governments' waste management services	111	4.78	Spain	Public Administration	Local Government; Waste Collection; Outsourcing
4	Kuran et al. (2020) Vulnerability and vulnerable groups from an intersectionality perspective	102	8.73	Norway	International Journal of Disaster Risk Reduction	Sexuality; Queering; Gay Tourism
5	Bellringer et al. (2011) Reasons for sustainability reporting by New Zealand local governments	76	2.00	New Zealand	Sustainability Accounting, Management	Corporate Social Responsibility; Sustainability Reporting;

					and Policy Journal	Global Reporting Initiative
6	Elliott (2009) The failure of organizational learning from crisis - A matter of life and death?	71	2.46	United Kingdom	Journal of Contingencies and Crisis Management	Crisis Management; Terrorist Attack; Organizational Effectiveness
7	Monstadt and Schmidt (2019) Urban resilience in the making? The governance of critical infrastructures in German cities	57	4.41	Netherlands	Urban Studies	Biopolitics; Governmentality; Disaster
8	Economy (2014) Environmental Governance in China: State Control to Crisis Management	32	0.80	United States	Daedalus	Bilateral Relations; International System; China
9	Padeiro et al. (2021) Local governments' use of social media during the COVID-19 pandemic: The case of Portugal	30	7.17	Portugal	Government Information Quarterly	Open Government; Transparency; E-Governance
10	Mao (2021) Political institutions, state capacity, and crisis management: A comparison of China and South Korea	30	6.21	Hong Kong	International Political Science Review	Cadres; China; Central Committee

Analysing the SciVal Topic, it was determined that the main ones are: Disaster, Government. In terms of countries, the most cited authors are from the United States and the United Kingdom.

The analysis of Co-citation by Cited authors makes it possible to identify 3 clusters. The results of the analysis are shown in Figure 8.

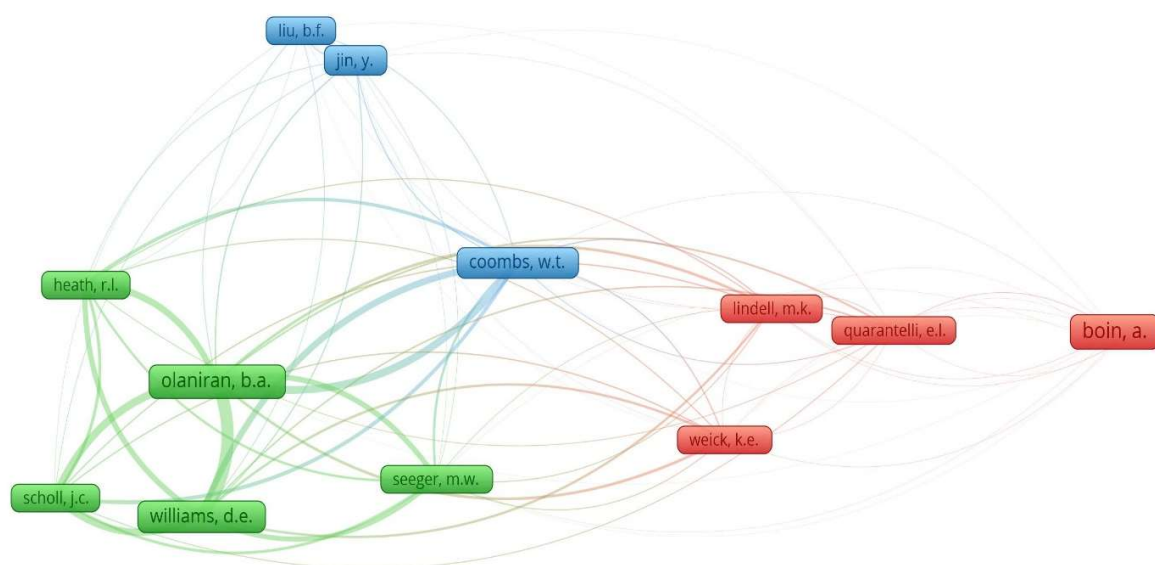


Figure 8. Analysis of the most frequent co-citations in research (created using VOSviewer)

Certain clusters of references were identified as a result of the analysis of the articles "Citation by Source" (Figure 9).

