

Preventive and Curative Efforts in Archive Management Planning for the Threat of Natural Disasters in Indonesia

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Abstract

Background of the study: Archives have a very crucial role in the development of organization and institutions, Including in Indonesia. The importance of archival protection is in Determine records management planning in overcoming the impact of natural disasters.

Purpose: The Efforts taken are preventive and curative actions that aim to minimize the risk of losing archives and as an effort to safeguard the importance of policy-making towards archives in the future.

Method: This research is qualitative research with literature study method. The researcher raised a study that was in accordance with the topic of understanding, then made a map of the data related to preventive and curative Efforts in an effort to overcome natural disasters. In this case, the analysis of data is done through reference to books, journals, and other library materials Articles regarding preventive and curative actions in archival management and policy planning related to archives. Literature studies pay attention to relevance to the subject matter and to facilitate the understanding and direction of writing in accordance with the problems in the study.

Findings: The results of this study indicate that disaster management consists of stages several items, namely mitigation, preparedness, response, and recovery.

Conclusion: Prevailing Efforts are focused more on Preventing and protecting conventional archives from the disaster damage. The actions taken include storing archives in a safe and disaster-resistant place, storing archives with special equipment (vaulting), duplicating or duplicating records by transferring media in the form of Microfilms, microfiche, magnetic recordings, electronic records. While curative Efforts are repairs or maintenance of records with conditions that have or have begun to be damaged. Actions include lamination, encapsulation, reproduction of archives and recovery.

Keywords: *Archive Preservation, Preventive and Curative Efforts, Management of Archives of Natural Disasters.*

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Introduction

Based on Law No. 43 of 2009, article 1, paragraph 2, states that archives are a recording of activities or events in various forms of media in accordance with the development of information and communication technologies have made and received by state agencies, local governments, educational institutions, companies, political organizations, community organizations, and individuals in the implementation of the life of society, nation, and state, Archives have a very crucial role in the development of Indonesia, and therefore the maintenance of the preservation of the archive is very important.

Reviewing Regulation of the National Archives of the Republic of Indonesia number 06 of 2005 on guidelines for the protection, security and document recovery / archive state explained that the document / records is a testament to the organization of the state organization that serves as proof of performance accountability, legal evidence and memory organization. Archive of the information recorded in the form of paper and non-paper media are of great importance for the survival of the organization. Archives have an important role in protecting the interests of rights organizations, agencies and individuals or parties other interested parties. Therefore, the archive should receive special protection, especially the possibility of lost, missing or damaged caused by the disaster.

Indonesia is a country prone to natural disasters. The existence of the position of Indonesia is surrounded by tectonic plates, Indonesia is the path of the Pacific Ring of Fire which is a series of lines of active volcanoes in the world. Indonesian volcanoes, amounting to approximately 240 pieces, in which nearly 70 are still active and are mostly located in the eastern region (Tondobala, 2011).

One of the causes of damage to the archives is a natural disaster. Natural disasters that can occur in Indonesia, for example, such as flooding, earthquakes, fires and riots are the factors that are very difficult to avoid (Ibrahim, 2013). An earthquake can damage archives. Occur suddenly in the surface layer of earth and soil so that the vibration, which is strong enough will cause the collapse of buildings and destruction of life and property (the Disaster Epidemiology Research Center, 2003). Such damage can be caused by debris building materials. For example, the earthquake with a magnitude of 7.9 on the Richter scale has devastated West Sumatra, especially Padang and surrounding areas on September 30, 2009. (Adeliny et al., 2013), Required preparedness planning an effective records management to maintain security and rescue archives. Rescue archive can be done through archival preservation activities.

