Development of Emergency Archives Information Resources- Based on the Case of Sichuan Province

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ABSTRACT

Archives information resources are the first-hand data and original records for recording and responding to emergencies. They play an important role in the emergency decision-making of emergencies. Strengthening the development of emergency archives information resources is an important way to improve emergency decision-making ability. The article takes the development of archives information resources for earthquake disasters in Sichuan Province as an example, conducts research on the development of archives information resources, and conducts case analysis to point out the current problems and optimization ideas.

Keywords: Emergencies; Archives Information Resources; Sichuan Province

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Introduction

In recent years, all kinds of unexpected events occur frequently at all levels, Sichuan Province is after the 2008 year "5·12" Wen Chuan earthquake, the 2012 year "4·20" Lushan earthquake, the 2017 year "8·8" Jiuzhaigou earthquake. The numerous major natural disaster emergencies have brought major challenges and opportunities to the governments at all levels and the participating entities. In the process of emergency management of emergencies, the archives department and archivists are also actively playing the role of archival work while participating in the rescue, in the archival work of emergency management and the practice of responding to emergencies in the archives department., accumulated a wealth of practical experience.

In 2015-2018, we visited and investigated the archives departments of Sichuan Provincial Archives, Chengdu Archives, Dujiangyan City Archives, Beichuan County Archives, Shuangliu County Archives, Xinjin County Archives, and Sichuan Province. Disaster prevention Office, Sichuan Provincial Archives School and other departments. Through the actual interviews and investigations of the above-mentioned departments, combined with the network research of relevant government documents and special databases, the company has a clear understanding and understanding of the development of emergency archives information resources.

Archives Department Plays a Leading Role in Emergencies Archives Information Resource Development

The archives department and its archivists are the core subjects of the development of archives information resources. From the current situation research, it is learned that in the archives work of emergency management, all levels of archives and their archives staff are active after the emergencies. Investing in the archives collection, business guidance, archives development, and utilization of emergencies. The following is a list of surveys to illustrate the current state of practice of archival institutions in the development of emergency archives information resources:

Case 1: Sichuan Archives Development Archives Information Resources for Earthquake Relief Services

In the 2008 year "5·12" Timor after the Sichuan earthquake, Sichuan Province, the archives respond quickly, and actively collect, the compilation of the history of seismic archives, provides a powerful archival information resources for the rescue service and the response to the earthquake. Among them, typical development results and service work include:

First of all, based on the advantages of the collection resources of the Sichuan Provincial Archives, the development of archive information resources provides archives information resources services for the earthquake relief headquarters. After the earthquake, in May 14th overtime, the emergency personnel Roll Compilation, take aftershocks of risk into the records storage access to the selection of archival materials, the Sichuan region 500 occurred between the years 10 (such as the second major earthquake in 1536 in Xichang Earthquake The archives of the Songpan and Pingwu earthquakes in 1976 were quickly compiled and compiled into the "Shenzhen Strong Earthquake Disaster Record" and sent to the Sichuan Provincial "5·12" Earthquake Relief Headquarters for reference. On May 15th, the archives and information resources of 10
severely affected areas were collated and provided for the Chengdu Military Region\(^1\).

Secondly, actively coordinate the archives of major earthquake disaster archives and materials, and quickly collect, organize and compile relevant archives for reference by relevant departments of the Sichuan Provincial Government. In response to the Sichuan Provincial Government’s planning for post-disaster reconstruction services, the Sichuan Provincial Archives quickly contacted the Hebei Provincial Archives, the Yunnan Provincial Archives, the Tangshan City Archives, and the Lijiang City Archives, and received support and cooperation from the relevant archives. Among them, the Hebei Provincial Archives arranged more than 10 staff members to look through more than 300 volumes of the Tangshan Earthquake archives overnight, and to copy about 300 pages of precious materials such as disaster relief deployment, arrangement, summary, existing problems, and post-disaster reconstruction planning; The Tangshan City Archives designated a special person to fax the relevant archives to the Hebei Provincial Archives in the first time, and the Sichuan Provincial Archives sent a special flight to Shijiazhuang to retrieve the materials; Yunnan and Lijiang City Archives also timely Lijiang More than 200 pages of relevant archives of post-earthquake reconstruction were faxed to the Sichuan Provincial Archives. After collecting these precious seismic archives in a week, the Sichuan Provincial Archives quickly compiled and compiled relevant thematic materials to the relevant departments of the Sichuan Provincial Government, providing an important reference for the planning and decision-making of post-disaster reconstruction\(^2\).