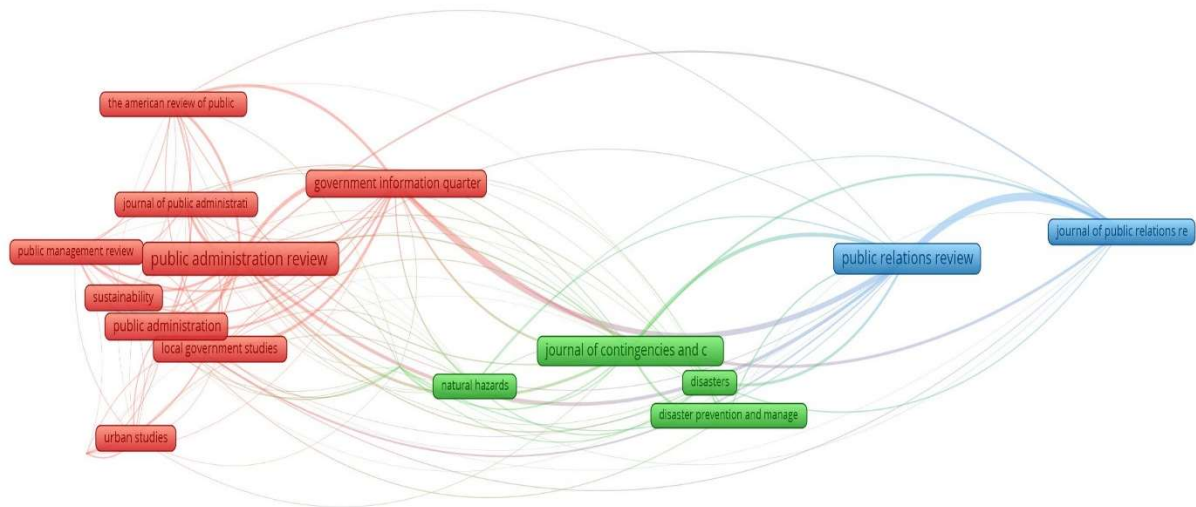


Figure 9. Analysis of Co-citation by Cited sources (created using VOSviewer)

3.7 Analysis of Terms

VOSviewer was used to obtain the main terms used in the articles under study. Figure 10 shows the 3 main clusters that were obtained as a result of the study. The first cluster is formed by such keywords as Local government, Covid-19, Pandemic, Government and others. The second cluster – Crisis management, Disaster management, Risk management and others. And the third cluster consists of Governance approach, Decision making, Crisis and others.

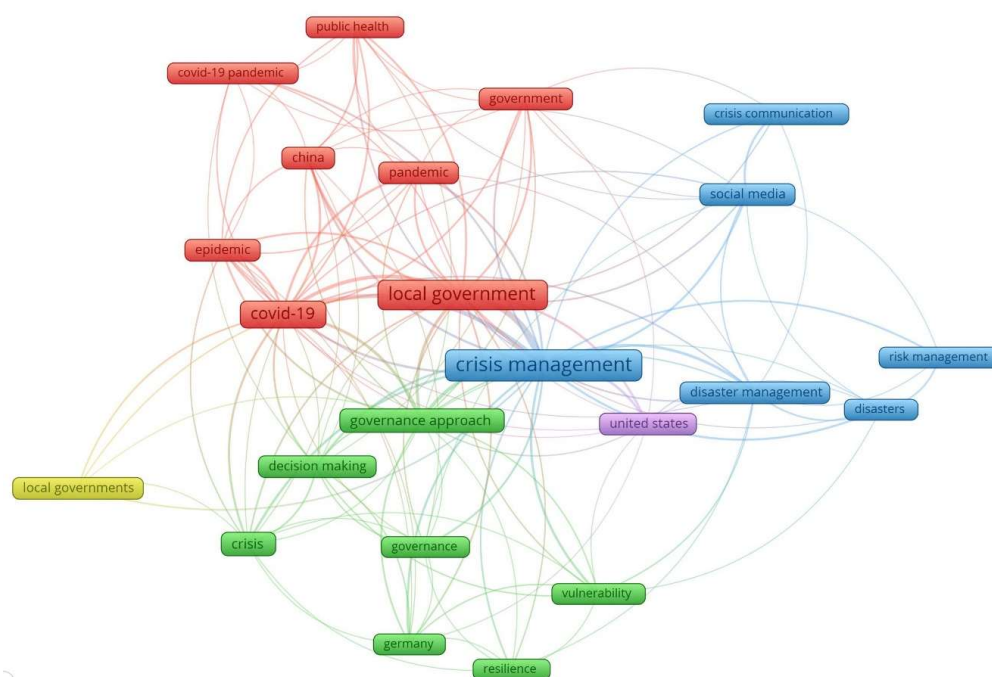
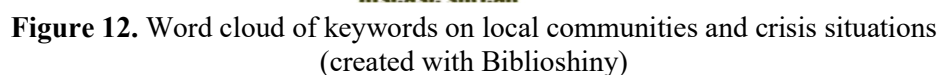