The next natural disaster, a tsunami is a series of large waves generated by the displacement of seawater, earthquakes or volcanic eruptions were able to widen the gap and cause a spike damage the soil (Center for Research on the Epidemiology of Disasters, 2003). The tsunami disaster in Aceh tsunami still lingering in the minds of the people of Indonesia. The earthquake and tsunami in Aceh occurred in 2004 have caused many casualties in which more than 200,000 people dead and missing. About 650,000 hectares of agricultural land and destroyed settlements. The building houses damaged as many as 20 917 units from 36 145 units of existing homes, damaged social facilities reached 162 units (62.31%), while the economy is damaged facilities reached 4,403 units from a number of 6763 units or 65.10% of the existing facilities in Banda Aceh (BRR, 2009). The earthquake and tsunami in Aceh have provided construction changes on the archive. Archives are affected by natural disasters suffered damage to, loss of archives. Disaster conditions in Aceh can be used as learning that in Indonesia vulnerable to disasters. Impact of Aceh disaster has resulted in a change, damage and loss of records, and therefore required the efforts of planning and management of archives.

Another natural disaster is flooding events represents a significant increase in the level of water in rivers, lakes, reservoirs or coastal areas (Center for Research on the Epidemiology of Disasters, 2003). Jakarta is located in the lowlands are mostly composed of layers of sedimentary rocks to the Pleistocene era that limits the upper layer is 50 meters below the ground surface

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(Gunawan, 2010). With the geographical conditions big the possible impact of the most dangerous in addition to the destruction of the archive material is sinking (Shaluf, 2007). In the case of a flood disaster as the study of factors that could cause the loss of archives. Study on some disaster-related case studies described above make this research important in order to maintain the integrity of archival value. In achieving the unity of archival value is carried out through the efforts of preventive and curative measures. Both of these actions are considered important because the archive has crucial value. Archive as a national responsibility, which means that every event or activity will lead to the archive (Mahmudah, 2016). Values can be used as guidelines historical archives determination even future policy. Archive as a coherent form of activities in the implementation of activities undertaken as humans.

Losing archives as natural disasters become an important focus for discussion in this study. Researchers would like to review more in preventive and curative efforts possible to maintain the value of the archive as a pre-disaster and post-disaster. Given the urgency of the archive has value in maintaining the history and decision making. Archival value is currently a core part of an organization in decision-making that can be used by management in determining the future of the organization (Mardiyanto, 2017). On the other hand the value of the archive to the determination of decision-making is considered very important in policy making. This archive rescue distinguished in two objectives through actions / preventive and curative efforts.

Method

This study is a qualitative study using literature study method. Qualitative research is a descriptive study of analytical (Gunawan, 2013). Analysis of the data in the literature study method is done through reference books, journals, articles and other library materials on preventive measures and curative measures, records management planning and related policies archival. Data retrieval and analysis of the literature was conducted in March-May 2018. The researchers collected the literature review consists of journals and books, and then grouping the data by taking into account the relevance of the theme of the subject and to facilitate understanding and the writing direction in accordance with the problems with the title, Writers compile a list of devices that use the methodology and analyze all the data collected. Writing literature study aims to analyze a problem or situation and events through some literature references in order to obtain a study in scope and depth related to a specific topic. Specific research topics, then describe the data relating to the maintenance of records management with preventive and curative action.

Result and Discussion

Preservation archive is an action for maintenance and protection of archives. Preservation is done in an effort to prolong the life of archival storage, and preservation of archives that is still intact and physically damaged archives, especially the archives (Zega, 2014). Efforts to do a preservation archive aims to ensure the safety and preservation of archives that do preventive and curative. Disaster recovery planning (DRP) is planning for the rational management and budget effectively to disasters that will and has occurred.

Disaster management

Disaster management cycle consisting of several stages, namely mitigation, preparedness, response and recovery (Zaveri, 2015), Mitigation (mitigation) is achieved with / taking a long-term preventive measure after analyzing the risks that may arise. Readiness (preparedness) is usually regarded as a step which allows organizations, communities and individuals to respond quickly and effectively to disaster situations that occur. The response (response) as a response actions are applied immediately after a disaster, such as the implementation of the plan, the activation of the disaster management system, search and rescue, and so on. Recovery (recovery) phase goal is to restore the affected area to its previous state, although not completely. Four concepts as a basis for planning in records management.