**Case 2: Dujiangyan Municipal Archives to Develop Timor Sichuan Earthquake Topic Archival Information Resources**

In the 2008 year "5·12" Timor after the Sichuan earthquake, Dujiangyan City Archives full play the main role, first arrange archives departments use cameras, video cameras and other equipment actively collecting photographs disaster situation, the impact of the information, the second is for social organizations Individuals have collected a large number of photos (more than 20,000 pages) and video materials (more than 10 hours). The third is to assist the earthquake relief agencies to collect archives. In 2010, the archives and all walks of life collected archives and materials, and formed a total of 502 boxes of the “5·12 Earthquake Special Archives” (1-79 are the archives of the Earthquake Relief Headquarters, and 80-502 are the Earthquake Relief Headquarters). Substances deployment center and he all levels of government, departments, local archives). This thematic archive is an important feature Archives of the Dujiangyan City Archives. It is a bold attempt and exploration to establish a complete ancestor in the event-based archives. It is conducive to the centralized management, development and provision of seismic archives. The thematic archives can develop and form a series of representative and characteristic research and development results.

Among them, ""5·12"earthquake in Dujiangyan City, the memorandum" is well represented, relying on the results of the thematic collection of archival resources, several revisions compiled research made, illustrated, comprehensive system reflects the whole process of earthquake disaster emergency management in Dujiangyan City (three disasters, rescue, reconstruction, pre-earthquake overview, disaster, emergency rescue operations at all levels, rescue of life and property, post-disaster epidemic prevention work in Dujiangyan City, post-disaster
transitional work in Dujiangyan City, post-disaster society stability, infrastructure rehabilitation, reconstruction Shanghai, etc), the "4·20 provides an important reference Lushan earthquake" emergency management. According to the Bureau Director Wang Keming description, Ya'an earthquake relief headquarters in the "4·20" Lushan earthquake relief received the "Dujiangyan record of "5.12" earthquake", the memorandum treasure, requiring significant leadership and work. The staff hand 1 carefully read and studied, and the number is insufficient to request dozens of sets to be delivered overnight (Fig 1). It can be seen that archival institutions have great potential in the development of emergency archives information resources.

![Fig 1 "Dujiangyan record of "5.12" earthquake"](image)

**Case 3: Ya'an City Archives Development Archives Information Resources for Earthquake Relief Services**

After the “4·20” Lushan earthquake in 2012, the Ya'an City Archives dispatched a professional to the Municipal Earthquake Relief Headquarters to be responsible for archives collection and guidance while urgently deploying the archives system for earthquake relief work. In April 23rd, the night copy collection "5·12" earthquake relief information on 1.8 million pages for the emergency power to compile the "5·12" Wenchuan Earthquake Information Selected", "5·12" Compilation of Land and Resources Policy after the Wenchuan Earthquake", "The Complete Catalogue of the 5·12 Wenchuan Earthquake Reconstruction Archives" was sent to the Ya'an Earthquake Relief Headquarters to make scientific and efficient decision-making and command the
city's earthquake relief for the Ya'an Earthquake Relief Headquarters. Work provides detailed information reference4.

From the above cases and interviews, we can see that archives at all levels are actively collecting, sorting, and arranging the archives of their own collections in the emergency management of emergencies, or by coordinating the archives of archives related to emergency Archives. Editing and researching archives related to emergencies and providing archive information resources services to emergency command and decision-making departments in a timely and timely manner is an important way to implement the emergency management of emergencies by the archives department.

Emergency Functional Departments Play a Direct Role in the Development of Emergency Archives Information Resources

The emergency management department is the direct generation and formation of the emergency archives, and it is also the main body of the collection, arrangement and development of the emergency archives. Emergency management of emergencies is different from conventional practice activities. The suddenness, evolution and complexity of response make the formation of archives appear to be characterized by rapid growth, complexity and multi-sectorial crossover. How to play the emergency management department the role of the archives, archives and related information staff in the emergency archives is also crucial for the development of archive information resources throughout the emergency. From the emergency department involved in the development of emergency archives information resources, the survey knows the typical things such as:

Case 1: Geological Data Development and Service in the “6·24” Maoxian County

Geological Disaster Area in Sichuan Province

In Sichuan Province, "6·24" after Maoxian County geological disasters, the National Geological Archives, the Sichuan Provincial Archive collection of existing geological data involved in Maoxian County, Sichuan Province in the directory finishing release of Land and Resources portal, in order to fully develop and utilize geological data, it provides an important window to support the disaster relief, disaster relief and reconstruction work in Maoxian County, Sichuan Province. According to the published catalogue of geological data, including 36 detailed survey reports on geological disasters in Maoxian County, Maoxian mica minerals inspection report, radioactive element inspection report of Tumen manganese mining area in Maowen County, and other geological data of 36 disaster areas in the National Geological Data Museum. and "Sichuan Province 2016 geological disasters Aba Maoxian detailed survey results report, Sichuan Province, Mao Wen County, Wisconsin iron ore supplementary geological report, Maowen polymetallic mine reconnaissance report" and 61 parts of Sichuan Provincial information Geological data of the disaster area in Zangmao County. At the same time, the National Geological Data Center has developed the “Special Service for Geological Mountain Collapse Disasters in Maoxian County”. The title of the website can be viewed in the title of the relevant archives, the size of the archives, the number of drawings, etc. Can apply for processing services (Fig 2).

In Sichuan Jiuzhaigou County 7.0 post-stage geological occurrence, only 35 minutes on the fast draw exceeding 300 files earthquake geological data, geological data released on the Internet exclusive services for post-earthquake rescue, disaster prediction, Reconstruction

provides emergency support and auxiliary decision-making, and timely processing other geological data according to on-site needs, fully supporting emergency search and rescue work, and the emergency response speed has reached the world's leading level. It can be seen that the National Geological Data Museum and the Sichuan Provincial Land and Resources Museum responded quickly after the occurrence of geological disasters in Maoxian County, “6·24”, actively consulted the relevant geological data of the museum, developed relevant archives data catalogues, special service webpages, and emergency management in emergencies. The process played an important role.

**Fig 2. Special website of geological data of mountain collapse in Maoxian County**

**Case 2: State Grid Sichuan Electric Power Company Archives Department Develops Power Archives Service for Earthquake Relief**

After the “8·8” Jiuzhaigou earthquake, State Grid Sichuan Electric Power Company immediately launched the first-level emergency response to earthquake relief, and the company office subsequently launched an archives work emergency plan, dispatched part-time archive personnel to go deep into the earthquake zone to collect archives and open a green channel for archives services. Organize and manage the security status of archives, and provide full archives support and services for earthquake relief.

On the one hand, after the archivists arrived in the earthquake zone, they actively collected data on damage to power supply facilities, damage to major customers, power supply recovery, and post-use demand, and earthquake-induced disasters. Key data such as various types of documents with preserved value, and returned to the archives for emergency response in the first time for reference for restoration and reconstruction, insurance claims.

On the other hand, actively responding to decision-making needs such as post-disaster equipment estimation, and coordinating the “cost book and completion drawings of Ganhaizi Substation, Sichuan Electric Power Yearbook 2016, Jiuzhaigou County 2014, 2015 Yearbook and Aba Prefecture Statistical Yearbook for the past three years” etc. depth development and other research results (Fig3), provide reference for the fee of the Panel.
Case 3: Hydrological Archives Service in Flood Control and Disaster Mitigation in Fuzhou City, Jiangxi Province

The "China Archives "reported in 2016" core pillar in the work of flood control and disaster reduction - the use of hydrological archives in Jiangxi Province to do a good job of flood control and disaster reduction work " pointed out that the water information center of Fuzhou Municipal Hydrographic Bureau passed the data of more than 10 years. And more than 30 large, medium and small flood data for analysis and processing, pooled into a program, analysis of real-time rainfall data and real-time conditions, and the results of the forecast. Typical development results include the “Hydrological Data Collection of the Yangtze River Basin in Jiangxi Hydrological Station” (including observations such as water level, water quality, flow, precipitation, evaporation, hydrological data and hydrological yearbooks and atlas). It is understood that there were rare winter plagues in the city in 2015, and there were many regional heavy rains. There were several rivers with a total of five hydrological stations with over-the-counter floods. During the period, the hydrological department staff timely received data, data, and data for rainwater conditions. exchange work, has sent text messages to leaders at all levels hydrological 5.17 million, the transfer "Hydrology Bulletin" 20 period, "Hydrology Express' 139 period," Hydrology was read pieces of " 11 period, to win the leadership of scientific decision-making flood control Time, the safe transfer of 1,330 people, the reduction of direct economic losses of 102 million RMB, can be said to be a good example of the development and utilization of hydrological archives in flood control and rescue. In addition, the initiative to develop in a number of other departments involved in emergency management, many cases of collaborative archives department developed archival information resources, such as 2008 , the "5·12" Wen Mianyang City Bureau of Civil Affairs disaster relief organization set up under the
Sichuan earthquake There are “Comprehensive Coordination and Information Publicity Group, Disaster Collection and Reporting Group”, etc., which are responsible for the collection, compilation, submission and publicity of disaster information. It is a key node for the collection, arrangement and development of archives information resources in the civil affairs system, and is a follow-up earthquake resistance. The disaster relief compilation has laid an important foundation. In 2015, the Aksu Regional Archives was based on the collection resources, and at the same time, emergency management from emergencies such as the local government and government, the agricultural office, the public security bureau, the archives, the petition bureau, the fire department and the safety supervision bureau. Relevant departments borrowed more than a thousand archives and compiled them into a compilation of major emergencies in the Aksu area (2009-2014), which provided important decision-making reference materials for the response and handling of regional emergencies.

