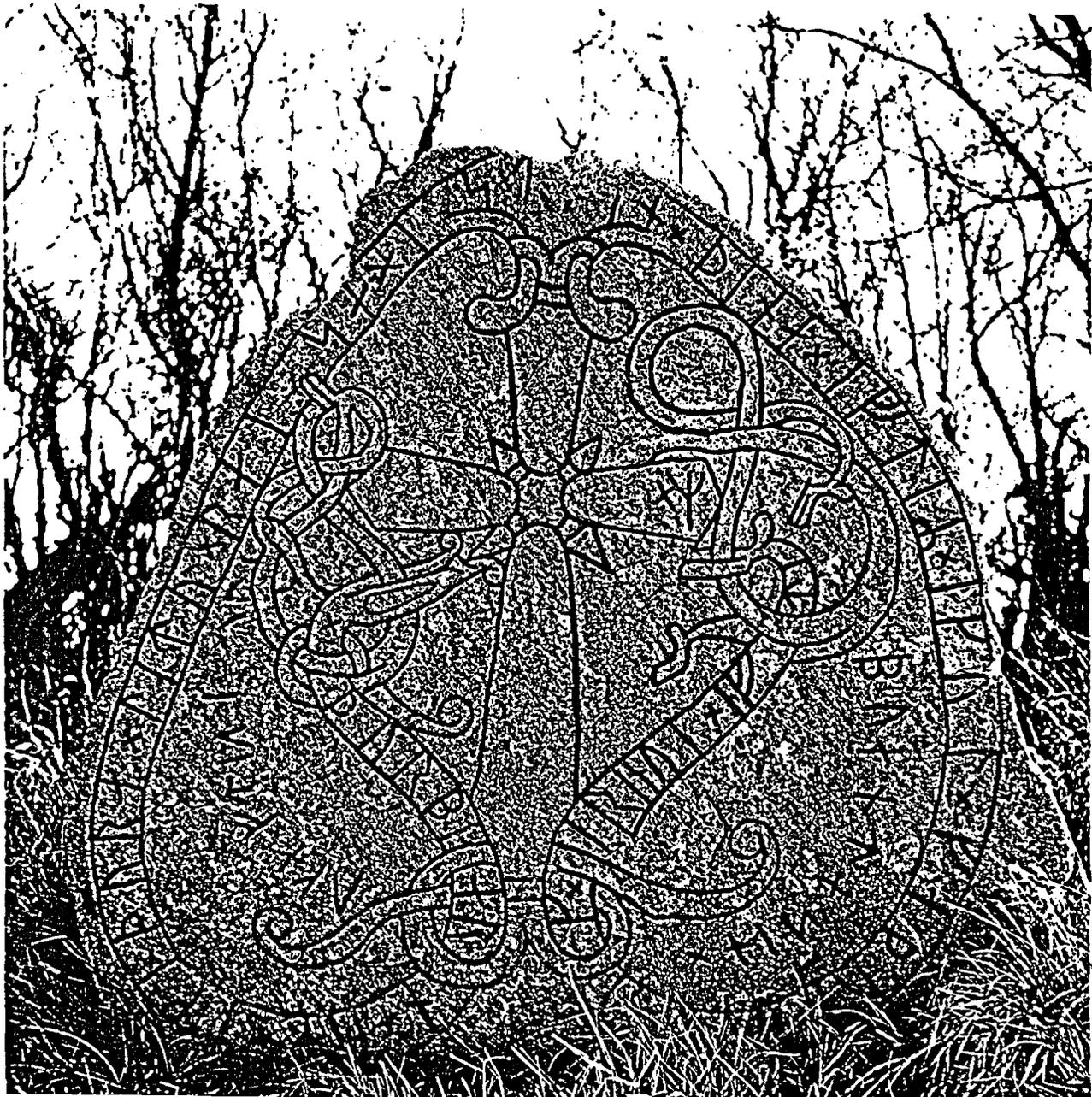


Archive Safety Analysis.
Case Study:
German Archives During the 20th Century.

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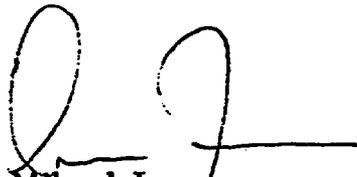
KAN-programme

KAN-1.3 is a project within the Nordic Nuclear Safety Research Programme, NKS. KAN stands for *Nuclear Waste and Decommissioning*.

This report is a case study for the project KAN-1.3

The project KAN-1.3 has addressed the question of conservation and retrieval of information from a nuclear waste repository by investigating the type and form of the information which needs to be kept and by studying future threats to the information and describing possible counter-measures.

The project's main report is written in English. It will be printed in 1993 and will be available from me.



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**THE NORDIC NUCLEAR SAFETY RESEARCH PROJECT KAN-1.3:
INFORMATION CONSERVATION AND RETRIEVAL**

PROJECT 5 - 91: ARCHIVE SAFETY ANALYSIS

CASE STUDY :
GERMAN ARCHIVES DURING THE 20TH CENTURY

PART A: ABSTRACT

Botho Brachmann, Matthias Herrman, Susanne Pollert

Berlin, November 1991

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I. THE RESPONSIBILITIES OF THE ARCHIVIST

The fundamental responsibilities of archives and archivists include: the collection, preservation and protection of archival materials. This holds true for almost all parts of archival activities. These tasks characterize the primary archival job ethics.

The protection of archival documents becomes a necessity because of the chemical-physical changes and decomposition processes of the material: These processes can be calculated to a certain extent. Furthermore, archival sources are dependent on natural and societal influences which can be predicted only with difficulty, and which in turn, influence their conservation and preservation. Therefore, the archivist endeavors to be prepared to deal with all these different factors. This demands a continual adjustment of protection methods for the archival content to present levels of imperilment.

II. DEMANDS - CHALLENGES - HAZARDS

The fear of catastrophes which can damage and destroy archives - fires, water damage, flooding, draught, earthquakes and other natural disasters has existed for hundreds, even thousands of years. However, it is no less the interference of man, be it through robbery and theft, sale, evacuation and deportation, from which archives must be safeguarded.

While natural catastrophes (as well as arbitrary intervention by man) can cause substantial losses of rare source material in a relatively short time; the biological, physical and chemical aging processes of archival materials take place insidiously and gradually. Unfavorable exterior conditions increase physical signs of decay. During the 20th century, an increase in the direct and indirect hazards to archival material through human influences was noted.

These new hazards influenced the archival material in different ways. Especially devastating for German archives and archival materials were military confrontations (First and Second World War) as well as political upheavals and economic crisis (the November revolution in 1918/19, inflation 1922/23, the post-war period, the reunification of both German states).

A 100% protection of archives and archival material cannot be guaranteed during such situations. [The possibilities of loss or damage are too manifold and at times irrational.] Often, they are dependent on factors which cannot but be described as "chance incidents".

Since the end of the Second World War, the emphasis of the protection of archival material has shifted increasingly, even though at first the fear of war damage was paramount, relatively early "everyday measures" were instituted, in order to prevent the natural aging process of archival material. The occurrences of natural catastrophes such as earthquakes, devastating storms, etc. could almost totally be excluded due the geographical situation of Germany. Nevertheless, care had to be taken to prevent endangering the archival materials through fire, water damage and moisture, theft and sabotage in order not to aid processes of natural aging.

While researching of these danger potentials which have already been known for hundreds of years, substantial improvements were achieved. Science and technology brought about modern technological processes, through which the condition of archives

could be considerably improved and damages could be repaired by means of new methods of restoration and conservation.

However, a multitudes of other potential causes for damage appeared due to the innovations of modern 20th century life. Since the middle of the century global environmental problems have increased such as the beginning of the nuclear age, the increasing air pollution, tendencies of increasing global warming and the phenomena of ozone depletion. Increasing industrialization, the ever-changing political landscape and the continued development of new production technology and new procedures had far reaching consequences. These factors introduced new and unpredictable dangers for archives and archival materials. Under these conditions, a preventive approach to archive preservation has become more and more difficult.

At present, the periods of time in which qualitative changes occur, has shortened considerably -- one only has to consider the history of electronic data control. It seems, as if the quantities increase explosively (tangentially), be it with regard to the explosive area of nuclear technology or to the comparatively unimportant field of manufacture and storage of information.

The combination of these two factors - "increasing quantities and, at the same time, constant changes in quality" - complicate the planning and anticipation of future development. This also holds true for the question of long-term archival storage of information and documentation, and informing future generations about disposal areas of nuclear waste.

III. GERMANY FROM 1900 TO 1945

First World War

The First World War had no direct results on German archives, since heavy fighting did not take place on German soil itself. However, much experience could be gained by observing the occurrences in occupied or contested areas. Among these were the lack of personnel due to the draft with its side effects (discontinued replacement of personnel, lack in user control, etc.); the use of qualitatively inferior paper,(so called "war paper" which brought about grave consequences) and the rapid growth in paper output due to an increase in bureaucracy.

The Weimar Republic

The November revolution of 1918 brought about political and judicial changes caused by the transition from a monarchy to a Republic. This had a direct effect on the transmittal system of the republic itself and its individual states. As a result of the war, the existing masses of archival material to be taken over were intensified by the political situation. Documents with limited capacity for storage caused a broadening of tasks, and at the same time a temporary neglect of traditional tasks. The November revolution also caused losses of source materials as a result of specifically aimed and politically motivated actions, through a lack of expertise, indifference as well as general confusion.

Due to these circumstances, urgent and necessary tasks for the immediate and approximate post-war era came about. Problems arose from having to deal with huge volumes of materials on an international -- and up to now -- unprecedented level. In 1919

the 'Reichsarchiv' was founded to assure the safekeeping of documentation from the authorities, at first primarily military and war-economical materials but later on civil material as well. Modern and high-quality methods of recording (film, photos) reached the archives in ever-increasing quantities. A general lack of personnel as well as missing financial means aggravated the management of these respective tasks.

The personal commitment of the archivists was often decisive in the safekeeping of the sources from the registries. Archival job ethics outweighed in countless instances the resentments towards the Weimar Republic, as well as subjective personal and political views.

The peace treaties brought about shifts in jurisdiction of individual archives and compulsory exchange of archival material, occurring mainly in those territories belonging to and those having to be ceded to the victors. Numerous attempts to interpret the relevant articles of the Versailles treaty for archival use led to an considerable increase in archival theory which in turn brought about many practical applications. The extradition of large amounts of archival materials, especially to France and Belgium, could not be avoided. However, an archival treaty with Denmark enabled Germany to avoid an immediate surrender of its archival material. Despite the increased level in theory, the constitutionally-fixed federalistic principles made a far-reaching effective judicial protection of archival materials, already existing in the other European countries, unfeasible.

The new technological developments since the beginning of the 20th century have also enabled improvements in the protection of archival materials, especially in the areas of archive functional architecture, reprography and restoration/conservation. Changing political circumstances and an increased need for more contemporary research lead to an increase in the use of archives.

However, an increase in damage to the archival materials was gradually occurring. The consequences of this problem were realized in its entirety in the 1920s. Measures to reduce potential hazards were instituted. These included user control, reducing availability of archival documents and the first extensive measures of conservation of material on film.

1933 - 1939

Under the rule of the National Socialists a politization of all archives was aspired. This encouraged an increase of certain tasks (such as evaluations, inquiries) and special protection of other tasks (such as registers of personal status, church registries, archival materials of political opponents). The technology of microfilm took on increasing importance in this context.

The political incorporation of archives also brought about an improvement in personnel and equipment of the archives. The measures were partly repealed due to the pre-eminence of remilitarization and open rearmament after 1935.

Second World War

The largest amount of damage and loss to German archival materials and archives in the 20th century occurred during the period of World War II. Officially, only minimal preparations to protect the archives against the hazards of war had been undertaken. Unofficially, specific experiments and considerations were undertaken in 1933 to protect

the archives in case of war. Due to the lack of a central authority comprising all archives during the Third Reich, the archives were not part of the air raid precaution regulations (1935/37) nor of the mobilization regulations, as was the case in France since 1935.

At the outbreak of war in 1939, the safeguarding of archival materials was accomplished primarily by re-storing the material within the respective buildings containing the archives. Additionally, the first specific building codes were instituted as well as the establishment of emergency services and auxiliary personnel in accordance with the regulations of the general air raid precaution laws.

The enormous dangers facing the archives only became apparent with the increase in the allied air attacks on Germany. The protective measures that were finally instituted included the evacuation of single pieces or of the entire stock of material considered particularly valuable. Only towards the end of 1942 were more intensive endeavors for the protection of archival materials instituted. Newly installed protective measures, particularly evacuation were put in place much too late in order to prevent severe losses.

During the air war, single buildings situated away from important junctions, traffic- and industrial centers and structures of little strategical importance, were used as important above-ground storage facilities.

When the land war started to expand to actual German territory, it became apparent that above-ground storage places could no longer provide sufficient protection. Under-ground facilities, particularly salt mines, increasingly found use. Above-ground storage facilities were again evacuated. Due to the lateness of this decision, means of transportation, assisting personnel and further material prerequisites were all lacking. Roads needed for transportation were gradually destroyed and transport vehicles became objects of attack. More often than not, these safety measures could not longer be carried out successfully. Particularly affected were materials located in the eastern provinces or materials that had been relocated earlier to these provinces. Evacuations took place up until the last weeks of the war.

Additional damages to materials during the period from 1933-1945 were incurred due to a directive from Hitler given in 1944, which ordered the planned and systematic destruction of all important, secret, and politically compromising documentation. Especially affected were materials from ministries, upper government offices, as well as the National Socialist Party and its organizations.

1945 - 1946

At the end of the war, new hazards faced the archival materials which at the beginning of the war had not been sufficiently recognized. The plight of the civilian population led to ingenious ways in the use of archival materials as a means of survival. The results were alienation and destruction. Insufficient safeguarding of storage facilities encouraged a considerable amount of malicious destruction as well as the theft of known valuable archival materials and senseless plundering. These losses are in part irreplaceable.

Additional losses occurred due to the politically and materialistically motivated confiscation of archival materials by the occupational forces. Part of the registrar records of the highest civilian authorities, the military as well as of branches of the Nazi government - (these potentially valuable archival materials) - were considered captured property and confiscated. The materials were immediately filmed for reasons of

preservation and utilized as demonstrable evidence in the Nuremberg trials of war criminals. These archives thus served the Allies substantially in their research into the history of national socialism. These losses were only of a temporary nature. After their judicial, military and political utilization, a large part of these archival documents were returned to Germany, some in copy form, but most in their original version.

Numerous archives suffered varying degrees of damages during World War II. Some archives did not suffer losses or damages, others were totally destroyed. However, the large part of archival materials in Germany survived the war without appreciable damages. It is difficult to pinpoint the exact extent of the damages or losses incurred by the war. Quantitative statements had to remain one-sided, since they often dealt with extensive stocks of little actual value. Nevertheless, even the loss of such a source was able to inflict a painful gap to the content of an archive. The exact assessment of the value of damages or losses additionally varied due to countless differing criteria.

IV. GERMANY FROM 1945 TO THE PRESENT

Initial Position

In the beginning, the reconstruction of German archives took place under extremely difficult personnel and material conditions. After the restoration, the reconstruction of archives took the form of gathering and returning scattered materials, which stretched out over a time of several years. At the same time, new techniques of massive conservation, restoration and safety-filming of archival materials were tested and put to practical use.

Damages

In the second part of the 20th century, no incidents occurred in Germany that led to such grave losses and damages to archival materials as during the war and postwar years. The only exception was a giant blaze that occurred in 1961 at "Burg Trausnitz," in the vicinity of Landshut, the location of the state archive of Lower Bavaria. More serious problems were due to damages caused by natural aging. Unfavorable climatic and storage conditions also sped up the decomposition process, i.e. the acid contents of substandard paper products.

Durability and Age Resistance

The durability and resistance of the archival materials to age can be estimated to an upper limit of 1000 years; (parchment and acid-free paper). The modern materials (magnetic, electronic and digital storage) are supposed to have a maximum lifetime of 100 years. Since there is no long-term experience with these materials, simulation and prognosis have to be substituted instead.

Problems with Volume

The increase in bureaucracy at the beginning of the 20th century, brought with it immense problems of how to deal with massive volumes of materials which have confronted the archivists ever since. New kinds of potential archival materials are constantly added to already unmanageable amounts of stored materials and to the 'mountains of files' containing it. After appraisal, only about 1-5% of the volumes of documents are selected for archiving. Nevertheless, in day-to-day practice, for example in the former German Democratic Republic, this has led to a doubling in the size of the state archives (1970-1990).

The successes achieved during the second half of the 20th century in the safekeeping, protection and preservation of archival materials have been to good practical use during the past several decades. However, upon closer scrutiny a different view becomes apparent.

Statutes of Law

In order to protect archival materials, the archivist is forced to work within a certain legislative framework. In the 'old' German Federal Republic this framework could be compared to a mosaic whose individual parts were searched out and put together by the archivists themselves, after initial efforts for comprehensive legislation for the protection of archives failed.

Representatives of cultural agencies, agencies for the protection of monuments as well as civil authorities assisted them in their endeavors. Only at the end of the eighties federal archive protection laws and, at the same time, first state archive protection laws were passed. Many federal states still do not have such laws, especially the five new states which, after the reunification, are now part of the German Federal Republic. The centrally structured government of the German Federal Republic used different archival ordinances to regulate archival materials protection from 1950 up to the time of the reunification in October 1990. Regulations dealing with cultural treasures, fire-and catastrophic protection completed the judicial framework.

Restoration and Conservation

Since the second half of the 1940s, conservation and restorative tasks have been undertaken in the workshops of all large archives. The personnel undertaking the restorations developed highly efficient methods to handle the respective tasks and oftentimes found simple, financially affordable and workable technical solutions for drying processes, conservation and restoration of paper, parchment, seals, etc.

In both German states centralized offices for the conservation and restoration of archival materials were instituted, for example in Bückeburg and Dresden. In these institutions, research into problems of conservation, restoration and archival technology were and are being carried out. In view of the volumes of archival materials that were in need of conservation and restoration, these workshops have been kept busy. Considering the volumes of documents presently flooding into the archives from the former German Democratic Republic (approx. 300.000 lfm), it appears questionable at this time whether the task of its conservational assimilation can be accomplished. The problem presents not only technical and personnel problems, but above all economical ones.

Functional Architecture for Archives

In the fifties and sixties, Germany, as did other countries, experienced occasional fires and flooding in some of its archives. These events signaled the need for the intensifying of preventive measures in order to safeguard archives and archival materials. Safety concepts for archives underwent new scrutiny and the installment of fire alarm as well as fire extinguishing equipment was enforced. Only at this time were a multitude of projects for the construction of functional archive buildings added to the already existing plans to remodel and enlarge existing archive locations. Severe pressure to make a decision to construct new archive buildings existed because of the extensive problems with the volumes of materials, the management of which depended on the establishment of additional storage capacity.

Establishment of Inventories

The catalogs that were created during the work-up of archival materials are often the only source for the reconstruction of information of destroyed, vanished or scattered archive contents. Depending on their respective conditions concerning finances and personnel, the archives are trying to create complete inventories of all documentation, occasionally publishing general content surveys, catalogs and inventories. Edited documents add to the protection of archival materials since to a certain extent, they state the information of the original sources and can often be used in lieu of the originals. Not only does this prevent wear, but it can also be used as a substitute in the event of loss or damage of the original.

Filming for Preservation

Starting in the early sixties, the culturally important content of archives in both German states have been systematically put on film, in order to provide a replacement in case of loss or damage of archival materials. The larger archives of the individual states as well as the State Archive Administration of the German Federal Republic as well as the nationalized archives of the German Democratic Republic created 'film departments' where microforms are produced of the individual documentation. In the Federal Republic alone, in the time period from 1961 to 1983, this voluminous filming of archival material has created more than 300 million reproductions. Since 1976 these microfilms are stored in a mine shaft in the Black Forest.

V. STRATEGIES FOR THE ESTABLISHMENT OF LONG-TERM ARCHIVING

Human rights to peace and the necessary global disarmament to achieve this peace are important political aspects from the viewpoint and the understanding of the professional ethics of archivists, in the endeavor to help in the recording of radioactive waste places which must cover civil as well as military objectives helping to avoid grave hazards for all of humanity. The archivist is therefore looking towards maximization of archival laws on a state as well as worldwide basis. The International Atomic Energy Commission, respectively similar politically neutral control organizations have to take on the responsibility for continuous documentation and the preservation thereof. In this instance, national sovereignty should give way to international interests, thus enabling on-spot-inspections at any given time.

The archivist has a choice of different methods for the securing of documentation. For long-term preservation the use of acid-free paper, having a life-span of over 5000 years, as well as printing in block letters in multiple languages (primarily the main world languages) is recommended. When using computer technology for office communications taking place in national and international on-line operations, copy quality of text, graphics and pictures have to guarantee readability of the material without necessitating technical aids. The safekeeping of archival materials at the same time necessitates the safekeeping of the 'institution of archives' against manifold negative impacts both external and internal. This would encompass the exclusion of wrongful use, forgery, plagiarism, theft of documents, or even 'radioactive waste-terrorism'.

These criteria of accepted standards (ISO), are to be applied to architecture as well as to the security, storage, transportation, information preservation, documentation, copying technology, authenticity, etc.

**THE NORDIC NUCLEAR SAFETY RESEARCH PROJECT KAN-1.3:
INFORMATION CONSERVATION AND RETRIEVAL**

PROJECT 5 - 91: ARCHIVE SAFETY ANALYSIS

**CASE STUDY 1:
GERMAN ARCHIVES DURING THE 20TH CENTURY**

PART B: STUDY

Botho Brachmann, Matthias Herrman, Susanne Pollert

Berlin, November 1991

1 INTRODUCTION

Project Description

The research project "German Archives During the 20th Century" has been put together as a part of the "Nordic Nuclear Safety Research Project KAN 1.3: conservation and Information Retrieval/Project 5-91: Archive Safety Analysis/ Case Study I". The textual focal point of the Part II:Study can be found in paragraphs B and C, while paragraph D, conclusions and recommendations fixate realizations which can be incorporation under KAN 1.3.

The present version represents in a short general form the perceptions as seen by the project management. Some additions regarding thematic emphasis and references to factual literature were made. The text is based on numerous preparatory work such as individual consultations, research at different institutes and specialty magazines, analysis of which comprised more than 200 pages. The authors also put together a compounded classification and a bibliography of secondary literature, which combines thematically, respectively alphabetically organized material of specialized archival and historical interactions.