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Records management planning is done in libraries, e.g. India proposed a guideline for digital disaster management (Zaveri, 2015), Given the increasing number of collections of digital resources, especially in the archives. Disaster management guidelines to consider, among others; (1) sensitive to disaster management issues; (2) reduce the risk of disasters; (3) disaster preparedness; and (4) address the recovery process after a disaster. Sensitivity to the issue of digital disaster management should be considered an integral part of the environmental management archivists. Reflected at the institutional level in policy, and at the level of the profession in the literature in information science education. Action to reduce the digital disaster risk through vulnerability monitoring will prevent problems before they happen through preservation. Preservation and protection against records involving hardware and software from damage.

Archival institution should develop a disaster recovery plan or disaster response plans. This plan will help in the protection and recovery of data, hardware and software, but will also help in restoring service. Initial efforts should be targeted to protect and preserve the archives. The process through the identification and protection, then do transfer to a clean and dry environment and far from the disaster site. The first priority is to restore archived data to back up data. Backing up data is archived on disaster management needs to be done regularly and periodically. Then if you lose or break records do recovery. The availability of local data recovery services should be identified. Readiness analysis before disasters are most likely to identify steps that occur in the organization with the risks that natural disasters caused by humans or events caused by technology. Natural disasters is a condition caused due to the geographical situation of the region. Therefore, an organization should consider the location / region will be occupied precisely because of the location related to the continuity and security of data owned by the organization. The next risk is an event caused by humans, such as damage to the building, fire, riot, terrorism and hackers. Although only a small impact on the security of the archive data exist, but it should be minimized by means of duplication and archival storage outside of the organization. Technology facilitates archiving can be done through cloud storage and archive storage services elsewhere. In the case of archives that are still in conventional conditions, it is necessary to archive switch from conventional to electronic media / digital. Rather aims media effectiveness and efficiency of service and the need for sustainability in the long term archive. In Indonesia, the archive storage media is still largely conventional manner that is where the archive is stored in a specific place or space in paper form. It is very prone to damage mainly caused by the disaster. In the case of archives that are still in conventional conditions it is necessary to archive switch from conventional to electronic media / digital. Rather aims media effectiveness and efficiency of service and the need for sustainability in the long term archive. In Indonesia, the archive storage media is still largely conventional manner that is where the archive is stored in a specific place or space in paper form. It is very prone to damage mainly caused by the disaster. In the case of archives that are still in conventional conditions, it is necessary to archive switch from conventional to electronic media / digital. Rather aims media effectiveness and efficiency of service and the need for sustainability in the long term archive. In Indonesia, the archive storage media is still largely conventional manner that is where the archive is stored in a specific place or space in paper form. It is very prone to damage mainly caused by the disaster.

Preventive efforts towards archive

Preventive measures to prevent effectively as early as possible and minimize the loss of the nation's cultural assets caused by the disaster (Mustafa, 2004), In the preventive measures of disaster prevention can be done through a Regulation of the National Archives of the Republic of Indonesia Number 06 Year 2005 on Guidelines for Protection, Security and Penyelamaan Documents / State Archives is by way of duplication and dispersal. This method is carried out with a copy or copies of the archive and store it somewhere else, in a way over the media in the form of microfilm, microfiche , magnetic tape, electronic records and so on. Preventing pre-disaster management policies and agreements needed in order to transfer the archive media in other forms,