Other Types of Subjects Are Important Supplements in The Development of Emergency Archives Information Resources

In the first time of the emergency, the first site, in addition to the government emergency function department and the archives department, there are many other subjects. The texts, photos, conference proceedings, and physical objects recorded by them are often indispensable first-hand archives. Information is an important source and development object of emergency archives information resources. Many bureaus, research institutes, news media and other subjects play an information-assisted role in emergency management activities, and also have special perspectives and development results in the development of emergency archives information resources.

Case 1: All Parties’ Work, The Local Editorial Committee, the Development of Emergency Archives Information Resources Compilation

According to the survey, the subjects such as Disaster prevention Office and Disaster prevention Compilation Committee of various provinces, cities and regions play an important complementary role in the development of emergency archives information resources. For example, since the establishment of the People’s Republic of China, the Compilation Committee has been established at the national level, and the first special thesis has been compiled. The Wenchuan Earthquake Disaster Relief (2016) has a total of 11 volumes and 13 volumes totaling 14 million words, fully mobilizing the National Liberation Army Staff Headquarters. The Ministry of Civil Affairs, the Ministry of Health, and the Ministry of Agriculture have jointly completed. The thematic book contains transcripts and pictures to create a panoramic earthquake relief and recovery and reconstruction process. It also publishes more than 900 pages of “Photographs” (including aerial maps, surveys and scene photos, Fig 4).

For example, the Shanghai Local Records Office compiled the "Wenchuan Earthquake· Shanghai counterpart support Dujiangyan City Post-Disaster Reconstruction" (2012), Chengdu Local History Compilation Committee, "Wenchuan Earthquake, Chengdu Earthquake Relief" (2013), Wenchuan County History Chi do codification "5·12"Wenchuan earthquake in Wenchuan County earthquake relief Chi" (2014) and other are each and each class chronicles do, the integrated use of various public Chronicles Compilation Committee of pictures, data, text, web pages and other information Check out the
archives related to emergencies and form typical examples of development results in the form of books. The process of compiling the Zhishu books by the various parties and the editors of the local chronicles can be said to be a form and an important supplement to the development of archives information resources for emergencies.

**Fig 4. Sample book of Wenchuan earthquake relief record**

**Case 2: Research Institutions Develop Emergency Archives Information Resources to Create A Special Database**

Since the major incidents such as SARS, Wenchuan Earthquake and Lushan Earthquake, the society has paid more and more attention to the research and construction of the special database of emergencies. Among them, the construction of emergencies Research Database National Social Science Fund supported directly related to the project will include two, one is Wang Jun chaired research "emergency case base building and semantic ad hoc decision-making model of the National Social Science Foundation of major projects (2014), the second is Yu Fasheng presided over the National Social Science Fund key project "Media Early Warning and Incident Database Construction" (2013). In addition, there are various provincial and ministerial-level and college-supported emergency database, which are also increasing year by year. Representative projects such as the “Eleventh Five-Year Plan” of the Sichuan Provincial Philosophy and Social
Science hosted by Professor Yao Leye are 5·12 Wenchuan Research on the Construction of Special Databases for Seismic Documents (2008).

For example, Yu Fasheng, the project leader of the "Media Early Warning and Incident Database Construction", pointed out that it is proposed to divide the emergency data set into “dynamic news, case analysis, statistical release, results platform, theoretical research, laws and regulations, popular science documents and expert institutions. "eight modules, in order to achieve data sharing of information, intelligence and analysis functions such as unity of command, the construction of the database strengthen the" information gathering, risk research sentenced and information dissemination "Three Kinds of emergency mechanisms to promote early warning by the media “Random warning” to “trend warning”

Another example is "5·12 Wenchuan literature topic Earthquake Database Construction of" Project Leader Yao Leye (2010) et al point out that the topic database is the current domestic collection Timor up to the Sichuan earthquake literature species, the most extensive, the largest database data volume, contains a total of There are nine different types of documents in documents, online literature, newspapers, periodicals, books, dissertations, pictures, audio and video, and websites. The database will be 2 million articles Timor -related dispersion Sichuan earthquake, disorderly conduct systematic literature collection, collation and output, the establishment of a comprehensive set of thematic literature database a graphic audio and video in one of the Wenchuan earthquake Researchers and other users responding to emergencies provided a full range of thematic data of the Wenchuan earthquake and contributed to the construction of the special database for emergencies.