The study of the German Archival History of the 20th Century addresses in particular the judicial and practical aspects of protection of archival materials, safekeeping from damages or physical losses during peace times as well as during and after World War II.

With the transition to the atomic age in 1945 and the deployment of atomic armament and atomic energy, a qualitatively new level of hazardous sources for archives and archival materials has sprung to life. The archivist has to take into consideration conventional as well as traditional hazards endangering archival materials and find ways of using his political vote based on his specialized knowledge to draw attention to the modern necessities in handling documentation concerning the atomic waste products.

Strategies

The following thesis can be derived from the above:

1. The approach of the archivist concerning nuclear waste and other waste products (poisons, special waste and regular waste) must be manifold. However, it will still contain a high measure of incompleteness, since the potentially negative effects in their entirety cannot as yet be determined. In any case, nuclear waste from the civilian and/or military sector represents an almost incalculable safety risk for mankind.
2. The unavoidable historicity and with it the incompleteness of archival documentation concerning intermediate and final depositories for nuclear waste demand a constant updating and strict evidence-keeping of the respective information. Archival knowledge is historically limited. Documentation can only provide a partial knowledge about which aspects, which material, technical, personnel and financial expenditures must be marked for use of existing waste deposit sites over a long-range period.
3. As suggested by the government of the Federal Republic of Germany, 'nuclear waste colonization' - taking advantage of dependent or third world countries is unacceptable. A national solution for the deposit of nuclear waste and its documentation should have

priority over so-called 'export' solutions. Bi- and multi-national treaties must be signed in the event of an intermediate or final deposit of radioactive material taking place outside of one's own national territory due to varying of geographical, seismological and other conditions.

4. The ratification of international treaties concerning the handling and documentation of atomic waste products and its civil and military factors represents an existential problem facing all of mankind as is the case with atomic disarmament and, suitable political solutions must be found.

5. Complex archival documentation spanning several centuries on a national as well as on an international basis is essential, even in the event of the abolishment of all atomic weapons and a discontinuance in the operation of all atomic reactors, due to the massive amounts of atomic waste material which have to be traceable and controllable. This includes production sites for the mining of uranium, its enrichment and continued processing.

6. Expert opinions from traditional archival history can draw attention to the continuation for the protection of archival materials and for its safe-keeping, however, they are of limited value only in giving guidance and in decision making due to the totally altered danger potential.

7. The strategies in documenting which have to be considered by the archives in recording 'orderly' as well as 'wild' atomic waste deposits both civil and military in origin, including existing "havarie regions" (experimental and restricted zones, intermediate and final deposit sites, etc.) can not rely solely on the expert competence of the archivists.

8. Texts, catalogs, maps, plans, pictures and films should be used for an appropriate documentation of atomic waste sites assuring correct information about the location, the condition and the size of the sites. This holds equally true for the management of either state run and private firms engaged in the production, transport and disposal of atomic waste products. The documentation has to provide future generations, be it hundreds of years from now, with exact and correct instructions. In the Federal Republic of Germany, the majority of deposit sites for nuclear waste will most likely be located in the state of Lower Saxony. This means that the respective archives in Lower Saxony, besides those on the federal level, have to document this information.

9. Documentation about atomic waste disposal whose decentralized and at the same time centralized storage in paper- as well as digital form would prevent any kind of atomic waste terrorism and other kinds of theft could be compiled in a kind of catalog. This could only be achieved in the form of a research project on a combined international level.

10. The regulations governing the civil defense of the Federal Republic of Germany, as well as the ones applying to the safekeeping of cultural treasures must be adhered to. The controlling offices and agencies of the state including the archives must rely on a modern judicial system using a way of documentation which coexists with and combines the traditional and modern methods of document preservation. The valid legal regulations contained in the federal archive laws as well as in the individual state archive laws governing archival materials must be supplemented to deal with the subject of atomic waste disposal documentation.

Expression of Gratitude

While conducting their research, the authors received assistance and support from a multitude of institutions. Our special thanks go to Prof. Hacke of the Hahn-Meitner-Institut for Atomic Research (Berlin), Dr. Hund of the Federal Offices for Radiation, Dr. Henning from the Historical Archives of the Max-Planck-Gesellschaft (Berlin), Dr. Usarski of the Federal Offices for Civil Defense (Bonn) as well as from the Federal Archive (Department Koblenz and Potsdam). To the Swedish Institute for Radiation Protection which made this research possible, and to Dr. Jensen for the wonderful cooperation, our special gratitude.

2 ARCHIVE MATERIALS PROTECTION STARTING AT THE BEGINNING OF THE 20TH CENTURY UP TO 1945

Federalism and German Archives

Towards the end of the 19th century a multitude of archives existed in the German Reich. The structural and occupational classification of the archives were based on the principles of the respective articles of the federal and state constitutions. The federalistic principle, established in the Reichsverfassung (federal constitution) of 1871, determined the division in jurisdiction between the (Reich) federal and the individual states.

Of significance for the archives was the independence in cultural and educational matters that had been granted to the individual German states.

Based on the sole responsibility of the states, the different archives and archival agencies were administered in different fashions. The archives were in part subordinated to the cultural or interior ministries, and in part to the state chancellery.

A central coordination of archives, as practiced by some of the neighboring European states was therefore not feasible in Germany. Not even a central archive for the conservation of the uppermost documentation of the Reich did exist from the foundation of the empire in 1871 to 1919. From the middle of the 19th century on, territorial factioning, the aspiration for relative independence of the states as well as the dualism between Prussia and the Reich, prohibited the founding of a central federal archive. In the larger German states such as Prussia and Bavaria, several state archives were in existence. Administrations for archives were established which carried out, coordinated and centralized functions on a regional level.

In accordance with the principles of local authorities, city- and communal archives were administered according to the respective judgment of the local governing body. These methods brought about a great variance in management and organization. State archives felt a responsibility to render professional assistance to local archives. This kind of assistance was responsible for the first regulations to appear in the middle of the 19th century which were from then on increasingly intensified and organized. The resistance to this increasing influence by independent authorities brought about latent controversies among the state as well as the public and above all local archives lasting well into the 20th century. To this day, these controversies are still not completely resolved. At least these measures led to an improvement in 'archival maintenance' as this kind of archival care-taking and safekeeping of archival references using the assistance of state as well as special organizations, is called.

Church and family archives were the responsibility of their respective owners. Individual economic archives appeared only towards the end of the 19th century when rapid industrialization and concentration took place. Depending on the importance of the respective industrial branch, these archives saw a rapid development by the middle of the 20th century.

Beginning with the end of the 19th century, the institution of 'archival maintenance' was equally interested to find proper ways to influence the safekeeping and maintenance of private archives.

Decentralization - Advantages and Disadvantages

One of the advantages brought about by decentralized authority was the use of a wide range of individual solutions for similar tasks. Despite these existing separating elements, the last third of the 19th century saw a desire towards closer cooperation and exchange of experiences especially among the individual archival categories. The conferences of the chairmen and directors of archives contributed significantly to this movement. Close cooperation also took place on the level of community and church archives. For non-state archives, advisory bureaus were established, similar to the ones that came into use during the middle of the 20th century.

An intensive exchange of ideas took place at state archive conventions. The creation of the German Archive Congress established toward the end of the 19th century became an effective means of sharing new methods on a more than regional level. Once a year the archivists met, shared their knowledge and experiences and decided common strategies. Additional instruments used in these kind of exchanges were "archival newsletters", published regularly starting in 1876, such as the "Newsletter for the Clubs of German History and Antiquity" as well as single publications of individual archives and state archive administrations. After the crystallization of firm rules for archival care and the establishment of archive information centers, their respective publications contributed to the extensive distribution of basic knowledge and experiences as well.

Until the end of the 19th century and beyond, the archival institutions in the German Reich were shaped in a variety of different ways and levels of responsibilities. This resulted in a wide diversity of the qualitative appointments, effectiveness and intensity. These factors prohibited the treatment of "archival practices" in a global and all-inclusive fashion. Safekeeping of Archival Materials during the 19th Century.

Due to the tremendous rise in technological developments as well as the social and political changes which occurred in the 19th century, striking changes could also be observed in the handling of archives. As far as safekeeping of archival materials were concerned, these changes could be seen particularly in the areas of acquisition, development and gathering of inventory as well as in the use of functional architecture for archive buildings. Curatorial and restorative methods had been developed, to systematically preserve archival materials.

Towards the end of the 19th century numerous guidelines and internal rulings existed for the transference of archival materials from state or other institutions to the respective archives. The system of 'archival maintenance' was born.

Changes in historical administrative practices increased the demand for technical expertise for the handling of archival materials and the establishment of firm training guidelines. The position of an archivist was consolidated.

Protection of Archival Materials at the Turn of the Century - Problem Areas

The concern for acquisition, safeguarding and preservation of archival sources was and is the central duty of the archivist. This represents the nucleus of the archival job ethics as well as the basis for all thoughts and activities. The problems occurring in the endeavor to protect archival materials from negative influences are mostly of traditional origin. Archival job ethics must therefore be looked at on a continuum. This pertains particularly to:

- the goal-oriented and systematic, but also coincidental collection of written materials and other potential archival materials from record offices and other filing departments and its respective safeguarding into archives by the archivists or other employees.
- the judicial fixation of safeguards for archival materials and other records from loss or damage with all due rights supplied by law.
- the delay of physical and other aging processes.
- the preventive protection of archival material from destruction due to numerous physical influences as well as natural catastrophes.
- the reversal or minimization of damages due to natural aging processes or natural catastrophes.

These very same problems were faced by the archivist at the end of the 19th and beginning of the 20th century. The changes that came about were due to differing threats which were brought about by historical and human development. As examples one can cite advancing industrialization with its specific influences on the environment and, at the same time advancing military technology and modern methods of warfare. Concurrently, better preventative methods as well as improvements in the repair of already occurred damages were achieved. In general, the demands made on the archivists can easily be compared to the situation as it exists today.

Protection of Archives until the First World War

The consistent conditions in state and administrative practices permitted a continuation in the efforts for acquisition, safekeeping and preservation of archival documentation that had begun during the last third of the 19th century.

Basis for the Acquisition and Safekeeping of Archival Material

By the turn of the century considerable improvements had been achieved in the area of archival maintenance and in the creation of judicially useable methods to insure continuous acquisition, safekeeping and preservation of archival materials. By 1906/08 additional states had established judicially binding laws which allowed state archives to take part in the collection of archival material from public establishments.

Due to the cultural independence of the individual states, it was not possible to establish uniform norms or procedures for the preservation of judicial, historical, cultural, scientific or other important source material. At the beginning of the 20th century increased efforts were put forth to balance out the flaws in the system by a multitude of independent regulations, a majority of which operated in a horizontal fashion, the others worked in a vertical fashion. These rules created advantageous conditions allowing for an overview as well as for a consistency in the operation of the system, while at the same time considering the specific archival and bureaucratic needs of the respective system. The smaller area of responsibility allowed better controls and facilitated dealing with exceptions and special conditions. In the area of federal law this should have also been realized by establishing additional regulations.

The resulting flaws in the system which came to light during the course of World War I, were proof that the measures begun in the 19th century to create the most far-reaching legal protection for archival material were absolutely correct and of highest priority.

Physical Protection of Archival Materials

Beginning in the 1870s an increasing bureaucracy as well as expansion of civil laws brought about a tremendous upswing in the production of written materials. This problem was initially realized when the masses of material had, by the 1980s, exhausted the capacity of many archival facilities. The services of countless archivists were mobilized in order to guarantee optimal physical conditions for archives. Specifically, the interdisciplinary areas gained significance. A multitude of chemical and physical innovations were adopted as well as innovations in functional architecture. During the 20th century this could be seen mainly in the architecture as well as in the lay-out of archives, in the restoration and conservation of archival materials but also in the acquisition and supplementation of existing material.

Functional Architecture

Extensive activities in this area were initiated by the middle of the 19th century. Prior to this date the majority of the archives were located in unsuitable and unpractical buildings whose climatic and spatial arrangements rarely came close to providing optimal archival needs. By the end of the century many new buildings were, at least in their general lay-out, geared towards specific archival needs. These buildings were used as examples, their deficiencies analyzed as well as their advantages pointed out. Finally, at the end of the century, two basic systems of functional archival architecture had evolved which could satisfy both, the climatic and safety requirements of their times: These were the so-called "warehouse system" and the "chamber system". Two projects from the 19th century represented examples of the most significant archival architecture of Germany.

Main State Archive of Saxony in Dresden

An excellent example of functional architecture featuring the "chamber"-system, which is composed of separate, sturdily constructed rooms which were enclosed onto themselves, became the new home of the main state archive in Dresden. Long before actual construction began in 1912, the project had been introduced to the trade press, in order to make use of advice and suggestions put forth by other archives. In fact, this building still meets modern-day archival demands.

The thirteen stories of this "warehouse"-style building were constructed by using a system of brick-enclosed concrete pilings. Even the framework of the roof consisted of concrete. For aesthetic reasons the outside of the roof was tiled on a foundation of wooden rafters.

The area housing the administration of the archive was separated from the storage area, but joined by a fireproof hallway. The rooms which were to serve as storage areas for specialized archival material such as certificates, maps, plans and outlines were furnished in exemplary fashion. The entire interior met the highest safety standards and much detailed planning had gone into providing optimal conditions. The modern central heating plant was located outside of the main building. However, within the administrative areas, living quarters for the caretaker were located--this additional risk factor had been taken into consideration. Shortly there-after, living quarters were no longer designed to be located in the building housing the archive.

Secret State Archive of Prussia located in Berlin-Dahlem.

A second remarkable new building put up in the first quarter of the 20th century housed the Prussian State Archive. Just as in Saxony, the increase in volume of archival materials created by the different administrative offices in the last third of the 19th century had filled existing space, and in some cases, overloaded the individual archives. Therefore the decision for new archive quarters was made at about the same time as in Saxony. The decision in Prussia favored the so-called "storehouse"-design. The storehouse was to be erected on a free-standing steel framework which would contain the storage units and shelve systems. This created relatively large spaces which were then subdivided into smaller "fire sectors". The administration was housed separately from the storage area. Contrary to the design in Dresden, no living quarters were located in the archive building itself.

Living quarters for the director of the archive as well as for the caretaker existed separately on the grounds belonging to the archive building. During the first few years of World War I, work on the building had to be stopped. Completion took place in 1924. Although this particular design was, at this point in time, considered fireproof, during the thirties the opinions circulated that in case of fire, this "storehouse"-type design could easily be in danger due to the "back-draft" effect. Therefore, this design was discontinued. The Second World War brought proof that the freestanding shelf-system was able to withstand the effects of high-power explosive bombs. The parts of the shelf system damaged in an air raid could still be cleared of archival material contained therein. Finally a fire set by plunderers did bring about the feared "draft effect" in a part of the archive. The damage that the bombs had caused in the ceilings facilitated the spread of the fire. The fire was finally halted at the "fire wall", in the north wing of the archive, which had been erected after the completion of the building itself. Thus, only part of the non-evacuated material was destroyed.

In summary, the solutions used in the first decades of the 20th century for functional architecture of archives can still be regarded as superior. They still meet general modern criteria for the protection of archival materials.

Photography and the Archive Systems from the Beginning of the 20th Century. Technical development encouraged the transition to applied use of photography in the archive system. The criteria demanded by the archivists (including volume and speed of preparation, durability, respectively easy archiving of the carriers and a reasonable cost-user-ratio) allowed then only at the turn of the century to consider the use of photography. The first in-depth discussions of these problems took place in 1905 during an International Congress in Lüttich dealing with the reproduction of handwritings, coins and seals. The Prussian archive administration presented in 1909 comprehensive documentation resulting from a three year combined research project undertaken by

archivists and photographers. By 1910 photography had prevailed as a technical aid in archives. When the Main State Archive of Saxony in Dresden was built, they incorporated a reprographic workshop into its concept. Generalized use of photography, however, had not yet come into its own. Archival aspirations in this respect were interrupted by the outbreak of World War I.

Direct Influences of World War I on German Archives

Direct influences of the First World War on archives occurred mostly in the German border states, especially France, Belgium and Poland. Due to the dominating military strategy (Schlieffenplan), no comprehensive preparations were undertaken to protect archives in case of war. German territory it was assumed, would not be invaded by any foreign troops. Further-more, large circles of the population relied on compliance with the "agreement for a peaceful settlement of international conflicts", signed on October 18, 1907 (Haag State War Ordinance).

Modern Ways of Warfare

The adherence to the Haag treaty in the territories affected by the war proved to be an illusion. The engagement of mass armies, new ways of trench warfare and horrifying new methods of annihilation, superior equipment and new fighting techniques, especially of the air forces, made it impossible to control regulations for the protection of institutions of sciences and culture. The potentials for such widespread destruction could not have been foreseen in 1914. For the first time in modern warfare, the rear area had become a second front. Even archives which were not located directly in the center of hostile operations were endangered. Since neither capacities for transport nor accuracy of firepower of the air forces were highly developed, and since mostly industrial, not civilian location, were the objectives of military operations, archives were generally not endangered. Even the war on land brought with it small consequences for archives located on German soil.

War Experiences

Between the years 1914/15 and 1918 archivists began to draw conclusions concerning aspects of the safeguarding of archives during future military actions. These conclusions were based mostly on evacuations of archival materials undertaken by French archivists and the damages that occurred. Additional knowledge was gained through the archivists working in the occupied territories, mainly in France and Poland. Final conclusions were also drawn through an understanding of the destructiveness of modern weapons' systems and changes in the methods of warfare which made the protection of civil objects possible only on rare occasions. A thorough evaluation of the findings and their application in the archive systems remained to be done in the postwar period.

Indirect Consequences

For Germany and its archives, the direct effects of military confrontations were not as significant as the indirect consequences of the general shortages brought on by the hostilities. This area had also received insufficient consideration in the time before the outbreak of the war. The lack of a centralized archive administration system on a federal level which could have worked as a liaison for the individual archives was evident. Resistance to certain decisions that could have been handled by an authority like this did not occur. Centralized regulations for protection of archives in case of war were not established. This oversight was felt by the archives.

Approximately two thirds of all German archivists were drafted and many of them did not return from the war. Some of the archives had to cease operations due to lack of personnel. Many of these very same archives were victimized during the "Hindenburg program" in 1916 in the drive to collect "wastepaper". The collected paper was used in an attempt to achieve self-sufficiency for war productions, for the manufacture of ammunition, and for the securing of press information. Valid archival materials were used as secondary raw material, since there was no centralized authority to protest these measures. Even regular archives fell victim to this "waste paper" drive. Public objection of the archivists against this deplorable undertaking were voiced only towards the end of the war and then only on a small scale.

The acquisition of new inventory was possible on a minute scale, but in most cases could not be done at all. This resulted in a stabilization of already existing registries and of departmental archives.

At the same time the scope of services provided by archives had to be reduced and/or totally discontinued. A lack of control in the use of the archives led to the "Hauck incident" --a theft of enormous scope which was discovered only in the post war era and led to a considerable increase in regulations regarding the utilization of archives.

Work in progress on some new buildings had to be disrupted or discontinued since not only cement and steel, but also financial means were urgently needed for war production.

"War - Paper"

A further consequence of the war was the use of low quality paper. The so-called "war-paper" contained a large percentage of wood which provided the paper with low aging stability. This problem had to be dealt with in post-war times. Numerous documents, mostly the large numbers of carbon copies created by the increased use of typewriters, practically self-destructed in the course of a few years, as was aptly pointed out by Karl Zipfel, who became director of the Reich archive. During the war there was a literal explosion of written communications and the archives spoke of a "paper war" taking place in the different administrative offices. A relatively quick decision was necessary on how to proceed, however, due to the lack of trained personnel and suitable storage space, it had to wait until the mid-1920s. An effort was made to manage these volumes of documentation by means of "positive" and "negative" determination of its value to enable the proper archiving of the reduced amount of material.

Photography

An indirect effect of the World War was the increased use of photography in everyday life due to military use of photography for documentary, reconnaissance and propaganda purposes. German industry achieved considerable improvements in the development of photographic methods and particularly in the quality of the respective equipment. Pictures of good quality, durability and cost-effectiveness could now be produced. The archive system was also able to profit from this development. A relatively large source of new material flowed into the archives: photography as archival material. A new function for archives was thus created. However, a wide consideration of photography as a method of safeguarding material or as replacement of documentation did not occur during the War until 1918.

3 PROBLEMS OF PROTECTION OF ARCHIVAL MATERIALS BETWEEN 1919/1933

The effects of the problems which occurred in German archives during the World War could still be felt in the post war era. In fact, they intensified in certain archival areas. The changes in state government which came about due to the November revolution caused additional impacts. There was a strengthening of interaction between archives and administration and between archives and state politics took place.

Peace Treaties and the Archives

In the German archive system, not only the loss of many colleagues was mourned but a few years later in 1925 during the German Archive Congress a "death list" of kind was put together: Two archives on the western side of the Rhine and two archives located in the north east had to be turned over to other states. This ceding of the archives, in accord with the regulations of the Versailles Treaty, was one aspect of the German defeat. In addition, negotiations began concerning the surrender of archival material or delivery of replacement documents for damaged or destroyed archives in the formerly occupied territories.

In close connection with the regulations of the treaty of Versailles, the problems of adhering to and interpreting the Haag land war ordinances came up again. The question was whether or not it would be possible to adhere to an agreement laid down in 1907 while fighting a modern day war when the safety of the civilian population in the rear areas could no longer be guaranteed. How could the land war ordinance be used and interpreted in order to safeguard the inventory of archives from having to be surrendered to the other powers? These questions were pondered by both sides; the French archive administration making the demands, as well as by the archive administrations of the German states.

Carrying out the terms of the treaty turned out to be an arduous process and brought about an intensification of theoretical research regarding archival concerns. In particular, efforts were made to establish unchallengeable and generally accepted definitions for the concepts of pertinence and provenance. This process contributed to the development of clear terminology, which began in the middle of the 20th century. The French archives finally did agree to have part of their demands for replacement of their archival losses added to their reparation demands. Another part of their demands remained unfulfilled.