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rather than focusing on a single storage medium. Storage in one place as part of a policy prone to loss and subsequent preventive recovery. Effort difficulty is with special equipment (vaulting). Vaulting is done by using a special storage device, such as a cabinet, cabinet, filing cabinets, fireproof, basements, and so on. Storage equipment selection tailored to the type of media, and the size of the archive. Storage equipment must have the characteristics of non-flammable, waterproof, and free magnetic fields to an electronic archive. In line with the statement Zega (2014) that there are five actions in preventive preservation, namely: First, is the choice of storage facilities. In this case the archive storage facilities such as cabinets, box records should be adequate and appropriate standards so that the archive is maintained and stored properly. Second, is the selection of archive storage media. Media archive storage there are two types of conventional and electronic. Archive storage with the appropriate media, can protect archives from damage caused by the disaster. Third, the temperature and humidity regulation that aims to prevent damage to archives due to, the temperature is too cold or dry. Fourth, the prevention of animal destroyer archives by putting camphor or camphor and silica gel in archive boxes or archive storage space. Fifth, the preventive preservation is environmental cleanup, which aims to clean dust that could damage the physical archive. Cleaning is usually done periodically using a tool such as a vacuum cleaner. Prevention archive destroyer animal by putting camphor or camphor and silica gel in archive boxes or archive storage space. Fifth, the preventive preservation is environmental cleanup, which aims to clean dust that could damage the physical archive. Cleaning is usually done periodically using a tool such as a vacuum cleaner. Prevention archive destroyer animal by putting camphor or camphor and silica gel in archive boxes or archive storage space. Fifth, the preventive preservation is environmental cleanup, which aims to clean dust that could damage the physical archive. Cleaning is usually done periodically using a tool such as a vacuum cleaner.

Most archives in Indonesia in the form of conventional archives. Conventional Archives extremely vulnerable to damage that need special handling in the prevention and protection from damage due to natural disasters. According Mardiyanto (2017) is more focused preventive methods to prevent and protect conventional archives from damage. Actions taken include, storing archives in a disaster resistant, which can reduce the damage minimal archives. Then carried over media in digital form through the process of digitization. The next steps for backing up the archive doubling in case of loss archives. The survey was conducted in advance to determine the location of the remote archival storage and minimum of natural disasters. So it requires careful planning prior to the construction of a space saving archive. In the storage room, the archive is stored using a roll pack which means to put boxes particular archive archives. Installation preventive method with a symbol, such as an evacuation route sign and hazard detection tool. Preventive preservation was also made as management and storage. At the time of the archival storage process is placed in a special place to prevent it from damage and information theft. Based Regulation of the National Archives of the Republic of Indonesia Number 06 Year 2005 on Guidelines for Protection, Security and rescue Documents / Archive of State explained that the location of the archive storage is carried out on site and off site. Storage on site is an archive storage on a territorial coverage creator archival institutions.

Need to plan a written guide systematically arranged that include preventive measures such as guidance, guidelines and specific regulations for an archive disaster management act, which allows the collection and damage to buildings and infrastructure (Mustafa, 2004), The aim of natural disaster preventive measures to minimize the damage done to the archive. The guides were written periodically need to hold a simulation so that all participants concerned with disaster management, e.g. on a unit-untie socialization of institutions into the unity of the Indonesian state.

Curative efforts to Archive

Preservation curative is a preservation archive that is repaired or maintenance of archives or start a damaged condition so that it can extend the life of the archive. Preservation curative is

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generally done to repair damaged files following a disaster, such as floods, tsunamis, landslides and so on.

Preservation curative can be done with some activities by Zega (2014), namely: laminate archives, archives and reproduction encapsulation archives. Laminate archive is the activity of repair or restoration of damaged conventional physical, like a tear. Lamination is done by patching the archives of the torn or damaged tissue paper using glue and Japan. The purpose of the laminate is to keep the archives to remain durable and long lasting as well as maintaining the integrity of the data from the archive. Furthermore, the encapsulation of the archive is the archive maintenance manual with every set of archival techniques covered by two sheets of polyester plastic by means affixed using double-sided tape. The purpose of encapsulation is to protect the physical archive archives. The latter action is the reproduction of records, which is done by re-creating the archive to the other media. Reproduction archive can be done by digitizing. In this case the conventional archives of hard files converted into the form of soft media files. The purpose of archival reproduction is to back up the data to make it easier for retrieval.

