ORGANIZING DISASTER INFORMATION UNITS:
A Training Manual

For Participants in the Caribbean Disaster Information Network

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Special thanks to Ms. Stephney Ferguson, University Librarian, who gave the initial guidance to the project and Mrs. Norma Amenu Kpodo, Deputy Librarian who presently supervises the CARDIN Project.

We trust that this tool will assist the non-professional information manager in the assessment, collection, storage, retrieval and dissemination of disaster related information throughout the Caribbean Region.

Please note however that the European Commission is not liable for any use that may be made of the information contained herein.

Beverley Lashley
Project Coordinator
CARDIN

June 2000
Introduction

The Caribbean Disaster Information Network (CARDIN) is a cooperative framework of organizations within the Caribbean that are involved in disaster management. The Network was formally established in June 1999, but its origins can be traced to the early meetings in Jamaica in December 1997 between the International Decade for Natural Disaster Reduction (IDNDR) now the International Strategy for Disaster Reduction*, the Pan American Health Organization (PAHO) and the Main Library, University of the West Indies, Mona Campus.

The major objective of CARDIN is to integrate all types of disaster information from the various organizations and make it easily accessible through the CARDIN database via the Internet, in book format and CD's. The criteria to select documents for this database are laid down in the Document Selection Guidelines, (which is dealt with in detail in Unit III). This is an effort to bolster the capacity at national and regional levels for capturing and disseminating disaster information in the Caribbean.

Members of CARDIN are drawn from organizations that are involved in disaster management and have indicated a willingness to become members through a cooperative agreement. To become members the organizations/individuals must possess disaster related information within their collection and be willing to assist CARDIN in meeting its objectives by assessing, collecting, indexing and encouraging the transfer of knowledge by means of the exchange of publications at national, regional and international levels. Organizations who have shown a willingness to become members of CARDIN include the Caribbean Disaster Emergency and Response Agency (CDERA), PAHO, International Federation of Red Cross and Red Crescent Societies (IFRC), Caribbean National Disaster Organizations, Caribbean National Libraries, the Center for Latin American Medicine [Centro Latin Americano de Medicine de Desastres (CLAMED)], Stichting Rampenbestrijding Nederlandse Antillen (STIRANA) and Université Antilles Guyane (UAG).

This Training Manual is intended to assist regional members in the establishment of successful Disaster Information Units and to facilitate effective collection, organization, dissemination and preservation of disaster related information for successful participation within the Network.

This manual was devised with the sole purpose of instructing non-professionals in organizing disaster information units and it also introduces the basic concepts of disaster information management. Training activities will be conducted in each country with the assistance of the national focal points (which have been selected in some Caribbean countries), national libraries and library associations.

The Network covers the Dutch, English, French and Spanish speaking Caribbean and is funded by ECHO. Its Coordinating Centre is located at the Science Library, University of the West Indies, Mona Campus in Jamaica.

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*International Strategy for Disaster Reduction (ISDR) is the successor arrangement to the IDNDR which was mandated by Resolution 63/99 of the U.N. Economic and Social Council (ECOSOC) and the ProVention Consortium launched by the World Bank in February 2000.
UNIT ONE:
Organizing a Disaster Information Unit
Introduction

The need for organization in a library is axiomatic, as this allows both the client and the library manager to benefit from the information in the library's collection.

This unit offers practical guidelines for establishing a Disaster Information Unit. It presents simple procedures that will allow individuals to create efficient information services in providing clients with the required information when it is needed.

Aim

Unit One is designed to equip individuals with competencies required to effectively develop and formulate guidelines and plans needed to facilitate the successful creation of a Disaster Information Unit.

Objectives: Unit One
At the end of this unit individuals will be able to:

- Create a checklist, which will demonstrate the nature of the organization to which the Disaster Information Unit will be attached.
- Formulate a Needs Analysis to enable them to identify the organization's Disaster Information needs.
- Identify and coordinate the disaster information resources within an organization.
- Formulate a plan of "immediate action" in order to create the Disaster Information Unit.
- Determine the resources to be sourced outside of the organization.
- Order suitable stock, equipment and furniture based on selection criteria, user needs and administrative procedures.
UNIT ONE: Organizing a Disaster Information Unit

It is essential to be knowledgeable about what is the organization's vision for a Disaster Information Unit. This can act as a starting point to understanding the organization's disaster information needs. The initial step towards drawing up a plan on the type of unit to establish is to familiarize one's self with the organization. The following checklist will help you to create a simple organization profile and can act as a practical guide to assist in planning programmes for the unit.

**Checklist!**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>a</td>
<td>Determine the size of the organization.</td>
</tr>
<tr>
<td>b</td>
<td>Find out the type of business activity undertaken by the organization.</td>
</tr>
<tr>
<td>c</td>
<td>Ascertain the type of clientele the organization serves.</td>
</tr>
<tr>
<td>d</td>
<td>Establish possible related subject areas.</td>
</tr>
<tr>
<td>e</td>
<td>Determine number of sites, e.g. other offices and associates.</td>
</tr>
<tr>
<td>f</td>
<td>Note the location of these sites.</td>
</tr>
<tr>
<td>g</td>
<td>Find out the total number of staff by function e.g. number of partners, managers, consultants, specialists, researchers, and administrative and secretarial staff.</td>
</tr>
<tr>
<td>h</td>
<td>Ascertain the number and type of separate departments (include size and special interests).</td>
</tr>
</tbody>
</table>
The purpose of this analysis is to establish the main areas in which information will be sought by your clientele. The clientele in this case will be not only staff but outsiders using the Information Unit's collection. The analysis is necessary to establish a collection, which will reflect your user's needs; it can be done via questionnaire, telephone or personal interviews. The following should be included in your assessment:

a) Name
b) Educational Level
c) Position held in the organization
d) Main responsibilities
e) Type of disaster information required (by subject area and format). What aspects of disaster information are they interested in.
f) What emphasis is likely to be made i.e. current or historical
g) What journals are read regularly?
h) Identify what reference books are consulted regularly, and determine if these books are used and housed internally and if it will be necessary to obtain copies for the unit.
i) What subject files are maintained in office/departments?
j) Is a database or the Internet consulted regularly for disaster related information.
k) Is the individual computer literate? How competent is he at using the Internet and databases?
l) Determine if the individual is a member of any disaster-related association or geological society, which could be used:
   • To get required publications at a reduced price
   • As a source of disaster information
m) Are there any other information facilities within the company which may be incorporated within the disaster unit?
Upon completion of the Needs Analysis, the next step is to identify and coordinate the resources that exist within the organization, and determine if an information unit is already in place. At this point it will be necessary to determine; the existing resources within the organization; how these resources can be accessed, the existing administrative procedures; and accommodative spacing allocated to the disaster information unit.

After this step has been completed it is essential that resources to be sourced from outside of the organization be identified. These key questions will therefore have to be answered.

**Existing Resources:**

a) Does the organization already have an information unit? If not then various sources should be checked to identify existing resources, this should include the following:
   • checking the registry or personnel offices to identify the distribution of inventory
   • conducting an office to office survey of acquired materials
   • checking bookshelves and filing cabinets housed in the various offices

b) Identifying any database which may have been developed

c) Subject Coverage: How does the material identified relate to the requirements expressed in the Needs Analysis; what perspective does the material present have (current or historical); is there any foreign language coverage?

d) What is the present emphasis (books, journals, online services, subject files, audiovisual materials)?

e) Does the organization produce disaster related in-house publications, is there a collection or a stock of these?
Organization / Access

a) Is there any organization of the existing information resources?
b) Is a classification scheme used, is it used for all disaster material?
c) Is an indexing system used?
d) What type of catalogue is used, e.g. card, book, loose-leaf lists or computerized?
e) What information services are offered?

Administration and Administrative Procedures

a) Is a budget provided for the library/information unit and what is the total expenditure on library resources?
b) Who is responsible for this budget and how is it disbursed?
c) Is there a budget for any purchase of resources such as online database access?
d) What records are kept e.g. invoices and orders, and how are these records organized?
e) Who has authority to sign orders and invoices?

Accommodation

a) Is space allocated to the Disaster Information Unit?
b) Will infrastructure items such as electricity supply, telephone facilities and water be made available.
c) Will accommodation have to be made for users and staff e.g. chairs, tables or carrels?
d) Will staff and users be accommodated separately?
e) If clientele are to be accommodated what sort of physical arrangement will have to be made for them e.g. seating.
f) Establish what type of equipment will be suitable for the various services and procedures to be undertaken e.g. fax machines, computers, typewriters.
g) What sort of lighting, ventilation, or air condition system will be used?
The standard equipment and furniture which can be used in a Disaster Information Unit has been detailed below:

**Equipment:**
- computer terminals and screens, modem, keyboards, scanner, digital equipment, typewriters, facsimile machine, television sets, video recording equipment, cassette players, headphones, projectors and screens, photocopier.

**Furniture:**
- desks, workstations and units, tables and chairs, filing cabinets, shelving, worktables, display units and a catalogue.

**Storage of Resources:**
Each item within the disaster collection has its own unique properties, which requires special storage considerations. The following are suggested storage methods:

<table>
<thead>
<tr>
<th>1. Resources</th>
<th>2. Storage Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative documents</td>
<td>Folders, ring binders, filing cabinets or computer files.</td>
</tr>
<tr>
<td>Books</td>
<td>Shelves</td>
</tr>
<tr>
<td>Cassettes</td>
<td>Storage boxes designed for purpose e.g.: boxes with dust proof lids or plastic trays.</td>
</tr>
<tr>
<td>Computer Discs</td>
<td>Storage boxes designed for purpose in appropriate disc file boxes (in dust free paper covers in boxes with dust proof lids).</td>
</tr>
<tr>
<td>Maps or plans</td>
<td>Vertical file cases or shallow drawers</td>
</tr>
<tr>
<td>Microfilm or fiche</td>
<td>Microfilm or fiche boxes</td>
</tr>
<tr>
<td>Newspapers</td>
<td>Shelves or racks</td>
</tr>
<tr>
<td>Overhead projector transparencies</td>
<td>Flat storage boxes</td>
</tr>
<tr>
<td>Pamphlets</td>
<td>Pamphlet boxes (see figure 1a)</td>
</tr>
<tr>
<td>Photographs</td>
<td>Horizontal storage - drop-front boxes</td>
</tr>
<tr>
<td>Reports</td>
<td>Pamphlet boxes</td>
</tr>
</tbody>
</table>

Figure 1a: Pamphlet boxes on shelves
Organizing Disaster Information Units: A Training Manual

UNIT ONE: Organizing a Disaster Information Unit

Staff

a) Determine the number and level of staff needed for efficient management of the Disaster Information Unit.
b) Establish a work schedule and determine if staff will be part-time or full-time. Detailed job descriptions should be drafted.
c) Find out if other departments will lend support to the Disaster Information Unit and schedule in this support.

Visit other Information Units

These visits will provide invaluable information such as:
a) Ideas e.g. design of room and shelving of materials
b) An evaluation of the usefulness of equipment which are available or those budgeted for,
c) The general layout of the office areas and designs of furniture for example the design of the issue desk.

How to Proceed

a) Ensure the proper infrastructure for the Unit e.g. lighting, telephone etc.
b) Prepare a plan for its physical setting up i.e. layout. Use the questions asked under accommodation on page 12 as a guide.
c) Set up a file in which all policies, services and procedures, which will be provided, are detailed. This will also function as the framework for a staff manual. The following procedures should be considered:

- Ordering and acquisition
- Processing
- Indexing and cataloguing
- Loan and circulation procedure
- Information and delivery service

d) Decide on the services that will be offered by the Disaster Information Unit.
e) Identify and send for sample copies of journals and details of various disaster information services.
f) Consider budgetary control system, for example using a spreadsheet software package.
g) Draw up a list of all possible information suppliers, this list will be a useful tool when you are ready to purchase items for the information unit.

Figure 1b: Catalogue Cabinet in use
h) Plan the layout of the Disaster Information Unit and make orders for the necessary infrastructure e.g. suitable lighting, telephone and electrical outlets.

i) Set up correspondence files.

j) Look at catalogue, library shelving, equipment and stationary; assess requirements, then make orders. Move any available equipment and resources within the organization to the appropriate point in the information unit.

k) Order also initial stock using core list of disaster related materials. Decisions on what to acquire for the Disaster Information Unit is not always the sole responsibility of the Disaster Information Manager, these decisions may be made in concurrence with an Acquisitions/Selection Committee. The Disaster Information Manager could provide a list of materials and information such as reviews, requests from specific users. He/she must also know what is being published, read reviews and promotional information on the subject (Disasters published by the PAHO gives reviews on disaster publications) and attend disaster information meetings whenever this is possible. One should also liaise with other department managers to ascertain their needs and evaluate trends.

l) Determine "real need" by using a request form, a sample of which has been included in the Procedures Manual page 1 (see Appendix 1).

m) Create a statistical record of all processing and service transactions.

n) Decide on arrangement of information resources, i.e. formally classified, arranged by keyword, authors, etc.

o) Decide on labeling and identification methods.

p) Decide on loan periods and information services, which will be offered.

A sample of a Procedures Manual has been included at Appendix 1, which can be used as a guide to monitoring the collection and systems in your Disaster Information Unit.
## UNIT ONE : EXERCISE

Identify the resources that exist within your organization which can assist in the development of your Disaster Information Unit

### Supplementary Reading


UNIT TWO:
Disaster Prevention and Preservation
Introduction

Preservation is the task of ensuring long-term access to information and cultural materials of value, but saving recorded information has been problematic from the beginning of the written word. This unit presents to members methods that can be utilized to preserve the collection in the event of an impending disaster, and suggests procedures, which will help the participant to cope with dilemmas, which may arise after a disaster.

Aim

For library managers, preservation is the protection of their institution's major assets, its collections. A preservation plan must be one of the key components in a management strategy to provide information resources to users. This unit has been devised to help individuals face the challenges of coping with the fragile media of the present century. It was designed with the aim of sensitizing individuals to the physical building requirements necessary for the preservation of the collections and provide directives, that can be utilized to plan for disasters caused by fire, water, earthquake and wind.