The negotiations regarding the surrender of archival materials to the victorious powers had both positive as well as negative effects. As positive one can consider the further development of archival theory which also had an influence on improved methods of protection for archival materials. A negative aspect was the splitting up of archival holdings.

The most momentous consequence, however, was the fact that these regulations set a precedence for settlement of disputes regarding archival materials in case of future armed conflicts. This process of reciprocal action reached back to events that had taken place in prior times. French archives took revenge in 1919 for demands made by Germany in 1871, which in turn had been a reaction to former demands for archival documentation made by the French. The action of German "archive commandos" was a continuation of the dispute that began in 1919.

Effects on Archives caused by the World War I - Overlapping Problems

Since the state archivists, mostly civil servants, saw themselves as "servants of the state", the fall of the monarchies in 1918 seemed to destroy the value of their life work. However, the tremendous job that faced the archives due to the influx of huge volumes of archival materials and the safeguarding of these sources, made them realize the necessity to change their attitude towards their new employer, namely the state. In Tucholsky's words: they changed from "heartfelt monarchists to republicans for matters of reason". At this same time this new attitude came about not only because of political motivation but also due to feelings of responsibility to the main purpose of their profession: the conservation and preservation of archival materials. Their professional ethics bridged the gap between subjective and personal political attitudes. This new attitude was essential if they were to meet the demands of the times: the Bavarian state archive had taken on approximately 40,000 files by 1923 and the Reichs-archive had an increase of nearly 2 million files by 1925. This demanded speedy action to deal with these problems of large volumes which by the middle of the 20th century existed in several different variants.

A further problem, which had already existed before the war presented itself again: the problem of judicial fixation of the safeguarding of archival materials. Changes in the bureaucratic structure, especially in agencies that had been geared towards the war effort, could bring with it the acute danger of destruction of voluminous archival materials, especially since there was a lack of interest, financial means and specific regulations for handing over this material to the respective archives. If at all possible, authorities were to be forced to deliver the respective materials to the archives.

Finally, one had to try to find ways and means for the inclusion and preservation of archival materials located in private hands. A law drafted in 1925 and presented to the Reichs-cabinet was not ratified. The demands to establish a centralized state ruling of authorities for the individual states was in contradiction to Article 150 of the Weimar constitution and could therefore not be acted upon. Another basic problem was "how far...is it judicially possible and practical" to influence "the freedom of the individual owner to sell, give away and destroy private archival materials." This discussion received a special stimulus in 1932 in connection with discussions for social reforms. After the takeover of the national socialists, these efforts were continued, however, with additional parameters added to encompass the objectives of party and state.

The fact that substantial losses of source materials did not occur during the catastrophic times of 1918-1921 and during the inflation in 1922/23 is primarily due to the personal commitment of the archivists. At their own initiative, they ferreted out potential archival sources and took measures to safeguard important material. A large part of their success was due to the reputation of the directors of the archives as well as the general respect accorded to their profession in Germany.

Physical Measures to Safeguard Archival Materials

The practical work to safeguard archival material from destruction and damages was carried out in a more sedate fashion because it was not as interesting on a political level. Just as in the transition period from the 19th to the 20th century, similarities can be seen with the tasks at hand. The projects which had been interrupted by the World War, i.e. the work on the new building which was to house the secret state archive were taken up again and finished. Additional commitments and problem areas arose from the war and its aftermath, as was mentioned already in the example of "war paper."

Photography

After the world war, a considerable increase in the practical use of photography in the archive system for purposes of safeguarding materials took place and photography found its way into archives as a relatively new medium for information storage. Specialized archival criteria had to be ascertained and considered.

At the time of the Paris negotiations in 1919, photographic reproductions were already demanded as part of the surrender of archival materials. The underlying reasons were undoubtedly to protect archives, since in this fashion only the information and not the actual sources were changing hands. The use of photography in the post war period was helpful in exchanging sources for information purposes, for safeguarding documentation, for safeguarding material which was privately owned and not easily accessible and possibly endangered, and finally, for purposes of completing existing inventories. Photographic procedures were also employed for other purposes, i.e. improvement in the readability of sources.

Nevertheless, the use of photography for reproductive purposes was still relatively negligible in the archival system. Only in 1929 was a larger project undertaken: the creation of a "central office for photographing older certificates on German soil" in Marburg. This institute made use of photography for purposes of safeguarding material and improving scientific work. After three years of operation, their first report pronounced their work a success. This "Archive" (which has proven its value over the years) is still in existence today.

4 PROTECTION OF ARCHIVES DURING THE TIMES OF NATIONAL SOCIALISM

After 1933 a tighter integration of archives into the political objectives of the national socialist dictatorship took place. From a purely professional standpoint, this brought about some beneficial results. An increase in the workload needing immediate attention required additional personnel as well as an upgrading of equipment and additional financial support. However, there was an upswing in these activities after 1933 which subsided with the begin of open remilitarization in 1935 and the introduction of general conscription because financial support, material and personnel were required for this effort.

Filming for Safeguarding Archival Material

Due to the racial politics of the national socialists, the Reichsbureau for genealogical research took over church registries and personal data located in state and church archives in the German speaking territories. This material was photographed for reasons of safeguarding and the photographic copies were archived centrally and used for evaluations and cataloguing. This is an example of the use of photography as a means of safeguarding and for replacement purposes. At the same time, attention has to be drawn to misuse of technical progress by a radical inhuman political system.

During the second world war, an endeavor was undertaken to photograph all materials before an eventual evacuation would take place. However, this attempt failed due to the sheer volume of the material, the lack of qualified personnel and the lack of proper equipment. The attempt to photograph documentation on a short-term notice in the event

of impending catastrophes was unsuccessful. It was determined, even while the war was still going on, that actions such as filming for safeguarding of materials had to begin far in advance of war.

PREPARATION OF THE ARCHIVE SYSTEM FOR WORLD WAR II

Necessity for Air Raid Precautions

The devastating effects that wars have on archives has been well-known for centuries: fire, theft, looting, or destruction of complete archives have been a constant threat. On the negative side, one can cite the napoleonic misappropriation of archive and cultural materials at the beginning of the 19th century. Many archivists lived through these times and saw the aftermath of the first World War. It became evident that despite historical continuation and repetition of events, insufficient conclusions for protection of archival material had been made.

Beginning in the 1920's, military techniques showed a tremendous expansion in destructive power and operational range which continued into the thirties. These developments posed serious dangers for the archive system. The development of the air forces can be used as an example for this trend; their operations inflicted considerable damage on archive buildings as well as on archival material. In 1914 during eight air raids 14 airplanes dropped 33 bombs on German territory; by 1918 during 353 air attacks carried out by 2319 airplanes, 7717 bombs fell on German soil. In the years of 1915 to 1918 the number of attacks had increased 18-fold. Even though the Luftwaffe in the First World War was not a deciding factor in the outcome of the war, it did have a substantial demoralizing effect.

It showed the tendency of developments in the technical and tactical parameters of the production of a weapon in the "Blitzkrieg" approach to warfare and which would have considerable consequences in future wars. This would have significant influence in the rear areas of the warring countries. It was realized that all established principles for the protection of civilian populations became infeasible. Proposals presented at international conferences to ban air raids using high explosive bombs, incendiary bombs and chemical weapons against civil populations and civil institutions failed. Finally, based on the foundations of the Paris "air agreement" of 1926, it was decided by the Reichs-administration to take important steps in the area of civil air defense.

The German archives found no special consideration under this plan. It was assumed that the general fire- and technical safety parameters as well as the preparation undertaken in case of catastrophic events were sufficient. Until 1934, there was no direct reference to air defense, even though some articles had pointed out the dangers posed to archives in wartime. This attitude could be traced back to existing political conditions which in turn were influenced by regulations of the Versailles treaty.

Conditions changed abruptly with the takeover of the National Socialists. The Reichs-air defense coalition created by Göring in 1933 carried out extensive educational-, schooling- and controlling activities. Archivists were also trained as air raid wardens. Until then, initiatives were mostly directed towards protection against natural catastrophes, now leaned heavily towards preventive protection in case of war.

At the German Archive Congress in 1934, when A. Brackmann put the archive system in the service of the National Socialist politics, two lectures were presented which dealt exclusively with the situations for archives in wartime. For the first time, air defense for archives as well as the effects of poison gas on archival materials were debated. Both reports showed that at least the two largest archive administration, namely in Bavaria and in Prussia, had already grappled with this problem for some time.

In order to be able to carry out the necessary and costly experiments there had to be connections established to authorized military research institutes or an extensive technical know how had to be available in the archives themselves. Based on these experiments or original documents, the effect of poison gas on archival materials such as paper, parchment, seals and seal capsules as well as on people were tested. The information gained from these experiments was used to establish guidelines in case of emergencies.

Additionally, optimal conditions for locations and equipment, respectively necessary changes to existing archive buildings were determined. Fire protection standards were established and the flame resistance of different materials such as paints, shelves and frameworks were tested. The special steel framing system for archive buildings was rejected because of its possible back draft effect in case of fire. Furthermore, an increase in the quality of existing preventive measures occurred (i.e. the installation of fire extinguishers.) The problem of air raid shelters and the allocation of alternative locations were also addressed. Therefore, the archives were prepared for these eventualities even before the air raid protection law was passed in 1935. According to C. Burkhard, it was already "superfluous" to point out the general dangers of air warfare: the general population was well aware of it due to the educational efforts of the Reichs air defense organization.

Archive Protection and Air Raid Defense in the Perimeter of the War

In the course of the militarization of public life in the German Reich after 1935, many long-term projects dealing with propaganda, institutions and laws were realized. One of these measures was the state-wide establishment of air defense systems. The law of January 26, 1935 regarding air defense declared air defense to be the responsibility of the Reich and several different agencies were instructed to oversee its enforcement; the individual states were told to comply with the regulations. In 1937, concrete rules for the enactment of these laws were established. However, since the archive system was not organized on a federal basis, there was no existing responsible agency which could have taken over the coordination of this function. This meant compliance took place in the usual ways: the general managers met and decided to exchange experiences and knowledge in meetings or at archive congresses. Responsibility for the safeguarding of the archives remained largely in the hands of the general directors.

Contrary to German ordinances and laws, the French government had in 1935 included the safekeeping of libraries and archives into their general mobilization preparations. This had a stimulating influence on German archives as well. According to the recommendations of the air defense confederation and the ordinances of the air defense law, the evacuation of attics began relatively early. Starting in 1938, practical air defence exercises were carried out which not only included fire prevention but also rehearsals of evacuations and the shifting of the contents inside the archives.

With the entry of German troops into Austria and, eventually into the German speaking areas of Czechoslovakia, the seriousness of the gravity of the situation became evident and the uneasiness of the archivists, particularly those located in the Western territories increased. Due to the appeasement politics of the Entente powers, the dangers abated once again. However, the archives now began a much more intensive search for effective measures to safeguard their holdings.

Some of the state archives urged again standardized federal regulations to inventory the most valuable archival documents and materials as well as establish evacuation plans and determine appropriate evasion measures. In case of war, an immediate evacuation to centrally located areas in Germany were to take place. However, neither the creation of a law for the safe-guarding of archival material nor a centralized federal administration took place at this time. Generally, public discussions of these matters was considered as "defeatism" and in some instances, punished with sanctions. Nevertheless, at the conference of archive directors in Marburg in 1938, the problem of archival safeguarding during times of war was discussed. At the conference of archive directors in Berlin in March of 1939, the first tangible suggestions regarding these eventualities were made.

An opinion poll showed that general evacuation measures were not considered; merely the shifting of inventories within the archives themselves appeared to be necessary. In the event of war, an evacuation would be feasible anyhow, since transport capacities would all be directed towards the movement of war materials. Nevertheless, beginning in 1938 the fortress of Ehrenbreitstein in Koblenz was being prepared to receive additional archive materials. This surprisingly farsighted undertaking ran contrary to popular doctrine but its appropriateness was confirmed in a relatively short time-span.

It was not by chance that the general manager of the Prussian state archive in 1939 undertook an inspection tour of the archives located in the western provinces. At the outbreak of the war, archival materials stored in archives in immediate vicinity of the border or of the Siegfried line were promptly evacuated.

At this point in time, the Prussian archive administration had already taken up the initiative for appropriate action. Through the combination of the two positions, that of general director of the Prussian state archive and the position of the director of the Reichsarchive, an institution was formed at the highest level which endeavored to reconcile grievances existing between the Reich and the individual state archives. The combining of positions, a quite common occurrence in order to tend to archival interests, found further extension during the war and proved to be effective.

Due to these events it is obvious that on an official level insufficient measures for the protection of archives during times of war were initiated. The emphasis until 1939 was on "peace- time buildup". Nevertheless, certain steps had been taken, which were only of significance if one had an intimate knowledge of the political situation and its internal workings.

5 SAFEGUARDING OF ARCHIVES DURING THE SECOND WORLD WAR

Archives during the War Years until 1942

With the exception of archives located in the western territories of the German Reich, no considerable changes in safety concerns took place in the institutes located in central

Germany after September 1, 1939. The measures which were laid down by the air defense law (employment of air defense wardens and stand-by personnel, activation of a reporting system, supplementation of technical equipment for fire protection) were rarely expanded to include preventive measures specifically oriented towards use in archives. Only a few archives began to move their most valuable inventory into lower levels of the buildings, basement storage spaces or special safes.

Some archives located near the French border were evacuated, however, when German troops occupied these French territories, these materials were returned to their original location. It was particularly valuable to the political propaganda machine to be able to say that these archives were operational. This propaganda advantage thus took priority over the safety concerns of the material. Already at this point in time, the availability of transport vehicles as well as the climatic conditions in the substitute facilities did not meet the needs of the archivists nor the necessities of appropriate safeguarding of the inventory.

At least some of the archivists working in occupied territory gained valuable knowledge and experience from evacuations under-taken by French archives--as had already occurred in World War I. Within a relatively short time, some of the inventory had suffered considerable damage due to damp storage facilities. A further problem was the availability of trained personnel and in keeping a semblance of order when undertaking evacuations, transports and return of material.

The speedy succession of victories of the German army on all fronts brought with it a certain amount of false security which lasted until the Battle at Stalingrad took place and the air attacks on German cities increased. The institute of "Commissars for the safeguarding of archival material (KfdA)" created in 1940, had only received instructions which covered the protection, safeguarding and exploitation of archives in the occupied territories.

Even the first English air attacks gave no cause to doubt the security of the archives. A general closing of the institutions--as had taken place, despite considerable opposition, with all museums in Berlin in 1939--could not be enforced. In the middle of 1942, the commissar for the safeguarding of archives published a document regarding "difficulties in the archive system" which could be found in the "information leaflet of the General director of the Prussian state archives." The described deficits were mainly found in the communal level and not in the domain of the state. Therefore, this document could not be considered an order for tackling respective tasks but more as part of a general argument for a last-ditch effort to bring about a new version of a law for the protection of archival material.

Increased Air War over Germany

Only in May of 1942 were orders given by the general administration (which a short while earlier had still been taboo): the decentralization and evacuation of parts of archival inventories into specially selected substitute facilities. These were to be located as far as possible from communications-, traffic-, and industrial centers, but still within a reasonable distance for reasons of transport. Inquiries to locate such facilities began immediately. Numerous archives had already pressed ahead with such inquiries without waiting for orders from a higher authority and without making their efforts public. The seriousness of the situation could be seen when Reichscommander Bormann gave instructions to individual area commanders that all "valuables" were to be stored in

facilities that were fireproof and bombproof. Archival materials belonging to the party were to be included. State archives were called upon to render all possible assistance to non-state archives.

Finally, the authority of the commissar for protection of archives was expanded to cover all of Germany. He was responsible for all organizational works as well as for a centralized air defense of all archives in cooperation with the party chancellory and military administrative offices. At the same time with these organisatory and structural changes "guidelines for the proper execution of air defenses of archives" were published, a measure that was long overdue. The preservation of the archives and the safeguarding of archival material now became dominant to its utilization and exploitation. One paragraph entitled "special air defense measures" laid down mandatory procedures such as the installation of fire extinguishing systems, individual fire extinguisher, structural changes in the buildings and classification of archival material into three "value" categories for emphasis on evacuation as well as questions about the general protection of archival material.

The Archive System in Germany after the Battle of Stalingrad

Meanwhile the archive system had been regimented under strict guidelines. Archives had to report air defence practices, damages incurred to archival material due to air attacks and respective rescue operations. These reports were collected, the data evaluated and published in a leaflet for general distribution to archives. This very useful publication was discontinued in 1944, since, supposedly "the enemy.....has extra-ordinary interest in it" in order to gain "further information about the effects of their bombing raids". The exchange of data now took place in a "collected report" which was distributed as "confidential" matter. It is not known whether the enemy really had profound interest in the destruction of archives and archival inventories. One can assume that these reports were discontinued in an effort to prevent further anxiety to German archivists. Part of the damages could be blamed on the delayed action of the archive administrations which had for a long time resisted the demands for a timely protection of archival material.

Only in March of 1943 did the general director of state archives decide that the best possible protection for archival inventories would be the evacuation into substitute facilities. The directive given in May of 1942 for an evacuation of 20% of the total inventories was increased to include approximately 50% of the inventories. Under the conditions of the ever intensifying air war, even these measures were not sufficient. At the Congress in Würzburg in September 1943, the evacuation of a percentage of at least 75% of inventories was advised. But given the conditions of the war, these high evacuation rates were only feasible for the largest archives. The smaller institutes failed, due to a lack in transport capacity.

Archives were already evacuating their inventories under adverse conditions into substitute facilities located nearby. At first, they used vaults in savings institutions, banks or similar places. Within a short time, however, they realized that these places did not afford sufficient protection. Fires caused the documents in the safes to turn into ashes or they would suffer considerable water damage from efforts to extinguish fires. Other evacuation possibilities were: free standing manor houses, castles, convents, churches, parsonages, breweries, estates and other similar places (see attachment 4.) Even cellars in wineries were used, although their dampness presented a great problem. However, they were located underground which made them relatively safe from air attacks. Putting individual material in private locations was considered "billeting." The question of moral

or materialistic motivation of the individuals providing their property for storage purposes could be of significance. However, a large part of the population esteemed not only German archival material but also foreign and even enemy "cultural assets." Appeals for the protection of cultural assets found support, despite the tremendous existential problems of the period.

One of the largest above-ground substitute storage locations belonging to the state, was the fortress Ehrenbreitstein. This location was no longer in use for military purposes and, therefore, not of any strategic importance. Numerous gun turrets had served already as archival storage areas during peacetime, others were prepared up until the outbreak of the war. Due to its architectural construction--cross vaulting and barrel-vaulting--a roof thickness of 0.8 to 1 meter and an additional floor cover of 2 to 4 meters, this building seemed to offer sufficient protection from penetration. Since the gun turrets were not dug out of the rock but built upon it, the climatic storage conditions were good. At the time of its greatest storage capacity, it contained archival material from the state archives in Aurich, Düsseldorf, Hamburg, Kiel, Luxemburg, Oldenburg, Osnabrück and Wiesbaden, as well as inventories of numerous city and church archives. For the first time (in 1944), high explosive bombs penetrated the gun turrets which previously had been considered totally secure. This meant that this substitute location--like so many others--had to be evacuated.

Reactions of Archives to the Land War - Mines

At that point, only mines could be considered as substitute locations for evacuation of archival materials. Since 1942, museums and (since 1943) the secret state archive of Berlin-Dahlem, as well as the Reichsarchive of Potsdam had used mines as storage facilities. Because of their underground location, these mines were absolutely safe from damages by either incendiary or highly-explosive bombs. Above all, the salt mines offered excellent condition, i.e. completely dry conditions. Only salt dust which settled on the documents could be damaging to metal capsules. An analogous effect on files could not be determined. However, this small detriment was counteracted by use of wooden storage boxes. The same purpose was fulfilled by "file aprons." Files on which the salt dust had settled, became noticeable only when the files were returned to their appropriate locations and came into contact with the humidity in the air. After the war, a simple method for cleaning these files was found.

The storage facilities in the mines worked so well, that the secret state archives could continue to conduct inquiries and, if necessary, hand over files to the ministries. It had even been considered to permanently locate a branch of the secret archives in a mine.

The decentralization of archive inventories during the war was more or less successful. Nevertheless, the following observations can be made: In numerous instances, for example the main state archive of Saxony and smaller archives, losses were incurred in the substitute locations while the regular archive location suffered no or only minor damage. Other archives were destroyed while evacuation was in progress. The evacuated materials were the only surviving sources of these archives.

Transport to substitute locations took place under considerable difficulties, since proper means of transportation were not available. In opportune circumstances the army was able to furnish vehicles, but often horse-drawn wagons had to be used. Transportation by rail--in the beginning still carried out with special containers meant for transport of furniture, became continuously more difficult. Tracks were destroyed, moving trains were

attacked, disabled and left lying on the tracks. Pillaging often occurred under these circumstances. As a result of this, quite extraordinary means of transportation of archival material had to be employed. The large holding areas of barges and the relatively rare air attacks on them offered a good way of transportation. With few exceptions, little damage occurred on these transports.

Another difficulty in the safeguarding of archival material was the often difficult accessibility of the temporary location. At times these locations were so inaccessible that the archival material had to be shifted from one mode of transportation to another, i.e. from the archive to the departing train station, from arrival station to substitute location, etc. Severe damage was often caused in the whole system and at times even losses were incurred.

In summary, one can say that no one method sure way was found to guarantee the safekeeping of archival material. The conservation of inventories of the German archives during the Second World War could only partly be credited to the preventive measures that were taken. The fact that some archives were untouched while others were destroyed in devastating fires falls under the category of "luck".

6 ARCHIVE INVENTORIES AND THE POST WAR ERA

The Effect of the Distressed Conditions in Post-War Germany

One could assume that the post war era would bring the necessary relief to archives which was essential for the return of the evacuated materials, the reorganization of inventories and to the reconstruction of destroyed or damaged buildings. But this assumption proved false.

There were no working administrative agencies to run the archives in the immediate post war era. Numerous archivists had been killed in the war or had lost their lives trying to rescue archival materials during air attacks. Many others were prisoners of war. Archivists who had not been sent to the front but had remained behind in Germany belonged to a group which due to health or age were not fit for active duty. The situation facing the archives looked grim.