Preservation curative according to Arifin (2013) via three methods: (1) a method leafcasting, (2) conventional archive lamination method, (3) methods of encapsulation, (4) the use of vacuum freeze dry chamber and freezers for the handling of the archive after the flood. The first method is a method leafcasting is a method used to restore the archive by using a tool called leafcasting machine. This machine is used to restore the archive with A4 paper size to double folio with archived records is not too fragile or damaged (archive fragile better to use the manual method) and the archival ink does not fade when exposed to water. Archive size larger than double the size of the folio cannot be restored by this method. This is because the archive will not be able to enter into the conveyor leafcasting machine.

The archive is already too fragile not allowed restored with this method because when the archive is inserted into the machine conveyor leafcasting be broken so that it will worsen the condition of the archive. Similarly with archival inks that fade if exposed to water are also not allowed to be restored with this method. This is because the process deacidification on leafcasting method of immersing the archive into the water so that it can cause ink smearing on the archive. The leafcasting method is usually used to restore the archive in the number of sheets that much with the same relative size in one bundle. This is done so that the archive restoration can take place effectively and efficiently. This leafcasting method broadly includes the application of the patch archive with leafcasting machine (filling with pulp or pulp).

The second method is a conventional method of lamination archive leafcasting done without using any tools. This method is used to restore all types of archives distinguish archive size, type of ink, and brittle or not the archive. This method is useful to strengthen the physical archive.

The third method is the method of encapsulation, in which the method is used to protect the physical archive of the factors that can damage archives. Archive encapsulation usually used for sheets of paper records, such as manuscripts, maps, printed materials or posters. The latter method is the use of vacuum freeze dry chamber machine and freezer for the handling of the archive after the flood. The Freezer is used to freeze the archive so that water molecules contained in the archive sidelines sheet (book) frozen so as to facilitate the open archives sticky sheet previously exposed to water. While the vacuum freeze dry chamber is a machine used to dry the frozen archive of books from the freezer.

Preservation curative is a preservation archive that is repaired or maintenance of archives or condition began damaged so that it can extend the life of the archive. In Indonesia preservation curative is generally done to improve the archives damaged by the disaster. This is in line with the opinion of Gregory (2008) that the purpose of data recovery (recovery) is a long-term storage (long-term archiving). Data recovery as one of the efforts curative measures following the disaster. In the recovery of data useful to protect, recover applications and data to the application. The purpose of this recovery is for the safety of the data. Recovery can be done through replication. Replication is a

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process of changes to the database transaction that occurs in the primary storage system is done on a secondary storage system. Replication and mirroring are part of the architecture endurance larger application that includes clustering or failover capabilities. Protecting data through replication and mirroring generally refers to the ability to write new data is introduced into more than one storage system at the same time. Replication and mirroring have different details. Replication activity using backup software on the system to send data. At the first event database replication replication of existing transactions can be sent to off-site. Furthermore, copying the data to a standby system that is located far away in other places during a disaster. Off-site storage of backup media to provide one or more copies of data that can be used to recover the system in case of disaster.

Some factors to consider when evaluating the off-site location, among others: the proximity of the location of recovery data storage, physical security to protect the media from hazards and unauthorized access, the proximity of transport to storage locations, the security while in transit to or from the storage facility. Disaster recovery planning purposes to protect not only the information and security, but also the ability to continue transmitting and receiving information from third parties. While in disaster recovery mode and during the disaster in need of protection, among others (Frank, 2013): backup server, backup media to protect, protect data transmitted and robust storage system partner. In the process of disaster recovery aspect to note from the data.

Disaster Recovery Planning (DRP)

DRP is a plan for the management of a rational and cost-effective disaster information system that will and has occurred, in which there are aspects of the catastrophe in information systems (Hoesada, 2006), the Preventive disaster planning system as well as an effective post-disaster recovery must be perceived benefits. The collapse of the information system within the institution is a disaster, because the cessation of activity and loss of information due to poor disaster management within the organization.

Viewpoint Jackson (2002) cited in Nnolim (2007) the DRP as the evolution of the business continuity planning process. DRP has a technical focus on and prioritize the recovery application. Later developed into a sustainable business plan with a focus on business functionality and priority on client and distributed processing. This study showed that the overall planning environment includes contingency planning activities that include IT, business operations, crisis management, and continuous service availability during emergencies. This plan aims to support information security management functions.