In the process of researching and constructing the special database of emergencies by these research institutions, units or academic teams, a large number of emergency archives information resources and non-archive information resources can often be collected, which is also an important supplementary subject for the development of emergency archives information resources. Its unique research perspective can be used as a reference for the development of emergency archives information resources.

Case 3: Media Reporters, Volunteers and Other Organizations Actively Participate in the Development of Emergency Archives Information Resources

In the emergency management activities of emergencies, the general public, volunteer organizations and individuals often have infinite wisdom, and they are also in the development of emergency archives information resources. For example, the Youth Work Committee of the Zhejiang Provincial Archives Bureau proposes that all the units at all levels in the whole process of earthquake relief should have archived texts, pictures, sound images, physical objects, etc., which should be archived, and put into action the emergency archives information with practical actions. In the development of resources, all kinds of government websites, news websites, newspapers and periodicals, blog networks and forums have collected "high-level care, disaster records, departmental measures, local disaster relief, military emergency, national response, international assistance, post-disaster reconstruction, etc." More than ten types of network archives, catalogues, and special databases have been formed, forming representative development results such as the Catalogue of Wenchuan Earthquake Archives.
Conclusions

On the whole, the archives department, emergency management function department and other organizations (social public, media organizations, volunteer organizations, research institutions, etc.) and other subjects in the development of archive information resources for emergency decision-making, from different levels, different focus Play a role.

From the current emergency archives information resource development practice, there are still several major problems. First, the development of the archives department needs to be strengthened. From the statistics of the development results of the emergency archives, whether it is the compilation and research results of the archives related to emergencies, or the results of the special database construction on emergencies, the archives department The development and utilization of the library is far less than that of libraries, museums, bureaus, research institutes and information departments. Second, the lack of coordinated development of the archives department and relevant entities. From the analysis of the practical cases related to the development of emergency archives information resources, the archives department is in the process of emergency response to service emergencies, and there is no lack of coordination with the archives department of the region and the archives department of the foreign region. Collect, organize and develop archive information resources together, provide archive information resources for emergency decision-making, and realize the sharing and development of emergency archives information resources. At the same time, we can also see that the archives department is cooperating with other emergency archives departments, emergency departments, information technology departments, academic institutions, etc., and many emergency management departments, Disaster prevention Offices, and academic institutions are compiling emergency archives. In the process of compiling emergency response books and building accident database, it is often combined with different levels and different types of departments and institutions for joint development. Third, emergency archives "peacetime" lack of development, from the current situation analysis, the "5·12" Wen Chuan earthquake, "4·20"In the Lushan earthquake, the Sichuan Provincial Archives and the Ya'an City Archives urgently organized the research and development of strengths and staff after the earthquake, and took the risk of the aftershocks to inspect, collect, organize and develop historical seismic archives inside and outside the museum, for the earthquake relief command. The Ministry of Commerce provides decision-making reference. This aspect shows that the archives play an important role in emergency management of emergencies and can actively participate in emergency management of emergencies. On the other hand, it also knows the archive information after the earthquake. Resource service is a kind of development of archive information resources developed by "fast-live" development, "wartime" and "after the event". It can also be said to be an emergency archives information resource development of "temporary cravings".

In view of the existing problems, the development of archive information resources for emergency response decision-making needs to further strengthen the "normal" development and lay a good lead. In the current environment of frequent incidents, the archives department should establish a sense of crisis and strengthen crisis capacity building. First, strengthen the development of emergency file information resources at different levels, form different forms
of archives development, and establish a sense of crisis. The second is to do a good job in the "wartime" archives work plan, planning, and wartime archives collection, sorting and development, and establish a sense of wartime emergency. The third is to establish a good sense of service, so that the "dead archives" becomes a "living archives", so that "hidden use", rather than just a complete and well-preserved archive. The fourth is to break the conventional thinking, establish a sense of innovation, and actively do innovative services for the archives of emergencies. The fifth is to strengthen the collaborative capacity building within the archives work system, the collaborative construction of the archives department and other departments of the society, to achieve complementary resources, information sharing, technical support and dynamic cooperation, to give play to their respective advantages, to maximize the effectiveness and value of limited archive resources. To provide support and guarantee for emergency decision-making of emergencies.

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