Due to the chaos of the hostile actions and the occupation, numerous substitute locations containing archival material had been left without supervision. Many transports were missing while others were abandoned in train stations somewhere in Germany. Plundering in substitute locations and in loaded transport vehicles occurred frequently. Depots, vehicles and boxes were broken into. Files were torn open and rifled through; the thread from file bundles was removed, etc. Due to severe shortages in heating materials many of these files and boxes were used as fuel.

Further damages, the consequences of which can be seen to this day, were due to pilfering and purposeful theft of selected pieces for collectors: deeds, seals, maps and autographs disappeared in large numbers. These documents still appear, infrequently, even at reputable dealers and auction houses.

It is an ironic that particularly the substitute locations, which seemed most secure from military and bomb damages--namely the mines--were especially hard hit in post war

times, by confiscation, infringement by the civil population, etc. The concentration of these materials in such a small area made them very vulnerable to theft and pilfering.

Even though these infringements were prosecuted, the lower ranks among the occupation troops as well as the civilian population took part in this destruction, mostly due to a lack of understanding.

Confiscation by the Allies

Special commandos of the allied forces were responsible for the protection of general cultural and archival materials. At the same time, archival material and documentation--especially located in the larger archives, in the ministries and in administrative offices of the party as well as large industrial plants--were considered war booty, confiscated and sent out of Germany. A large part of the confiscated documents and materials were used as evidence by the allies during the Nürnberg trials of war criminals. Another part remained overseas for scientific evaluation, but was eventually returned to the archives of origin. However, a large part of valuable historical archival material is still not accounted for. The legality of "safeguarding" archival materials can today, 46 years after the end of the war, not be considered closed.

7 SAFEGUARDING OF ARCHIVAL MATERIALS IN GERMANY FROM 1945 TO THE PRESENT. DANGERS - PROBLEMS - PROVISIONS

Man and nature

For hundreds, even thousands of years there has been great fear of fires, floods, tidal waves, droughts, earthquakes and other natural catastrophes. However, archives and their inventories have to be protected first and foremost from human beings who cause damages through robbery and theft, sale of archival materials, evacuations and abductions.

Not only does the gradual natural aging process of archival material and its acceleration due to biological, physical and chemical process cause damage to archival materials, another source of grave danger are natural catastrophes as well as the arbitrary interference of man.

The media

The media generally does not lend much support to archivists who carry the responsibility for the safeguarding, security, preservation and permanent storage of archival materials. Most of the memorials are created for our fellow man and for future generations to commemorate important events. The "memory of the state" however, is composed of the documents put out by the state, industry and private sources. The natural attributes of these materials are not made to last "for all eternity."

Present day experiences have shown that traditional writing materials such as parchment and "quality old paper" (i.e. linen paper made without wood fibers) will last hundreds of years showing relatively little damage, whereas "modern" papers turn yellow, brittle and deteriorate over the course of just a few years or decades. These "modern" paper products have been used more and more use since the end of the 19th century, and by the 20th century they literally were flooding offices, registries and archives. An additional problem appeared with the development of new copying techniques. Thermal copies, for example,

are totally useless for archival purposes, because they are totally unreadable within a period of some weeks.

Investigations into durability and aging resistance of modern paper and other writing material lack the long-term experience which is available with "old" documentation. Meanwhile, a new kind of wood- and acid-free paper has been developed with an expected durability of 800 to 1000 years. Institutions which produce archival material will eventually use only acid-free paper. In Finland, all government agencies producing documents must use this specialized paper and other writing equipment. In the course of the 20th century, traditional writing materials, parchment and paper were supplemented by new sources and storage medias. The long-term conservation and storage of photographed, audio-, and audio-visual documents, computerized data, etc. caused the archivists still larger technical, personnel and financial problems than storing the traditional archival materials.

Climatic parameters

Climatic conditions are of utmost importance to the physical preservation of archival material. Unfavorable climatic conditions foster biological (mildew, anobias, silverfish, mites, termites) as well as physical-chemical decomposition and decay processes (ink- and color destruction, dissolving of the emulsion layer on film, aging of paper, film, photographs, etc.). Humidity, light penetration and room temperature, increasing air pollution levels, dust deposits--mostly on modern-day information carriers--as well as infestation with microorganisms slowly lead to damages and losses of archival material. Time is the enemy of the archivist and, especially when several of the above mentioned factors occur at the same time, the negative effect on archival material is multiplied.

The speed and extent of the natural aging process as well as parameters for optimal storage conditions, which could minimize the decomposition process of the documents vary widely for each type of archived material. An increased knowledge concerning these processes was gained in this century, and adjustments were made, i.e. assuring proper room temperatures as required for traditional documents or the storage of colored films in areas where the temperature was below the freezing point.

As one can see, science cannot provide the archivists with a "head start" as far as information carriers are concerned, but it can only react to the phenomena brought about by climatic and other environmental factors. It is up to archivists to use this knowledge in a responsible and practical manner to protect archival material.

Threats to archives from fires

During the second half of our century there have only been a few isolated incidents of fires and floods which had catastrophic consequences for archival materials (see attachment 6).

In 1961, spectacular fires in the castle of Traunitz (housing the Lower Bav. State Archive) caused the destruction of 300 meters of shelved files as well as enormous water damage from the efforts to fight the fire. Unfortunate circumstances and an insufficiently planned concept for the prevention and control of fires were to blame. These incidents--as well as fires in foreign archives (Montreal, Winnipeg, Greenland, Norway)--and in similar institutes where large quantities of papers are stored in a comparatively small area,

greatly alarmed the German archivists. The lessons gained from these fires led to improvements in fire prevention methods.

File archives are basically not more susceptible to fires than other buildings, even though their content consists predominantly of paper which, however, is not regarded as highly flammable material. However, if a fire is able to expand, the results can be devastating. The effect of water or foam used to extinguish the flames can present just as large a danger to archival material as the fire itself by causing crusting on the material or gumming up of files. This damage cannot be repaired. Although water is an extremely effective means of putting out fires, it can also cause tremendous damage, repair of which are costly and take a tremendous restorative effort. The fire that broke out in Burg Traunitz was a classic example of the devastating effect of fire and the following water damage incurred from the efforts to extinguish the same.

The goal of fire prevention in archives is to avert any outbreaks. In case of fire, it is absolutely essential to discover the source of the fire in the shortest possible time to prevent further spreading and to extinguish the fire with appropriate means that prevent irreversible damage to the source material.

In archives where films and audiovisual documents with a base of nitrocellulose are located--the danger of explosion is ever present. These materials self-ignite at room temperatures above 40 Celsius. Their storage therefore demands special technical and climatic safety measures. In January of 1989, a fire broke out in the nitrofilm storage depot of the federal film archives in the fortress of Ehrenbreitstein. Causes of fires involving nitrofilm can not always be determined. A world-wide effort is underway to copy remaining nitrofilms unto safer, non-flammable materials.

Threats to archives from water

What exactly were the main causes for water damage in the history of archives of the Federal Republic of German? The following three scenarios repeatedly led to water damage in the archives:

- flooding due to natural causes such as thunderstorms, storm tides, and inland flooding
- damages caused from the efforts to extinguish fires with water
- flooding caused by technical mishaps, such as burst pipes, non-functioning drain pipes, etc.

In almost all reports concerning water damages which were not due to fire extinguishing efforts, archival inventories were located--almost without exceptions--in basement storage areas or ground level areas which simply "filled up" with water. Here we are dealing here a phenomena which holds true for all archives. On the one hand, the handicap of easy access for the water, on the other hand, the advantages of ceilings with a high load capacity, very little light penetration and relatively low temperatures in these areas.

What sort of problems arise? Most of the time, large volumes of papers are soaked and their greatest danger lies in the fact that they can often not be retrieved in time before mildew begins its destructive action. If a technique could be found to retard or prevent these processes by freezing, freeze-trying, etc., the possibility exists to later thaw, dry and restore the individual pages, and thus salvage them.

A large problem for conservationists are the so-called "bricks"; remnants from past water damages. Stacks of wet archival materials which did not swell up due to the restricting action of their storage shelves, gummed up into an inseparable mass surrounded by a solid crust due to the action of mildew and slow drying. Only after separating the individual pages using complicated and expensive physical, chemical and thermal procedures could the restorative effort begin.

Reports concerning water damage in archives usually state that a large part of the saturated materials can be salvaged from total loss when employing a tremendous effort of personnel, financial and technical measures and time-consuming conservation-, drying-, and restoration efforts. It seems advisable to take proper precautionary measures to prevent water damage to archival material before such events occur. A good beginning towards this goal would be the storing of all archival materials above the natural water level of the respective location.

If no other storage area but the basement is available, certain changes in the construction should be considered which would help prevent water damage. Erecting new buildings--as was done when planning the new building housing the Stuttgart state archive-- can be done more efficiently and cost-effective than in converting already existing structures into use as archives. In any event, the location of the archive building is crucial as well as the location of the respective storage area.

Uncontrolled cassation

The guild of archivists still faces the age-old problem of selecting relevant historical documents of the present time, in order to establish a continual tradition for future generations. While making these judgements, the archivist does not know the future significance of the selected documents nor can he predict the informational or user benefits of them for future generations. This endeavor is further complicated by restricted storage facilities as well limited financial and personnel capacities.

The communications revolution and the ever-increasing use of paper products has caused active debates among those dealing with these very specific archival tasks in administration, archive, library, information and documentation offices. How can the rising flood of documentation, the ever-increasing variety of information carriers be channeled, reduced and preserved as archive material for the future? A final and completely satisfactory solution to this question will probably never be found. The responsibility of the present-day archivists begins in the registries where the documents are created, where archivists function as consultants. Many different strategies have been established and further developed to facilitate the process of selecting documentation for archiving.

The latest development in Germany points out the dangers of uncontrollable and unjustified destruction in the second half of the 20th century. This affects mostly private archives and archives during times when drastic social changes are taking place and federal and administrative structures are being replaced. Economic forces often bring about the danger of destruction of archival material. A few examples are listed below:

At the end of World War II, systematic destruction of documents from the Nazi regime was ordered and carried out in order to eliminate incriminating materials. It is also known that in registries and administration archives in East Germany, especially in the offices of the former ministry for state security, documents were destroyed for the very

same reason. Even though most of the volume of the material remained, it is not known what valuable sources were removed, thus preventing updated and scientific scrutiny of passed events.

The East German economy suffered from a permanent shortage of raw materials. The use of files for purposes of recycling was as much an economic factor as the possibility to extract the silver from acetate-cellulose film material.

Since reuse of magnetic data carriers is easy and saves material and finances, it is tempting to reuse them. But if no prior decision for the safeguarding of this material has been arranged, this process will destroy valuable archival material.

The disintegration of the German Democratic Republic released a flood of documents from dissolved state- and industrial institutions; this material is being offered to archives. The next few years will show how successfully the archives will master this tremendous volume of paperwork.

Some branches of the East German economic system were not obliged to offer their archival material to state archives. Individual cases are known, where the new owners of the factories have ordered the destruction of all the documents and archive material; at the present time there is no way to prevent this.

Threats to archival material from overuse

At the present, many believe the greatest threat to the permanent preservation of archival material can be found in the increasing number of archive users. Each time the material is used, there is a certain amount of physical wear and tear. In files, for example, the paper is worn by the handling, writing can be smudged, and the binding is negatively effected. The use of sources preserved on film can put scratches into the emulsion layer, tears in the film itself due to brittleness of the older material, as well as additional dust accumulation. However, when comparing the extent of user damage to individual documents with the other damages that occur to large quantities of the material, the danger to archives from users seems to be minute.

Making copies also influences the condition of the source material because of the glaring light-flash respectively laser beam of the copiers. However, these kind of techniques of duplicating archival documents to either microfilm or paper, seem to be an alternative to the constant use of the original material. The original documents can then only be released for special occasions. The copying of material unto age-resistant, acid-free paper can, at times, be an economic alternative in order to preserve information of physical endangered material.

Prediction of causes of damages

What kind of measures can archives take to counteract these problems? Experience and research data are available and can be used as examples to enable one to respond properly to repeatedly occurring events and processes. However, there always remain certain things that cannot be planned for, a danger potential for archives and archival material, which at present cannot be predicted. Who knows what kind of damage reports, of a natural or deliberate kind, people will have to deal with in a hundred or more years? At the same time, nobody can predict which causes will lead to a fire or which threats will face the archivists in archives located in a particular region. Here "chance" will be just as

much of a factor as is the advancing development of the human race during the course of years, decades and centuries.

The main tasks of the archivists must therefore consist of the safeguarding, preservation, storage, development, utilization and interpretation of the source materials and to invent preventive measures to protect the material and to be prepared to react appropriately in the event of natural catastrophes.

The following aspects must be considered:

- climatic and geographic conditions
- location accessible to traffic/conditions applying to locality
- functional architecture (new structures/remodelling/expansion)
- technical equipment in archives
- filming for purposes of safeguarding
- conservation and restoration

The archivists can only accomplish this task when the state and society create not only the necessary legal regulations but also provide the financial means.

Just how was the safeguarding of archives and archival material in the former Federal Republic and former East Germany legally established?

Legislation in the Federal Republic of Germany

For decades, the Federal Republic of Germany, did not have comprehensive legislation, as did many other European and non-European countries. The legislation would include jurisdiction of archives, measures for the protection and permanent safeguarding and preservation of archival material as well as procedures for its respective use. As part of the responsibility of cultural- and civil protection authorities, regulations concerning the protection of archival material on a federal and state level found their way into the legislation.

After the end of the second World War, considerable archival losses had taken place due to evacuations, pilfering, confiscation, theft, etc. In addition, the owners of the former private, territorial archives, the nobility and the large landowners--their family archives--were in severe financial straits. Of course, in their extreme personal situation it was very tempting to sell or export valuable pieces of the family archives, which at that time in Germany were not of immediate monetary value. At this time, the archivists again renewed their efforts to bring about legislation in the individual states for the safeguarding of archival material, which, after an initial positive outlook, failed at the beginning of the sixties.

On May 14, 1954, UNESCO passed the Haag "convention for the protection of cultural valuable material in case of armed conflicts" as a direct consequence of the severe losses of such goods suffered by countries during the war. Appropriate measures were to be taken during peacetime to assure the safeguarding of archival materials during times of war, regardless of origin or ownership. Archival material was to be considered "movable....goods of great value to the cultural heritage of all people" and archives as "structures, whose main purpose it is to preserve and exhibit " these valuable goods.

Even though the Federal Republic only joined the Haag Convention in 1967, the legislature had passed in 1955 "legislation for the safeguarding of archival material against migration" and in 1957 a "first law concerning the protection of the civil population". The first legislation obliged the federal authorities as well as the individual states to establish a "register of archives of national value" and obliged private respective private owners of archival material to obtain export licenses prior to any sales. The second law made the safeguarding of archival material the responsibility of the civilian air guard.

In 1958, legislation was passed to establish an institution, the "federal office for the protection of the civilian population" which would be responsible on a national level.

The inclusion in the individual states of archives and archival material into the legislation for the protection of memorials took place at the beginning of the 1960's. In the state of Baden-Württemberg this was done in the most definite manner: all national valuable or historically important archives for state or city were to be registered in the "memorial registry" as movable works of art and thus come under the protection of the state.

In the states of Bremen, Hamburg, Schleswig-Holstein, Lower Saxony, Hessen and Bavaria, such legislation was passed which allowed culturally meaningful archives and archival inventories to come under the protection of the law covering memorials.

The Haag convention was ratified by the federal government on April 11, 1967, but only in 1980 was the authorization for the executive jurisdiction of cultural material on a federal level delegated to the Federal Office for the Protection of the Civil Population. The Minister of the Interior, the federal offices for the protection of the civilian population and the individual states came to an agreement under which the following preventive measures were to be undertaken:

- filming for purposes of safeguarding archival material
- marking of memorials and the photographing of same for documentation, i.e. also marking and photographing of materials located in archives
- continued work on the civil emergency plan of the federal government and the emergency plans in case of natural catastrophes of the individual states.

Only towards the end of the 1970's did work on a legislation for archives begin. One of the reasons was the problem with the protection of data in connection with sentences passed by the Federal Constitutional Court dealing with scientific freedom (1973) and with the right to informational self-determination of citizens (1983). In view of these decisions concerning the qualitative changes in user requirements of archival sources, continuously growing volumes of information and documentation on traditional as well as modern information carriers and the danger of destruction of these historical valuable goods, the Federal Archive Law was passed on January 6, 1988. It gave responsibility to the Federal Archive for "continuous safeguarding, and useful and scientific utilization" of the archival material of the federation. Since its foundation in 1952 based on a decision of the cabinet, the Federal Archive has taken on these tasks.

In 1988, after over ten years of work, the constitutional basis was created that historically valuable archival material of constitutional committees and other administrative departments were not only to be protected from destruction, fragmentation and

embezzlement but also to be protected from physical deterioration by appropriate conservative and restorative measures.

The legislation for archives for the individual states was advanced first (since 1981) in Baden-Württemberg. As a rule, such archival legislation determined the organization, the jurisdiction and the relations of the archives of the states to each other, as well as their position in regard to the administrative authorities. The

legislation not only included the state archives (main archive of the state, main federal archive and state archives) but community archives as well. So far the state governments of Baden-Württemberg, Bavaria, Bremen, Hessen, Nordrhein-Westphalia, and Rheinland-Pfalz have passed state archive laws for their territories.

The legislation for archives on a federal, state, and community level concerns industry as well as private archives only if they are owned by the state or in the process of becoming part of the state. However, in most instances archival materials belonging to concerns, businesses and individuals are private property and the owner can dispose of them at his or her own free will. In order to prevent losses, the regulations for cultural goods, memorial- and civil protection must apply. This problem takes on special importance considering private archives of the atomic industry.

Legislation in the German Democratic Republic

In contrast to the situation in the Federal Republic, the passing of a regulation governing records in 1950 in the German Democratic Republic was one of the first steps taken to provide a legal basis for the creation and maintenance of public archives. Previous to this, the responsibility for governmental documents had been entrusted to the Central German Archive, which had been founded in 1946 and was later renamed the Central State Archive.

To the extent that governmental power and the economy in the G.D.R. became progressively more centralized in the following years, so too this regulation was modified both in 1965 and 1976 regarding the responsibilities and scope of powers of the central, territorial, communal and economic record offices.

This regulation also governed jurisdiction over state archives or state central archives (from 1951), and later over Public Archives (from 1965), that is to say, at the territorial level (state and later district), as well as regional, communal and other record offices.

In 1976 the National Archive Fund (first defined in 1965) was extended to include "the entirety of publicly owned archival assets" and "that official documentation, which, because of its social value, can be considered an archival asset." From this point on, governmental archives also had explicit jurisdictional control over business records, on the national level (the Central State Archive), on the district level (Government Archives) and so forth. Only the records of private persons and social organizations (in the broadest sense, i.e. political parties, labor unions, churches and religious societies) were exempted from the Archive Fund. They could, however, be included, provided that they possessed broader social significance and were handed over to government custody by their possessors.

The notion of protecting both official and nongovernmental documentation found expression in these regulations. In the first instance, the National Archive Fund was

defined as a cultural asset of the G.D.R. under the protection of the socialist state and therefore in all of its elements inalienable and in its holdings indivisible. In the second, the export of unofficial records was subject to authorization by the Ministry of the Interior. In the disposal of records of this type, government archives had right of pre-emption. Otherwise, the Ministry of Interior was authorized to take measures for the preservation and security of endangered nongovernmental archival assets. The National Archive Fund's resulting archives, holdings and documentation were, regardless of their storage location and availability, registered through the official records administration in a central inventory list.

All of these positive provisions for assessment served the primary established goal of official archival science in the G.R.D., which was to ensure the "total control of the state over archival assets." In this sense, the politically current and scientific use of these records, as well as their utilization for economic purposes, were supposed to be managed. The "safeguarding of official documentation and archival assets including their filming, conservation and restoration" was, on the other hand, one necessary means on the way to achieving this goal.

Beyond archival legislation there were numerous efforts to advance the protection of records and archives in the background of protecting cultural assets, civil defense and disaster prevention. The G.D.R. first joined the Haager convention in 1974, when, consequential to the progressive thawing of international relations, it became a member of the U.N. and its special organizations.

The practical realization of protecting cultural assets was seen in the G.D.R., just as that of disaster prevention, loss and fire protection, as an integral component of national defense. In this way, the axioms, by which archival assets were protected, differed substantially between the two German states. In the Federal Republic, especially after the nuclear accident at Chernobyl, a stronger emphasis was placed on safeguarding against natural or man-made disasters, while the G.D.R. maintained a fundamental emphasis on the idea of a "comprehensive system of national defense."

In 1981, a few years after the ratification of the Haager convention, the Law for the Protection of Cultural Assets was passed in the G.D.R. The responsibility for protecting cultural assets was delegated to the state and its various agencies, above all to museums, bureaus of records and libraries. Not only collections and archives were expressly named as cultural assets, but also other historical documents and mementos such as recordings, placards, geographical representations and artifacts.

All owners, rights holders and others holding the power of disposition for such documents—whether official agency, member of the nationalized or co-operatively owned sector of industry, political party, social organizations, churches, religious societies, private citizens, etc.—were legally obligated to have the cultural asset registered by an official authority and to guard it from "loss, damage and destruction, from dangers inherent in its use, transportation and storage, as well as...from injury and damage by outside forces or accident" or otherwise to restore it "with regard to normal changes brought about by age." In addition, the export of cultural assets was subject to official authorization.

The Law for the Protection of Cultural Assets was used in the archival practices of the G.D.R. Therein those records, documents and other holdings considered most valuable historically and socially were, on the basis of a classificatory plan, evaluated and indexed

by color. This categorical grouping for archival holdings was developed in the 1960's in accordance with the internationally standard classification scheme. In the case of their evacuation due to fire, gas leak or danger from building collapse or flood, these specially marked holdings in this way were supposed to first be extracted according to a prepared evacuation plan.

In the legal provisions for disaster and fire protection, civil safety and pollution control there are no concrete references to the protection of archives. Of course, all record keeping organizations were bound to adhere to comparable norms.

8 CONSEQUENCES OF PROTECTING ARCHIVAL HOLDINGS

On the basis of the above described legal situation and the factors involving available finances, personnel and space, in both German states many measures were attempted in order to ensure the effective, practical protection of archives. During the first decade after the war, the reconstruction of record bureaus, the return of archives and the restoration of damages remained the priority.