DRP purpose to minimize the risks that may occur and optimize the sustainability of the entity in the face of disaster risk. If unable to formulate a disaster management effective of DRP then this program will not take place. For costs that may be incurred will be greater if a disaster has occurred. Efforts budget for preservation of sustainable small nominal will not noticeably compared to the entire budget incurred as a result of disasters. DRP as the willingness of savings for unexpected disaster that is set aside from the budget in an organization. Discontinuity administration as a long-term investment in the event of natural disasters. Thereby minimizing the loss of information.

DRP reason to be important to the sustainability of the availability of information. The development and use of disaster recovery plans based on strong principles supported by the leadership and carried out by trained staff will greatly reduce the severity of the impact and incidence of natural disasters (Jones, 2008), The assumption with a good DRP will minimize the risk of the worst that might happen. Although attention has been given to planning and disaster recovery procedures are well identified, the effectiveness of DRP relies on pre-disaster efforts. But in reality, the preventive and curative often never happens.

Jones (2008) also a requirement that may be made to the development of the DRP. Develop a disaster plan to operate in case of natural or man-made disasters. One model is a disaster recovery procedures developed by the data archive include: (1) Ensure that all staff are trained in for disaster

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management; (2) Create an archive copy of data resources when moving to an institution; (3) Save archive copy on industry standard digital tape or on other contemporary media; and (4) a copy of the archive inside and outside the site. Off-site copy should be kept at a safe distance it is to make sure the copy is not affected by natural or man-made disasters.

Before the disaster as a base case of disaster recovery planning, replacement cost has been identified and updated. The necessity of making a special fund for the replacement of assets at risk of disaster that may not be covered by insurance. This stakeholders can prioritize archives are considered and require special treatment. Based on Hoesada (2006) probability and frequency of disasters are identified and prepared in accordance with the DRP include: (1) a list of the main assets that must be preserved; (2) a list of major assets / critical insurable; (3) the list of assets that can be protected from the risk of catastrophic compiled, and action plans implemented risk aversion; (4) All such assets, if damaged or malfunctions, causing entity cannot operate normally, so that should receive priority protection planning and replacement.

Recovery recording / data electronically (recovering electronic records). In this step, there are several actions, namely cold recovery, disaster sites, warm site disaster recovery, and disaster recovery hot sites. Disaster cold recovery sites is a site where data can be stored without the use of tools and data can be used for business continuity. Warm disaster recovery sites is the site data backup service providers provide data storage and the necessary equipment. So as to facilitate the search back in. Furthermore, disaster recovery hot sites are sites that can duplicate the data from the computer system in full and backing up data from the user directly.

Recovery recording / data in the cloud (disaster recovery in the cloud). This method first appeared in 2009. Many doubted the security of this method given the geography of each region are different and the cost is also relatively expensive. However, this method is efficient enough to access data. Apabila compared to countries Croatia, Indonesia country that has a level of consciousness that is a pretty good archive. Croatia is one of the countries that have awareness in archives low maintenance, especially ancient archives. Krtalic (2012) in a case study conducted in the country of Croatia explained that preservation covers many areas of contextual terms and in terms of the practical. Considering the low awareness of the state or institutions in the maintenance of ancient archives will require a comprehensive framework, especially in the field of library management preference. In that framework, preference library management consists of five components: (Krtalic, 2012): 1) theories and strategies, 2) economics and law, 3) education, 4) technical and operational, 5) social and cultural.