Objectives: Unit Two

At the end of this unit individuals will be able to:

1. Determine the physical environment, which is necessary for preserving disaster information.

2. Have knowledge of the measures, to be undertaken in a Disaster Information Unit before and after a disaster occurs.

3. Recognize the importance of having a controlled physical environment for disaster information.
Preservation

The best plan for Disaster Information Units is informed action to protect and safeguard materials from hazardous and hostile environments. It is therefore important that a controlled environment and proper storage procedures be maintained. The ideal physical environment for a collection must include the following:

1. Controlled temperature and relative humidity
2. Clean air with good circulation
3. Controlled light sources
4. Freedom from mold, insect, or rodent infestation
5. Good housekeeping practices that guard against fire and water damages.

Temperature and Relative Humidity

Several factors must be kept in mind when establishing specifications for temperature and relative humidity for a collection. The Disaster Information Unit may contain a wide range of materials in different formats, and each may respond differently to a given environment. Ideally, separate controlled storage areas would be more suitable for differing materials but most collections are assemblage of various materials. It is therefore suggested that a compromise be made.

Materials such as paper when kept in the coldest of temperature will have a longer life span but if these materials are heavily used they need to be flexible and thus require high humidity. Taking into account that there are sometimes conflicting requirements for use, preservation and human comfort, the following ranges of temperature and relative humidity are recommended as a reasonable compromise for storage and use:

<table>
<thead>
<tr>
<th>Relative Humidity: 47% + 2%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature: 76 ° F + 2° F</td>
</tr>
</tbody>
</table>

This recommendation will be suitable for any collection with a wide variety of materials e.g. paper, slides or photographs.
**Air Quality**

Air circulation and filtration are important elements that must be addressed in providing a suitable and safe environment for your disaster collection. A good ventilation system will provide for circulation of air in and around stack areas. If this is not ensured little pockets of stagnant air will be created which under the right conditions can encourage the growth of mold. It is also recommended that filtration devices be incorporated into the heating and cooling systems to remove harmful gases, dirt and other solid particles from incoming air, which also encourage the growth of mold. Mary Ritzenthaler in her work *Archives and Manuscripts Conservation* noted that:

"Absorption systems remove gaseous pollutants
Mechanical filtration systems remove solid particles" (30)

Even a sophisticated environmental system is only as good as the monitoring system that backs it up; the two are equally important and must go hand-in-hand. The staff of the disaster information unit should be responsible for monitoring environmental conditions as the importance of knowing prevailing conditions cannot be over emphasized. It is advised that regular readings of temperature and humidity be done from several locations throughout the Disaster Information Unit.

**Ultra Violet Light**

The disaster collection must be protected against ultra violet (UV) radiation and active visible light, both of which have a deteriorative effect on paper and speed up chemical reactions. Ultra violet radiation is emitted primarily from sunlight and florescent light and their effects can be devastating. Therefore sources of light throughout the Disaster Information Unit must be examined and the degree of light emitted from these sources evaluated. Ideally the stack area should have no windows at all even if items are boxed. If windows are present they should be covered so that a minimal amount of ultra violet radiation is admitted, this can be achieved by using UV-filtering shields. An intermediate step or a further precaution, can be the use of...
window shades, blinds, or opaque curtains which when used limit the amount of sunlight entering the area. Another means of reducing the levels of radiation is the use of UV-absorbing paint e.g. UV-absorbing zinc white or titanium dioxide. Florescent light tubes should be covered with UV-filtering sleeves; these are flexible plastic covers that contain UV-absorbing material that slip directly around the florescent tubes. Florescent light tubes that have been coated directly with UV-absorbing material can also be purchased, an alternative is the incandescent light which pose no significant threat to the collection and thus are preferable.

**Housekeeping**

Housekeeping practices within the Disaster Information Unit will have a great impact on the preservation of the collection. An atmosphere of cleanliness and orderliness is a positive force in maintaining good conditions for the collection. This not only discourages insects and rodent infestation but also creates a good impression with clients and contributors. Insects pose a particular problem in tropical climates such as the Caribbean, therefore food and drink should be strictly prohibited from the Disaster Information Unit. At the first sign of insects or rodent infestation, remedial action must be taken to treat the materials and the area to prevent re-infestation.
Disaster Planning

The Manager of the Disaster Information Unit must ensure that a Disaster Plan is in place in the event of a disaster. A good plan should incorporate prevention, preparedness, reaction and recovery. The disaster plan should attempt to lessen the potential loss and damage and also allow the Disaster Information Unit to return to its normal conditions within a short period of time.

A typical disaster plan should include:

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<table>
<thead>
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<tbody>
<tr>
<td>1)</td>
<td>A Summary of emergency procedures for fires, water damage etc.</td>
</tr>
<tr>
<td>2)</td>
<td>A List of persons to be summoned in case of a disaster - The names of the disaster team with their home telephone numbers should be clearly posted in the Disaster Information Unit. A comprehensive training programme for selected staff should also be undertaken in order to make them aware of their responsibilities.</td>
</tr>
<tr>
<td>3)</td>
<td>A List of local and national experts and persons experienced in all aspects of recovery - these persons should be familiar with the nature of the library and its collections.</td>
</tr>
<tr>
<td>4)</td>
<td>A List of local vendors who can supply items - equipment, facilities which offer assistance in freezing of items and transportation services</td>
</tr>
<tr>
<td>5)</td>
<td>Procedures for obtaining emergency funds - arrangements should be made to have access to contingency funds to meet such needs.</td>
</tr>
<tr>
<td>6)</td>
<td>Reaction procedures which are relevant to the different types of disasters</td>
</tr>
<tr>
<td>7)</td>
<td>Diagrams of the library with locations of book collections - floor plan should indicate the fire extinguishers, emergency exits, water and electricity switches</td>
</tr>
</tbody>
</table>
8) Insurance coverage and physical inventory - This should be up-to-date and back-ups made of the shelf-list or the catalogue to assist with the insurance claims. Important questions to note include:

- Does the existing policies protect the Disaster Information Units against theft and water damage as well as fire and other natural catastrophes?
- Is there a per-book replacement coverage and is this adequate?
- Is there insurance protection for any documents, which had been lent for exhibitions outside the Disaster Information Unit?

9) Periodic fire and electrical inspections.

10) Roof and drainage maintenance and inspection.

11) A contingency plan which should be known to all staff members

Securing the Disaster Information Unit from Disaster Damages

Securing the Disaster Information Unit from disaster damages has been overlooked by many organizations. Disasters whether brought about by human error or natural events, pose the ultimate threat to the collection. The results are in most cases immediate and catastrophic. Disasters can result from fire, water damage and natural disaster, and this can damage or destroy a few items or an entire collection. Fire and water have been the two enemies of information units. Although fire is more spectacular it is usually water which causes the greatest damage as in the floods which accompanied Caribbean Hurricane Gilbert in 1988.

Plumbing leaks, roofing leaks and air conditioning breakdowns usually affect information Units. Having a disaster preparedness and recovery plan is the best way to guard against loss. Integral to any disaster preparedness plan is the issue of securing the unit from fire, water, earthquake and wind damage.
The Disaster Information Unit must be outfitted with automatic fire detection and suppression equipment. Smoke and heat sensors with warning alarms are ideal systems to acquire for the unit, but at the very least the unit should have portable fire extinguishers and all staff members should be trained to use them. An understanding of the fire extinguisher system is required. The location of manual fire alarms should be mandatory knowledge, in addition, to be effective, all fire detection and suppression systems must be checked and serviced regularly to make sure that they are functioning properly.

**Water**

The Caribbean region is susceptible to negative disaster conditions including floods and hurricanes that can cause tremendous damage to the structure of the Disaster Information Unit and its collection. To secure the information unit from water damage you should ensure that there is an absence of open spaces such as decorative blocks. Windows and doors should have shutters which can be closed in the event of a pending hurricane or flood. One should also ensure that all windows, doors and shutters are sealed as water sometimes seeps through tiny creases causing havoc to the floor areas. Items close to the floor should also be removed and equipment such as computers and projectors adequately secured.

A water detection system should be installed if the Disaster Information Unit is equipped with a sprinkler system. Water detectors are also desirable if the unit is susceptible to natural flooding, surrounded by water pipes, or located near restrooms. Ensure that the water detection system which is obtained reacts in the presence of water and not under conditions of high humidity. Such systems usually have an audible alarm and may be outfitted with remote indicators. (See succeeding section as to what to do if water damage occurs.)
Earthquake

Decisions should be made during the planning stages where to place the most valuable collections in the event that an earthquake may occur. After an earthquake there is often need to re-shelve thousands of books which have been thrown on the floor. Buildings which are closer to the epicentre suffer collapsed bookshelves, shelves ripped away from the walls due to structural damage. It is advisable to use seismic bracing and retrofitting to minimize such danger.

Wind

Winds, which accompany a hurricane, can be very destructive often causing structural damage as a result of falling trees or weakened structures. The Information Manager should therefore limit the number of trees planted in proximity to the Disaster Information Unit and keep these trimmed regularly. He should also ensure that the structure of the building is so designed to withstand wind damage.

Measures to be Undertaken After a Disaster

The Information Manager at this stage is faced with decision-making as to what material are irretrievable and what measures are to be used to restore the retrievable items.

Salvage Operations

Before a salvage operation can begin a series of questions must first be addressed:

1) What is the damage?
2) How many items have been affected?
3) What types of items are affected - have all the valuable items accounted for?
4) Does the insurance cover the type of damage?
Each medium on which information is recorded whether paper, film, tape or disc has its own requirements and it is important to understand the properties of each so you can deal first with the ones most vulnerable to destruction.

**Paper**

Following a disaster, paper based materials should be dealt with first. Paper is extremely fragile when wet and must be handled carefully. Similarly, mold and mildew will grow if wet paper is left unattended for 24 - 48 hours. In addition the older the item the more water it absorbs.

There are several ways of dealing with wet paper documents:

1. When a large volume of books get wet the best response is to place them in a freezer and freeze them in temperatures of below - 10 to -40 degree F. as freezing stops deterioration by solidifying the water so that it can no longer infiltrate the paper and cause damage.

   Freezing also helps to prevent distortion and helps to dry the document. (An effort should be made to identify which facility offers this assistance within your country.)

2. Air-drying is most effective when the number of wet items is small. This should be done in a well-ventilated area with good movement of air. Fans should be used. This will help the drying process and discourage the growth of mildew. If materials are dried outside, they should not be exposed directly to sunlight as this may fade inks and accelerate the aging of the paper. Single sheets can be laid out on flat surfaces protected by paper towels or unprinted news-sheet.

   If records are printed on coated paper they must be separated from each other to prevent them from sticking together. This is a tedious task, which requires skill. Once dried they can be housed in clean folders or boxes.
Drying wet files will present many problems, as each sheet has to be dried separately. The file either has to be unfastened and each sheet laid out on a flat piece of blotting paper or hung by a pin on a line or sheets of clean interleaving paper inserted between each page. Care should be taken with water-soluble inks; records with running ink should be frozen immediately to preserve the written record.

**Photographs**

When recovering photographs, salvage first colour photos, then prints, then negatives and transparencies.

When photographs become wet they stick together. It is advised that you try not to force them apart as this will only lead to more damage. Place them in a tray of water and allow them to come apart naturally. If photographic materials are covered with mud or dirt they should be gently rinsed in a bucket of cold, clean water. The photographs should then be placed on an absorbent paper to dry with the emulsion (image/picture) side facing up or they can be hung on lines with plastic pegs to dry. Avoid touching the front surface of the wet or damp photograph prints or negatives.

**Tapes**

This category includes microfilm, reel-to-reel and magnetic tapes. Tape does not suffer water damage like paper as water runs off because it has a high quality paint coating on a plastic. They are more susceptible to damage by extremes in heat and cold, and dust and debris. If tapes become wet they are not immediately damaged unless the water contains an agent that is harmful such as seawater. The salt in the water will corrode metal-based tapes this also happens when the tape comes in contact with mud. If the water is clean tapes can remain wet for several days without immediate attention. If the water is dirty or salty the tapes should be rinsed in clean water preferably distilled water as soon as possible but they do not need to be dried immediately.
Measures to be Undertaken After a Disaster (Cont’d)

**Tapes** (Cont’d)

Tapes should not be allowed to dry on the reel or with sediment attached to them. If tapes are retrieved from a muddy or greasy environment, a mild detergent should be used to remove oil and grease. It is important to note that the edges of the tape not be handled at any time when they are being recovered from damage.

Wet microfilms can be placed in a bucket of water until they can be sent to a lab for processing. Of course, if these stay wet too long, mildew will begin to grow.

Tapes that have been through fire can have heat damage, water damage and soot damage. If the temperature of the fire was excessive this may cause the binder coating to melt which results in tapes sticking together. This is known as blocking. There is no way to recover a badly blocked tape.

Audio and Videocassette tapes can be recovered by simply opening them and drying out the water. Similarly Floppy diskettes can be removed from their covers and washed in distilled water and dried. Despite the measures that can be applied to recover these media, an effort should be made to create backups of material that these tapes contain.

**Optical Discs**

The recovery plan for optical discs is similar to magnetic tapes. However with optical discs it is important to avoid scratching the surfaces of the discs through the cleaning process. Discs can be rinsed in distilled water but be careful in rubbing to avoid scratching. When wiping debris from an optical disc it is important to wipe from the centre of the disc to the edge and not wipe around the disc in a circular motion. This has to do with the way the information is stored on the disc.
Figure 2a: Samples of Video and Audio Tapes

Figure 2b: Universal Storage Cabinets
UNIT TWO : EXERCISE

Identify the physical environment of your Disaster Information Unit and make note of any changes which could be made to improve it.

Supplementary Reading


UNIT THREE:
Selecting Documents for the CARDIN Database:
Document Selection Guidelines
Introduction

This unit will be a useful to individuals who wish to provide the most appropriate disaster related material for clients. Participants are provided with guidelines, which can be used to identify suitable documents to be included in the Caribbean Disaster Information database and unit.

