

Integrating Disaster Risk Management and Archival Frameworks for Safeguarding Citizens' Vital Records

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Notes

Submitted: 08-01-2024

1st Revised: 29-01-2024

2nd Revised: 11-08-2024

Accepted: 19-11-2024

How to cite: Martino. (2024).

Integrating Disaster Risk Management and Archival Frameworks for Safeguarding Citizens' Vital Records. *Khizanah Al-Hikmah : Jurnal Ilmu Perpustakaan, Informasi, Dan Kearsipan*, 12(2). Retrieved from <https://journal.uin-alauddin.ac.id/index.php/khizanah-al-hikmah/article/view/44477>

DOI: [10.24252/kah.v12i2a6](https://doi.org/10.24252/kah.v12i2a6)

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ABSTRACT

Citizen's vital records contain information value, proof of important life events, and legal and binding ownership of assets. Disaster risk management rarely calculates damage and loss of vital records due to disasters. This article presents a comprehensive review of records protection practices designed to ensure the preservation and accessibility of citizens' vital records. This study provides a comprehensive review of practices for protecting vital records to ensure their preservation and accessibility. Using a qualitative methodology, the research examines the integration of disaster risk management and records management within the framework of the Records Continuum concept. The study identifies critical processes in protecting vital records, including prevention, mitigation, response, and recovery. It highlights the need for a tailored approach at the individual level, considering community awareness, infrastructure availability, and resource limitations. Factors such as susceptibility to natural disasters, inadequate infrastructure, low public awareness, and financial constraints exacerbate the risks to these records. Consequently, protection strategies must account for the socio-economic, physical, and cultural contexts of the affected populations. The findings emphasize that safeguarding vital records is a shared responsibility, involving not only governments and archival institutions but also active community participation. By integrating disaster risk management principles with archival frameworks, this research offers actionable insights for enhancing record preservation practices globally.

Keywords: Archival management; records preservation

1. INTRODUCTION

Over the past few decades, the frequency of medium and large-scale disasters worldwide has been reported to be on the rise. Between 1970 and 2000, the average number of such disasters was approximately 90 to 100 events per year (UNDRR, 2022). This number has increased

significantly between 2001 and 2020, with the reported occurrence of disasters rising to 350 to 500 events annually (UNDRR, 2022). This surge includes various geophysical disasters such as earthquakes, tsunamis, and volcanic eruptions, as well as climate-and-weather related disasters, and biological hazards including crop pests and epidemics (CRED, 2019).

The escalating risk of disasters highlights the complex interplay of numerous risk factors and hazards. These include demographic, ecological, and socioeconomic changes, coupled with inherent uncertainties that have created an unprecedented context for disaster impacts. Recent disasters have had dramatic effects on millions of people, resulting in loss of life, infrastructure damage, widening inequality and poverty, and substantial material losses. Population growth and the expansion of settlements have placed more people and infrastructure in harm's way, while the frequency and intensity of climate-related hazards have increased due to climate change (IPCC, 2018; Otto et al., 2018).

Disasters pose significant threats of damage and destruction to human life, material assets, and the environment. It is impossible to completely disregard the possibility of a disaster as an external occurrence beyond human influence. It is essential to acknowledge that disaster risk is not a singular concept but rather a combination of two interconnected factors: disaster threat and vulnerability (Blaikie et al., 2004). Disaster risk is formed when the possibility of disaster combines with vulnerability (Cardona et al., 2012). Hence, mitigating disaster risk necessitates a range of endeavors to diminish prospective losses through implementing efficient disaster risk management strategies and enhancing the ability to handle catastrophe threats.

Losses are a measure of the damage and destruction resulting from a disaster (UNDRR, 2015). These losses can be classified as either direct or indirect. Direct losses refer to the immediate and tangible impacts of damage or destruction that can be measured directly (UNDRR, 2015). This category includes fatalities, injuries, damage to infrastructure, and losses of assets and natural resources affected by the disaster. Direct losses can be promptly identified and directly linked to the disaster event. In contrast, indirect losses are consequences and impacts that are not immediately identifiable, are challenging to quantify directly, but can be experienced broadly and over the long term. Examples include social, economic, psychological, health, educational, cultural, and environmental impacts. Recognizing these types of losses is crucial for effective disaster risk management.