Figure 10. Visualization of all keyword on local communities and crisis situations (created with VOSviewer)

Topic	Count	Percentage
local government	36	14%
crisis management	52	20%
covid-19	21	8%
governance approach	15	6%
china	8	3%
epidemic	8	3%
government	6	2%
disasters	5	2%
social media	5	2%
vulnerability	5	2%
disaster management	7	3%
disaster planning	4	2%
state role	4	2%
urban policy	4	2%
civil defense	3	1%
communication	3	1%
germany	4	2%
emergency management	3	1%
human	3	1%
humans	3	1%
intergovernmental relations	3	1%
knowledge management	3	1%
united states	7	3%
empirical analysis	3	1%
leadership	3	1%
public service	3	1%
risk management	3	1%
strategic approach	3	1%
public health	4	2%
france	3	1%
local authorities	3	1%
united kingdom	3	1%
accessability	2	1%
accountability	2	1%
decision making	6	2%
risk assessment	4	2%
health policy	3	1%
pandemic	3	1%
urban area	3	1%
behavioral response	2	1%

Figure 12 shows the keyword cloud of the analyzed publications.



4. DISCUSSION

Nissen and Cretney (2022) investigated the peculiarities of organising the activities of local governments during crises related to natural hazards. Kawashima (2023) highlight the diversity in civil protection management among local governments during a disaster. Tinoco (2023) show how to address perceived institutional failure during preliminary crisis response measures.

Dalloul et al. (2023) identify the need for a holistic view of the role of accounting information systems in financial crisis management and prove that the effectiveness of financial crisis management is mainly related to the implementation of successful information systems. Möller (2021) examines the process of public financialization, tracing the emergence and consolidation of municipal debt management policies, including the use of interest rate derivatives.

Cotterell et al. (2022) note the importance of a proactive response by the government and local community to overcome a natural disaster and propose learning activities that encourage critical thinking. Eriksson et al. (2015) presents a framework for preparedness planning based on four areas related to learning: prerequisites for preparedness planning, who should be involved, what should be learned, and how the work should be structured. Lenart-Gansiniec (2020) argues that crowdsourcing affects the organisational learning of local governments that use it to stimulate citizen engagement in information generation, service cooperation, and the development of solutions to crisis situations.

With regard to local communities facing crises, the discussion focuses on analysing and understanding the tools available to mitigate the impact of crises. The analysis highlights the multifaceted nature of responses to crises in local communities and the urgent need for comprehensive research to develop effective strategies.

Thus, based on the research, the following main problems faced by local communities in the context of crisis management were identified:

1) Lack of resilience and preparedness for crisis situations. Many local communities lack sufficient resilience and crisis preparedness, which reduces their ability to respond effectively to crises.

2) Insufficient number and inefficiency of communication channels. The lack of strong social networks and effective communication channels leads to difficulties in coordination and interaction during crises.