Aim

The unit was designed to ensure that individuals have the knowledge necessary to enable them to include only the most relevant disaster materials in their Disaster Information Unit and ultimately the CARDIN Database.

Objectives: Unit Three

At the end of this unit individuals will be able to:

1. Identify the geographical, chronological, language and subject scope of the database.

2. Know of the type of documents, to be included in the database.

3. Determine the selection criteria for inclusion in the database.

4. Identify areas excluded from the database.
The CARDIN database is expected to be a product of a regional cooperative effort with contributions from English, French, Spanish and Dutch speaking territories as follows:

**English**
Anguilla, Antigua & Barbuda, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, and Turks and Caicos Islands

**French**
French Guiana, Guadeloupe, Haiti, Martinique, St. Martin

**Spanish**
Cuba and the Dominican Republic

**Dutch**
Aruba, Bonaire, Curacao, Saba, St. Maarten, St. Eustatuis and Suriname

It is envisaged that where possible designated centres in participating countries will coordinate the gathering and selection of documents for inclusion in the CARDIN Database. As this process will be done in a decentralized way, it is imperative that a common set of guidelines be used to ensure the inclusion of valuable material and the exclusion of inappropriate ones.

As a high level of system optimization is desirable, the selection criteria described should be periodically reviewed by specialists in the related areas of interest covered by the database. It is evident that choices of what to include will at times be difficult and in such cases it is recommended that when in doubt, documents be included.
Document Selection Guidelines (Cont’d)

Documents
(published or unpublished items to be described in a bibliographic record.)

Types:
- Conventional
  - Non-Conventional- grey literature, technical & business reports, theses, conference proceedings, government documents, technical papers, newsletters, maps, numerical data, photographs, manuals, guides, training manuals, workshop documents and students’ projects etc.
- Multimedia
- Material in Electronic Format

Scope of Database

The CARDIN’s database is intended to cover all types of documents within the following parameters:

- Documents on disaster and disaster related topics on the Caribbean
- Documents in English, Spanish, French or Dutch on disaster-related topics.

A document will be eligible for inclusion in the CARDIN database provided its contents are related to Disasters in the broadest sense. Documents of a general nature, which may have implications or be of potential use for disaster management in the Caribbean, may be included.
**Subject Scope**

CARDIN’s subject scope will be expressed by the use of the *Controlled Vocabulary on Disaster Information* and emphasis will be placed on the following areas related to Disasters:

![Disaster Management Diagram](disaster_management_diagram)

**Chronological Scope**

All documents available from as far back as possible should be included. Priority will be given to current material.

**Geographical Scope**

This has been defined on page 33

**Language Scope**

Documents written in any of the four languages - English, Spanish, French & Dutch are to be included in the database. Where possible the aim is to provide abstracts in 2 languages and the translation of titles where no abstracts are possible.
Selection Criteria by Format
Conventional Documents

Journals

Journals to be indexed will be screened by the National Focal Point and the analytical level at which each one will be treated will be decided. The three main levels are:

1. Journals, which comply with the CARDIN Database subject, scope, international publication standards and follow a regular publishing schedule. Journals in this level can be analyzed in depth, from cover to cover.

Other journals not primarily devoted to disaster but which include relevant information and related fields.

2. Indexers will extract only those articles, which they consider worthy of inclusion in the database. This implies a subjective decision on the part of the indexer, and this should be minimized by consulting with specialists in each field of activity.

When a title has been classified as belonging to one of the above levels, the following rules should be applied to each issue:

To be included:

- Original articles with title and author expressly stated. If the article is followed by a discussion, it will be considered part of article and will have its pagination included.
- Editorials that can be considered as special articles.
- Congress/Committee and conference reports including those related to organizational or administrative affairs.
- Abstracts of articles, monographs, lectures, meetings, etc.
- Newspaper or magazine articles which deal with specific Caribbean disaster problems.
Organizing Disaster Information Unit: A Training Manual

UNIT THREE: Selecting Documents for the CARDIN Database: Document Selection Guidelines

NOT to be included:

- Financial reports
- Advertisements

Monographs

Only monographs within the subject scope will be eligible for inclusion

After accepting a monograph according to the above characteristic, the indexer should carefully analyze each chapter and decide whether it should be treated individually as a different document.

The basic rule guiding this selection is:

Think of a chapter or part of a book as an independent bibliographical unit, and decide whether it is intelligible and complete by itself, excluding the previous or the following chapters.

Fugitive and Unpublished Documents

This type of literature presents the greatest degree of difficulty with respect to judging its intellectual content. The general rule, which states that the intellectual content of a document has priority over its outward form, has a special meaning here.

Usually, quality control rules are not applied to these documents in the way that they are to documents published in serials or presented at conferences. This makes the establishment of quality control procedures at the point of indexing, imperative. Indexers should exercise judgement, use their knowledge of the subject scope of the database and consult with other professionals to arrive at a decision.

Theses and other Curricular Documents

These documents will be included when related to Disasters. Students’ project reports, (for example University of the West Indies, Caribbean Studies), and thesis written outside of the region, on the region, should be included.
Selection Criteria by Format

Conventional Documents (Cont’d)

Technical Reports

Reports on technical activities accomplished by scientific societies, associations, institutions, programmes, councils, etc., should be accepted for inclusion.

Project reports, if available, should be included. Where necessary, Preliminary Reports should be retained along with final Technical Reports.

Legislative Materials

General laws on disaster-related matters and new legislation drafts and bills should also be included and so identified.

Statistics

Statistical information from international, national governmental and non-governmental organizations and other sources comprising data related to disasters.

Manuals, Guides, etc.

This type of publication usually would be generated by Disaster Coordinating Bodies and would provide guidance to officers dealing with disasters.

Public Educational Documents

These documents are mainly directed to the layman and are presented in a variety of formats, from monographs to posters, including pamphlets, leaflets, etc. These are usually designed to help educate the general public on disaster matters and very direct and graphic language is used.

Posters and Leaflets etc. may be included in the database, subject to the discretion of the National Focal Point.
Audio Visuals

Cassettes, Videotapes, Maps, Photographs and other Multimedia documents should be included.

Papers presented at Conferences, Meetings, etc.

Publications comprising abstracts of papers presented at conferences and other similar events should be included as monographs and indexed by the subject covered at the event. Abstracts are not to be separately included or analysed.

Electronic Format

Where possible, attempts should be made to obtain the texts of papers and other documents in electronic format for inclusion in the database.

Indexes

Indexes and bibliographies published over the years, containing citations from Caribbean authors and which fall within the database's subject scope should be included.

Directories

Disaster information related directories will be included in the databases.
### UNIT TWO: EXERCISE

Examine the abstracts presented on pages 41-46 and determine the relevance of these publications to the CARDIN database.

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### Supplementary Reading


SECTION A – Natural Hazards: Analysis, Vulnerability, Forecasting and Warning

1 CARIBBEAN TSUNAMIS: AN INITIAL HISTORY

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ABSTRACT

Reports of 50 tsunamis of varying certainty are listed for the Caribbean beginning with an event off the coast of Venezuela in 1530. Fifteen of these have reports of damage associated with them and six have reported fatalities. As a thoroughly researched history for the region has not been done, these numbers are approximate and probably low. The author has just learned of but not yet seen, a paper on Caribbean tsunamis by Myrtle Thorm and Compton Deane at the Civil Engineering Department, University of the West Indies, St. Augustine, Trinidad written in the late 1970’s. Also, given the increase in coastal development, a repeat of these events today would cause much higher damage and fatalities. Although the history of the Caribbean area is the longest in the Western Hemisphere, the tsunami history has not been studied in detail. The varied colonial past and the number of political divisions make such a study difficult and needing local involvement. Tsunamis have affected the whole area from the northern coast of South America, Costa Rica and Panama, to the whole arc of the Antilles. It is subject to tsunamis of tectonic origin associated with the trench and with structures cutting the arc. Notable is the 1867 tsunami originating in the Anegada trough between St. Thomas and St. Croix, Virgin Islands, which caused 14 to 16 fatalities and was observed throughout the Caribbean. The 1918 tsunami off the northwestern corner of Puerto Rico caused about 40 fatalities and extensive damage. The Caribbean area is also subject to rare but destructive tsunamis from Atlantic sources. The 1755 tsunami which affected Lisbon, North Africa and England put waves as high as 7 metres at Saba, and 3.7 metres at Antigua and Dominica. Waves reached the second story of buildings in Martinique. The Caribbean may also be subject to tsunamis generated by volcanic activity as seen by the 1690 landslide on Nevis Peak and an explosion of a mud volcano near Trinidad in 1911. Kick-em Jenny, a submarine volcano discovered in 1939, may have generated small, local tsunamis in the 1939 or 1990 eruptions (Sigurdsson, 1996) and may in the future produce a larger wave. Landslides are another source of tsunamis. Each type of source produces tsunamis with different characteristics. The risk should be thoroughly evaluated by a multi-national effort to improve the history and predict effects by using models.
2 COMPUTER-SIMULATION MODELS OF PYROCLASTIC FLOWS AND LAHARS AT SOUFRIERE HILLS VOLCANO, MONTSERRAT: APPLICATIONS TO HAZARD ASSESSMENT

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ABSTRACT

Sofriere Hills Volcano (Montserrat, British West Indies) consists of a series of andesitic lava domes. English’s Crater, a horseshoe-shaped depression opening to the east-northeast, contains the youngest dome prior to the onset of volcanic activity on 18 July 1995 and the creation of the 1995-1996 dome complex. The computer code FLOW3D is being used to simulate several types of volcanic flows that have been observed or may potentially occur at Sofriere Hills. Because of their predominance at Sofriere Hills, an understanding of pyroclastic flows produced by the disintegration of lava domes is critical. In this study, we concentrate primarily upon pyroclastic flows and lahars, as well as examine an energy-cone model. The program first constructs a digital terrain model based upon a 3-D network of (x,y,z) triplets. The triangulated irregular network (TIN) of digitized topographic data serves as the basis for the numerical computations. Gravitational acceleration and flow retardation are iteratively calculated for each flow element as it passes over the finite element net. The shear stress retarding the flows is divided into three parameters: basal friction, internal viscosity (or viscous drag), and inertial acceleration (or dissipation). Estimated values and limits for these flow parameters are based upon the known distribution of products from Sofriere Hills and the observations of actual flows of various types at other volcanoes. Any desired number of flow paths can be traced to their terminations with the velocity displayed on a color scale. An animated eruption image is presented on a computer screen as a three-dimensional model. These computer simulations can be extremely useful in assessing and mitigating the risk associated with several types of volcanic hazards.
4 ANALYSIS OF AN OBJECTIVE DVORAK TECHNIQUE DURING THE 1995 HURRICANE SEASON

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ABSTRACT

The Dvorak technique is the internationally recognized means of estimating tropical cyclone intensity using satellite imagery. A drawback of the technique is that it can be highly subjective. This paper analyzes an improved objective satellite technique for use on strong tropical storms and hurricanes. This objective technique uses the warmest eye temperature and the coldest surrounding ring temperature to determine the final T number. The unusually active 1995 Atlantic hurricane season provided the basis for a preliminary analysis of the objective technique. An initial study based on this single season revealed that (1) a negative bias existed in the Satellite Analysis Branch’s subjective Dvorak estimates compared to reconnaissance observed mean sea level pressure observations; (2) a negative bias also existed with the objective technique; and (3) a critical review of the current intensity-wind-pressure relationship is warranted.
7 BURLINGTON AND JUPITER LANDSLIDES, RIO GRANDE VALLEY, JAMAICA: COMPARISON WITH MILLBANK LANDSLIDE AS EXAMPLES OF PROCESSES PRODUCING NATURAL DAMS

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ABSTRACT

Two large, presumably prehistoric landslides in the Rio Grande valley are those at Burlington, at the mouth of the Rio Grande, and at Jupiter, near Moore Town. Both these slides are considerably larger than the landslide that blocked the Rio Grande at Millbank in 1937, impounding a lake. The Burlington landslide has been described briefly in a previous publication. The Jupiter landslide is similar in form to, and has developed over the same geological units, as the Millbank slide. Although presumed to be prehistoric, its geomorphology suggests that it is of comparatively recent origin, and the nature of the debris indicates that more than one event is involved. Debris from one of the more recent events extends across the valley floor, with appreciable run-up on the opposite side of the valley from which the slide originated. Investigation of these landslide features is continuing.
9 OUTLINE FOR A DISASTER REDUCTION PROGRAMME FOR LIVESTOCK IN CENTRAL AMERICA

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ABSTRACT

Central America has a high predisposition to natural disasters. For example, in the last 10 years nearly 40,000 people have died as a result of earthquakes, floods and hurricanes in Central America, at an estimated cost to these countries in excess of US$ 8.5 billion. Catastrophic events also have a great impact on agriculture. In 1994, the direct losses in grain production in Central America as a result of droughts alone were estimated to be approximately US$ 44 million.

The estimated value of the Central American livestock agriculture is US$ 3.3 billion, and employs nearly 10\% of all people. Therefore, animal husbandry systems contribute significantly to the economic and political strength of Central American countries, and represent a large portion of each country's standard of living, cultural heritage and identity. In many areas of Central America, the long term stability of the environment also depends heavily on sustainable agriculture, which is based on traditional livestock husbandry systems and social structures.

In most natural disasters in Central America the likely victims will be farm labourers and dependent families in rural communities. The most likely farm types affected will be subsistence and small farms, which are owned, with improved or natural pastures. Because in some countries over 60\% of their entire livestock industry may be at risk of natural disasters, disasters also represents a threat to the local human food supply. Children are likely to be the first to suffer the effects of such events. Damages to the livestock agriculture from natural disasters or epidemics are, therefore, likely to bring with them serious long lasting impacts on country's economies. Without carefully planned interventions, natural disasters affecting livestock may have only poor potential for complete recovery.