Indonesia, with its geographic and geological aspects, is a country with a high level of disaster risk. Historically and actually, disasters in Indonesia occur with high frequency every year. As an illustration, in 2022, there will be 3,544 disaster events in Indonesia (BNPB, 2022). This includes 1,531 flood disasters, 1,068 extreme weather events, 634 landslides, 252 forest and land fires, and 28 earthquakes, as well as other events such as extreme waves, droughts, and volcanic eruptions (BNPB, 2022). This high level of disaster susceptibility means that disaster risk is a reality that Indonesian society must confront with various threats of loss.

Among the losses frequently overlooked in disaster management in Indonesia despite their significant impact are those resulting from the destruction, loss, or injury of vital records belonging to citizens due to disasters. Citizen vital records, under citizens' ownership, possess both informational and evidentiary value concerning demographics, civil registration status, resource and asset ownership rights, educational standing, and administrative evidence of asset ownership that is tally-separated, legally binding, and evidentiary. Individuals' Vital records encompass many documents, such as documents about the population, civil registration, asset ownership, education certification, licensing, tax, and notarial deeds.

The oversight and management of record damage is a critical aspect of disaster management that is frequently disregarded. Disaster management practices have not consistently included efforts to protect and preserve records, even though they have a significant impact. Physical identification of damage or loss of citizens' vital records resulting from disasters is possible. Nevertheless, disaster risk management rarely performs calculation analysis to determine the quantity, nature, and derivative effects of such damage or loss. The insufficient consideration and measurement of archival damage and a general lack of awareness result in its infrequent inclusion in inventories and analyses of disaster-related losses. In archival management, identifying pre-disaster and post-disaster losses is, in fact, one of the initial stages in risk assessment and the development of disaster management measures.

The consequences of losing vital records in a disaster extend beyond administrative significance. These records also possess evidentiary value and ownership security, both impacting the community's ability to recover and susceptibility to further difficulties. Citizen records serve as fundamental prerequisites that citizens must possess to obtain access to a range of necessities associated with their rights and responsibilities. Land certificates and other evidence of resource ownership are of the utmost importance in ensuring land ownership rights throughout the disaster recovery and reconstruction phase. Derivative consequences may arise in the event of a loss of vital records for citizens. These may include complications regarding the legal status of the residents, hindrances in accessing public services and government programs, cancellation of insurance coverage, disputes over asset ownership and inheritance, and conflicts over resources following a relocation.

Evidence that protects the property rights of citizens is crucial in post-disaster situations. The presented evidence will demonstrate the transparent and equitable enforcement of citizens' rights to resources, thereby promoting disaster resilience (Brown et al., 2006). Numerous governments encounter the issue of ownership rights and access to services due to the destruction of records that can provide such assurances as one of their post-disaster challenges. Several studies indicate that the ruin of citizens' vital records increases their vulnerability in the aftermath of a disaster. The devastation leads to heightened ambiguity regarding the ownership rights of resources and assets after the catastrophe (Barnes & Riverstone, 2009). Land larceny, resource disputes, and inheritance rights disputes can result from losing official ownership documents (Leckie, 2009; Williams, 2006).

Society requires records providing evidence of ownership and access rights to safeguard their well-being and actively engage in diverse service and development initiatives. Furthermore, it is a crucial prerequisite for individuals' uninterrupted sustenance and existence. Ownership rights refer to establishing and validating rights and responsibilities associated with anything regarded as valuable (von Benda-Beckmann et al., 2006). Therefore, damage to vital records such as land certificates, population and civil registration documents, insurance claims, tax histories, and asset ownership letters can cause conflicting claims, triggering conflict and suffering (Brown et al., 2006).

The critical role of citizens' vital records in ensuring ownership rights and access to assets, resources, and public services, especially in the context of disaster resilience, remains incompletely comprehended. The need to enhance the community's ability to protect access and property rights and effectively integrate them into risk mitigation, response, and recovery actions is becoming more prominent (Brown et al., 2006). With the rising frequency and intensity of disaster threats, there is an urgent need to bolster collective capacity to protect these records. Integrating the protection of vital records with disaster risk reduction strategies is essential for creating a resilient and responsive system.