3) Lack of proactive planning mechanisms. Local communities often do not have proactive emergency planning mechanisms in place, making it difficult to respond quickly to crises.

4) Insufficient use of technological advances. The use of digital tools and technologies to enhance crisis preparedness and response remains insufficient.

5) Insufficient funding for crisis management. Local communities often face a lack of financial resources for effective crisis management, which limits their ability to implement the necessary measures.

The problems identified through the literature review were confirmed during the project implementation, in particular through interaction with experts and the involvement of key stakeholders, such as representatives of local communities and policy makers. In this regard, we propose to identify specific areas for addressing the identified problems.

In view of the challenges faced by local communities in crisis situations, it is proposed to develop and implement a comprehensive Strategy for enhancing their resilience and preparedness. This strategy should be based on the following areas that will contribute to effective emergency response and minimize risks for the community:

1) Developing and implementing programs to increase the resilience and preparedness of local communities to crisis situations. This should include education, training, and simulation exercises.

2) Establishing and maintaining strong social networks and effective communication channels to ensure better coordination and interaction during crises.

3) Developing and implementing proactive contingency planning mechanisms, including detailed action plans and contingency scenarios.

4) Active use of digital tools, such as social media platforms, geospatial technologies and crisis mapping applications. This will help to improve situational awareness and efficient allocation of resources during crises.

5) Develop strategies for attracting financial resources, including public and private investments, grants and other forms of funding. As well as creating emergency reserve funds that can be used for rapid response to and recovery from crises.

The proposed recommendations should be incorporated into regional development programs and sustainable community development programs. This includes improving communication mechanisms between authorities, community representatives, and other stakeholders to ensure better coordination and interaction. Focusing on increasing the resilience and preparedness of local communities, as well as enhancing their access to financial and technological resources, can significantly improve the effectiveness of crisis management. Practical implementation of these measures could include the development of training programs tailored to local needs, the creation of emergency funds, and the integration of innovative digital tools into local governance practices. Such efforts will not only help to mitigate the identified gaps, but will also contribute to the long-term sustainable development and resilience of communities. These proposals are of particular value given the current geopolitical uncertainty, as they increase the level of resilience of communities to risk and uncertainty, and will also increase the level of autonomy of communities, which will also have a positive impact on their resilience.

5. CONCLUSIONS

This study analysed crisis situations in local communities and identified various aspects of their impact and responses. The results of the study highlight the importance of scientific analysis for effective crisis management at the local community level. In particular, the study demonstrates that the readiness and implementation of crisis management plans are crucial for successful crisis response and recovery.

The proposed improvement of the strategy for enhancing the resilience of local communities to crisis situations is a significant step towards strengthening their preparedness for emergencies and ensuring effective response to them. The implementation of the outlined measures will not only mitigate the consequences of crisis situations, but will also contribute to increasing the resilience of communities to future challenges, improving their ability to adapt and recover.

Limitations include the fact that this study is based on a limited data source, namely the Scopus database, which may affect its overall representativeness and generalisability. It is also worth noting the limited timeframe of the study, which may limit the depth of analysis and understanding of the dynamics of crisis situations in local communities. These limitations will be addressed in future research by incorporating data from other databases and extending the study period to provide a broader perspective and deeper insights.

Future research could explore the role of technological innovations in ensuring and enhancing crisis preparedness and response in local communities. Methodologically, this could involve the use of systems analysis, network modelling or participatory research to assess the effectiveness and integration of such technologies into local crisis management systems. Further research could also focus on the development and implementation of strategies for sustainable development and recovery of local communities after crises, including adaptation mechanisms and support programmes. Also, the integration of community-based approaches into crisis management strategies should be explored to assess their impact on local empowerment and long-term sustainability.

Thus, this study emphasises the importance of scientific analysis of crisis situations in local communities to develop strategies for effective crisis response and resilience building. In general, the results of the study can be useful for academics, government agencies, NGOs and practitioners in the field of crisis management and community development.

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CONFLICTS OF INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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