Because the recovery costs from disasters are estimated to be up to 20-100 times higher than the costs of prevention, a disaster reduction programme for livestock in Central America should be seen as a cost effective venture, that can reduce losses, expedite recovery, enhance regional trade and stimulate economic development.
11 IDENTIFYING AND RETROFITTING HIGH-RISK SCHOOLS IN QUITO, ECUADOR

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ABSTRACT

A recent assessment of earthquake risk to Quito, the capital of Ecuador, concluded that many of its public schools are vulnerable to collapse during major earthquakes. In response, GeoHazards International initiated the Quito School Earthquake Safety Project in December of 1994, in collaboration with Ecuador’s Escuela Politécnica Nacional and the University of British Columbia. The project demonstrated that retrofitting Quito schools to protect the lives of their occupants is affordable and inexpensive relative to a school’s replacement cost. The most significant finding of the project is that the relatively inexpensive process of identifying high-risk schools and designing their retrofits generated sufficient local funding to pay for retrofit construction.

The project had three objectives: evaluate the vulnerability of Quito’s public schools to earthquakes; design affordable means of strengthening a sample of those schools that are vulnerable; and strengthen the sample of vulnerable schools. Fifteen high-risk school buildings were chosen by selecting Quito’s high-use schools, classifying them by construction material, and determining the most vulnerable within each group. Retrofit designs were created for each of the high-risk school buildings and for two types of high-risk school modules replicated throughout Ecuador. These designs are affordable and utilize local materials and local construction techniques.

As of this writing, local funding has been committed to retrofit 11 of this project’s school buildings, and to design new, earthquake-resistant school modules for use in new school construction.
UNIT FOUR:
Using the LILACS Methodology,
WIN/ISIS and CDS/ISIS
Introduction

This unit focuses on the need for individuals to have an understanding and familiarity of standardized software. The module provides a brief introduction to the LILACS Methodology in an attempt to promote the successful construction of a database within their Disaster Information Unit. In addition, a brief introduction to WIN/ISIS and CDS/ISIS have been incorporated in an effort to provide participants with an understanding of simple search strategies which can be utilized to locate disaster information within these databases.

Aim

This unit is designed to foster an understanding of the importance of standardization and to equip individuals with some measure of competence in data entry in order to make entry and retrieval of information less time consuming and more precise.

Objectives: Unit Four

At the end of this unit individuals will be able to:

1. Identify the different formats in which information can be obtained e.g. books, videotapes or maps.
2. Determine the different fields for data entry.
3. Understand Boolean logic and the different search strategies, which can be used to find disaster information in the database.
4. Understand the levels of bibliographic description of disaster information as applied.
Search Strategies for Data Retrieval

Over the years various computer software systems have been used to store data systematically and to retrieve information. The search strategies identified (WIN/ISIS and CDS/ISIS) will be useful for Information Managers with little knowledge of information retrieval.

Using WIN/ISIS for Data Retrieval

WIN/ISIS is a hypertext database system software developed in the Czech Republic in collaboration with UNESCO. This system allows the quick manipulation of textual databases and the creation of background research. WIN/ISIS works under the WINDOWS operating system.

Simple Search Strategy (WIN/ISIS):

1. Open the WIN/ISIS programme by clicking twice on the WIN/ISIS icon mounted on the desktop,
2. Click on the button marked DATABASE, which will bring up a list of available databases.
3. Select the database you wish to search by clicking.
4. Begin your search by clicking the SEARCH button.
5. Select GUIDED SEARCH.
6. Type in a disaster related term e.g. earthquakes.
7. Click the EXECUTE button, the number of hits will then be displayed on the screen.
8. Select the DISPLAY button to bring up your search results. The search expression entered will be highlighted within each record.
9. Maximize the screen to see the full record.
10. Use the arrows at the top of the screen to move from one record to the next.
11. The HELP button will give additional information to navigate using WIN/ISIS.
Using CDS/ISIS to Retrieve Data

CDS/ISIS is an advanced non-numerical information storage and retrieval software being developed by UNESCO since 1985. CDS/ISIS information retrieval component uses a powerful search language, which provides for field-level and proximity search operators, in addition to the traditional and/or/not operators, as well as free-text searching.

Simple Search Strategy (CDS/ISIS)

Choose S-Information Retrieval Service from the main menu to begin your search. When the Information Retrieval Service screen comes up, select S-Search Formulation.

• Begin by typing in your search term for example: Landslides
• The answer to your query will be indicated as follows:

  Set 1: Landslides
  P = 2 Landslides
  T = 1 - #1 Landslides

  P = indicates the number of times the term landslides occurs in the database.
  T = indicates the number of records containing the term within the database.

• Typing D at this point will display the record. X will take you back to information retrieval service and S will allow you to begin a new search. R enables recall query formulations i.e. viewing all the searches that you have done (a history search).

Keyword Searching

The simple search strategy above illustrates keyword searching which is useful in doing research. However both keyword searching and subject searching are useful approaches when undertaking research. Keyword
searches will reveal more search results than a subject search as is evident in the following types of searches below:

- For a new area of research or a new term. Published subject headings and thesauri will take awhile to develop. For example, searching for information on La Niña was a challenge when this topic first came into the awareness of the general public. Keyword searches were the best way to locate information in these areas.

- For a highly specialized or obscure topic.

- When only a few relevant articles are needed. If the client only needs two or three articles which are relevant then keyword searching will identify the exact information over a subject search.

- For interdisciplinary topics. Topics that cross many disciplines will require searching many databases. Some databases may not offer subject headings for terms that are not within the discipline. The CARDIN database will not have education as a subject heading but if a keyword search is done it will reveal records in the database.

**Boolean Logic**

Two or more terms can be combined in a search by using logical operators.

1. **AND** narrows your search retrieving only what is specified e.g. Landslides AND Jamaica. AND is represented by an asterisk e.g. *Landslides * Jamaica*

2. **OR** helps to broaden you search by linking related terms that may be pertinent to the term or concept you wish to retrieve. OR is indicated by a plus sign e.g. *storms + hurricanes + typhoons*. This search will retrieve items containing any of the terms indicated.

3. **NOT** excludes records from your search e.g. clinics NOT hospitals only records containing the term clinics will be retrieved. NOT operator is represented by ^ e.g. *clinics ^ hospitals*.

It is possible to use logical operators to refer to previous searches. Simply combine the record numbers previously retrieved e.g. Combine search one (#1) and search eight (#8), using AND e.g.#1 * #8. \
THE LILACS METHODOLOGY

Latin American and Caribbean Health Science Literature (LILACS) Database is a cooperative product of the Latin American and Caribbean Health Science Network, coordinated by BIREME. It is a format for bibliographic description, which allows interchange of records among LILACS and related databases.

The LILACS Database uses the following basic concepts:

**Documents:**
A document is considered to be any material published or unpublished that can be described bibliographically. By this definition, in LILACS, a document can be a collection of books, a book or a chapter of a book, a thesis or a chapter of a thesis or a journal article, etc.

**Data Element:**
This is a piece of information that describes a document e.g. author name, title etc. These are entered in areas/fields that have been assigned to them by LILIACS.

**Data Field:**
This is used to enter one or more data elements. It is identified by a #: e.g. field # 10 is used for entering the name of the author of document.

**Sub Fields:**
This is a part of a data field separately identifiable and contains a data element. In the LILACS format it is identified by the sign ^ followed by a lowercase letter.

**Repeatable Fields:**
A field is repeatable when it permits the entering of more than one occurrence of a data element.
In the LILACS Database four (4) main levels are used to describe bibliographical items:

1. Analytic (a): The Analytic level is used in the description of an article or chapter within a document.

2. Monographic (m): This level is used in the description of a document that is not an integral part of any other document. In other words not a part of a series or a collection.

3. Series/serial (s): This level is used in the description of a document, which is part of a periodical serial. In this level complete description requires information from the analytical level (article) and the serial level of which it is part.

4. Collective (c): This is used in the description of a collection as an entity, being treated as a single document. To be considered a collection the complete document must be composed of a number of definite parts e.g. vols., each with individual title in addition to the collective title.

Each level has specific fields for author (personal and corporate) title pages.

Associated levels include:

1. Conference
2. Project
3. Thesis

Various combinations can be used to identify types of literature e.g.:

1. Article in journal - (as)
   This level is used in the description of a document, which is part of a periodical serial. In this level complete description requires information from the analytic level (article) and the serial level of which it is part.
THE LILACS METHODOLOGY

Various combinations used to identify types of literature (Cont’d):

2. **Chapter in monograph - (am)**
   This level is used for the description of a document, which is part of a monograph, in other words a chapter or article in a monograph. In this level of treatment complete description of the document (chapter or article) requires information from the higher level (monographic) of which it is part.

3. **Chapter in book which is part of a series - (ams)**
   This level is used in the description of a document part of a monograph (volume) which is part of a series. In this level of treatment complete description of the document (chapter or article) requires information from the monographic level (volume) and also from the serial level from which it is part.

4. **Chapter in monograph which is part of a collection - (amc)**
   This level is used in the description of a document, which is part of a monograph, which forms part (volume) of a collection. In this level of treatment, complete description of the document (chapter) requires information from the monographic level (volume) and also the collective level of which it is part.

*Other fields include:*
1. Imprint
2. Subject descriptors
3. Abstract
4. Administrative fields such as date of entry, indexer name etc.

**LILACS RULES**

For LILACS, as in any database, rules have been developed for data entry to ensure standardization. LILDBI was created by BIREME to aid in standardized data entry it provides boundaries or rules, which enables the individual entering records to adhere to LILACS data entry methodology. In addition on-line help is also made available by simply clicking the HELP button.
The following are some standardized LILDBI data entry rules used in the LILACS database:

1. Some fields are mandatory and these fields must be entered.
2. Essential fields must be entered provided that the information exists.
3. Optional fields can be entered at the discretion of the documentalist.
4. Only the following characters are permitted:
   • All English letters both upper and lower case.
   • Numbers
   • The following symbols: , ; / ! ? @ $ & * # ( ) + = ' " [ ]
5. The % symbol is reserved by the system for separating occurrences of a repeatable field and cannot be used as content in a data field. This must be written out in full i.e. Percent
6. The final full stop is not entered at any time to indicate the end of a field. This rule applies even when the entry is an abbreviation e.g. U.W.I

In order to have standardized description of the same record, the disaster information manager should use the table below as a guide in identifying the chief sources of finding the bibliographic information for entries into any database.

**Chief sources of information according to AACR2R**

<table>
<thead>
<tr>
<th>TYPE OF MATERIAL</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books, pamphlets and printed sheets</td>
<td>Title page</td>
</tr>
<tr>
<td>Cartographic materials</td>
<td>Cartographic item itself (container or case, the cradle and stand of a globe etc)</td>
</tr>
<tr>
<td>Manuscripts</td>
<td>Title page</td>
</tr>
<tr>
<td>Music</td>
<td>Disc and label</td>
</tr>
<tr>
<td>Sound recordings</td>
<td>Reel and label</td>
</tr>
<tr>
<td>Disc</td>
<td>Cassette and label</td>
</tr>
<tr>
<td>Tape (open reel-to-reel)</td>
<td>Cartridge and label</td>
</tr>
<tr>
<td>Tape cassette</td>
<td>Label</td>
</tr>
<tr>
<td>Tape cartridge</td>
<td>Container and label</td>
</tr>
<tr>
<td>Roll</td>
<td>Film itself and its container (if integral part of item)</td>
</tr>
<tr>
<td>Sound recording on film</td>
<td>Item itself including any labels and the container</td>
</tr>
<tr>
<td>Motion pictures and video recordings</td>
<td>Title screen</td>
</tr>
<tr>
<td>Graphic materials</td>
<td>Object itself with any accompanying textual material and container</td>
</tr>
<tr>
<td>Computers files</td>
<td>Title frame</td>
</tr>
<tr>
<td>Three-dimensional artifacts and realia</td>
<td>Title page</td>
</tr>
<tr>
<td>Microforms</td>
<td></td>
</tr>
<tr>
<td>Journals (printed)</td>
<td></td>
</tr>
</tbody>
</table>
### UNIT FOUR: EXERCISE

1. Do a simple search for hurricanes to determine how many records are in your database or on the CARDIN online database.
2. Determine how many records are in the Database relating to your country.
3. Do a joint search of Question one and Question two. State how many records you have found.
4. Do a history of all the records, which have been searched throughout this session.

### Supplementary Reading


UNIT FIVE: Abstracting and Indexing Techniques
Organizing Disaster Information Units: A Training Manual

UNIT FIVE: Abstracting and Indexing Techniques

Introduction

Abstracts often include keywords from an article or a thesaurus. The task of preparing a synopsis or abstract of a disaster related document and report is sometimes tedious. This unit offers to individuals a general guide, which will enable them, by following simple rules and procedures, to prepare abstracts effortlessly. The Controlled Vocabulary on Disaster Information will be introduced as the tool to be used by CARDIN members to index documents, which will be included in their Disaster Information Unit’s databases.

Aim

This unit is designed to enable individuals to construct concise and accurate representation of the contents of disaster materials (abstracts). Individuals will then use the controlled vocabulary for indexing purposes in order to assist the clients to identify information relevant to their needs in the Disaster Information Database.

Objectives: Unit Five

At the end of this unit individuals will be able to:

1. Understand the criteria, which are necessary in preparing an abstract.
2. Understand the different components of an abstract.
3. Prepare different types of abstracts.
4. Understand how to use the Controlled Vocabulary on Disaster Information for indexing of information for the CARDIN database.
Abstracting Techniques

An abstract is a concise and accurate representation of the contents of a document, in a style similar to the original document. Abstracts are particularly useful for technical and scientific information. They should adhere as closely as possible to the order of the ideas presented in the original document. They must be able to reduce the number of pages of written text, graphs, tables and charts to give the reader a clearer understanding of the purpose and content of the document.

The objective of an abstract is to save the user's time in information gathering and selection. It should assist the reader in assessing the contents of a document for relevance.

Criteria for Abstracting

1. It must be a concise but accurate representation of the contents of the original document.
2. The order of ideas presented must match the original document.
3. The vocabulary used must be similar or simpler if appropriate to the original document.
4. It should provide sound methodology and convincing evidence.
5. It must convey information, which is difficult to access.
6. It must make significant advances or reviews of information.
7. Items should be located in authentic publications e.g. professional and technical journals with established reputation.