Literature specifically addressing the impact of disasters on records, citizens' vital records, remains sparse. This presents an opportunity to integrate disaster risk management with records management, a concept that has not been extensively explored. Globally, there is a need to develop more robust and integrated protection strategies. This research aims to address this gap by exploring practices and stages of protecting citizens' vital records within the disaster risk management cycle. The study's contributions are expected to enhance interdisciplinary understanding of how records management can become an integral part of disaster risk reduction strategies. The findings could assist countries worldwide in formulating more comprehensive policies that safeguard vital records and, ultimately, strengthen global community resilience against various forms of disaster.

2. METHODS

This research applied descriptive content analysis research to comprehensively explore the practice of protecting citizens' vital records within a framework that integrates records management and disaster risk management. Content analysis in descriptive research was a systematic and objective approach used to analyze and interpret textual data (Assaroudi et al., 2018). The analysis aimed to identify the text's stages, patterns, themes, and relationships to enhance understanding of vital records protection practices within the integrated framework.

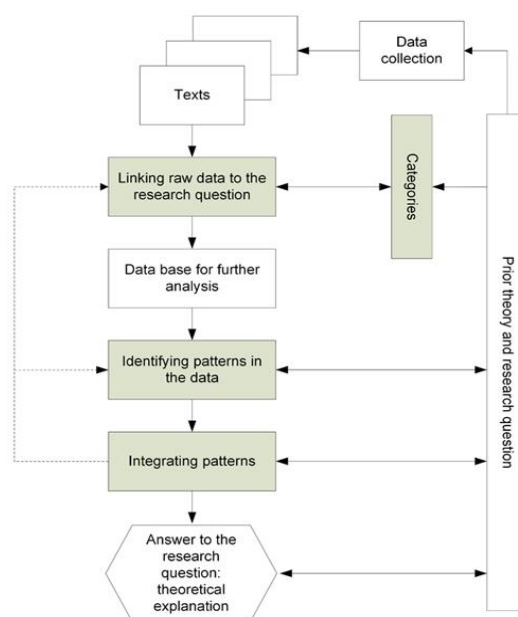


Figure 1. Process flow of a content analysis (Mayring & Fenzl, 2014)

There were two types of literature serve as data sources for this research. Firstly, policy documents related to vital records protection, records management, and disaster risk management were consulted. Policy documents at both global and national levels have been used.

Table 1. Literature data source policy documents

A. Disaster Risk Management	
1.	Global Framework
	<ul style="list-style-type: none"> • The Sendai Framework for Disaster Risk Reduction 2015–2030 • ASEAN Framework on Anticipatory Action in Disaster Management

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2. National Policy
 - Law of the Republic of Indonesia Number 24/2007 concerning Disaster Management
 - Regulation of the National Disaster Management Agency 10/2008 concerning Emergency Response
 - Regulation of the National Disaster Management Agency 6/2017 concerning the Implementation of Rehabilitation and Reconstruction
 - Regulation of the National Disaster Management Agency 11/2014 concerning Community Participation in the Implementation of Disaster Management
 - Regulation of the National Disaster Management Agency 2/2012 concerning General Guidelines for Risk Assessment
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B. Records Management

1. Global Standard
 - ISO 18128:2024 Information and documentation — Records risks — Risk assessment for records management
 - ISO 15489-1:2016 Information and documentation - Records management
 2. National Policy
 - Law of the Republic of Indonesia Number 43/2009 concerning Archives
 - Regulation of the Indonesian National Archives Agency 9/2018 concerning Guidelines for the Maintenance of Dynamic Archives
 - Regulation of the Indonesian National Archives Agency 6/2005 concerning Guidelines for the Protection, Security, and Rescue of Vital State Documents/Archives
 - Regulation of the Indonesian National Archives Agency 23/2015 concerning the Protection and Rescue of Archives from Disasters
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The second data source was Scopus-indexed scientific journal articles related to the topic of vital records protection and disaster risk management context published in the last decade. Data collection involved the use of a search engine with specific keywords such as "vital records"; "records management"; "records protection"; "disaster management" through the *Publish or Perish* software program. This platform was developed by Anne-Wil Harzing, a professor in International Management at Middlesex University, London and visiting professor in International Management at Tilburg University. *Publish or Perish* is a software program that retrieves and analyzes academic citations. It uses a variety of data sources to obtain the raw citations, then analyzes these and presents a range of citation metrics, including the number of papers, total citations and the h-index.

Descriptive data analysis unfolds through organized stages, including data organization, theme development, the data interpretation process, data validation, and the analysis write-up.