Strategy and theoretical in the library preservation management includes planning and conservation in the development of programs, plans and policies at the national and institutional level. While in the field of economics and law include the management of financial resources and additional resources. In the analysis of the legal framework indicates that some legislation has been explained about the responsibilities and roles in the preservation of ancient heritage in the library. However, this legal framework has not been discussed in detail and clearly about the consequences of their misuse of authority in ancient heritage preservation. However, there are still many libraries are faced with legal issues in preservation activities. Problems encountered, especially in the ancient heritage of unclear criteria and copyright issues in the case of digital material. The next component is education, in that it combines the knowledge of preservation issues into formal education. Technical and operational is estimated that the storage conditions and the extent of damage, conduct a condition survey collection, material handling and applying the method of preservation and disaster preparedness techniques. The latter method is the cultural and social aims to raise social awareness about the importance of the value of cultural heritage. Perform collection condition surveys, material handling and applying the method of preservation and disaster preparedness techniques. The latter method is the cultural and social aims to raise social awareness about the importance of the value of cultural heritage. Perform collection condition surveys, material handling and applying the method of preservation and disaster preparedness techniques. The latter method is

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the cultural and social aims to raise social awareness about the importance of the value of cultural heritage.

These components are related to each other. In this context the preservation of library management in Croatia focused on the educational component. The results showed that institutional and community awareness of the preservation of ancient archives is still very low, it is because they lack understanding and awareness regarding preservation. Therefore, the need for education about preservation archives by regulatory authorities such as the national library that has the authority and responsibility for the preservation of archives.

Conclusion

Indonesia as one of the disaster-prone countries need to undertake preventive and curative efforts in an attempt to prevent the loss of archives as a source of information and knowledge contained in archival value. Disaster management efforts in preventing the loss of the archive consist of several stages of the mitigation, preparedness, response and recovery. Preventive measures carried out more focused to prevent and protect archives from damage caused by the disaster. Actions taken, among others, to save the archive in a safe and resilient, keep an archive with special equipment (vaulting), duplicating or copying an archive with over media in the form of microfilm, microfiche, magnetic tape, electronic records. While efforts are corrective or curative treatment started archiving or damaged condition.

Readiness before the disaster has most likely identified the steps that occur in the organization with the risk of natural disasters, adverse events caused by man, and the incident caused by the technology. Natural disasters is a condition caused due to the geographical situation of the region. Therefore, an organization should consider the location / region will be occupied precisely because it is related to the continuity and security of data owned by the organization. The next risk is an event caused by humans, such as damage to the building, fire, riot, terrorism and so on. Although only a small impact on the security of the data that exists, but it should be minimized by means of duplicating and storing data / files outside of the organization. The risk of the latter is an event caused by technology. At this time most organizations start switch over provider archive storage from conventional to electronic media / digital. Storage of digital archive has a risk of data, loss caused by viruses. Therefore, the digital storage using the protection of the service providers because they have a data backup and recovery of data sufficient to minimize the occurrence of loss or damage to the archive. The success in the implementation of the management and records management of the disaster need to be supported guides, guidelines and regulations related to the field of archives. At this time most organizations start switch over provider archive storage from conventional to electronic media / digital. Storage of digital archive has a risk of data, loss caused by viruses. Therefore, the digital storage using the protection of the service providers because they have a data backup and recovery of data sufficient to minimize the occurrence of loss or damage to the archive. The success in the implementation of the management and records management of the disaster need to be supported guides, guidelines and regulations related to the field of archives. At this time most organizations start switch over provider archive storage from conventional to electronic media / digital. Storage of digital archive has a risk of data, loss caused by viruses. Therefore, the digital storage using the protection of the service providers because they have a data backup and recovery of data sufficient to minimize the occurrence of loss or damage to the archive. The success in the implementation of the management and records management of the disaster need to be supported guides, guidelines and regulations related to the field of archives. Digital storage using the protection of the service providers because they have a data backup and recovery of data sufficient to minimize the occurrence of loss or damage to the archive. The success in the implementation of the management and records management of the disaster need to be supported guides, guidelines and regulations related to the field of archives. Digital storage using the protection of the service providers because they have a data backup and recovery of data sufficient

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to minimize the occurrence of loss or damage to the archive. The success in the implementation of the management and records management of the disaster need to be supported guides, guidelines and regulations related to the field of archives.

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