At nearly all of the larger archival repositories, workshops for preservation and restoration busied themselves achieving this goal. The restorers developed a high degree of professionalism, and were often able to find simple, cost effective and highly efficient technical solutions in drying, restoring and preserving paper, parchment, seals and so forth.

In both German states, centers for restoration and preservation were constructed: Among the largest in the Federal Republic are the ones in Bückeberg, Lower Saxony and in Munich, Bavaria. The central workshop for the G.D.R. was in Dresden. Such institutions pursue, on the one hand, research into the problems involved in restoration, conservation and archival techniques. They also contribute greatly by restoring great quantities of archival materials. Thus, at the State Archive in Bückeberg, a pilot installation for bulk preservation will commence operation in the near future. With an annual capacity of 1,000 cubic meters, it should contribute in reducing the problem involving the great number of papers in the various archives that have deteriorated with age.

In contrast to the situation in the Scandinavian countries, where, after the Second World War, many new, modern archival facilities were built in order to handle the growing demand for storage, processing and use, the areas constituting the present day Federal Republic limited themselves for the time being to the restoration of existing facilities or the remodeling and expansion of an available buildings, that could be used for this purpose. It wasn't until the 1970's that new facilities were constructed for most of the local archives in the Federal Republic. The Federal Archive, on the other hand, remained for a long time in provisional structures like the one in which it had been founded, relocating often before finding a permanent home in the late Eighties. This very modern facility shows in a very impressive manner how architecture, functionality and archival preservation can be combined in a unified grouping of administrative buildings and depositories.

Things were different in the G.D.R., where the Central German Archive (later called the Central State Archive and now administered by the Federal Republic) was able, within a few years after World War II, to move into new premises that, for a time, did justice to

concerns over storage capacity and document safety. Its administrative office in Merseberg, however, remained over the decades just such a provisional arrangement, like a part of the various state archives with their numerous repositories and branch offices. In this situation those archival buildings constructed in the 19th and early twentieth centuries, such as those of the state archives in Weimar and Dresden, stood the test. They certainly fulfill their purpose today, aside from problems in their depository areas. Many places no longer conform to the criteria of modern safety and storage technology, as well as that of the fire prevention: The use of grating between different levels would, by permitting air currents, assist in the spreading of fire just as much as wooden shelving, missing fire zones or other factors.

Equipping depositories with fire alarms and temperature and humidity gauges have since become standard nearly everywhere. To some degree automatic fire extinguishers using carbon dioxide, water or halon gas have been installed.

Archival activity applies record offices, where archivists have influence on the make-up of potential archival holdings by insisting that documentation be administered in an effective, clearly organized manner, that office systems and filing strategies be practiced, that regular intervals be assigned in which the various types of documentation are stored away, and that these strategies are adhered to. In this way the archivists endeavor from the time documentation is first created to continually track the document, safeguard it and archive it. Regular auditing should ensure that damage and losses among valuable documents can be discovered quickly or, better, prevented.

Since the beginning of the 60's, those archival materials deemed culturally significant by both German states were systematically filmed, so that, in case of loss or damage, there would be copy of the document on microfilm. In the larger archives, the various boards of directors of state archives in the Federal Republic and the State Archive Administration in the G.D.R. constructed for this purpose filming centers, in which microfilm copies of individual pages were made. In the Federal Republic, as a result of the mass filming of archival materials from 1961 to the end of 1983, over 300 million microfilm copies were produced. Since 1976 these microfilms have been stored in an old mining tunnel in the Black Forest in order to meet the demand for secure preservation areas. Except for these galleries from Oberried for safety film there are however, concerning construction of rock cavities, security of the archive content, protection of the archive constructions and the development of a safety concept for the case of civil catastrophes, unfortunately still notable defects.

Otherwise, the Federal Office for Civil Defense complains that they often see opposition and attitudes of refusal in people not wanting to have their the building "covered by placards."

The valid requirements for organizing preservation areas were first established in 1987. A full and practical realization of these principles in the form of funding for concrete construction projects lay, however, still in the future. This was also the case for extrapolating disaster deterrence plans in the states.

9 DOCUMENTATION AND ARCHIVING IN THE REALM OF NUCLEAR TECHNOLOGY

When considering the long term archiving of documents, which specific problems come up, that should yield information about the storage sites of radioactive residues and wastes? A description in all particulars of the various document types can be dispensed with, since these were already analyzed in Sweden's example. Here will have to be decided which data are relevant for succeeding generations.

From the point of view of archiving, the important thing is: which medium of information should be used, how and where archives should be preserved. Besides the timelessness of the materials, other factors to consider are: whether the information is still "legible" and understandable in centuries to come, whether it requires technical apparatus to reproduce it that may no longer be available, and whether recopying it to the media available at some future date can, over such a long period, be funded or even accomplished.

Looking from present state of archiving of project documentation for the licensing and management of nuclear installations, storage facilities and so forth, perhaps inferences can be made for the shut-down and clean-up phase. Up to now the second hasn't been considered urgent in the Federal Republic, because final storage facilities are, at best, in the process of development. It seems essential to follow up on the route these documents presently take from their creation to their final archiving. In this aspect, the relations between federal and state authorities, as well as between their subordinate organizations, is just as important as the relationship between them and the business associations and transport firms in the private sector, the institutes, technical oversight committees and others who have a hand in making decisions.

All of these state and civic organizations record and store information describing, in accordance with the latest developments in science and technology, the condition of respective installations and materials. Regular measurements are taken, decisions and safety analyses are provided, tunneling authorizations granted, worst-case scenarios and preventative measures developed, to name just a few examples.

A key role in this mesh of activity is held by the "Federal Office for Radiation Prevention." Being the highest federal authority in the region of environmental protection and reactor safety since 1989, this bureau is responsible for all questions resulting from federal legislation on nuclear safety. While the "Federal Minister for Environment, Nature Conservation and Reactor Safety" exercises the ultimate responsibility and supervisory duty over nuclear questions, the Federal Office for Radiation Prevention retains and administers all information considered relevant to each question. The documentation conforming to mining laws is produced by the state mining administrative offices, based on the "Mining Riftwork," which itself is bound to German Industrial Standards norms. Beyond all this, binding limitations exist regarding the type and scope of the (current) documentation, with reference to the time and location of their safekeeping.

From these statements regarding the final storage of radioactive waste, one can deduce that such documentation extends in time from the construction planning (authorization documentation), over the actual construction (realization and quality-control documentation) and operation (operational papers) up to the recruiting of administrative

personnel and after that it's maintained and updated at the storage site and one other location as long as the storage installation exists.

Thought was given to the problems of the permanence of information media such as paper, magnetic tape or other materials. The reason for this is that protection has to be provided by means of high-quality paper and inscription, duplication and storage technologies in order to insure that the records are legible and losses in information won't alter the content. No recognizable practical measures have, however, resulted from these provisions, because the subject obviously hasn't yet reached the point of urgency. The Federal Office for Radiation Prevention, for example, still maintains, right up to the present moment, the practice of reporting to the Federal Ministry exclusively through written means, that is, through "traditional" information media.

Data and record materials that come into being at the various federal and state agencies set up to solve nuclear problems are filed next in the record offices of these agencies. Based on the Federal and State Archival Laws, this material would, after a while, have to be offered to federal or state archival registries and possibly, to some degree be taken possession by them. The fact that, until 1986, the economic sector, above all, was responsible for the nuclear industry and questions related to it, later generations would find information about in their archival holdings. The same applies for all of the institutions on the federal level that in 1989 gave up their jurisdictions to the Federal Office for Radiation Prevention.

Now, in Lower Saxony and Saxony-Anhalt, the two states who are most interested in the problems of final storage (the locations of Asse, Gorleben, Konrad and Morsleben), there are no laws regarding state archives. These will, however, be worked out in the coming years. The Central State Archives in Hannover and Magdeburg are now responsible for taking possession of archives from the environmental ministries of these two federal states. It's very unlikely that these archives are prepared for accepting in the future such controversial documents that are sure to be of extreme interest for a long time to come. It wouldn't be just ensuring the physical preservation of the media over long periods, but rather also guaranteeing an immediate access to the information, as well as its trouble-free comprehension. The same task confronts every other institution archiving this documentation over the long term.

10 CONCLUSIONS AND RECOMMENDATIONS

In the following study and expert's assessment, experiences from the archival landscape of Germany before and after 1945 were especially considered and analyzed. Their generalization allows, from the archivist's point of view, inferences to be offered, as well, for the overlapping *Topic KAN 1.3. "nuclear waste repositories."* These inferences address in a formal, substantive and technical respect, special questions of preserving archival materials and of specifications for archival documentation. They also point out various interdependencies among the problems.

Balance-sheet of the Causes of Loss of Archival Materials

If one attempted, based on German experiences, to lay out the causes of loss among archival materials, a differentiation would have to be made between:

- a) "normal" times or times of peace
- b) times of war and post-war times

c) social upheavals/revolutions and cases of extreme loss.

The resulting findings will, when regarding "normal" developments, be able to find in other countries just such a correspondence, as will the special experiences of the 20th Century war and post-war times compare with that of other similarly affected European countries. Continuities and discontinuities will also be found in the archival history.

a) Preserving Archival Materials in "Normal" Times or Times of Peace

The integrity of the juristic institution "archive," of its structural-organizational design and storage, as well as of the actual "archival materials" with demonstrable, juristic value, with value as medium of commemoration and remembrance, which can be consider an object of research, of commercial and noncommercial use and a cultural asset, is graphically (see inclosure in Part I: Abstracts and Inclosure 6) and verbally describable:

During the recently organized archival purging involving of over 90% of their original documents, potential archival materials, that are quantitatively estimable, come into being in the *life cycle of the Document Losses*. This *systematic purging* takes place *on the basis of legal orders* within a time period of several decades (30-50 years), so that the historical final archives take over only a small part of the original available documents as being lasting and worth archiving.

"Spontaneous" in proportion yet nevertheless considerable losses of archival materials could come to pass in Europe's historic final archives and throughout the world by 2050A.D. above all because of *acidiferous paper*. Without a mass acid neutralization and/or copying to better types of paper, more than 70% of all paper-based archives will be affected. In the future this occurrence can be prevented in current archives (registries) through the use of acid-free, low-wood content paper.

Other "spontaneous" loss of archival materials in the life cycle of records can continuously occur by means of "drop outs" in modern information media such as computer tapes, diskettes, magnetic audio tapes, video tapes and disks and film sound tracks. Something similar happens when developing microfilms are insufficiently washed or through chemical-physical processes in the case of color and black-and-white films.

Information loss through these processes could amount, in the most unfavorable scenarios, to as much as 100%, if recording media aren't soon replaced. Regeneration and copying are required at 2, 5, 10 or 15 year intervals, depending upon the medium. With microfilm and moving images this interval can be delayed to 50-60 years.

Quantitatively, losses through microorganisms, animal pests, fire, explosion, water, the effects of dust, earthquakes come, in contrast to this, behind the remaining mentioned possibilities.

Theft, bootlegging and similar crimes have grown especially frequent in an age of videos and also need to be considered as a growing possibility for the loss of archives in time of peace. Documentation from atomic waste sites would also have to be secured against this.

b) Loss of Archives in War and Post-war Times etc.

The experiences of Germany with regard to loss of archives during the Second World War and thereafter can be differentiated between *direct effects of war*, meaning armed combat

and losses that occurred afterwards. In this the important observation is that direct losses due to the effect of weapons, bombardings, fire and damage during fire extinguishing operations are, of course, in an isolated case, considerable, even irreplaceable, but, however, are quantitatively far and away less than the losses incurred after the end of the conflict.

Among the losses incurred after the war, the *confiscation of current and historical archives* by the victorious powers and the partial transfer abroad dominate quantitatively. The foundations for this were various: they stretched from the preparation, through the implementation of the war crimes trials, right up to claims of reparation. The booty claimed by the Soviet Union alone, which, between 1950 and 1960 was returned to the G.D.R., is calculated to be at least 50,000 cubic meters or 3,000-5,000 tons of archival materials. Even so, there are still thought to be extensive archival holdings in the archives of the Communist Party of the Soviet Union in Moscow that came from registry offices in the former German Empire.

During 1989 even older historical files were, surprisingly, returned to the G.D.R. They will even lead, as well, to future negotiations over restitutions of holdings and partial holdings still in the U.S.S.R. With that it will be shown that, through improper storage and natural abrasion in these storage facilities over a period lasting more than four decades, irreversible losses have occurred.

The U.S., Great Britain and France likewise confiscated, used and exploited German files. Here there have been considerable reparations that are substantially complete.

Other European countries, that were particularly subjugated by the German occupation, can, in the same way, call attention to just such losses of archives. Above all these countries are Poland, the U.S.S.R., France and Czechoslovakia.

In the *storage locations in Germany*, which after the war again were at the disposal of the German authorities, losses have resulted from entering fluxes of water, humidity and also from plundering, theft and from fire. This didn't just happen to files, but also to film and radio archives.

The *conclusions* from these losses of archival materials signal to the archivist that a constructive peace policy absolutely must have play a role in not yet completed security plans just as pollution control, concrete construction, evacuation and anything else.

Applied to the *Documentation Concerning Atomic Waste Repositories*, it would only be fair to stress that, considering the sensitivity of the repositories and their critical nature, the possibility of losing these documents to fire, water or theft must be precluded. More secure storage locations and a more secure delivery system to varied locations would be the archivist's hope for these types of documentation.

c) Social Upheavals/Revolutions and Case of Extreme Loss

The revolutionary events of 1989/90 in the former G.D.R., ones that also took place in other east European states and beginning August 1991 in the Soviet Union, provided historically unique archival security duties. In contrast to losses of archival materials like those that occurred in 1789 and 1917, the archivists at the former State Archive in Potsdam and at the State Archive of the G.D.R. were able to protect the overwhelming volume of archives available in the current registry offices of the various ministries and

their official organs. This material (approx. 100, 000 cubic meters) exists, at this stage, in the position of historical intermediate archive for the Federal Republic and the new states. Loss of archives through intentional purging, and also through pillaging and theft obviously occurred particularly in the field of the former Ministry for State Security. The great mass of materials, however, was preserved (approx. 200,000 cubic meters) and for now comes under the Federal Republic's Special Authority.

Beyond this, archives, through of personal interest of for the purpose of commercial use, can be stolen in times of revolutionary change and, like newspapers, magazines or other media, can be offered and sold. In 1989/90 just such a thing happened in a spectacular way.

Archive losses occur in these times—and this is worth noting—above all during the change of ownership, that is, here the transition from governmental to private ownership. Especially in the realm of business, there is, on the part of the business archives of the new federal states in Germany, repeated indications that the new owners are uninterested in the old archival materials and recommend purging. The recommendation for creating regional business archives, has, of course, been made. Still, there are never the requisite financiers needed for such institutions. There are also, however, individual instances showing that the new owners in private business feel responsible for these materials and take them into their own archives.

The danger of being insulated from archives, that represents, as a matter of fact, federal or state capabilities, having originated in official agencies, likewise emerged with mass media's program capacity and local radio and television archives. Their archival materials on game and documentation films, on word and music recordings represent billions worth, that must be not only safeguarded from theft and bootlegging, but also, from an archival perspective, held together as uniform resources for a prospective commercial, business or other use.

Cases of extreme loss such as the disaster at Chernobyl contaminate the environment with radioactivity and also cause archive losses that can't be corrected.

Atomic waste repositories. Recommendations regarding their documentation as long-term archiving.

The study or rather expert assessment of German experiences in the safeguarding of archival materials and periodic losses should be bound with the consideration of which types of archival materials are particularly suited for long-term archiving in order to provide help deciding for the *Documentation Concerning Atomic Waste Repositories*.

In the midst of considerations for long-term archiving of the documentation concerning the provisional and final storage of radioactive waste, several equivalent components appear from the archivist's point of view. They are:

- the *substantive focus* of the documentation
- the *type of information* (for example: data, graphics, descriptions) and
- its *length of storage*, which must be defined by the current experts.

The saving of information on a medium leads to its materialization. the storing of information media adds to it an economic factor that, with growing masses of material

and increasing temporal extension, becomes more and more significant. The *expenditures and costs* for the entire length of storage and maintenance of documents regarding the storage of radioactive waste would have to be projected. It should already in process when this documentation is being stored in order to produce such material pre-conditions that its long-term maintenance seems assured.

The experiences of archivists in the Near East and Europe with millennium- and century-old documents show that *languages and writings* have remained largely legible and understandable over long periods. Worth mentioning, therefore, is the making out of documents regarding atomic waste repositories on imperishable paper in printed typeface in presently dominant languages/language families, as well as the language of the "country of origin" in a modern analogy to the historic Rosetta Stone.

The *type of information medium* should be chosen so that its *storage*, the *accessibility* of the information and the *readability* of the information can be ensured, if possible, independent of devices (climate control, coding devices or reproduction and play-back technologies.) A decision concerning the type of medium must otherwise be predicated on its *durability and imperviousness to aging*. Both criteria eliminate, for the present, the use of magnetic, electronic or digital storage media for long-term archiving.

The multiple storage of complete and updated documentation at various locations and the supplemental filming for security purposes of the documents indispensable. One of the central storage locations for the documentation on provisional and final storage sites for radioactive waste should be classified in the European or even global setting as an international registry. The danger of uncontrolled access or the planned or coincidental destruction of the documentation can thus be largely avoided.

Paper as the Medium of Long-term Storage

It may seem peculiar that the authors of this study recommend paper as the best single information medium to use. Acid-free paper guarantees, as storerooms of state and city archives prove, a durability of more than 500 years. atomic waste documentation or documentation regarding corresponding repositories should therefore be deposited in paper form "in situ," with national authorities and registries, as well as with international organizations in foreign lands, who are likewise certified as secure storage facilities. This is not to exclude the fact that, for purposes of prompt information, besides being on paper, the documentation regarding atomic waste repositories should be loaded concurrently in computers, providing on-line access in a modern network. In any case, the type of paper used in printing and filling out of the available information must be ensured at every stage in order to make correct decisions possible.

In application of the general concept of archival material, the atomic waste documentation could, without being complete in specification, embrace the following:

- complete documentation "in situ" as basic documentation and further organization of the archival documentation into special archives or the centralized documentation in the national archive, in state archives or with a central registry (national/international)
- documentation technology
- application of general classification and coding principles

- knowledge of forms for the documentation local or central
- methodology of archival documentation for atomic waste repositories (recording, reduction, storing, investigation and presentation of archival "findings")
- control of the data and descriptions
- analysis in the form of tables and graphic representations
- clear text documentation and not encoded data
- "anamnesis" and "findings" from atomic waste repositories
- extrapolative documentation with early history, findings, diagnosis, therapy, decontamination or sanitation results, prognosis
- complimentary documentation (labor data, tectonic and seismic data, research projects, associations from documentation on nuclear medicine and radiation intensity, radiation protocols, measurements of local doses from atomic waste repositories, monitoring of exposure to persons).

All important entries should be made fully and without cryptic characters (that means: credibility to the public), as, for example, in the case of traditional birth, marriage and death certificates, ship registers or log books. With such documentation, consisting of the various forms, an exact map and permanent actualization, then a more secure life, a transparency and the control over repositories would be possible for future generations.

APPENDICES (IN GERMAN)

- APPENDIX 1 ADVANTAGES AND DISADVANTAGES OF VARIOUS ARCHIVE MATERIALS**
- APPENDIX 2 ARCHIVE SAFETY PROVISIONS IN GERMANY DURING THE 20TH CENTURY -CHRONOLOGY**
- APPENDIX 3 ARCHIVE BUILDINGS IN GERMANY CONSTRUCTED AFTER 1874 (SELECTION)**
- APPENDIX 4 GERMAN STATE ARCHIVES:
LOSSES DURING WORLD WAR II**
- APPENDIX 5 DISASTERS AFTER 1945 (SELECTION)**
- APPENDIX 6 INTERDEPENDENCE OF ARCHIVAL DOCUMENTATION**
- APPENDIX 7 BIBLIOGRAPHY (SELECTION)**

Anmerkungen:

*)

Die Übersicht verwendet und ergänzt informelle Angebote der Publikation:

"Dokumentenverwaltung in Bürokommunikationsumgebungen unter besonderer Berücksichtigung der Schriftgutverwaltung (DOBKU).- 1991.- (Schriftenreihe der BBSt; 22)"
die vom Bundesministerium des Innern, Koordinierungs- und Beratungsstelle der Bundesregierung für Informationstechnik in der Bundesverwaltung unter dem 31.März 1991 (S.51-57) gemacht worden sind.

**)

Da die Studie für die Langzeitarchivierung auf dem Aufzeichnungsträger Papier orientiert, wird bewußt auf die Bezeichnung der Vorteile digitaler Medien in der Recherchezeit, in der Miniaturisierung der Träger etc., verzichtet. In der Praxis wird zwischen analogen und digitalen Speichermedien Zweigleisigkeit und Koexistenz anzustreben sein.

Definitionsvorschlag für Archivgut

Archivgut - Definitionsvorschlag auf der Grundlage des Bundesarchivgesetzes, der Länderarchivgesetze in Baden-Württemberg, Nordrhein-Westfalen, Hessen, Bayern, Rheinland-Pfalz, Bremen und entsprechender Entwürfe im Saarland, in Thüringen und Sachsen.

Um die Vielfalt der Arten des Archivgutes, die in der Praxis auftreten können, zu umschreiben, wird im deutschen Sprachgebrauch als Oberbegriff vom Terminus "Unterlagen" ausgegangen.

Als Unterlagen im Sinne der Archivgesetze werden aufgezählt:

- Urkunden
- Akten, Einzelschriftstücke, Presseauschnitte
- Drucksachen
- Karten, Pläne, Risse, Zeichnungen
- Siegel, Stempel
- Plakate, Bild-, Film- und Tonaufzeichnungen
- Register, Amts- und Geschäftsbücher, Matrikel, Karteien
- Dateien und deren Teile
- elektronische und sonstige Informationsträger sowie maschinenlesbar auf diesen gespeicherte Informationen und Programme, die der Ordnung, Benutzung und Auswertung des Archivgutes dienen.
- Dokumentationsmaterial, das von den Archiven ergänzend gesammelt wird, gehört auch zum Archivgut.