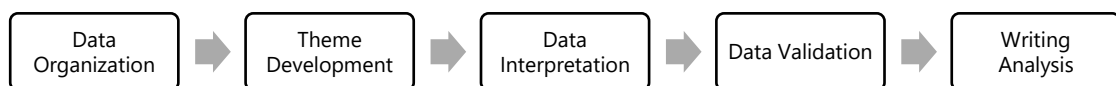


Figure 2. Descriptive data analysis process

Data organization was carried out by arranging and categorizing the collected data. Then, theme development was conducted to identify the main patterns and trends within the data. Once the key themes were identified, researchers proceed with data interpretation to understand the meaning of these findings. Sequently, data validation was performed to

ensure that the analysis results were accurate and reliable. Finally, researchers compiled these findings into a clear and structured analysis, making it easy for readers to understand. This comprehensive method ensured a nuanced exploration of the multifaceted aspects of protecting citizens' vital records in the context of integrated records and disaster risk management.

3. RESULTS AND DISCUSSION

The meaning of vital records in Indonesia is generally related to records with use values that determine the sustainability of an organization. Vital records play a crucial role in administrative tasks and have a strategic position due to the significant impact of the valuable information they contain on the organization's existence, rights, and interests. According to Indonesian Law No. 43 year 2009 concerning Archival, vital records are essential for the ongoing operations of the organization that created them. Due to their intrinsic significance, vital records need special attention in preservation and maintenance to prevent the potential damage, loss, or destruction caused by natural catastrophes or human activities. Records are records of events in various forms and media; besides being created through transactions in an organizational context, they also include those created and received by individuals. Therefore, vital records also exist in the context of individuals in their position as residents and citizens. However, insight and narrative about citizens' vital records and efforts to protect them are still very limited.

Based on the Record Continuum concept in Archival Management, citizen vital records are records with sustainable value identical in use for transactional, evidentiary, and memory purposes for individual citizens (Flynn, 2001; Upward, 2000). Citizen vital records are created from accountable transactional actions and produce reliable evidence of these actions. This transactional action involves a state entity represented by a government institution or public organization with individual citizens as part of implementing the rights and obligations of citizens in the context of carrying out social, national, and state life (McKemmish, 2016). The provision of public services by the government and public organizations involves recording every activity as part of the business process within the organization. Individuals who access public services by fulfilling a series of administrative requirements will receive the final results of the service in the form of legal and legally binding documents. Some documents resulting from this process are categorized as citizens' vital records because of the valuable value of the information and evidence contained therein.

Various public services serve as transaction platforms for governments or organizations that generate vital citizen records. These services encompass population administration, civil registration, licensing, health, education, land, and notary services. Individuals utilizing this service will conduct service transactions by meeting the requisite criteria. The government or public institution will receive and manage these transaction records as evidence of transactions that hold administrative significance in creating records. This public service will produce records that will be delivered to citizens. As the final result of services provided by government agencies or public organizations that have a vital record-keeping role for citizens, several products are inventoried.

Table 2. Citizen vital records production by public services

Types of Public Services	The Final Product Service	Characteristics of Value for Citizens
Population Administration	Resident Identity Card, Family Card, Child Identity Card, Resident Certificate	Administrative
Civil Registration	Birth Certificate, Death Certificate, Marriage Certificate, Divorce Certificate, Child Acknowledgment Certificate	Proof
Licensing	Building Permit, Business Permit, Health Practice Permit	Legality
Health	Medical records	Proof
Education	Education Certificate	Legality
Land	Land Certificate, Heir Certificate	Legality
Notary	Letter of Agreement, Letter of Sale and Purchase, Will, Statement of Inheritance Rights, Deed of Business Establishment.	Legality
Police	Vehicle Registration Certificate, Proof of Motor Vehicle Ownership	Proof
Financial Services	Certificate of Deposit, Letter of Credit, Bank Guarantee, Collection, Pension Fund Documents, Insurance Policy	Legality

The final products of public services, as described in Table 2, are received and become the property of individuals, which are vital records whose maintenance is the individual's responsibility. The reliability, authenticity, and integrity of vital records must be guaranteed so their helpful value can still be used according to their intended purpose. This avoids the risk of loss, damage, and destruction due to natural or human-caused disasters. So, an integrated approach is needed to manage vital records in a recordkeeping system that can capture, manage, and maintain their helpful value. However, the question arises of how to guarantee a recordkeeping system at the individual level. At the same time, record management can only be applied to record creators at the organizational level. If it is possible to formulate a specific vital records program at the organizational level, then managing vital records at the personal level requires a different approach.