Five Key Elements of an Abstract

1. The purpose and scope of investigation, etc.
   The abstract should start with the principal objective and scope of the study or the reasons why the document was written unless this has been clearly indicated by the title or can be gleaned from the remainder of the abstract.
2. **Methodology**

This describes the technique or the approach to begin writing the abstract. When making abstracts for documents concerned with non-experimental work, an effort should be made to describe data sources and data manipulation. The publication *Controlled Vocabulary on Disaster Information* should be consulted to ensure that the descriptors given in this tool are used to ensure uniformity and standardization of indexing terms for information retrieval from the database.

The following is a simple methodology to constructing an abstract.

1. Read the entire document for which the abstract is to be done.
2. Make note of the main points within the document.
3. Make a rough draft of the abstract.
   - Start with a topic sentence
   - Style and order of ideas should mirror the author’s
   - Make sentences short; the abstract should not exceed one paragraph, however this may not be possible with extremely long documents.
   - Avoid ambiguous words
   - Check for grammar and punctuation etc.

3. **Results**

The results and conclusion should be clearly stated. This can be done jointly to avoid redundancy, but suppositions must be differentiated from facts. Results describe findings in a concise and informative way. This includes theoretical results obtained, data collected, relationships and correlation noted and effects observed. An effort must be made to clearly indicate whether numerical values are raw or derived and whether they are the results of single observations or repeated measurements. The following must receive priority when findings are too numerous to include: new and verified events, findings of long term value, significant discoveries findings that contradict previous theories or
findings that the author knows are relevant to a practical problem. Limits such as accuracy, reliability and validity must be noted.

4. Conclusion
This should describe the implications of the results and how they relate to the purpose of the investigation or preparation of the document. The conclusion can be associated with the recommendation, evaluations, applications, suggestions, new relationships, and hypothesis accepted or rejected.

5. Any other findings
Includes any collateral information, that is, findings secondary to the main purpose of the document but may be of value outside its major area. This should be reported clearly, but not in such a way that it distract attention from the main topic. An effort must be made not to exaggerate their importance in the abstracted document. Findings may include modification of methods, new compounds or newly discovered documents.

TYPES OF ABSTRACTS
In general, the most appropriate type of abstract should be used to match the intended audience. There are five different types of abstracts which will be discussed in this unit. The different types of abstracts discussed include short abstracts, informative, indicative, extract and key word abstracts. Other types of abstracts include indicative-informative, critical, telegraphic and statistical, tabular and numerical abstracts.

The short abstract is usually a sentence or two and states vividly the essence of the paper. Extract is similar to the short abstract and states the title of the document. The informative abstract presents quantitative and qualitative information therefore it usually incorporates some of the original document. It usually highlights the main contents of the document, giving sufficient detail to create a clearer understanding. An indicative abstract makes general statements about the document and is most suitable for discussions and review articles of books. It also summarizes the main points but does not go into detail as the informative abstract.

The article on the following page has been used to prepare examples of different types of abstracts.
A real-time flood warning system for the Rio Cobre basin, Jamaica

BARBARA E. CARBY and MEDARDO MOLINA

Office of Disaster Preparedness, 12 Camp Road, Kingston 4, Jamaica

Abstract — As part of the Flood Plain Mapping Project, the Office of Disaster Preparedness and the project's other technical agencies are installing an automated flood warning system in the Rio Cobre basin. The system will consist of automatic recording rainfall and streamflow gauges designed to transmit data on a real-time basis to a base station equipped with a microcomputer which will decode and analyze the data and issue a warning when a critical rainfall level is reached. Application of advanced hydro-meteorological forecasting techniques is expected to provide timely and reliable warning of impending flood events. The proposed site of the base station is the Office of the National Meteorological Service, which is to be manned on a 24-hour basis. Installation of this system will be accompanied by a public education programme in the communities at risk in the basin.

INTRODUCTION

EMERGENCY management agencies walk a tightrope when issuing flooding and evacuation warnings. Too many wrongs too often will result in a casual attitude to and disregard of warnings by the public. Warnings held until certainty is greater may be issued too late to allow timely and safe evacuation. Provision of timely, accurate and reliable warnings is thus essential to maintaining credibility as well as to saving lives and property. To help achieve this, computer and communications technology have been combined with advanced hydrologic and meteorological techniques in an automated flood warning system which greatly improves accuracy and reliability of predictions.

Jamaica has a long history of flood events. Since 1800, 44 major events have been recorded (McDonald et al., 1987). Over the past 24 months there have been two major and several minor floods which have affected Jamaica. The cost of the damage caused by the June 1986 event was J$415 million, and the 30 October 1987 event, J$169 million. These costs do not include damage to private property, and certainly give no indication of the human suffering involved. No monetary value can be placed on the 46 lives lost in the 1986 event.

The island's history of flooding, loss of life and property, and social disruption prompted the implementation of a flood loss reduction programme consisting of flood plain mapping, improvement of structural and non-structural flood control methods, the development of community-based flood warning systems islandwide, and installation of automatic flood warning systems in selected basins.

The first automated real-time flood warning system for Jamaica will be installed in the Rio Cobre basin early next year as part of the flood loss reduction programme sponsored jointly by the United Nations Development Programme and the Government of Jamaica and executed by the Office of Disaster Preparedness and the World Meteorological Organisation.

The installation of the system is part of a pilot project for the Rio Cobre basin. The project also includes production of flood hazard maps, installation of a community-based flood warning system, and a public education programme in the communities at risk. The choice of the Rio Cobre basin for the pilot projects was based on the following factors:

(a) Proximity to Kingston and ease of accessibility by road;
(b) History of flooding; several communities within the basin have a history of repeated flooding;
(c) Potential threat: settlements on the banks of the river have increased, thus increasing the vulnerability of the population;

(d) Population at risk: in addition to sections of Bog Walk, Linstead and Spanish Town, the threat of flooding also extends to Portmore, a community of some 90,000 persons.

Portmore is protected from riverine flooding by an earthen dyke. The flood warning systems will be designed to alarm when overtopping of the dyke is probable. This will also signal a flood threat in the upper sections of the river.

**LOCATION OF THE RIO COBRE BASIN**

The Rio Cobre basin is located west and northwest of Kingston (Fig. 1). Land use is chiefly agricultural, but several towns are also located in the basin including Bog Walk and Spanish Town. Near the mouth of the river, a large residential community, Portmore, has been established (Fig. 2).

**RAINFALL AND FLOODING**

The northern half of the Rio Cobre watershed has a mean annual rainfall of approximately 1500 mm, with levels in the southern half being lower, at approximately 1300 mm (Nishimura, 1989, pers. comm.). During the October 1987 event the basin received rainfall which was 200 per cent of the 30-year mean (Irmer, unpub. rep.). Heavy rains produced flooding not only in the main river but also along major tributaries and their confluences. Peak discharge during this event was 20,800 cfs, during which the water level rose to within seven feet of the top of the dyke.

**THE FLOOD WARNING SYSTEM**

**General principle**

The system will collect rainfall and streamflow data at remote sites in the upper watershed (Fig. 2). This data will be transmitted by VHF signal, in real time, to a base station, where they will be received and analyzed by a computer. An alarm system will be activated if certain pre-determined limits of precipitation and water rise are exceeded. Siting of the gauges will allow maximum lead time for evacuation of communities facing the threat of flooding.

**Major system components**

*Rain gauge:* This is the tipping bucket variety and includes a tipping mechanism which is activated for every 1 mm of rainfall. This is placed within a 12-inch orifice catch basin and funnel appropriately screened to
prevent entry of debris. Each time the bucket tips the radio sends a signal to the base station. Rainfall data are collected by counting the number of tipps of the bucket so that the rainfall data are always current. If any data are missed, the next value transmitted provides the correct accumulated value to ensure that data remain current.

Stream gauge: A submersible pressure transducer allows monitoring of the water level.

Repeater station: Repeaters are necessary where remote sites are not in line of sight with the base station. In this system data are transmitted and received at the same frequency, thus requiring only one frequency for operation. The station is designed to power down except when a signal is detected, thus reducing the drain on batteries.

Base station: This is the central receiving point for all data. The computer and software are designed to collect, store, process and display the data. These functions are possible while data are being received because a multi-task operating system is used. Data are displayed in text/graphical form and can be chosen for any number of sensors over any time period. Precipitation or other kinds of maps can be displayed with the current value displayed and updated in real time. Special software features include alarm tones for all sensors including low batteries, an alarm log file and a password which ensures restricted access. The base station must be located at a facility which is manned on a 24-hour basis. Possible sites are the National Meteorological Service airport facility or their Coopers Hill Base.

Supporting activities:

Public education programmes: A public education programme to foster acceptance and understanding of the flood warning system is being drafted, and will be presented to the communities at risk in the basin. The programme will include communications, warning and evacuation procedures.

Community-based flood warning system: In addition to the automated flood warning system, a community based flood warning system is also being established. The staff gauges on which water levels will be measured have been installed and training of observers (readers) has taken place.

Communications: Establishment of a two-way communications system is scheduled. This system will incorporate CB and ham operators as well as operators of two-way radios linked to the base station. The radio communication system will allow reports on weather conditions, gauge readings and the state of the river, as well as allow for evacuation warnings to be transmitted to the communities.

Integration of police stations into system: The police have been kept abreast of all developments to date. At present during emergencies they provide a two-way communications link to staff gauge readers as well as providing field observations. It is intended that they be included in the public education programme for the automated flood warning system as well as being part of the evacuation plan.

Expansion: Expansion of the system should allow for the establishment of a second base station and installation of the automated flood warning system in other basins.

Predicted problem areas:

Security of equipment: The possibility exists that components of the equipment might be stolen or vandalized. Hopefully the public education programme will instil in the communities the benefits of the system and its importance, thus reducing the likelihood of vandalism. Siting of equipment on owner-occupied premises where possible, should also reduce the risk of vandalism.

Maintenance of equipment: The record of maintenance of equipment in the public sector is, unfortunately, a poor one. It is important that maintenance responsibilities for the various system components be assigned to the relevant agencies and that a regular schedule be put in place. One way of ensuring proper maintenance is by contracting a qualified private firm and this possibility will have to be considered. This alternative seem preferable to the other suggested, in which each agency would be responsible for their particular section of hardware components. Adequate financing for spare parts will also have to be ensured.

Availability of trained personnel: Adequate numbers of persons will have to be trained in order to ensure that staff turnover does not result in the system becoming inoperative because of a shortage of trained personnel. The level of training of local technicians must be such that the system can be operated independently of the manufacturers except in cases of major systems failure.

SUMMARY

The installation of an automated flood warning system in the Rio Cobre basin should increase reliability and accuracy of flood warnings, as well as lead time for evacuations if these become necessary. The success of the system will depend not only on the functioning of the equipment itself, but also on its credibility as judged by the beneficiaries for whom it was intended. The public
Flood warning system for the Rio Cobre basin

Figure 2. Rio Cobre basin flood warning system telemetry network.
education programme is therefore a vital part of this pilot project. Other essential components are:

(i) an emergency plan for evacuation of flood-prone areas;

(ii) a reliable two-way radio system for communication between the communities and the emergency response agency and base station;

(iii) a back-up (manual) system for data collection and field reports which will build some redundancy into the system.

If successfully installed and operated, this pilot project will become a model for similar flood loss reduction schemes elsewhere in the island.

REFERENCES


1. Informative abstract

Example:

Jamaica has a long history of floods, which result in loss of life and property. In order to mitigate this problem the Office of Disaster Preparedness plans to implement a Flood Plain Mapping Project in the Rio Cobre basin. This project will comprise of the following components: rain gauges to collect the rainfall data; stream gauges to monitor the water level; repeater stations used to transmit data and a base station which will receive and interpret the data.

Other components of the project will include a public education programme, a community-based flood warning system and a communications system, which will include CB and ham operators.

Problems envisaged include security and maintenance of equipment and availability of trained personnel. If successfully implemented the project will serve as a model for other flood warning systems in Jamaica.
2. **Indicative abstract or descriptive abstracts**
   
   **Example:**
   
   The proposed Flood Plain Mapping Project in the Rio Cobre basin, Jamaica is described. The rationale for the project is explained and its benefits are enumerated. Components of the project and possible problems are discussed and solutions proposed.

3. **Short abstract**
   
   **Example:**
   
   The proposed Flood Plain Mapping Project in the Rio Cobre Basin, Jamaica will provide an automated flood warning system. If successfully implemented this project will help the Office of Disaster Preparedness to devise similar flood loss reduction schemes in Jamaica.

**ABSTRACTING RULES**

Here are some simple rules that abstractors must adhere to in order to prepare abstracts that effectively capture the fundamental nature of the material being abstracted.

1. Abstractors must scan the material decisively for key facts.
2. Write the abstract with a slant towards the audience.
3. Tell why the work was done and how it was accomplished.
4. Ensure that you convey the findings depicted in the document.
5. Findings must be placed in the topical sentence and details given in the succeeding sentences with general statements placed last.
6. Ensure that relatively independent subjects are separated but avoid dissonance.
7. The abstract must be informative but brief, being concise but unambiguous using short, simple phrases or words.
8. Differentiate the hypothesis from experiments.
9. Try to use generic expressions when possible. Employ normal technical English while using direct statements and abbreviations sparingly.
10. The conclusion must be stated in the present tense.
11. The number of footnotes and items in the bibliography must be noted.
Indexing Techniques

Indexing
"An index is a pointer or indicator or more fully, a systematic guide to the item contained in, or concepts derived from, a collection or database" (Rowley 7). The British indexing standard (BS37000:1988) defines an index as a systematic arrangement of entries designed to enable users to locate information in a document. Therefore the index provides a much deeper analysis to the document than the catalogue. There are many different types of indexes from cumulative indexes (for journals), card indexes, book form indexes to computer database indexes.

Using Controlled Vocabulary
There are two tools which can be used to assist the indexing for the Disaster Information Units' database. These are subject headings lists and thesauri. Both are forms of controlled vocabulary designed to allow systematic access to a set of data, in this case disaster information.

A subject heading list contains
A list of preferred terms (index terms) to be used as access points References from non-preferred terms to the preferred forms
For example Library of Congress Subject Headings uses the following entries and initials to identify the subject of disaster victims.