Anlage 1

ARCHIVGUTARTEN. RELATIVE VOR- UND NACHTEILE (*)

Traditionelles Archivgut Vorteile / Nachteile

- | | |
|---|--------------------------------|
| + Akzeptanz beim Bearbeiter | - Such-/ Verwaltungsaufwand |
| + Unabhängigkeit von moderner Bürotechnik | - Platzbedarf bei Archivierung |
| + geringer Entwicklungsaufwand für organisatorische Unterstützung | |
| + eingeführte/ bewährte organisatorische und technische Lösung | |

Papier-Archivierung Vorteile / Nachteile

- | | |
|---|---|
| + visuelle Aufnahme | - platzintensiv (Raumbedarf) |
| + akzeptierte "Technik" | - zeitlicher Rechercheaufwand |
| + Weitergabe an andere Behörden | - sequentieller Zugriff |
| + juristische Anerkennung | - Haltbarkeit eingeschränkt durch äußere und innere Faktoren |
| + geringe Kosten für Büromöbel, Regale und die Erarbeitung von Klassifikationen | - hoher finanzieller Aufwand bei Konversion mit moderner Bürotechnik |
| + Haltbarkeit 500 - 1.000 Jahre | - Haltbarkeit säurehaltigen Papiers des 19./20.Jahrhundert 50 - 100 Jahre |

Mikro-Archivierung Vorteile / Nachteile

- | | |
|---|---|
| + geringer Raumbedarf | - Aufwand für die Verfilmung |
| + Weitergabe an andere Behörden (ISO, DIN-Standards, handliches Format) | - gleichzeitiger Mehrfachzugriff |
| + akzeptierte Technik | - spezielle Lesegeräte erforderlich |
| + Anerkennung als Archivmedium | - aufwendige Integration/ Kompatibilität gegenüber moderner Bürotechnik |
| | - Haltbarkeit 50 - 100 Jahre |
| | - Such- und Bereitstellungsdauer |

digitale Medien Vorteile / Nachteile

- | | |
|------------------------|--|
| + ** (siehe Anmerkung) | - erforderliche Investitionen |
| | - juristisch (noch) nicht generell anerkannt |
| | - Standards zum großen Teil erst in Entwicklung (Herstellerabhängigkeit) |
| | - Aufwand für Papierausdruck der Dokumente |
| | - Abhängigkeit von systemtechnischer Ausstattung |
| | - rascher Generationswechsel |
| | - Haltbarkeit bisher maximal 50 Jahre |

ARCHIVGUTSCHUTZ IN DEUTSCHLAND IM 20. JAHRHUNDERT - ZEITTADEL

- 1879 *Archivpflegeprogramm*, beschlossen von der Archivsektion des Gesamtvereins der deutschen Geschichts- und Altertumsvereine, bildet seit Beginn des 20. Jahrhunderts die Grundlage für die Archivpflege
- 1900 Überlegungen zur Errichtung eines Zweckbaues für ein Reichs- und Preussisches Geheimes Staatsarchiv in Berlin, später auf letzteres reduziert
- 1905-1906 Inventarisierung und Erhaltung von Archivgut kommunaler Einrichtungen werden in Bayern, Württemberg und Baden zur Pflicht
- 1909 Erste umfassende *Veröffentlichung zur Anwendung der Fotografie* im Archivwesen, herausgegeben von der Preußischen Archivverwaltung
- 1912-1915 Errichtung des Zweckbaues für das Sächsische Hauptstaatsarchiv in Dresden (Kammer- bzw. Kabinettsystem)
- 1916 *Hindenburgprogramm* bewirkt zum Teil unkontrollierte Kassationen potentiellen und vorhandenen Archivgutes durch Altpapiererfassungen
- 1914-1918 Vernachlässigung archivischer Funktionen im *ersten Weltkrieg* (Bestandsbildung, Bewertung, Benutzung); Verwendung minderwertiger Papiere nimmt zu
- 1919 *Versailler Vertrag* fordert Abgabe von Archiven und Archivalien an europäische Staaten. Hieraus resultierende Deduktionen beeinflussen Archivtheorie, Archivrecht und Archivgutschutz.
- 1920 *Verordnung über den Schutz von Denkmälern und Kunstwerken* gegen die Ausfuhr; berücksichtigt Archivgut nicht gesondert, kann aber dahingehend interpretiert werden; verliert 1925 ihre Gültigkeit
- 1922-1923 Personalabbau und Behinderung einer weiteren kontinuierlichen Archivguterfassung und -übernahme durch die *Inflation* in Deutschland. Schäden an Archivgut durch Weiterverwendung qualitativ minderwertiger Papiere
- 1924 Fertigstellung des Zweckbaues für das Preussische Geheime Staatsarchiv in Berlin-Dahlem (Magazinbauweise)
- 1924 *Gruppengrundsätze für die Archivgutbewertung* durch das Reichsarchiv Potsdam zur Bewältigung des Massenproblems erarbeitet (positive bzw. negative Wertauslese)
- 1924-1925 Arbeit an einem *Reichsgesetz zum Schutze von Archivgut* durch Archivverwaltungen. Forderungen: Aufsichtsrecht staatlicher Archive. Schutz gegen unkontrollierte Veräußerung oder Kassation, Registrierungsspflicht etc.
- 1925 Ablehnung des Archivgutschutzgesetzes durch die Reichsregierung. Gründe: Artikel 150 der Reichsverfassung, Beeinträchtigung von Privatrechten

- 1925 Deutscher Archivtag zu Fragen der Sicherung von Archivgut bei der Benutzung (Anlaß: "Fall Hauck")
- 1925-1926 Endgültige Festlegungen zum Einsatz archivierbarer (dauerhaft haltbarer) Schreib- und Beschreibstoffe in den Verwaltungen
- 1929 Errichtung der *Zentralstelle für Lichtbildaufnahmen* älterer Urkunden auf deutschem Boden in Marburg
- 1934 Errichtung eines Erweiterungsbaues für das Reichsarchiv Potsdam (Magazinbauweise) in nur halbjähriger Entstehungszeit
- 1935 *Luftschutzgesetz* Luftschutz wird Reichsangelegenheit, kein gesonderter Schutz für Archive, Kultur- und Baudenkmäler; Luft- und Archivschutz weiter in Eigenverantwortung der Archivverwaltungen, da Reichsinstanz fehlt
- 1935 Dachbodenberäumungen (Luftschutzmaßnahme) fördern Archivgut zutage, Folge: eher zufällig Kontrollmöglichkeiten und Befugnisse für Archive
- 1936 *Personalunion* des Generaldirektors der Preußischen Staatsarchive und des Direktors des Reichsarchivs
- 1936 "*Vierjahresplan*" Görings zur Herstellung der wirtschaftlichen Autarkie: Altpapiersammlungen erschweren die Erfassung von Archivgut und begünstigen die Vernichtung von Quellen aus Privatbesitz. Ringen um Kontrollmöglichkeit der Archive
- 1937 Beginn von *Luftschutzübungen in Archiven*, Umlagerungs- und Evakuierungsübungen, Verbesserung der materiellen Brandschutzausstattung, erste bauliche Veränderungen unter Berücksichtigung des Luftschutzgesetzes
- 1938 Beginn des Ausbaus der Festung Ehrenbreitstein zur Archivaliensicherung im Kriegsfall mit Schwerpunkt für das Saarland
- 1938/10 *Marburger Archivdirektorenkonferenz* Beratungen über Schutzmaßnahmen für die Archive im westlichen Teil des Deutschen Reiches im Falle militärischer Konflikte
- 1939/03 *Berliner Konferenz* Aussprache über Sicherungsvorkehrungen:
 1. Flüchtung auserlesener Einzelstücke
 2. Umlagerung der Archivalien innerhalb der Archive
 3. Feuerschutzanstriche an und in Gebäuden
- 1939 Praktische Luftschutzvorkehrungen innerhalb der Archive: bauliche Veränderungen, Imprägnierung von Holzteilen, Aufstellung von Sand- und Wasserbehältern, Umlagerung wichtiger Bestände in niedriger gelegene Stockwerke
- 1939-1940 *Kriegsausbruch* und rasche Siege der deutschen Wehrmacht bewirken breites Sicherheitsgefühl unter Archivaren: kaum zusätzliche Archivgutschutzmaßnahmen, obwohl die staatlichen Museen ihre Sammlungen für den Publikumsverkehr schließen (dadurch Konflikt letzterer mit Staats- und Parteiführung)
- 1939/10 Einrichtung einer deutschen Archivverwaltung im Generalgouvernement Polen zum "Schutz" von Archiven und Archivgut
- 1940 "*Richtlinien für die Durchführung des erweiterten Selbstschutzes in Museen, Büchereien, Archiven und ähnlichen Kulturstätten*" des Reichsluftfahrtministeriums erweisen sich als unzureichend

- 1940/05 Generaldirektor der Preußischen Staatsarchive und Direktor des Reichsarchivs wird *Kommissar für den Archivgutschutz* im westlichen Operationsgebiet
- 1941/04 Erlaß des Reichs- und Preußischen Ministers des Innern: Erweiterung der Zuständigkeit des Kommissars für den Archivgutschutz auf alle "von den deutschen Truppen besetzten oder noch zu besetzenden Gebiete"
- 1941/10 *Marburger Archivdirektorenkonferenz* Sicherung innerhalb der Archive vor- dringliche Aufgabe, da Flüchtung "von zweifelhaftem Wert" sei
- 1942/04 Großer Luftangriff auf Lübeck läßt Sicherheitsbedürfnis dringlicher werden. von Auslagerungen wird weiterhin abgesehen
- 1942/05 Zunahme der Luftangriffe im Frühjahr 1942 löst offiziell erste Flüchtigungen im Umfang von 20 % des Gesamtbestandes aus
- 1942/07 Erlaß des Reichs- und Preußischen Ministers des Innern: Kommissar für den Archivschutz erhält Befugnisse für alle deutschen oder von deutschen Truppen besetzten Gebiete. Dezentralisierung der Entscheidungsfindung bleibt, da Befugnisse des Reichswissenschaftsministers und des Preußischen Ministerpräsidenten nicht angetastet werden
- 1942/07 "*Richtlinien für die Durchführung des Luftschutzes in den Archiven*" des Kommissars für den Archivgutschutz. Folge: Auslagerungen weiter in einge- schränktem Umfang, Schutz von Archivgut dominiert gegenüber Auswertung
- 1942/Mitte Berliner Staatliche Museen beginnen mit der Evakuierung von Kunstgegen- ständen in Salzbergwerke an der Elbe
- 1942/09 Gefährdung behördlicher Archive führt zur Durchsetzung spezifischer Schutzmaßnahmen für Registraturen
- 1942/09 "*Richtlinien zum Schutze des wertvollen Schriftguts (Archivguts) der Wirt- schaft gegen Luftgefahren*": enge Zusammenarbeit der Reichswirtschaftskam- mer mit dem Kommissar für den Archivgutschutz
- 1942/10 *Erlaß* des Reichswirtschaftsministers über die "*Behandlung des Schriftgutes stillgelegter Betriebe*"
- 1942/12 Richtlinien zur Erhaltung wertvollen Schriftguts (Archivguts) der Wirtschaft bei Altpapiersammlungen
- 1942/2.Hälfte Beginn permanenter Schutzmaßnahmen (Wachdienste, Splitterschutzwände, Vermauerung von Fenstern, Verkleidung von Treppen usw.)
- 1943 Niederlage in Stalingrad, verstärkte Luftangriffe auf deutsches Territorium, *Verkündung des "Totalen Krieges"*: Schutz der Archive vor Auswirkungen des Landkrieges notwendig
- 1943/03 Instruktion des Kommissars für den Archivgutschutz zum Schutz der Archi- ve im Katastrophenfall: Einleitung vorbereitender Maßnahmen. Flüchtung von ca.50% der Gesamtbestände avisiert, zunehmend Bergwerke als Ausweichstel- len; 1943 erste umfangreiche Auslagerungen in ein Salzbergwerk durch das Preußische Geheime Staatsarchiv
- 1943/10 Signalwirkung durch *Zerstörung des Staatsarchivs Hannover*. Brand- und Sprengbomben vernichten Kernbestände und Findhilfsmittel

- 1943/11 *"Würzburger Tagung"* der Leiter der Archivverwaltungen beschließt Erhöhung der Fluchtungsgrenzen auf 75-80% der Gesamtbestände
- 1943-1944 Komprimierung von Erfahrungen bei Fluchtungsmaßnahmen (besonders Ausweichstellen und Transportfrage); Veröffentlichung im im Mitteilungsblatt des Generaldirektors zur Kenntnisnahme durch die übrigen Archive
- 1944/01 *Gründung der Unterabteilung Archiv- und Schriftgutschutz im Reichsinnenministerium.* Zuständigkeit des Kommissars für den Archivgutschutz für alle archivrelevanten Fragen; Befugnisse des Reichswissenschaftsministers bleiben
- 1944/03 Stand der Evakuierung: ca. 550 Ausweichstellen beherbergen ca.2 Millionen Urkunden, 450.000 Handschriften und Bücher sowie 1.460.000 Aktenbündel
- 1944/06 Stand der Evakuierung: von 96 beaufsichtigten Archiven werden 20 über 90%, 7 zwischen 80% und 90%, 53 zu mehr als 50% geräumt
- 1944/07 Erste Fluchtungen östlicher Archive und Ausweichstellen (Königsberg u.a.) wegen *Vordringen des Landkrieges.* Fluchtungen bleiben aufgrund mangelnder Transportkapazitäten auf wertvolle Einzelstücke beschränkt
- 1944/07 Kommissar für den Archivgutschutz erhält durch innenministerielle Weisung Befugnisse zur fachlichen Einflußnahme auf alle Reichs- und Reichsgauarchive einschließlich Wiens, die über den Luftschutz hinausgehen
- 1944/08 *Verordnung über den Einsatz der Beamten des höheren Archivdienstes für kriegswichtige Maßnahmen.* Anerkennung des Personalbedarfs für Sicherungszwecke sichert Beibehaltung von ca. 40% des Personalstammes
- 1944/09 Wiederholter *Erlaß* des Reichsministers des Innern *über Altpapiersammelaktionen:* Verluste potentiellen Archivguts, da Archive nicht mehr generell an Aktenaussonderungen beteiligt werden
- 1944/10 Anweisungen der Reichsverteidigungskommissare: Verbringung von Archiven und Ausweichstellen in unterirdische Lager, zumeist Bergwerke (zuerst die westlichen Gebiete, dann auch die östlichen und südöstlichen Kampfgebiete)
- 1944/11 Stand der Auslagerungen für 54 staatliche und 35 Kommunalarchive: Auslagerung von ca. 2,5 Millionen Urkunden, 550.000 Handschriften und Büchern, 400.000 Karten und Plänen sowie 175.00 Aktenpaketen
- 1944/12 Beginn der *Evakuierung der Feste Ehrenbreitstein* in Koblenz wegen Luftkriegsschäden und Landkriegsgefahr. Verzögerung durch Ressortstreitigkeiten mit der NSDAP-Gauleitung. Fluchtung in das Bergwerk Gralsleben, einige Transporte erreichen nicht mehr ihr Ziel
- 1945/01 Katastrophale Lage im Archivwesen: NSDAP-Größen verweigern Zustimmung zu Fluchtungsmaßnahmen in östlichen Gebieten, Transporte sind verschollen, werden zerstört oder abgebrochen; *Koordination nicht mehr möglich*
- 1945/03 Letzte größere Evakuierungen von Archivalien
- 1945/04 *Einstellung der Arbeit des Kommissars für den Archivgutschutz*
- 1945/04 *Massive Plünderungen* in Archiven und Ausweichstellen durch Zivilbevölkerung (Diebstahl von Verpackungsmaterial, Bindfäden, Papier als Heizmaterial, wertvollen Einzelstücken). Ursachen: Fehlen von Wachpersonal, Kontrolle und Überblick über die Ausweichstellen und den Aufenthaltsort des Archiv-

gutes. Übernahme von Schrift- und Archivgutmassen als Kriegsbeute durch Besatzungstruppen (zur wissenschaftlichen und juristischen Auswertung, auch zur persönlichen Bereicherung)

1945/05 *Erste Sicherungsmaßnahmen* ("Rucksackaktionen") kurz nach der bedingungslosen Kapitulation. Anlaß: Eigeninitiative der Archivare, später Anweisungen der Besatzungsmächte

1946 Errichtung des Deutschen Zentralarchivs in der sowjetischen Besatzungszone

1946 *Hochwasserkatastrophe* im Staatsarchiv Hannover

seit 1945 Diskussion um *Archivalienschutzgesetzgebung* in den westlichen Besatzungszonen

1949/09 Gründung der Bundesrepublik Deutschland

1949/10 Gründung der Deutschen Demokratischen Republik

1950 DDR: *Verordnung über das staatliche Archivwesen der DDR* (Neufassung 1965 und 1976)

1951 BRD: einmütige Annahme eines Modellentwurfs für ein Archivalienschutzgesetz der Bundesländer durch den 30. Deutschen Archivtag

1951 DDR: Bildstelle Berlin des Deutschen Zentralarchivs (1953 Verlegung nach Potsdam, später Ausbau zur Zentralstelle für Reprographie)

1952 BRD: Gründung des Bundesarchivs (Gründungsbeschluß vom 24.3.1950)

1952 DDR: Verwaltungsreform. An die Stelle der 5 Länder treten 15 Bezirke. Folge: Schriftgutschwemme vor Archivtoren, Neuorganisation der territorialen Archive

1952 DDR: Aufbau der Zentralstelle für Archivalienrestaurierung Dresden

1954 UNESCO: *Haager "Konvention zum Schutz von Kulturgut bei bewaffneten Konflikten"*

1955 BRD: *"Gesetz zum Schutz deutschen Kulturgutes gegen Abwanderung"* fordert u.a. die Erarbeitung von "Verzeichnissen national wertvoller Archive" auf Landes- und Bundesebene

1955 BRD: Einrichtung des Fototechnischen Ausschusses. Er soll die Voraussetzungen für eine systematische Sicherungsverfilmung in den Archiven schaffen.

1957 BRD: Archivtechnische Woche in Marburg, findet seit 1958 ca. alle vier Jahre in München statt

1957 BRD: "Erstes Gesetz über Maßnahmen zum Schutz der Zivilbevölkerung" bezeichnet Sicherung von Kulturgut als Aufgabe des zivilen Luftschutzes in Verantwortung von Bund und Ländern

1958 DDR: Beginn der systematischen Sicherungsverfilmung im Deutschen Zentralarchiv

- 1959 BRD: *Brand* in der Ratsbücherei Lüneburg
- 60er Jahre/
Anfang BRD: endgültiges Scheitern der Bemühungen um Archivalienschutzgesetze der Länder
- 1960 BRD: *Hochwasser* im Aktenkeller des Arbeitsgerichts Marburg
- 1961 BRD: *Brandkatastrophe* auf der Burg Trausnitz bei Landshut. dem Staatsarchiv für Niederbayern
- 1961 DDR: *Beginn systematischer Sicherungsverfilmung* der kulturell bedeutsamen Archivbestände
- 1961-1962 BRD: Beginn systematischer Sicherungsverfilmung der kulturell bedeutsamen Archivbestände
- 1962 BRD: *Sturmflutschäden* in den Archiven des Hamburgischen Welt-Wirtschafts-Archivs
- 1964 DDR: Einrichtung der Zentralstelle für Reprographie
- 1965 DDR: "Verordnung über das staatliche Archivwesen der DDR". Die Neufassung definiert den staatlichen Archivfonds der DDR, seinen Zentralen Bestandsnachweis bei der staatlichen Archivverwaltung sowie die Umstrukturierung der Archivorganisation auf territorialer Ebene.
- 1967/04 BRD: Ratifizierung der "Haager Konvention" durch die Bundesrepublik Deutschland. Kulturgutschutz auf Bundesebene durch den Bundesminister des Innern, Kulturgutschutz auf Landesebene durch die Länder im Auftrage des Bundes.
- 1971/05 BRD: *Denkmalschutzgesetz* von Baden-Württemberg bezieht eindeutig auch Archive als bewegliche Kulturdenkmäler ein. (Neufassung 1983 und 1987)
- 1972 DDR: Beschluß und Richtlinie über die Mikroverfilmung von Schrift- und Zeichnungsgut. Adressat: staatliche, Wirtschafts- u.a. Einrichtungen.
- 1972-1975 BRD: Denkmalschutzgesetze von Bayern (1973), Hamburg (1973), Hessen (1974), Bremen (1975) und Niedersachsen erlauben es, Archive oder einzelne Archivbestände unter Denkmalschutz zu stellen.
- 1973/05 BRD: Urteil des Bundesverfassungsgerichts zur Wissenschaftsfreiheit verlangt nach gesetzlicher Regelung der Archivbenutzung
- 1974 DDR: Beitritt der DDR zur "Haager Konvention"
- 1975 DDR: Internationales archivtechnisches Seminar
- 1976 DDR: "Verordnung über das staatliche Archivwesen der DDR". Diese bis zum 2.10.1990 gültige Neufassung definiert ausdrücklich das Schriftgut der volkseigenen Wirtschaft als zum staatlichen Archivfonds gehörend.
- 1976 BRD: Inbetriebnahme des *Oberrieder Stollens* als "Kulturbunker" für die Mikroaufnahmen der systematischen Sicherungsverfilmung von Archivgut
- 1977/01 BRD: "Gesetz zum Schutz vor Mißbrauch personenbezogener Daten bei der Datenverarbeitung (Bundesdatenschutzgesetz - BDSG)" verstärkt die Notwendigkeit eines Archivgesetzes.