Vital records protection encompasses a range of actions undertaken to maintain, secure, protect, and recover vital records from damage, loss, or destruction, physically and in terms of information. Designing a strategy to protect an individual's vital records requires considering several things. First, managing records at an individual level cannot be equated with implementing a recordkeeping system, which organizations generally carry out. Even though both are classified as record creators, they have different fundamental interests, functions, objectives, instruments, facilities, and resources. Second, people's insight, skills, and awareness as recordkeepers of individual vital records are still very limited. Third, the threat of disaster increases the risk of records being damaged, lost, and destroyed, resulting in the need to integrate efforts to protect vital records with disaster risk management strategies.

Disaster risk to records can cause various forms of damage according to the type of disaster. For this reason, defining what forms of risk may impact records when a disaster occurs is essential. This definition is valuable for formulating records management practices that can be applied to protecting vital records; it is also essential for detailing the capacity strengthening needed to minimize disaster risks.

Table 3. Disaster identification, damage risk, protection efforts, and vulnerability

Element	Description
Disaster Type	Natural disasters, including earthquakes, floods, tsunamis, volcanic eruptions, landslides, hurricanes, storms, and other disasters caused by natural factors. Human-made disasters, including fires, chemical spills, sabotage, war, pest attacks, theft, and other disasters caused by human negligence or intentional factors. Technological failures, including hardware malfunctions, software glitches, cyberattacks, and others
Risk of Record Damage	Damage to physical records that cause the information and valuable value to be partially lost, For example, torn, dirty, or wet. Damage to physical records that cause the information and valuable value contained to be lost entirely, such as charred, melted, lost, or destroyed.
Protection Efforts	Prevention and mitigation, including identification, storage, protection with specific equipment, protection with specific techniques, and digitation. Response includes identifying records affected by disaster, evacuation of records, rescue, and emergency storage. Recovery includes damage identification, recovery priority, cleaning, restoration, replication, and replacement.
Affecting vulnerabilities	<ol style="list-style-type: none"> 1. Dangerous living location 2. Dangerous residential building 3. Lack of awareness of records and record management 4. Minimal socialization of records protection efforts 5. Records services that have not yet reached the community 6. Resource limitations

The risks presented by natural disasters, human-caused disasters, or technical failures to records share a similar element, specifically the risk of physical damage to records. Various disasters can result in physical damage and the loss of valuable information and assets, such as tearing, soiling, dampening, and contamination. To an extreme degree, this harm can destroy physical and archival data, for instance, by charring, melting, loss, and destruction. This threat becomes significantly more perilous due to susceptibility factors such as dangerous residential areas, unsafe residential structures, limited visibility into records and maintenance, restricted availability of record services, and inadequate resources for protecting records.

Disaster risk management includes a series of actions taken before, during, and after a disaster to avoid disaster risk, reduce its impact, and recover losses (Carter, 2008). The contemporary disaster risk management cycle has several stages, including prevention, mitigation, response, and recovery (Khan et al., 2008; Nojavan et al., 2018). Within the framework of record management endeavors, crucial procedures exist for protecting key documents, including maintenance, media transfer, rescue, and restoration. These two management methods may be combined into a system for safeguarding individual vital records, allowing for their implementation in society. This notion can be incorporated as follows: Management of Protection for Citizens' Vital Records.

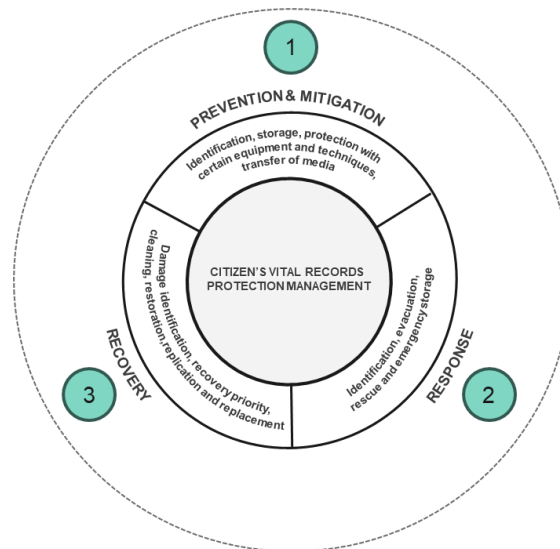


Figure 3. Citizen's vital records protection management

1) Prevention and Mitigation

An array of measures is implemented to avert disastrous events that possess the capacity to inflict harm or loss on crucial records, as well as strategies aimed at mitigating the adverse effects of such events on citizens' vital records. The preventive and mitigation phases involve the implementation of the following actions:

- a. Record identification is the process of knowing the types of personal vital records held within the family so that the number, type, and location of vital records are known. This step is integral to record protection and aims to provide a solid basis for organizing and storing records.
- b. Record storage is a process or activity that involves placing vital records in a particular storage place or storage system that can guarantee security, cleanliness, traceability, and access. The purpose of archival storage is to maintain the security, availability, and sustainability of documents or information for a certain period. The record storage process involves selecting appropriate storage space, document organization, implementing security policies, and maintaining the records' quality.
- c. Protection with specific equipment, namely the use of exceptional security equipment to limit access to vital records such as safes, monitoring cameras, alarms, and fire extinguishers.
- d. Protection with specific techniques, using specific techniques to protect physical and record information directly. The technique that can be used is lamination, which protects documents or records by coating them with a layer of plastic through a lamination process. This is done by applying a layer of plastic film to the record sheet on both sides and gluing it to the outer ring of the layer so that the record inside is found to be water, steam, or airtight. Lamination aims to provide physical protection to documents, preventing damage due to water, dust, dirt, or mechanical damage. It can also increase the document's resistance to changes in temperature and humidity.
- e. Media transfer refers to changing the format or storage media for records from traditional form to digital form. It involves moving information from physical documents,

such as paper, to a digital format that can be stored and accessed via a computer or information system. Archival media transfer involves scanning or taking images of physical records, indexing digital data to facilitate searching, and storing digital data in a record management system or database. This process often involves character recognition (OCR) technology to convert text in a document into searchable data.

Prevention and mitigation efforts are the responsibility of individuals. They can involve assistance from archival institutions to gain insight and knowledge about efforts to prevent and mitigate damage to vital records due to disasters.

2) Response

Disaster response refers to the actions and activities taken by governments, organizations, and communities after a disaster occurs to save, protect, and assist in recovering vital records. Disaster response covers various aspects, including evacuation, search and rescue, and recovery.

- a. Identification of records affected by disasters, namely systematic efforts to find, save, and restore records or documents that natural disasters or other emergencies may have negatively impacted. This process is essential to ensure the continuity of the information contained in the record. This is done by setting priorities in search and rescue based on the level of importance and damage the record may suffer.
- b. Record evacuation. Steps are taken to save and protect essential records or documents from damage or loss due to natural disasters or other emergencies. This evacuation aims to ensure the security and continuity of information in records, which may have historical, legal, or administrative value. This involves systematic search actions in the affected area to find and rescue records. This may involve moving storage materials, using special equipment, and good documentation.
- c. Emergency rescue and storage. Any records discovered should be clearly labeled and documented with pertinent information, including location of origin and extent of damage. Next, save the records carefully, using unique methods or equipment appropriate to the conditions. A safe and disaster-proof emergency storage area must be prepared temporarily.

3) Recovery

Post-disaster record recovery refers to efforts to recover and restore records that may have been affected or damaged due to a disaster. It includes a series of actions to ensure that vital information and physical records can be recovered, rehabilitated, repaired, or replaced by the issuance of new copies. The critical stages in the recovery process are explained as follows.

- a. Damage identification and evaluation process of damage that occurs to records, including the type of damage and the severity of the records affected by the disaster.
- b. Recovery priority sets priorities in record recovery based on the level of importance and user needs. This includes identifying critical files that must be recovered as quickly as possible.
- c. Cleaning and conservation are actions to clean records from damaging elements and potentially worsen the condition of damage to records, such as mud, water, embers, or dust. Followed by carrying out conservation measures to prevent further damage to the records

- d. Record restoration, a series of actions taken to restore damaged or damaged records, both physically and digitally, to their original condition or at least to a condition that can be reused; the goal of archival restoration is to maintain the integrity and authenticity of the information contained in the record. Provides a safe and controlled temporary storage place for records in the recovery process. Record restoration is done by applying unique archival restoration methods and involving experts.
- e. Replication or replacement If the record is very damaged and difficult to restore, even if it is destroyed or not found, then consideration may be given to making a new copy or new publication or replacing it with an existing copy.