Disaster victims
UF Victims of disasters
BT Victims
NT Child disaster victims
Church work with disaster victims

The symbols used in most subject headings lists and thesauri are as follows:
UF - used for (this indicates a term that is not used)
BT - broader term
RT - related term
NT - narrower term

General subject headings listing have precoordinated indexing. This means that the search terms are combined at the indexing stage, eg. Disasters - Jamaica
A thesaurus contains
A list of preferred terms (index terms)
References from non-preferred terms to the preferred forms
References to broader or narrower terms - this places index terms within a hierarchy

A thesaurus is a necessary tool which has the terms used in an indexing system. This tool provides detailed relationships between words.

The *Thesaurus of ERIC Descriptors* uses the following entries and initials. The term Disaster Readiness was selected. The entry below shows how the term is treated.

Disaster Readiness
Use Emergency Programme
UF Disaster Readiness, Disaster Preparedness
BT Programmes
RT Alarm System
Civil Defense
Natural Disasters
Rescue
Safety
School Safety
Terrorism

The term Natural Disasters however gave the scope notes and the related term.

**Natural Disasters**
Scope Note Calamitous occurrences produced by natural forces, often widespread and generally resulting in distress, loss, or material damage (eg. Floods, tornados, earthquake, drought)

RT Civil Defense, Earthquake, Emergency Programme, Safety, Volcanism, Weather
Indexing Techniques (Cont’d)

STEPS IN INDEXING

Using Controlled Vocabulary

Listed below are the steps in indexing new material:

1. Assess the content of the material for indexing
2. Select topics as can be identified in the material. For example the article on "A real-time Flood Warning System for the Rio Cobre Basin, Jamaica" on page 62 of this Unit would have the following index terms:
   Disaster Mitigation; Flood Warning Systems; Office of Disaster Preparedness; Jamaica.

   For consistency in indexing, a standard tool should be used for example the Controlled Vocabulary on Disaster Information, to describe the topics.

3. All CARDIN members would be expected to use the Controlled Vocabulary on Disaster Information to determine which terms are to be used. This will allow consistency of the indexing terms and will direct the users to the more precise terms used.

4. Select the indexing terms from the Controlled Vocabulary on Disaster Information that are to be used. The Information Manager can choose whether he/she wants to limit the number of terms used in respect of any one item.

5. Enter indexing terms in the area "Bibliographic Description with indexing" in LILACS.
The following excerpt was taken from the *Controlled Vocabulary on Disaster Information* to illustrate how the term Disaster Management has been treated. Note that entries are in English and Spanish.

**DISASTER MANAGEMENT / ADMINISTRACION DE DESASTRES**

The body of laws and regulations that govern and designate responsibility for disaster management during the various phases and levels of disaster (*Text II - IDNDR, 1992*).

El cuerpo de las políticas y decisiones administrativas y actividades operacionales que pertenecen a las diferentes etapas del desastre en todos sus niveles (*Material II - IDNDR, 1992*).

Research was carried out by the CARDIN secretariat during 1999 to ascertain if there was a thesaurus on disaster management information. This search provided various glossaries and listings of terms on various aspects of disaster management. It was based on these findings that the *Controlled Vocabulary on Disaster Information* was prepared. It was first developed in Spanish by the Regional Disaster Information Center for Latin American and the Caribbean ([CRID, Centro Regional de Información sobre Desastres América Latina y El Caribe,]) in collaboration with Latin American and Caribbean Center on Health Science Information (BIREME). CARDIN translated the publication into English making it available to the network members.

The Controlled Vocabulary is presented in three parts. A graphic representation of the main categories, the hierarchy of terms with the levels structured from general to the specific term and the alphabetical list of terms. The list has English terms and scope notes proceeded by their Spanish equivalent. This is very useful especially for Disaster Information Units that have maps, drawing slides and other formats of information in their collection, which require local indexing.

Disaster Information Managers who use the LILACS methodology for input will have these disaster terms incorporated into their databases. These disaster terms have been incorporated into the LILACS CDROM, a quarterly publication of BIREME therefore Disaster Information Units will have standardized terminology for accessing disaster information. Indexing terms are also available in English, Portuguese and Spanish.
Using Keywords

Keywords are terms as they appear in titles, abstracts and text. It is possible to have CDS/ISIS make a selection of these for indexing but this lacks standardization and searches have to be made on synonymous terms when this is done.

UNIT FIVE : EXERCISE

Select an article on Caribbean disaster information and prepare the following abstracts:

1. An Informative abstract,
2. An Indicative abstract,
3. A Short abstract

SUPPLEMENTARY READING

Caribbean Disaster Information Network. Controlled Vocabulary on Disaster Information, Jamaica: CARDIN. 2000.


UNIT SIX:
Exploring the World Wide Web for Disaster Information
Introduction

The Internet is often seen, as an obstacle by many individuals as they are unaware of systematic techniques that will enable them to quickly locate required information. This unit was designed to offer participants functional strategies needed to effectively maneuver Internet resources in order to locate disaster-related information on the World Wide Web.

Aim

Unit six has been devised to equip the individual with the necessary skills needed to manipulate the Internet as a reference tool in an effort to locate disaster information. It focuses on the systematic methods of identifying and evaluating disaster information located on the Internet.

Objectives: Unit Six

At the end of this unit individuals will be able to:

1. Have a general overview of the Internet.
2. Be aware of what the World Wide Web is.
3. Be able to understand and employ different search strategies to locate disaster information.
4. Evaluate disaster information found on the world wide web.
5. Understand how to use CARDIN's database.
6. Become familiar with the different types of Internet Search Engines.
7. Understand how Search Engines work and why they are different.
8. Make the best use of the Internet in identifying useful resources.
The Internet is a global collection of computer networks connected by protocols (forms of communication between computers) which makes it possible for users anywhere on the network to communicate with or use the services located elsewhere.

The Internet is not just about the World Wide Web. It offers a wide array of topics, services and applications. The services that Internet protocols make possible include:

**ELECTRONIC MAIL (E-mail):**
a method of sending and receiving messages and information, even over long distances. Users can access electronic publications and participate in discussion groups. Email is still considered the most powerful and useful tool of the Internet. You can email any person or computer on the Internet network.

**TELNET: (remote login)**
allows you to connect to another computer on the Internet and work with it on an interactive basis. Many library catalogs are available via telnet.

**FTP: file transfer protocol**
is used to transfer files from one computer to another on the Internet. Anonymous FTP is FTP access to remote computers for accessing publicly available files. Archie is a tool that locates FTP files.

**GOPHER:**
a multi-purpose tool through which you locate resources that are presented in hierarchical menus. Veronica and Jughead assist in locating items on gopher servers.

**WORLD WIDE WEB:**
is a collection of interconnected hypertext documents. You can access text, graphics or multimedia on the World Wide Web.
What is the World Wide Web (WWW)?
The World Wide Web is one of the fastest growing parts of the Internet. It is one of the services of the world wide web which is easy to use and is primarily a collection of Web pages residing on computers all over the world.

Web Sites and Servers

• What is a Web Site?
A computer connected to the Internet that stores the Web pages of certain individual, group, or organization. The graphics represents the main page for the CARDIN project:
• What is a Browser?
Web browsers are used to communicate with web servers, called daemons (a program that runs all the time, in the background waiting for things to do). With the web browser you can view web pages on-screen and navigate the links between them.

• What is a Web Server?
Specialized software that transmits information from Web sites to a user’s computer.

• What is a Home Page?
The initial Web page transmitted by a Web server when you access a Web site. A home page typically provides a table of contents or directory for other Web pages.

• What is a Uniform Resource Locator (URL)?
The URL is the main locator or the web address, which enables you to locate web pages e.g. (http:// Hypertext Transfer Protocol).

A typical URL looks like this:
http://www.uwimona.edu.jm/staff/address/telephones.html.
It is important to type the URL just as it is seen as punctuation is critical. The above URL will take you to the University of the West Indies staff telephone directory. The structure indicates the following:

<table>
<thead>
<tr>
<th></th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
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<th>7.</th>
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<tr>
<td></td>
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<tr>
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<td></td>
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<td></td>
<td></td>
<td>jm</td>
<td>Country</td>
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<td></td>
<td>jm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>/staff/address</td>
<td>Directory Path</td>
<td></td>
</tr>
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<td></td>
<td>/staff/address</td>
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<td></td>
<td></td>
<td></td>
<td>/telephones</td>
<td>File Names</td>
<td></td>
</tr>
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<td></td>
<td>/telephones</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.html</td>
<td>Extension</td>
<td></td>
</tr>
</tbody>
</table>

Some types of Domain Names Used in URLs
- .edu - educational institution
- .com - commercial enterprise
- .gov - governmental agency
- .org - organization, non-profit
- .uk, .au country codes
SEARCHING FOR DISASTER INFORMATION ON THE WORLD WIDE WEB

• **NET SURFING**
Starting with a good page and following links which make it possible to navigate from one page to the next. This method is time consuming but can yield useful information.

• **USING SEARCH ENGINES (Keyword Searching)**
- e.g. Alta Vista or Dogpile. Search engines allow you to type in keywords or phrases and will search the Internet for sites that match those key words or phrases. These search engines vary in their comprehensiveness. Other search engines offer subject directories (subject searching) - this is a listing of Internet resources arranged by subject categories, e.g. Yahoo or Magellan. The web page below gives a vivid picture of a subject directory.
Screen shots of popular internet search engines.

At left Yahoo, the first and most popular internet search engine.

At top and right, Lycos and Go.com (formerly Infoseek).
USING INTERNET ADDRESSES
Once you are aware of an Internet Address you can go straight to the site by simply typing the address in the location box. (See the web specimen of CARDIN's web site on page 76). This method is very useful in locating material in library catalogues and periodical indexes.

For more indepth research the following online international geological databases could be explored.

GEOREF - http://www.georef.cos.com

This is the main database for geology and geophysics. It indexes worldwide geoscience journal articles, books, conferences and report. The GEOREF web site www has a Preview database of the most recent references to be added to GEOREF and information about the database, search aids and the journals list. This database is updated quarterly.


It is best database which offers current articles. It is updated weekly.


This covers the earth sciences including geology and geophysics. It is particularly useful for geomorphology, environmental geology and climatology.


This is designed to source articles that have cited a given article of interest.

Other commercial databases include:

Science Direct - http://www.sliverplatter.com
ELSEVIER Science- http://www.elsevier.com
EVALUATING THE CONTENTS OF WEB PAGES

It is important to evaluate your information since:

- Quality of information cannot be guaranteed
- Virtually anyone can publish on the web
- Little editorial review process
- Difficult to determine authorship
- Information frequently not dated
- Information often old
- Sometimes difficult to determine authority

To assess validity, reliability and authenticity the following questions should be asked:

- Who is the author(s) or creator(s) of the information? What is their authority to write or speak on a given topic?
- What is the status of the institution/organization mounting the web page?
- What is the review process?
- Who is providing access to the information? Do they have a vested interest in a particular point of view?
- Check on line directory sources for bibliographical information?

Additional Points
It would be used to note that:

- Information is not always free
- Certain pages require additional software for viewing
- Browsers may view resources differently (Microsoft Explorer, America Online Netscape, Lynx)
- Without notice sites can be moved, removed or renamed.
UNIT FIVE: EXERCISE

Steps in Searching for Disaster Information

1. **Web Address (URL)**
   - Go directly to a web site by putting the URL in the location box
   - Remove the URL address by pointing in the location box and backspacing or delete.
   - Type in the URL of the site you want to see e.g. http://wwwcardin.uwimona.edu.jm:1104, http://www.paho.org/, http://www.odpem.org.jm
   - Press the enter key on the keyboard

2. **Search Engines**
   *Search engines are used for topical searches.*
   *(See list of search engines at net search)*
   - Click a search engine e.g. Alta Vista
   - Click in the search box and type disaster
   - Press the enter key
   - Scroll down for your list of sites
   - Click on the ones which are relevant to access the information
   - Click on images
   - Click on discussion groups

3. **Subject Directories**
   - Use subject guides/directories
   - Click on net search
   - Scroll down the page to see list of guides
   - Choose one e.g. Yahoo
   - Click on your broad subject area - Science, then geography, and then geographic name servers.
   - Keep following the links to your specific area and to the information

If you get an error message trying to access a web site it may mean
- You have typed the URL incorrectly
- The site is no longer at the address
- Communications lines are busy
- The server (local or remote) may be down
UNIT SEVEN: Information and Document Delivery Services
Introduction

Providing an information or document delivery service is the ultimate goal of the disaster information manager. Having collected, processed and organized the information the next necessary step to effectively meet the needs of the client is delivery of information to him. This unit was designed to create an awareness of the different information and document delivery services, which can be utilized by the information manager.

Aim

Unit VI has been devised to create awareness of the different services that can be offered by the disaster information unit and the various services which are available commercially.

Objectives: Unit Seven

At the end of this unit individuals will be able to:

- Have a basic concept of information and document delivery services
- Choose a document delivery service which is suitable to your organization's needs
- Understand Interlibrary loan systems
Information Services

It is not surprising that one of the earliest types of services provided by the library is that of retrieving information. Most clients will telephone, write or e-mail simple requests to Information Units and it is the role of the Information Manager to try to fulfill these requests. An information service is the general term, which covers reference services, and the delivery of information to users. Sometimes information services can be anticipatory, that is, the Information Manager can give advice before the need has been expressed. In other instances, a query comes for a specific item or some information. Where the request is not specific (e.g. request for a book by its title) the Information Manager must first conduct a reference interview where he simplifies the query by asking open ended questions to have a clear understanding of what is being sought. These questions frequently begin with words such as what, where and how. An example of open-ended question in response to a client asking, "Do you have any information on disasters in the Caribbean?" The question asked might be "What type of disaster information are you seeking?" or "How in-depth is your research? How will you be using this information for example is it to prepare a speech, research paper or a pathfinder?" When the Information Manager has determined and located the information required by the client the next step is the delivery of the information. Some examples of information services are as follows:

Current Awareness Services

Selective Dissemination of Information (SDI)
SDI by disaster information units entails supplying the clients with current information that match previously prepared lists of topics of interest. The Information Manager would have to prepare profiles of the interest of persons and provide current information on these topics. Listings such as the names of the most recent hurricanes in the Caribbean could be made available through this service and other topical issues.