- 1978 BRD: *Brand* im Stadtarchiv Speyer
- 70er Jahre/Ende BRD: Beginn der Arbeit an Archivgesetzgebung für die Bundesrepublik
- 1980 BRD: Bundesamt für Zivilschutz übernimmt Kulturgutschutz auf Bundes-ebene
- 1980/07 DDR: "Gesetz zum Schutz des Kulturgutes der Deutschen Demokratischen Republik - *Kulturgutschutzgesetz* -"
- 1980 BRD: Richtlinien und Technische Empfehlungen für die Durchführung der Sicherungsverfilmung von Archivalien (Neufassung 1937)
- 1981 BRD: Beginn der Arbeit am ersten Landesarchivgesetz (in Baden-Württemberg)
- 1981 BRD: *Wassereinbruch* in der Universitätsbibliothek Münster
- 1983/12 BRD: Urteil des Bundesverfassungsgerichts zum Volkszählungsgesetz. Das informationelle Selbstbestimmungsrecht des Bürgers verlangt nach gesetzlicher Regelung der Archivbenutzung.
- 1984 BRD: *Hochwasser* im Stadtarchiv Herborn
- 1986 BRD: Sonderprogramm des Landes Baden-Württemberg zur Erhaltung von gefährdetem Archiv- und Bibliotheksgut. Gründung der Stiftung Kulturgut zur Finanzierung des Sonderprogramms.
- 1987/04 DDR: *Brand* in der Außenstelle Altenburg des Staatsarchivs Weimar
- 1987/07 BRD: Landesarchivgesetz Baden-Württemberg. (Novellierung am 12.3.1990)
- 1987-1992/93 BRD: Errichtung eines Zentralen Instituts für die Erhaltung von Archiv- und Bibliotheksgut mit zentralen Werkstätten für Restaurierung/ Konservierung und Reprographie sowie mit dezentralen Werkstätten im Land Baden-Württemberg.
- 1988/01 BRD: "Gesetz über die Sicherung und Nutzung von Archivgut des Bundes (*Bundesarchivgesetz* - BArchG)"
- 1988 BRD: *Nitrofilmbrand* im Bundesarchiv-Filmarchiv Koblenz, Festung Ehrenbreitstein
- 1988 BRD: gegenwärtig gültige "Bekanntmachung der Gesamtverzeichnisse national wertvollen Kulturgutes und national wertvoller Archive" durch den Bundesminister des Innern
- 1989 BRD: *Landesarchivgesetze* Nordrhein-Westfalen, Bayern, Hessen
- 1990/07 DDR: Verwaltungsreform. An die Stelle der 15 Bezirke treten fünf Länder.
- 1990/09 "Gesetz über die Sicherung und Nutzung von Archivgut des Bundes (*Bundesarchivgesetz* - BArchG)" in der Fassung des Einigungsvertragsgesetzes
- 1990/10 Einigungsvertragsgesetz zwischen der Bundesrepublik Deutschland und der Deutschen Demokratischen Republik tritt in Kraft

Anlage 3

ARCHIVBAU IN DEUTSCHLAND SEIT 1874 (AUSWAHL)

Zweckbauten

1874-1877	Preußen: Stadtarchiv Frankfurt am Main
1886-1889	Preußen: Stadtarchiv Aachen
1894-1898	Preußen: Stadtarchiv Köln
1899	Preußen: Stadtarchiv Lüneburg
1906-1910	Braunschweig: Stadtarchiv Braunschweig
1873-1876	Preußen: Staatsarchiv Düsseldorf
1875-1877	Preußen: Staatsarchiv Breslau
1879-1881	Preußen: Staatsarchiv Wiesbaden
1880	Bayern: Kreisarchiv Nürnberg
1882-1884	Thüringen: Staatsarchiv Weimar
1886-1889	Preußen: Staatsarchiv Münster
1888/89	Preußen: Staatsarchiv Aurich
1892	Bayern: Kreisarchiv München
1894-1897	Elsaß-Lothringen: Bezirksarchiv Straßburg
1894-1897	Elsaß-Lothringen: Bezirksarchiv Metz
1896	Thüringen: Literaturarchiv Weimar
1896/97	Sachsen: Kriegsarchiv Dresden
1898	Sachsen: Universitätsarchiv Leipzig
1899-1901	Preußen: Staatsarchiv Düsseldorf
1899-1901	Preußen: Staatsarchiv Stettin
1900-1902	Preußen: Staatsarchiv Danzig
1901/02	Bayern: Kreisarchiv Speyer

1902-1905	Baden: Staatsarchiv Karlsruhe
1902-1905	Bayern: Kreisarchiv Bamberg
1905/06	Preußen: Staatsarchiv Breslau
1907/08	Preußen: Staatsarchiv Magdeburg
1910	Bayern: Kreisarchiv Amberg
1911	Mecklenburg: Staatsarchiv Schwerin
1912-1915	Sachsen: Hauptstaatsarchiv Dresden
1914-17	Preußen: Staatsarchiv Osnabrück
1915-25	Preußen: Geheimes Staatsarchiv Berlin-Dahlem
1929/30	Preußen: Staatsarchiv Königsberg
1934/35	Reichsarchiv Potsdam (Magazinanbau)
1935-1938	Preußen: Staatsarchiv Marburg
1937	Preußen: Staatsarchiv Münster (Magazinanbau)

Wiederaufbau, Neu- und Erweiterungsbauten

1952	Niedersachsen: Hauptstaatsarchiv Hannover
1953/54	Deutsches Zentralarchiv Potsdam
1954/56	Rheinland-Pfalz: Landeshauptarchiv Koblenz
1955	Niedersachsen: Staatsarchiv Osnabrück
1956	Deutsches Zentralarchiv Potsdam (zweites Magazingebäude)
1956	Niedersachsen: Staatsarchiv Wolfenbüttel
1959	Niedersachsen: Staatsarchiv Stade
1962	Niedersachsen: Staatsarchiv Oldenburg, Erweiterung
1962/63	Hessen: Hauptstaatsarchiv Wiesbaden
1963	Nordrhein-Westfalen: Staatsarchiv Detmold
1963	Niedersachsen: Staatsarchiv Aurich
1965	Bayern: Staatsarchiv Landshut (Burg Trausnitz)

- 1967 Bayern: Hauptstaatsarchiv und Staatsarchiv München
- 1967 Freie Hansestadt Bremen: Staatsarchiv Bremen
- 1968 Baden-Württemberg: Hauptstaatsarchiv Stuttgart
- 1971 Bundesarchiv-Zwischenarchiv bei Bonn
- 1972 Niedersachsen: Hauptstaatsarchiv Hannover (Magazin Pattensen)
- 1972 Freie Hansestadt Hamburg: Staatsarchiv Hamburg
- 1975 Nordrhein-Westfalen: Hauptstaatsarchiv Düsseldorf
- 1976 Nordrhein-Westfalen: Staatsarchiv Münster
- 1976 Niedersachsen: Staatsarchiv Wolfenbüttel
- 1976 Land Berlin: Landesarchiv Berlin
- 1977/78 Bayern: Hauptstaatsarchiv und Staatsarchiv München
- 1979 Niedersachsen: Staatsarchiv Wolfenbüttel
- 1979 Saarland: Landesarchiv Saarbrücken in umgebauter Privatvilla
- 1984 Hessen: Hauptstaatsarchiv Wiesbaden
- 1984 Hessen: Staatsarchiv Darmstadt (Beginn Neubau)
- 1984 Niedersachsen: Staatsarchiv Osnabrück (Erweiterung im Bau)
- 1984 Niedersachsen: Hauptstaatsarchiv Hannover (Umbau)
- 1984 Rheinland-Pfalz: Landesarchiv Speyer (Beginn Neubau)
- 1981-1986 Bundesarchiv Koblenz (Archivzweckbau auf der Karthause)
- 1986 Schleswig-Holstein: Landesarchiv Schleswig (Rekonstruktion abgeschlossen, Neubau geplant)

Anlage 4

**DEUTSCHE STAATSARCHIVE IM ZWEITEN WELTKRIEG (AUSWAHL).
FLÜCHTUNGEN UND VERLUSTE**

- 1 - Archivtyp
- 2 - Aufbewahrungsort
- 3 - Dauer der Auslagerung
- 4 - Umfang der Auslagerung
- 5 - Ausweichstelle
- 6 - Umfang der Schäden und Verluste
- 7 - Ursache der Schäden und Verluste

Verzeichnis der verwendeten Abkürzungen:

GHStA- Geheimes- und Hauptstaatsarchiv

GStA - Geheimes Staatsarchiv

HausA - Hausarchiv

HeerA - Heeresarchiv

HStA - Hauptstaatsarchiv

LHA - Landeshauptarchiv

RA - Reichsarchiv

RegA - Regierungsarchiv

StA - Staatsarchiv

ZA - Zweigarchiv

ZSt - Zweigstelle

? Bedeutet in Spalte 4 und 5, daß bisher in der Literatur keine vollständigen Angaben über den Umfang der Auslagerung oder die Zahl der Ausweichstellen ermittelt werden konnten.

1	2	3	4	5	6	7
StA	<i>Amberg</i>	Krieg	Teil	5	keine	-
StA	<i>Aurich</i>	1941-1943	75%	Festung, Bergwerk, andere	gering	Plünderung
ZSt	<i>Bad Sulza</i>	-	keine	-	größter Teil, Gebäude zerstört	Brand
StA	<i>Bamberg</i>	Krieg	Teile	?	keine, Gebäude gering	Beschuß
ZA	<i>Bautzen</i>	-	keine	-	gering	Fremdeinwirkung, ungenügende Sicherung
GStA	<i>Berlin</i>	1943/44	45%	Bergwerke, andere	20% der verbliebe- nen Gebäu- de zerstört	Luftangriff, Brandstiftung
StA	<i>Bremen</i>	1941-1945	Großteil	Bergwerke und StA	gering, Gebäude teilweise	Beschlagnahme, Entwendung, Brand, Luftdruck
StA	<i>Breslau</i>	Krieg	60%	Schloß, andere	große und wertvolle Teile, Gebäude zerstört	Kriegseinwirkung, Beschuß von Ausweichstellen
RegA	<i>Bückeburg</i>	1939-1945	100%	StA, andere	keine	-
StA	<i>Coburg</i>	-	keine	-	keine	-
StA	<i>Danzig</i>	1942-1945	75%	Bergwerk, Schloß, andere	25 %, darunter Findhilfs- mittel, Gebäude schwer	Kriegseinwirkung, Plünderung, ungenügende Sicherung
StA	<i>Darmstadt</i>	Krieg	gering	?	Teile der verbliebe- nen Gebäu- de schwer	Kriegseinwirkung, Brand
StA	<i>Detmold</i>	1942/43	80%	Schloß. andere	Teile, Ordnung gestört	Plünderung durch SS, Verwüstung

1	2	3	4	5	6	7
LHA	<i>Dresden</i>	Krieg	wertvolle Teile	35, darunter Schloß, Festung	große in Ausweichstellen. Gebäude gering	Kriegseinwirkung, Plünderung, Brand, Besatzungstruppen
StA	<i>Düsseldorf</i>	ab 1941	34%	Festung, Luftschutztunnel, Burg, andere	gering, Gebäude schwer	Plünderung, Diebstahl, Untergang Transportmittel, Kriegseinwirkung
StA	<i>Hamburg</i>	1942-1944	wertvolle Teile	Festung, Bergwerke	gering, Wertstücke, Gebäude teilweise	Plünderung, Besatzungstruppen, Luftangriff mit Wasserschäden als Folge
StA	<i>Hannover</i>	1942-1945	Teile	Burg, Schloß, Schule	große, darunter Findhilfsmittel und Bibliothek	Brand des Hauptgebäudes 50%, Außenmagazin 100% zerstört
StA	<i>Karlsruhe</i>	Krieg	20%	?	keine, Gebäude gering	Luftangriff, Brand
StA	<i>Kiel</i>	ab 1941	95%	StA, Bergwerk	gering, u.a. Siegel, Bibliothek	Plünderung
StA	<i>Koblenz</i>	Krieg	wertvolle Bestände	?	verbliebene Teile	Luftangriff
StA	<i>Landshut</i>	Krieg	Teil	diverse	gering	Moder durch Feuchtigkeit
StA	<i>Lübben</i>	1944	wertvolle Bestände	Bergwerk	gering, Ordnung zerstört, Gebäude schwer	Kriegseinwirkung, Besatzungstruppen
StA	<i>Ludwigsburg</i>	Krieg	?	?	keine	-
StA	<i>Magdeburg</i>	Krieg	große Teile	Bergwerk, Schloß	kleine, darunter Urkunden, Gebäude gering	Plünderung
StA	<i>Marburg</i>	Krieg	Teile	?	keine, Gebäude gering	-

1	2	3	4	5	6	7
GStA	<i>München</i>	Krieg	große	?	2% der Archivalien. 50% der Bibliothek. Gebäude zerstört	Luftangriff
HausA	<i>München</i>	Krieg	große	?	Teile, Gebäude zerstört	Luftangriff
HStA	<i>München</i>	Krieg	Teile	?	Teile verbliebener Bestände	Luftangriff
HeerA	<i>München</i>	Krieg	Teile	Schloß	große Teile, Gebäude schwer	Bombentreffer bei Luftangriff
StA	<i>Münster</i>	1941-1945	100% der Archivalien bis 1815	Kloster, Gut, Schule, andere	gering	Kriegseinwirkung, Brand-, Wasserschäden, Plünderung
StA	<i>Neuburg</i>	Krieg	?	?	keine	-
StA	<i>Nürnberg</i>	Krieg	fast 100%	36	gering, Gebäude beschädigt/zerstört	Feuchtigkeit, Entfremdung, Besatzungstruppen
StA	<i>Oldenburg</i>	1943-1944	50%	Schule, Festung, Schloß, andere	gering	Kriegseinwirkung, Einquartierung, Wasserschäden
StA	<i>Oranienbaum</i>	Krieg	?	Schloß, Burg, Schule, andere	gering	Besatzungstruppen, andere
StA	<i>Osnabrück</i>	1942-1944	80 %	Bergwerk, Tresor, andere	keine	-
HeerA	<i>Potsdam</i>	1944/45	nur Akten des 2. Weltkrieges	diverse	ausgelagerte, außer Nachlässe	zielgerichtete Vernichtung (Führererlaß 1944), Luftangriff
RA	<i>Potsdam</i>	1943-1945	wichtigste. ca.50%	Bergwerk, Tresor, andere	verbliebene Bestände, Gebäude schwer	Luftangriff, Besatzungstruppen
HStA	<i>Schwerin</i>	Krieg	großer Teil	7, darunter Bergwerk, Schloß, Güter	gering, wertvolle Bestände	1,5 Ausweichstellen durch Kriegseinwirkung
StA	<i>Sigmaringen</i>	Krieg	?	diverse	keine	-

1	2	3	4	5	6	7
StA	<i>Speyer</i>	Krieg	fast 100%	diverse	Teile, Gebäude keine	Bombentreffer in Ausweichstellen. Plünderung
StA	<i>Stettin</i>	Krieg	75 %	15	40 % der Ausweichstellen	Plünderung, Kriegseinwirkung, Besatzungstruppen
StA	<i>Stuttgart</i>	Krieg	75 %	29	3 %	Brand bei Luftangriff, Nachkriegszeit
StA	<i>Wiesbaden</i>	Krieg	Teile	Festung, Bergwerk	gering	Transportbeschuß
StA	<i>Wolfenbüttel</i>	1942-1945	Teile	15, darunter Bergwerk, Schule. Pfarrei	gering, Gebäude gering	Plünderung, vor allem im Bergwerk
StA	<i>Würzburg</i>	Krieg	Teile	?	verbliebene Bestände	Kriegseinwirkung, Brand

Anlage 5

KATASTROPHENFALLE NACH 1945 (AUSWAHL)

- 1 - Ursache
- 2 - Folgen
- 3 - Schadensbekämpfung

1946/Frühjahr *Staatsarchiv Hannover (Wasser)*

1. Hochwasser
3. seit 1968 jährliche Massenrestaurierung von 200.000 Blatt in der Werkstatt des Staatsarchivs Bückeburg

1959/12/29 *Ratsbücherei Lüneburg (Feuer)*

1. Brandstelle unter der Balkendecke entzündet alle Holzregale
2. von 30.000 Buchbänden des 16.-18.Jahrhunderts werden 9.000 vernichtet und 18.000 erheblich durch Verbrennen, Verkohlen, Hitze und Löschwasser geschädigt
3. Einzelblattrocknung, -konservierung und -restaurierung

1960/12/4 *Aktenkeller des Arbeitsgerichts Marburg (Wasser)*

1. Unwetter löst Hochwasser aus
2. 60 cm hoher Wassereinbruch in Aktenkeller, geringfügige Durchfeuchtung der Akten, 12 Pakete werden naß
3. Lufttrocknung bzw. maschinelle Trocknung der Einzelblätter durch die Trockentrommel des Fotolabors im Staatsarchiv Marburg

1961/10/21 *Burg Trausnitz bei Landshut, Staatsarchiv für Niederbayern (Feuer)*

1. nicht abgeschalteter Tauchsieder im Archiv
2. Schwelbrand entwickelte sich nach 16 Stunden zu offenem Flammenbrand, der erst nach 37 Stunden mit 450 Helfern durch Wasser gelöscht werden konnte. Von 3455 lfm Archivgut wurden 2650 lfm auf den Schloßhof gerettet. 500 lfm Archivgut wurden schwer geschädigt (300 lfm Totalverlust). 12 Lastwagenladungen Archivgut hatten Löschwasserschäden.
3. Löschwasser. Trocknung der Wasserschäden binnen 12 Tagen 70.000 00 Mikrofilmaufnahmen angekohlter Archivalien. 2.500.000 Blatt müssen laminiert werden.

1962/02/17 *Archive des Hamburgischen Welt-Wirtschafts-Archivs (Wasser)*

1. Sturmflut
2. 470 lfm Archivgut lagerten im Keller in 2.800 Pappkästen (Geschäftsberichte und Pressekommentare von 6.000 deutschen Firmen ab 1908). 2.000 Kästen standen 10 Stunden unter Wasser, Archivgut von 30 Pappkästen (auf Glanzpapier gedruckte Geschäftsberichte) war völlig unbrauchbar.
3. Trocknung der Pappkästen (1 Woche) Trocknung der Archivalien durch Zugluft (3 Monate)

1978/12/03 *Stadtarchiv Speyer (Feuer)*

1. Staubablagerung auf elektrischer Heizung, Hitzestau entzündet Weidenkorb mit Akten
2. Verschmoren von zwei, starke Beschädigung von vier Pergamenturkunden
3. vorherige Sicherungsverfilmung der Urkunden

1981/09 *Universitätsbibliothek Münster (Wasser)*

1. mehrere 1.000 Liter Wasser aus defekter Klimaanlage
2. 5.000 Bücher und Zeitschriften werden durchnäßt

1984/02/07 *Stadtarchiv Herborn* (Wasser)

1. Hochwasser
2. Hauptmagazin und Magazinräume im Rathauskeller laufen voll, 350 lfm Archivgut werden durchnäßt, Eisenregale stürzen um und brechen zusammen, auf den Fußböden bildet sich eine Schicht aus Schlamm und Archivgut
3. Einfrieren des Archivgutes für 4-6 Wochen in Plastiktüten bei -28°C bzw. Einsprühen mit flüssigem Stickstoff (-192°C) bei $+4^{\circ}\text{C}$ für 2 Wochen nach 9 Monaten ist annähernd die Hälfte des Archivgutes relativ schadlos aufgetaut, getrocknet und in benutzbarem Zustand

1987/04/23 Außenstelle *Schloß Altenburg* des Staatsarchivs Weimar (Feuer)

1. Brand in den Wohnungen über dem Magazintrakt weitet sich zu Dachstuhlbrand aus
2. Löschwasser durchnäßt große Teile des Archivguts
3. Auslagerung von 2.000 lfm Archivgut (11 Bestände: Amtsgerichte sowie Appellationsgericht, Notare und Landesregierung Altenburg) Trocknung durch Hopfentrocknungsanlage provisorische Unterbringung in einer Turnhalle, Benutzbarkeit durch provisorische Ordnung gewährleistet

1988/01/26 Bundesarchiv-Filmarchiv Koblenz, *Festung Ehrenbreitstein* (Feuer)

1. Nitrofilmbrand

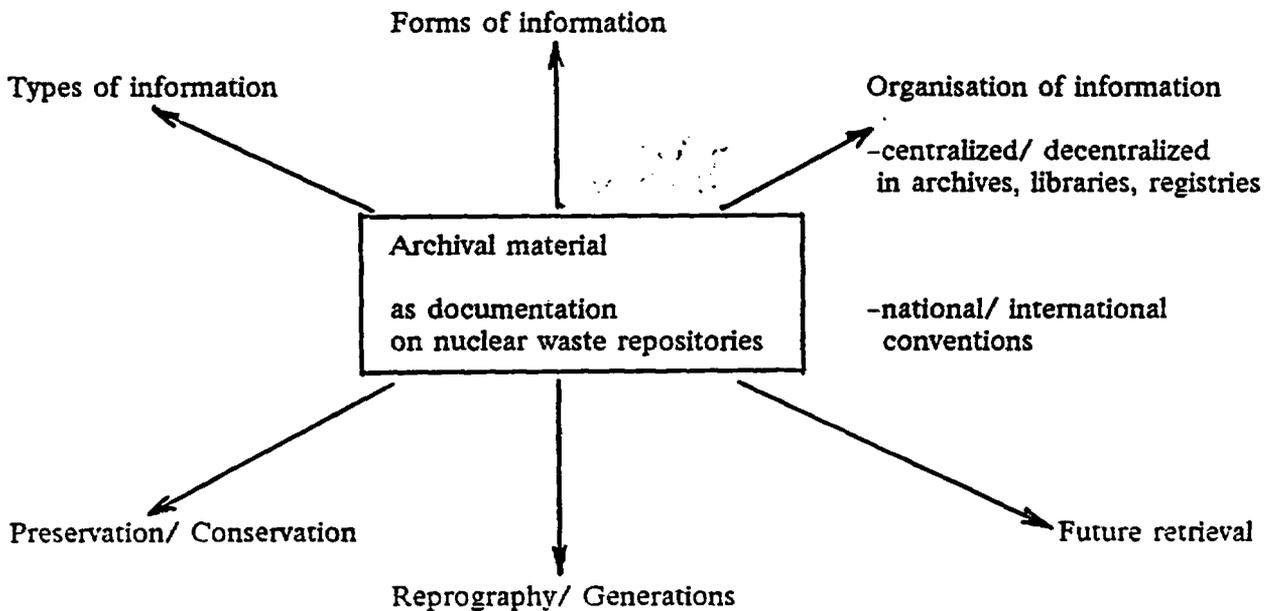
INTERDEPENDENZEN ARCHIVISCHER DOKUMENTATION - GRAFIKEN

Es wird für zweckmäßig erachtet, daß NKS im Zusammenhang mit dem Projekt KAN 1.3/ Projekt 5-91 der verbalen Deskription Grafiken und Schemata beifügen läßt.