Post-disaster record recovery involves collaboration between relevant stakeholders, including archival institutions, record restoration experts, and the government. The goal is to ensure that valuable information can be retained and reused after a disaster.

In addition to a series of efforts to protect vital records from the threat of damage due to disasters, it is essential to identify aspects of vulnerability that can increase the risk of disasters to records. Vulnerability can be formed by accumulating structural aspects, dynamic pressures, and unsafe conditions (Blaikie et al., 2004; Wisner, 2016). These unsafe conditions are composed of physical, socio-economic, and institutional aspects. Threats from physical environmental aspects include living space and the environment, which have increasingly reduced carrying capacity, and residential locations prone to disasters. This condition places communities at risk of disaster due to their reduced capacity to overcome and adapt to disaster hazards. This vulnerability can also be contributed to and exacerbated by socio-economic, social-ecological, political, and cultural factors. Aspects of vulnerability that influence efforts to protect citizens' vital records are as follows:

- 1) *Potential for Natural Disasters*. The location of a residence in an area prone to natural disasters such as earthquakes, floods, or volcanic eruptions can increase the risk of damage to vital records. Natural disasters can cause irreversible physical loss and the destruction of records.
- 2) *Insecure Infrastructure*. Buildings that do not meet safety standards can be an additional risk. Buildings that are fragile or cannot withstand shocks or external forces increase the likelihood of damage to vital records during a disaster or emergency.
- 3) *Lack of Awareness*. Lack of public understanding and awareness of the importance of vital records can result in a careless attitude towards archival protection. People who do not understand the value of information in records tend to ignore protective practices.
- 4) *Lack of Insight*. Minimal outreach regarding efforts to protect vital records can result in a lack of public participation in maintaining and protecting records. Education and outreach campaigns must be improved to increase public understanding and active participation.
- 5) *Limited Access*. The lack of archival services that reach the community can limit access to information and archival protection guidance. Unequal archival services can leave some communities without sufficient information to protect their records.
- 6) *Financial Limitations*. Limited financial resources can be a barrier to implementing effective record-protection measures. Investments in security infrastructure, personnel training, and records protection technology may not be accessible to all parties.

- 7) *Competition with Other Priorities.* Record protection may not be a top priority when society or government is more focused on day-to-day or pressing issues. Low priority can result in minimal resource allocation for archival protection.
- 8) *Disadvantages of Legal Guidelines.* The lack of clear regulations and law enforcement protecting vital records can leave gaps for non-compliance. Records protection requires a robust legal framework to ensure compliance and accountability.
- 9) *Lack of Emergency Planning.* The absence of proper emergency planning can increase vulnerability to losing vital records during a disaster. Poor risk management can make responding quickly and effectively to emergencies difficult.
- 10) *Lack of Community Involvement.* If the public is not involved in the decision-making process regarding record protection, the sustainability of these protection efforts could be threatened.

Community participation can strengthen protection efforts and ensure relevance to local needs. By understanding and addressing these aspects of vulnerability, vital records protection measures can be developed to deal with the various risks and threats that may arise more effectively.

4. CONCLUSION

Overall, the importance of vital records is not only limited to the organization's scope but also extends to the personal lives of individuals as residents and citizens. Despite this, awareness and efforts to protect citizens' vital records are still relatively limited. The Record Continuum concept identifies citizen vital records as records of events with ongoing value to individuals in various aspects of their lives. Public services generate vital citizen records, which become private property requiring reliable maintenance. However, managing records at the individual level encounters challenges, particularly concerning storage. Protection of vital records involves prevention, mitigation, response, and recovery. A distinct approach is required at the individual level, considering community awareness, available infrastructure, and limited resources. Integrating disaster risk management and records management concepts is crucial for protecting citizens' vital records. Aspects of vulnerability, such as potential natural disasters, unsafe infrastructure, lack of awareness, and financial limitations, can increase risks to vital records. Therefore, efforts to protect citizens' vital records must consider social, economic, physical, and cultural conditions. It is essential to recognize that protecting vital records extends beyond government agencies and archival institutions; active community participation is integral to the process. In this collaborative effort, a holistic approach can be established, ensuring the preservation and accessibility of vital records for the benefit of individuals and society.

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