Current Awareness Bulletin
Readers are alerted of the most recent records to the Disaster Information Unit's collection through a current awareness bulletin. This sometimes takes the form of Accessions Lists.
Contents page of Journals
Heads of Departments sometimes have particular interests in different aspects of disaster management, the Information Manager can circulate the contents pages of journals to them in the form of bulletins. The use of e-mail and electronic bulletins now allows these listings to be posted via electronic transmission to individuals or on the department’s network. This saves time in the user coming to the information unit to browse through new issues.

Document Delivery Services
Document delivery is one of the many methods of providing information. It is usually in the form of a specific request, with a bibliographic citation, which the client communicates to the information manager. There are six basic elements one has to consider when offering these services:

• What specific services will be offered to users? For example photocopying, scanning, interlibrary loans.

• What will be the means of delivery? - Will it be facsimile, e-mail, courier or post?

• What collections can be photocopied based on copyright laws?

• What system will be in place for interlibrary lending? Online request forms, telephone, mail or request forms.

• How will payment be accepted? - Cash, cheque, credit card, money order, deposit accounts or United nations Educational, Scientific and Cultural Organization (UNESCO) coupons.*

• How much will these services cost? This will depend on various factors such as the type of service required (photocopying versus repackaging of information) or the amount of pages being copied.

* In some countries foreign currency is in short supply. In the Caribbean we can purchase UNESCO coupons as the value is expressed in United States dollars and can be used to pay for foreign purchases.
Photocopying / Reproduction of Information

The photocopying of information should be in keeping with the copyright laws of the country. Restrictions on availability for duplication can be based on the physical conditions of the material, copyright limitations and legal restrictions. A basic rule should be established per copy of reproduction. Different rates will depend on the item e.g. scanned maps or photographs would have a different rate from that of photocopying an article in a journal.

Therefore service charges would be calculated based on:
- Type of document - maps, books, journal article
- Number of pages
- Photocopies delivery
- Location of client

Electronic Delivery of Information

The electronic transmission of documents is being facilitated by information units throughout the world. This service can be offered in a variety of formats including Adobe Acrobat's Portable Document Format (PDF), Tagged Image File Format (TIFF), ARIEL and e-mail. PDF documents are more difficult to edit than other modes of transmission. TIFF can be easily edited and modified but has the capability of compressing the size of files. "AREIL provides higher resolution copies than a fax machine and is a cost-effective alternative to using traditional fax and mail distribution systems." (Schnell, 90) BIREME offers online electronic delivery of photocopying services. (www.bireme.org)

A good Document Delivery service should:
- Protect both the privacy and integrity of the document
- Offer automatic tracking capabilities, which will be able to confirm document receipt, thus ensuring secure document delivery. The system should also offer a return receipt so that the sender can verify the exact time the recipient accessed the document.
- Offer some cost saving.
Interlibrary Loans (ILL)

The rising costs of journals have resulted in a greater need for interlibrary loans. Most developed library systems have procedures and policies, which they use as a guide to interlibrary loan. The Library of Congress follows the procedures set out in the *IFLA Principles and Guidelines for Interlending*. When presented with a citation the Information Manager should ask. Do I have the citation information I need in order to obtain a copy of the document? This would be as follows:

- Author name(s)
- Title of article/monograph/report/paper
- Date of publication (publication year)
- Abstract (if one is available)
- Title of main entry/journal/proceedings in which the item is published
- Page numbers or other information

All these information is important, as it will enable the Information Manager to readily locate and order the document. This Information Manager can structure simple procedures to determine what items should be reserved and which item can be loaned. The *Interlibrary Loan Policies Directory* comprises of the interlibrary loan policies of libraries throughout the United States of America, Puerto Rico and Canada. This makes it an important tool for finding current loans policies.

Most institutions will only offer interlibrary loans if there are more than one copy of the item. The loan period would have to be determined by each disaster unit taking into account shipping time throughout the Caribbean. Some libraries used a 30-day loan period giving an additional 30-days grace period after sending a reminder. But items can be recalled if they are needed by the lending disaster organization. The Information Manager also have to make decisions in terms of renewals and lost or damaged items (the borrowing Disaster Information Unit should assume responsibility for the safety of the borrowed information).
Fee Based Services

Since the 1970's the term fee-based information services (repackaging of information) has become prevalent in academic libraries. Within the Caribbean this practice has also become a practical part of the services of information units in attempt to recover costs. Fee based information services is the provision of specific information in a variety of formats both print and electronic as is specified by the client. It is primarily the delivery of information at a cost to the user.

Fee-Based services entail a selective subject search of information from the most reliable sources. These sources are then assessed and repackaged to match the particular need of the client. This is usually a costly venture as it is time consuming and seeks to meet the direct and specific needs of the client. Caribbean Disaster Information Units can however consider using this mode of generating revenue, as information within the region is not readily available to developed countries.

Disaster Information Units could focus on:

- Demographic studies of the country - number of persons displaced after a major disaster.
- Market Research Studies e.g. The economic impact of a disaster on Caribbean islands.
- Business List Services - such as the names and address of the various organizations involved in disaster management. These could include suppliers of products and services needed before and after a disaster.
- Custom Research Services - done to suit the client
- General Information Services - names of the most recent hurricanes in the Caribbean
Recent Developments

Some companies are linking the interlibrary loan and document delivery services through the use of management software, which allows them to streamline their operations and offer faster delivery of articles to users. Information managers use this software to eliminate time consuming manual tracking, record keeping and the statistical compilation of ILL operations. Clio* is one such software which offers interlibrary loan management capabilities. Major document delivery vendors include EBSCO, Faxon, OCLC (Online Computer Library Center), with FirstSearch and UnCover Web. Disaster Units can explore these services for fast and efficient document delivery.

UNIT SEVEN: EXERCISE

Based on the readings in Unit VII identify the types of document delivery services you would utilize in your Disaster Information Unit.

Supplementary Reading


* http://www.intrieve.com
APPENDIX
A. **ORDERING AND ACQUISITION OF INFORMATION**

A Collection Management Policy should be drafted at the outset so that the Information Manager has specific guidance in developing the collection. The Document Selection Guidelines which was detailed in Unit IV should be used as a guide in collecting disaster information.

A specially designed information request form, which should be used by all clients to address the acquisition of any new information for the information unit.

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**Sample of the specially designed Information Request form.**
After this form has been submitted to the Information Manager, the various library holdings must be searched to ensure that the title requested is not already in the collection, on order, or received but not processed. The following procedures should then be undertaken:

1. Assess user requests based on need i.e.; importance to the client or collection development; usage i.e.: number of users who have made the same request or will be making use of the title; purpose i.e.: how the item will be used to benefit the organization.

2. Check reference tools to obtain bibliographic details of the titles requested.

3. Determine how ordering will be done, whether via a local dealer or sourced directly from the publishers based on the following:
   
   a) If it will be more cost effective to utilize the local dealer or order directly from the publisher
   b) If the organization has a credit card account which can be used to make overseas transactions
   c) If the organization has access to foreign exchange that can be used to pay overseas publishers
   d) If the local dealer is competent i.e.: record of shipping and handling of resources is timely and efficient.

**Other Resources**

The Internet and Databases such as the CARDIN Database can be utilized as reference tools to locate information, which may be used to supplement the Disaster Information Unit’s collection or meet user request (see Unit VI and VII). Some of the web sites offer full text on disaster issues, these can be downloaded, bound and properly indexed for easy retrieval.

**Gifts**

Gifts can provide a major supplement to acquisitions therefore decisions must be made as to what type of gifts to accept. All gifts must be acknowledged using a designed card with the name of person or institution that donated the books and the date the donations were made. The terms and conditions of the gifts should be documented and signed so as to protect the intellectual property rights of the donor. It is important to note the name of the item deposited.
APPENDIX I

Procedures Manual for the Disaster Information Resource Centre (Cont’d)

B. PROCESSING PROCEDURES

Books
Place property stamps e.g. Caribbean Disaster Information Network on the back of the title page of each book and on page 24. Avoid covering information e.g. date of publication or copyright dates, publishers name etc.

Make a distinction between reference and loan copies. This can be done by placing a large R (in red) on the spine of the book. Classify information using the Disaster Information Unit selected classification scheme e.g. Dewey Decimal Classification Scheme, Library of Congress Classification Scheme or the Intertect System. For books the classification number is placed on the spine of book approximately 3cm from the bottom, and for journals, brochures, pamphlets and maps at the extreme right of the cover.

Paste Book Issue slips inside the back corner of each loan item to maintain a record of book return dates. All other items can be recorded on a designed form, which indicates the record of the item, and the date it was issued and the date it should be returned.
Journals

All new titles should be recorded on a "check in card". The journal should be closely examined and the appropriate information recorded.

Information which should be recorded for each new journal title are:

a) The name of each journal
b) Publisher and place of publication
c) The frequency of the publication - weekly, monthly etc
d) The name of the subscription agent or the publisher
e) The price of the journal
f) The due date for subscription payments
g) The location of each title - some journals can be placed as reference items
h) The date due for subscription payments.
APPENDIX I

Procedures Manual for the Disaster Information Resource Centre (Cont’d)

B. PROCESSING PROCEEDURES (Cont’d)

Journals (Cont’d)
Property stamps are to placed on the labels and on page 24 of each issue. Apply some system which will record the holdings as they are received. Current issues which are received should be noted on the visible index cards with the volume number and item number of current issue so that users will be able to identify the available issues. Larger type information units can invest in a visible index which can be purchased by office equipment companies such as the Gaylord Bros Catalogue. These are long shallow metal trays in a metal cabinet and are used for control the serials collections.

After the journals have been processed they should be filed in appropriate pamphlet boxes and indicate contents on the boxes clearly. Edit pamphlets regularly.

The sample card below gives some idea of how to fill out a check in card for a bi-monthly periodical.

<table>
<thead>
<tr>
<th>Title - ODIPERC News</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publisher or Agent: Office of Disaster Preparedness Office</td>
</tr>
<tr>
<td>Frequency Bi-Monthly</td>
</tr>
<tr>
<td>Address: 12 camp Road, Kingston 4, Jamaica</td>
</tr>
<tr>
<td>Bind No</td>
</tr>
<tr>
<td>Route to: Jackson</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1987</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1988</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2: Sample of a check in card for a bi-monthly periodical
Audiovisual and Non-conventional Materials

There are a variety of audiovisual materials that will require special processing. Study each one and ensure that they are properly labelled and properly listed in some record so that the information will help your clientele select the most appropriate item. The types of categories for audiovisual material include cassettes, videotapes, and multimedia documents. A Library Manager’s Guide to the Physical Processing of Non-Print Materials written by Karen C. Driessen and Sheila A. Smith can be consulted for more in-depth coverage on the processing of audiovisual material.

Information Needed for Processing the Different Types of Material

The different types of material have been assessed and a table has been designed to assist the Information Manager in preparing the information for processing.

<table>
<thead>
<tr>
<th>Type of Material</th>
<th>Information Needed on Label, Jackets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Books, pamphlets and printed sheets</td>
<td>Author, title, call number, accession number</td>
</tr>
<tr>
<td>Manuscripts</td>
<td>Author, title, accession number</td>
</tr>
<tr>
<td>CDs</td>
<td>Producer, recorder, writer, call number, accession number</td>
</tr>
<tr>
<td>Audio and video cassettes</td>
<td>Producer, recorder, writer, sponsoring agency, call number, accession number</td>
</tr>
<tr>
<td>Three-dimensional artifacts and relics</td>
<td>Accession number</td>
</tr>
<tr>
<td>Maps</td>
<td>Map title, call number</td>
</tr>
<tr>
<td>Microforms/Microfilms</td>
<td>Title of Information</td>
</tr>
<tr>
<td>Journals</td>
<td>Classification Number</td>
</tr>
</tbody>
</table>

Table 1: Information Required for Processing Materials
APPENDIX I

Procedures Manual for the Disaster Information Resource Centre (Cont’d)

C. SHELVING MATERIAL

Shelving is not to be undertaken mechanically and regarded as a boring chore. It is one of the best means of familiarizing one’s self with the stock, and is a valuable aid to any Disaster Information Manager who is interested in service to the public. The importance of this task cannot be over emphasized.

Simple procedures can be developed for each situation.
Monographs

Using the Dewey Decimal Classification Scheme* these books can be shelved according to a classification number and then by the first three letters of the author's name. So a book entitled *Disasters: The Anatomy of Environmental Hazards* by John Whittow would have as the call number 904.5WHI.

The Library of Congress Classification Scheme** combines two or three letters and numbers and sometimes the year of publication of an item. Each letter or combination of letters represents a specific subject area; the above item would fall in the subject area Physical Geography (GB) and would therefore be classified as GB 5018.W48, with W representing the first letter of the author's last name.

The Schedule G of the Library of Congress cartographic section is broadly divided into atlases, globes, and maps. Each of these are given blocks of numbers such as G1000.3 - 3122 for atlases, G3160-3182 for globes, and G 3190-9999 for maps.

With the Disaster Information Sharing System developed by Intertect*** the item would be classified as 80. This would indicate to the prospective reader that the item covers general aspects of Disaster Studies.

While Shelving:

a) Remove for temporary repairs or binding any book, which appears worn.

b) Remove torn and tattered book jackets and worn shelf guides.

c) Dust shelves and books

---

* The Dewey Decimal Classification, devised by Melvin Dewey in 1876, is a method of classifying and cataloging library materials by subject.

** In 1800 in Washington, DC, the Library of Congress was established to meet the information needs of the Congress of the United States. By 1897 an outline of the Library of Congress Classification scheme (LC) was drafted and definitive editions issued by the Library of Congress. It is used for organizing many academic libraries worldwide.