Bei der Expertise ist davon Gebrauch gemacht worden, daß eine solche Kombination von Text und Grafiken einen einheitlichen Zugang anbietet. Die Begrenzung der Seitenzahl für das Gutachten wird mit Hilfe der Schemata zum Teil kompensiert, so daß dem Leser, ausgehend von den Hauptbegriffen im Mittelpunkt, eine selbständige Orientierung möglich ist.

Aus dem inneren Feld einer Grafik können Assoziationen, Denkhilfen und didaktische Erleichterungen, fehlende Termini und notwendige Wechselbeziehungen abgeleitet werden, die der Leser selbst ergänzen kann. Sie gewinnt die Qualität einer "Landkarte", die gleichfalls beliebig, ohne die Notwendigkeit der Beachtung einer "Hierarchie", gelesen werden kann. Das Nacheinander in der Beschreibung einzelner Teilgebiete, wie es bei der verbalen Darstellung der Fall ist, wird vermieden.

Goal of the project



Kartografie

Geodäsie

Nord-Syd-Konflikt

Atomphysik

Geologie

Chemie

Biochemie

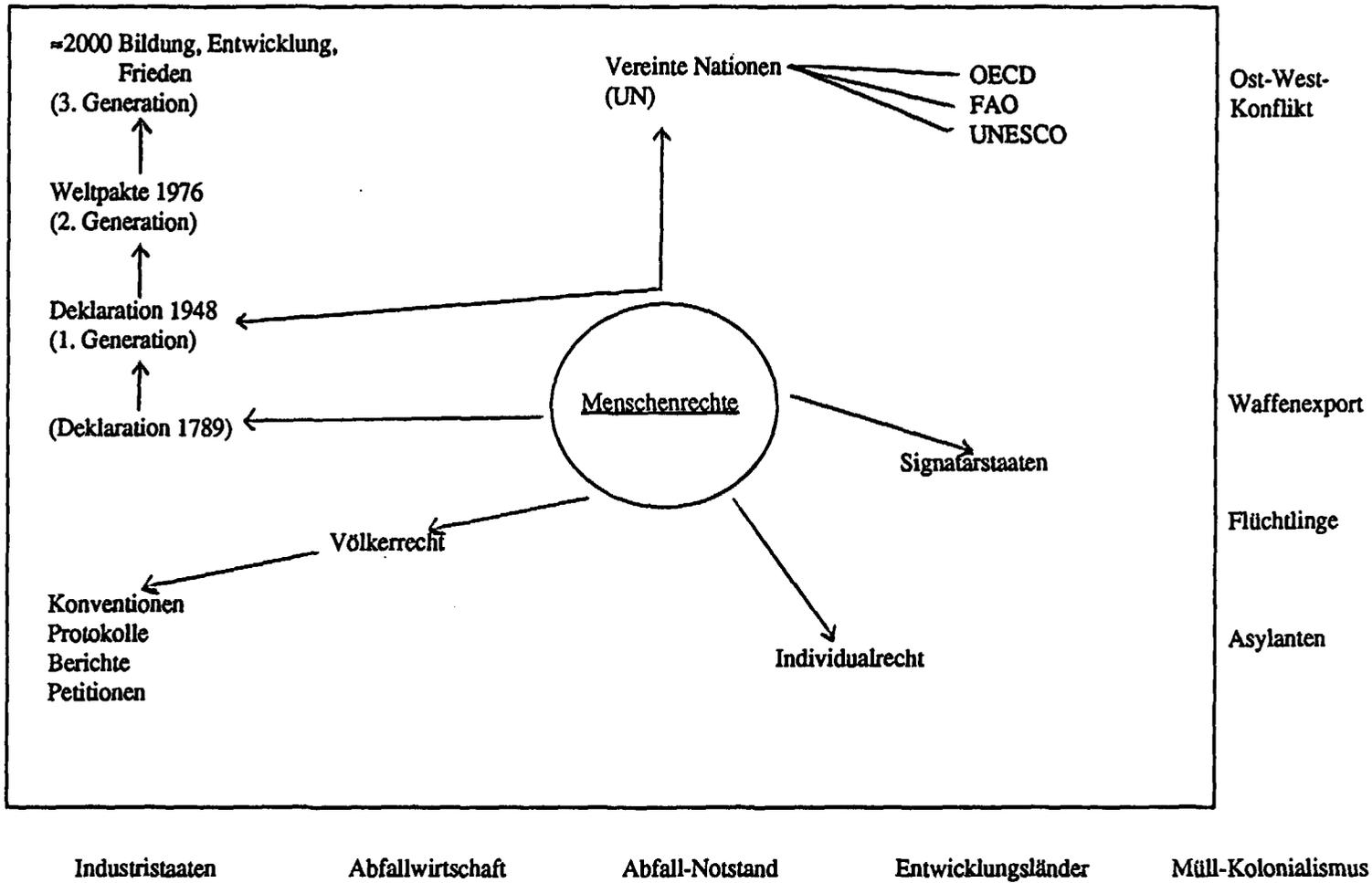
Humangenetik

Biologie

Molekularbiologie

Produktionsniveau

Umweltschutz



Ost-West-Konflikt

Waffenexport

Flüchtlinge

Asylanten

Industriestaaten

Abfallwirtschaft

Abfall-Notstand

Entwicklungsländer

Müll-Kolonialismus

Information und Dokumentation
(Datenbanken, Bibliographien,
Fachzeitschriften)

Bibliothekswesen
Bibliotheksverbund

Medizin/Gesundheitswesen
(Krankheitsstatistiken)

Völkerrecht
Menschenrechte

Konferenzen und Kongresse

Archivwesen

UN-Konventionen,
(OECD, UNESCO, FAO)

Green peace

Bürgerinitiativen

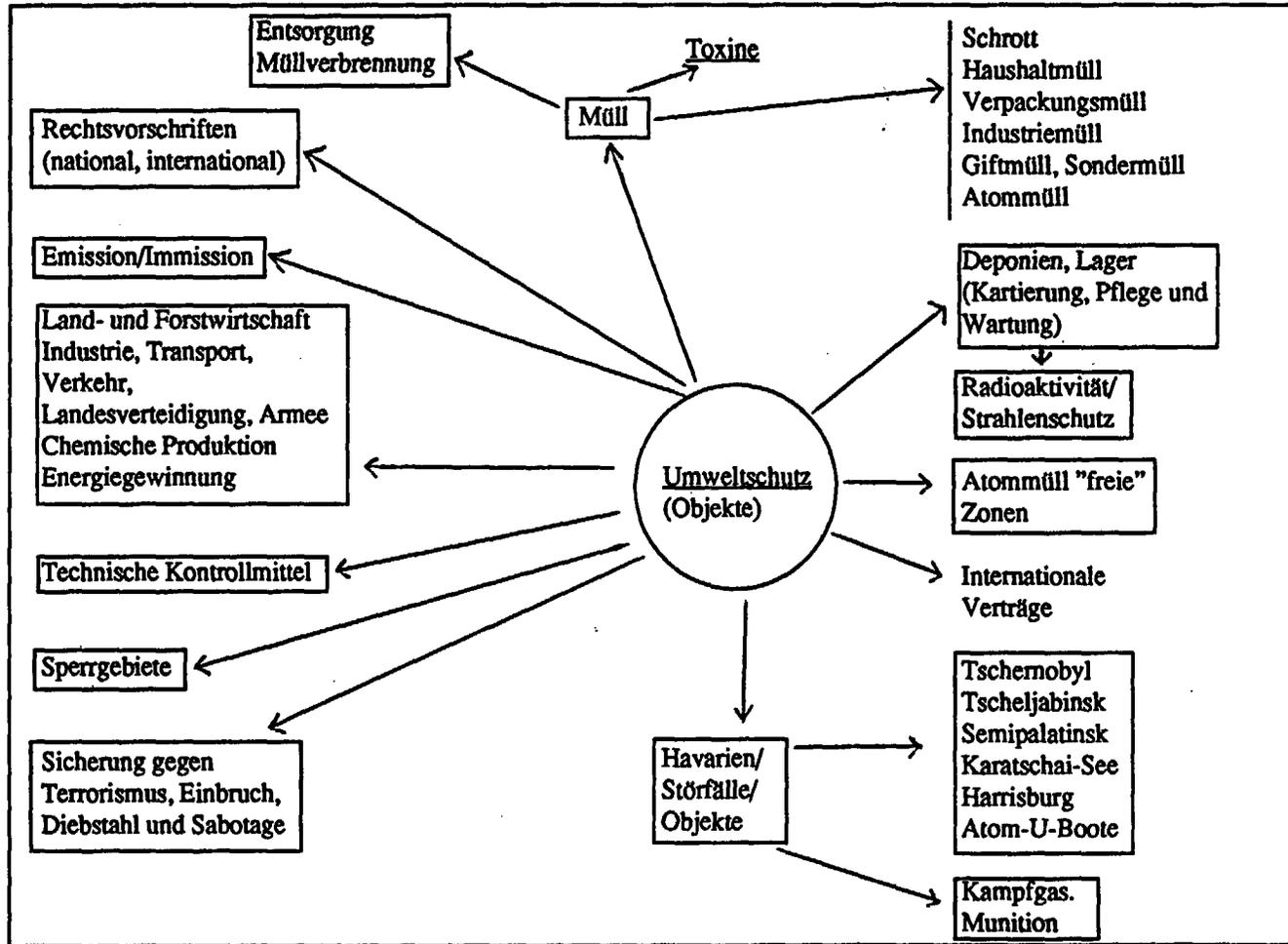
Bundesrepublik
Deutschland

ehemalige DDR

UdSSR

USA und andere
Industrieländer

Entwicklungsländer



Geologie

Atomphysik

Kernkraftwerke

Atomare
Abrüstung

Biologie

Medizin

Lebensmittel-
industrie

Statistik

Finanzen/
Profitoraten

Luftverschmutzung

Wasserverschmutzung

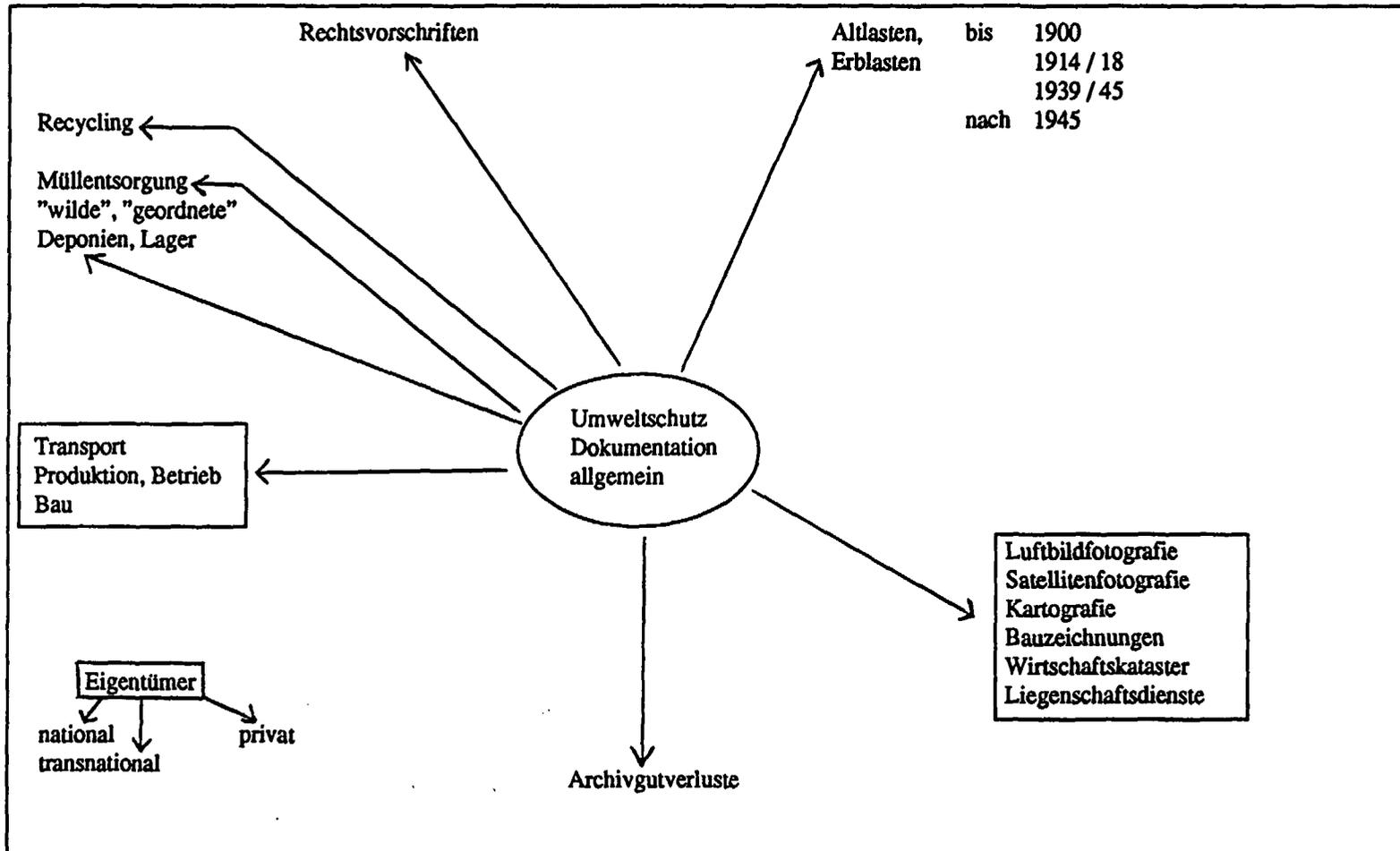
Meeresverschmutzung

Weltraummüll

Umweltkriminalität

Archive

Bibliotheken



Besatzungsrechte

Kriminalität

Administration

Staat
Wirtschaft
Kommunen

Bundesdatenschutzgesetz

Öffentlichkeitsarbeit Medien
Forschungs- und Entwicklungsaktivitäten

Internationale Atomenergiebehörde
Bilaterale/Multilaterale Verträge

Kernkraftwerk

Bundesarchivgesetz 1988

Länderarchivgesetze

Völkerrecht

Haager Landkriegsordnung

UN-Konventionen
(Kulturgutschutz)

Europaparlament
Straßburg

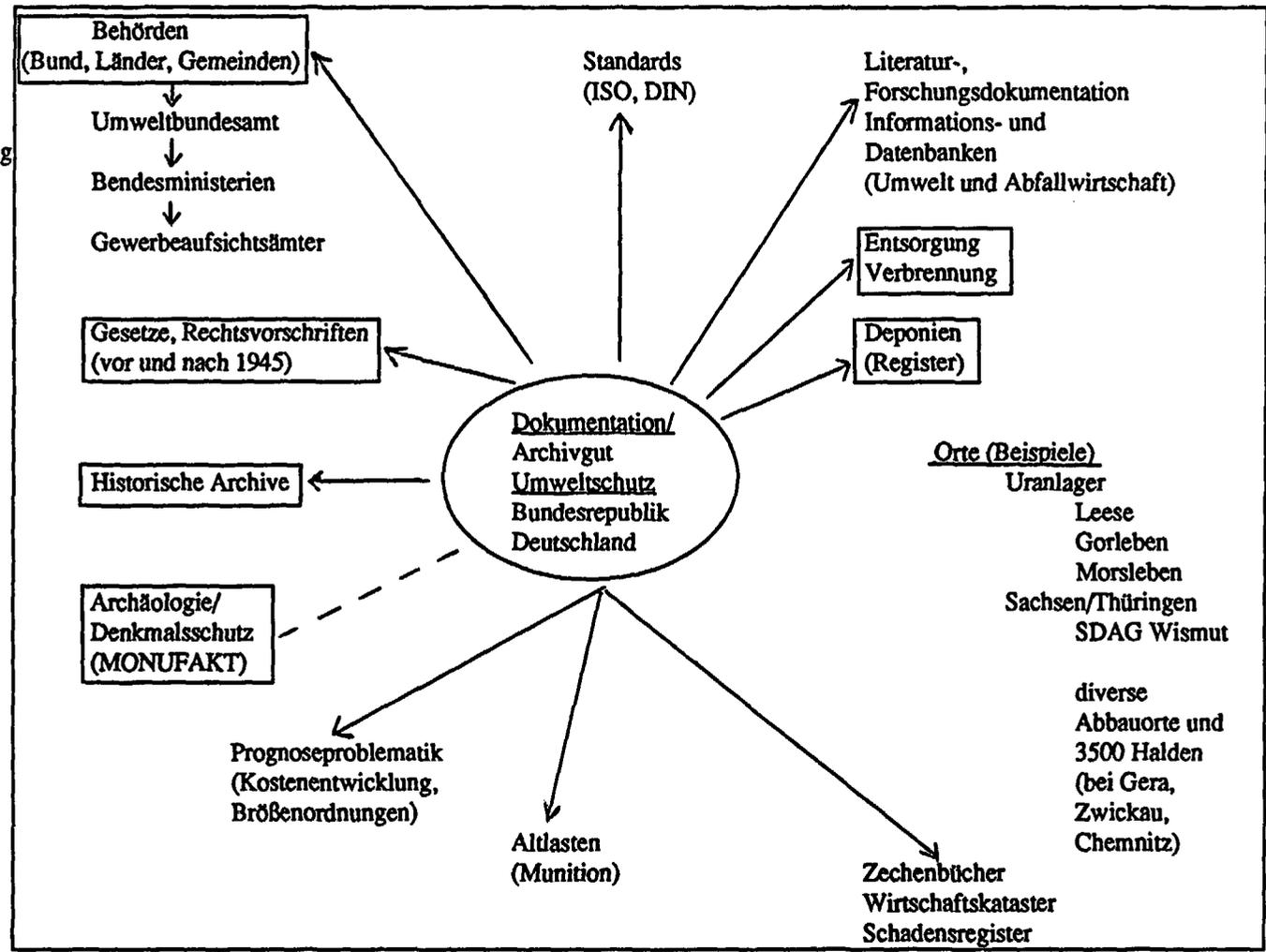
Umweltschutz
international

Finanzierung
Materialisierung

Nationaleinkommen

Statistik

Bevölkerungswachstum



Menschenrecht

Bergbau

Markscheide
wesen

Geschichte

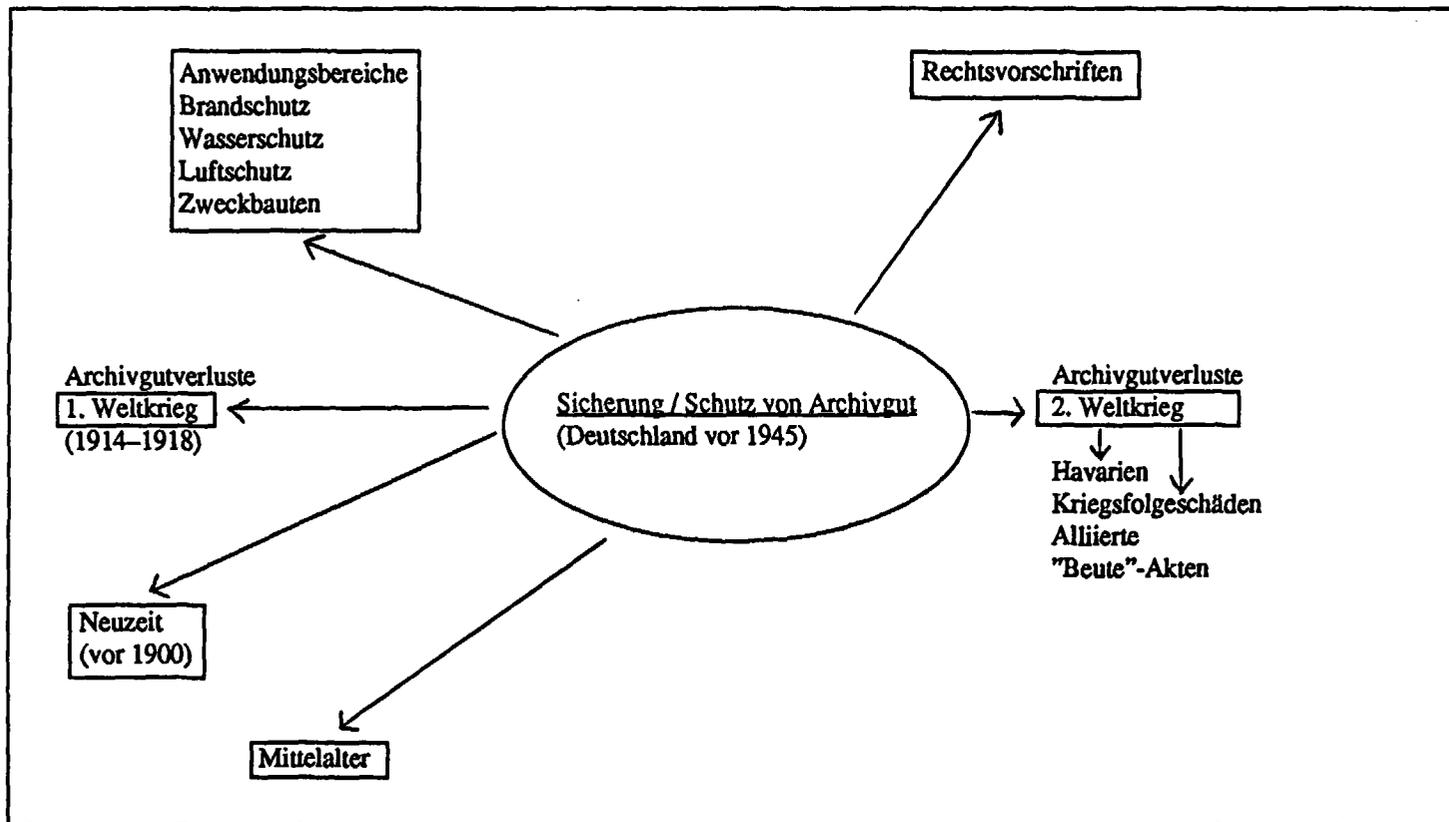
Hydrologie

Medizin

Chemie

Schadstoffe

Besatzungsregime Frankreich Polen
Niederlande UdSSR CSR
Belgien Südosteuropa



Besatzungsorgane
Belgien
Frankreich
Rußland

Literatur-
berichte

Kongresse
Konferenzen
Archivtage

Denkmalschutz

Kulturgutschutz

Anlage 7

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*)

Die Auswahl wurde schwerpunktmäßig auf die traditionelle Archivgutart Papier konzentriert.