*** Intertect has undertaken the development of an information sharing system to facilitate the dissemination of information on pre-disaster planning and preparedness, disaster relief and reconstruction and post-disaster technology.
C. SHELVING MATERIAL (Cont’d)

Periodicals

A title disposal policy should be drafted to give guidance as what should happen to each issue - where to route it, should it be on display and for how long, where will it be stored and should it be sent for binding.

Periodicals can be shelved in alphabetical order by title, but within each title periodicals are filed by Year, Volume and then Number e.g.:

*St. Lucia Solid Waste Management Authority News: Vol. 2. No. 3*
*St. Lucia Solid Waste Management Authority News: Vol. 2. No. 4*

Current titles are usually placed on a display stand. Periodicals should be scanned for any important items so that these articles can be indexed and abstracted to be placed in the database or routed to certain staff members or other persons before the issue is placed on display stands.

While Shelving:

a) Check to ensure that periodicals are in the appropriate pamphlet boxes.

b) Tidy shelves by replacing the periodicals as soon as readers have finished using them.

Audiovisual and Non-conventional Materials

All audiovisual materials such as videocassettes can be filed in alphabetical order by title or by the subject area. Non-conventional information such as maps can be arranged in alphabetical order by country. It is best that maps and photographs have specific enclosures for each item. This will diminish the breakdown of the processing chemicals from image to image and lessens the amount of handling of each item. The Information Manager should make decisions as to which documents can be loaned and these should be clearly stated in the Interlibrary Loans Policy.
While Shelving:

a) Check to ensure cassettes have been returned to their appropriate cases.
b) Check that the cassette tapes are not damaged.
c) Remove items for which labels are falling off or fading and retype the labels.

D. UNSERVICEABLE ITEMS

The collection must be neat and pleasing in appearance with proper preservation methods put in place. Collections should be given sufficient spacing for sufficient air movement. Cleaning schedules should include vacuuming and dusting. Any new acquisitions should be cleaned before they are placed on the shelves.

Withdrawals

A well-planned weeding programme is important to the management any collection. According to Gensel and Powers*, the monograph collection must be weeded constantly with comparisons made between new editions of older works and then discard if even slightly out - of date. The first consideration of any Collection Development Policy is the value of the material coupled with the replacement of the material if this is possible. An item should only be withdrawn if it is superceded by a more recent version or if it becomes useless. Information managers are now moving with technology and are digitizing maps and other material before discarding worn hard copies.

How to proceed

Each quarter sort materials into groups for mending and binding. Withdraw and discard items, in accordance with the preceding. If an item is irreplaceable every attempt should be made to repair it, or reproduce it if necessary in a different format. Further usage of the same item should be controlled if necessary.

The CARDIN Secretariat should be informed of all withdrawal of documents on a quarterly basis as these records will have to be withdrawn from the master database.

---

E. LOAN SYSTEM

Specific data must be recorded before any item is loaned.
(a) Title of items
(b) The item's classification number
(c) The name of the reader
(d) The date the information was issued
(e) The person who issued the document

<table>
<thead>
<tr>
<th>Author or Other Heading</th>
<th>Call Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>Volume</td>
<td>Parts</td>
</tr>
<tr>
<td>Borrower’s Name</td>
<td>Signature</td>
</tr>
<tr>
<td>(Surname first in block letters)</td>
<td></td>
</tr>
<tr>
<td>Address / Department</td>
<td>Staff:</td>
</tr>
<tr>
<td></td>
<td>Visitor:</td>
</tr>
<tr>
<td>Date Borrowed:</td>
<td></td>
</tr>
<tr>
<td>Date Returned:</td>
<td></td>
</tr>
<tr>
<td>Issued by:</td>
<td></td>
</tr>
</tbody>
</table>

Figure 3: Loan Card Design

However this information can also be recorded in a ruled book format including the same information

Interlibrary Loans

An Interlibrary Loan Policy should be devised detailing categories of items that are available for loan to another library. These should be within the National Loan Code.
This could include:

- The form of loan - for example the original material not loaned out of the country
- The method of borrowing - on specially designed forms and authenticated in handwriting by authorized personnel in the borrowing library.
- Citations - these should be complete with the correct bibliographic information and pagination of articles
- The loan period - This is usually 30 days with a 30 day grace period
- Delivery and return methods
- Special photographic services
- The collections which will be accessed
- The cost for this service - different charges for CARDIN members

The sample form on the below is in two parts and can serve as either a request or notice of return or request for the borrowing library and report for the lending library.

Figure 4: Sample form for Interlibrary Loan System
APPENDIX I

Procedures Manual for the Disaster Information Resource Centre (Cont’d)

E. LOAN SYSTEM (Cont’d)

The borrowing library should strive to meet the turnaround times. The turnaround time is the length of time the Information Manager receives the request from the client to the delivery of the request to the lending library.

The table below can be used as a guide to determine the turnaround time for documents.

<table>
<thead>
<tr>
<th>Client</th>
<th>Turn Around Time For Request</th>
<th>Destination</th>
<th>Request/Delivery Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>4 hours</td>
<td>Anywhere in the country</td>
<td>Fax, e-mail, telephone</td>
</tr>
<tr>
<td>Medium</td>
<td>48 hours</td>
<td>Anywhere in the country</td>
<td>Fax, e-mail, telephone, courier</td>
</tr>
<tr>
<td>Low</td>
<td>2 weeks</td>
<td>Local</td>
<td>Local postal service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elsewhere</td>
<td>Regular post</td>
</tr>
</tbody>
</table>

Borrowing Procedure

- Use the Interlibrary Loan Policy Manual at all times
- Screen requests carefully
- Verify citations
- Find out before sending the request which information unit owns the item which is needed
- Find out the lending policy of the lending information unit and follow their instructions and regulations carefully
- Return items promptly and properly
F. RULES AND REGULATIONS

1. All members of staff are eligible to borrow from the Disaster Information Unit.

2. The loan periods are as follows:
   - Book/Manuals - 1 week
   - Journals - 3 days
   - Audio Visual - 2 days
   - Materials are to be returned before the expiration of the loan period.

3. Members of the public may consult the information within the Library/Disaster Information Unit.

4. All items on loan are the responsibility of the borrower until they are returned. Borrowers are accountable for any loss or damage.

5. Materials marked "Not For Loan" should not be removed from the Disaster Information Unit; this includes the copy of the daily newspaper.
Abstract
A concise and accurate representation of the contents of a document, in a style similar to the original document, usually without added interpretation or criticism it is accompanied by the bibliographic reference of the original when it appears separately.

Abstracting and Indexing Services
A serial, which provides subject access to works in a group of subject fields or specific subject field by means of abstracts and indexes and may be available by subscription or fee.

Accession
a. The process of entering documents which have been added to the information unit's collection into an accession record. b. A document that has been accessioned and entered into the information unit's collection.

Accession Number
A consecutive number that is assigned to a document added to the information unit's collection.

Analytic see analytical entry

Analytical Entry
Synonymous with analytic. a. A bibliographic record of apart of a bibliographic item for which a comprehensive record may be made. b. A point of access to part of a bibliographic item, which a detailed bibliographic record has been made e.g. to the subject of a chapter of a monograph or the title of a separately titled volume of a multi-volume set of books.

Audiovisual Material
Material in audio or visual formats that conveys information by sound or images.

Boolean
A logical operation formulated by George Boole, involving variables with two values e.g. value x and value y; value x or value y and value x but not value y.
**Brochure** see pamphlet

**Budget**
A detailed financial plan for a specific time period that estimates by established categories, the expenditure that is required to accomplish the goals of the program of an organization based upon an estimated income.

**Catalogue**
Bibliographic records under the control of an authority file, created according to uniformed and specific principles, to describe the materials held in a collection or an information unit.

**Chronological Order**
The order of time or period when something occurs used as a means of classifying records or materials and arranging groups of documents e.g. publication date e.g. 1996, or period covered e.g. 1987-1999; 2000-2002.

**Conference**
A complementary type of publication. It is used to identify a document or group of documents presented at a conference. The generic term conference includes seminars, congresses, courses and workshops.

**Controlled Vocabulary Indexing System**
An indexing system where descriptors assigned to works is limited to a specific list of terms.

**Document Delivery Service**
a. In an Information Retrieval System - The provision of documents published or unpublished at an established cost upon request. b. The delivery of documents from the information unit or library's collection that have been requested by a user.

**Fugitive Material**
Material of immediate interest at the time, or place of publication that has been printed in limited quantities e.g. programs, pamphlets and brochures.

**Geographic Filing System**
An arrangement of records by place either alphabetically or on the basis of geographic classification scheme.
Index
A systematic guide to the contents of a document, groups of documents or file, consisting of an ordered arrangement of terms representing the contents, references, page numbers etc. which are used to access the contents.

Inter Library Loan (ILL)
A transaction where one information unit not under the same administration or campus, lends an item/s from its collection to another information unit upon request.

Journal
A periodical usually disseminating information on research and development in a particular subject field and/or containing scholarly articles.

Map
A drawing or representation, usually on a flat surface, of part or the entire surface of the earth, of another celestial body etc., indicating specific group of features, countries, land mass, planets etc.

Monograph
A document that constitutes a single entity with a publisher responsible for its publication, bound not necessary in hard cover, a title page with the essential data for its identification (author, title, publisher, place and date of publication)

Non-Conventional
Documents that appear outside of the normal publication channels, not formally published, that is to say, do not have a publisher responsible normally published for a small number of persons, does not follow standards, and by its characteristics cannot be defined by any of the other categories already defined.

Optical Disks
A video recording on a disc usually plastic which can be played back to produce pictures and sound.
**Pamphlet**  
Synonymous with brochure. A publication consisting of a few leaves of unbound printed matter. This material is usually a non-periodical independent publication.

**Pathfinder**  
Bibliographic guides arranged in a search strategy over various types of library materials available for doing literature search on a particular topic.

**Periodical**  
A serial, which appears indefinitely at regular intervals, each issue is numbered consecutively and usually contains separate articles or stories.

**Photograph**  
Any image/picture produced by photography.

**Project**  
This is a complementary type of publication and is used to identify a document based on a project or the project itself.

**Serial**  
A document in print or non-print form, published generally at fixed or irregular intervals, in successive parts, usually having chronological or numeric designations and intended to be continued indefinitely.

**Thesis and Dissertation**  
An original research document presented to a University or a center of studies with the purpose and a requirement for obtaining an academic degree or postgraduate professional title.

**Turnaround Time**  
The amount of time between the initiation of a task and its completion.

**Visible Index**  
Synonymous with visible file. A filing unit containing flat trays fitted with holding cards which contain index entry for collective records, usually serial records and holding information.

**Weed**  
To select materials from an information unit's collection for withdrawal or for transfer to a storage area.
Withdrawal
To remove an item no longer in the information unit's collection from the its records of holdings.
APPENDIX III

List of Acronyms

ADMD  Asociación Dominicana de Mitigación de Desastres
BIREME  Latin America and Caribbean Centre on Health Sciences Information
CAREC  Caribbean Epidemiology Centre
CARDIN  Caribbean Disaster Information Network
CARICOM  Caribbean Community and Common Market
CCMS  Caribbean Coastal Management Study
CDERA  Caribbean Disaster and Emergency Response Agency
CDMP  Caribbean Disaster Mitigation Project
CEHI  Caribbean Environmental Health Institute
CERO  Central Emergency Relief Organization
CLAMED  Latin American Centre for Disaster Medicine
CRID  Regional Disaster Information Center for Latin America and the Caribbean
CDM  Caribbean Disaster Management
CZM  Coastal Zone Management
DIPECHO  Disaster Preparedness Programme of the European Community Office
DFID  Department for International Development
ECHO  European Community Humanitarian Office
ECLAC  Economic Commission for Latin America and the Caribbean
EERI  Earthquake Engineering Research Institute
### APPENDIX III

#### List of Acronyms (Cont’d)

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
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<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
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<tr>
<td>FPMP</td>
<td>Flood Plain Mapping Project</td>
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<tr>
<td>GTZ</td>
<td>German Technical Cooperation Agency</td>
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<tr>
<td>IAEA</td>
<td>International Atomic Energy Agency</td>
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<tr>
<td>IAEE</td>
<td>International Association for Earthquake Engineering</td>
</tr>
<tr>
<td>IAEG</td>
<td>International Association of Engineering Geology</td>
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<tr>
<td>IATA</td>
<td>International Air Transport Association</td>
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<tr>
<td>IDNDR</td>
<td>International Decade for Natural Disaster Reduction</td>
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<tr>
<td>IFRC</td>
<td>International Red Cross and Red Crescent Society</td>
</tr>
<tr>
<td>ISDR</td>
<td>International Strategy for Disaster Reduction</td>
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<tr>
<td>NEMA</td>
<td>National Emergency Management Agency</td>
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<tr>
<td>NRCA</td>
<td>Natural Resources Conservation Authority</td>
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<tr>
<td>OAS</td>
<td>Organization of American States</td>
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<tr>
<td>ODPEM</td>
<td>Office of Disaster Preparedness and Emergency Management</td>
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<tr>
<td>OECS</td>
<td>Organization of Eastern Caribbean States</td>
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<tr>
<td>PAHO</td>
<td>Pan American Health Organization</td>
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<tr>
<td>PCDPP</td>
<td>Pan Caribbean Disaster Preparedness and Prevention Project</td>
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<tr>
<td>REDIS</td>
<td>Regional Disaster Information System for Latin America and the Caribbean (SRID in Spanish)</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>STIRANA</td>
<td>Stichting Rampenbestrijding Nederlandse Antillen -</td>
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<tr>
<td>SUMA</td>
<td>Humanitarian Supply Management System</td>
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<tr>
<td>UAG</td>
<td>Université Antilles Guyane</td>
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<tr>
<td>UDS</td>
<td>Unit for Disaster Studies</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
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<tr>
<td>UNEP</td>
<td>United Nations Environmental Programme</td>
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<tr>
<td>UNDRO</td>
<td>United Nations Disaster Relief Office</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<tr>
<td>WMO</td>
<td>World Meteorological Organization</td>
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<tr>
<td>WSSI</td>
<td>World Seismic Safety Initiative</td>
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<tr>
<td>WOVO</td>
<td>World Organization of Volcano Observatories</td>
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