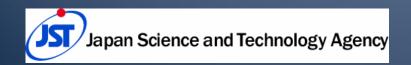
A Survey-Research on Scientific-Technological Methods and Socio-Cultural Assessment for the Emergency Restoration of Official Documents in Super Typhoon-Affected Areas in the Philippines

Mamoru Tsuda
Professor and Principal Investigator
Nagoya University of Foreign Studies

16 April 2015, Eastwood Richmonde Hotel, Quezon City Japan-Philippine Urgent Collaborative Projects regarding "Typhoon Yolanda" within the J-RAPID Program





POST-DISASTER ASSESSMENT OF ACADEMIC LIBRARIES AND GOVERNMENT OFFICES IN EASTERN VISAYAS AFFECTED BY SUPER TYPHOON HAIYAN

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ACADEMIC LIBRARIES



OBJECTIVES (Study I)

The study aims to identify:

- the factors that contributed to the extent of damage in the libraries and the collections;
- the level of knowledge of the library staff on disaster management;
- the strengths and weaknesses of existing disaster management plans;
- the disaster preparedness and recovery efforts done by the librarians.

Table 1. Profile of Libraries Surveyed

	f	%
State Universities and Colleges (SUCs)	7	77.78
Private	2	22.22
Physical Structure		
Concrete (Cement and Steel)	6	66.67
Mixed (Cement and Wood)	3	33.33
Distance from the Shoreline		
Less than 25 meters	1	11.11
25.1- 50	1	11.11
50.1- 75	1	11.11
75.1-100	1	11.11
100.1-500	4	44.45
In the capital (too far from the shoreline/river)	1	11.11
With Disaster Management Plan?		
Yes*	2	22.22
No	7	77.78
Intends to draft and implement DMP?		
Yes	6	85.71
No	1	14.29

Eastern Visayas (n=9)

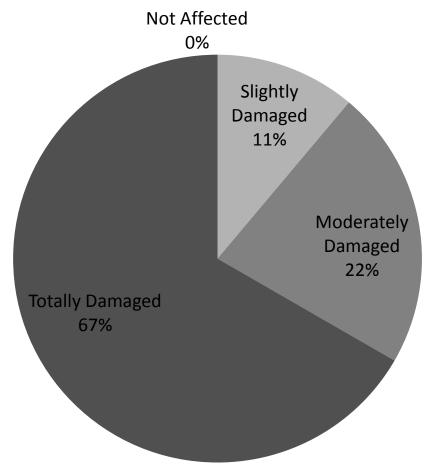




Figure 1. Perceived Damaged to Library Buildings and Collections

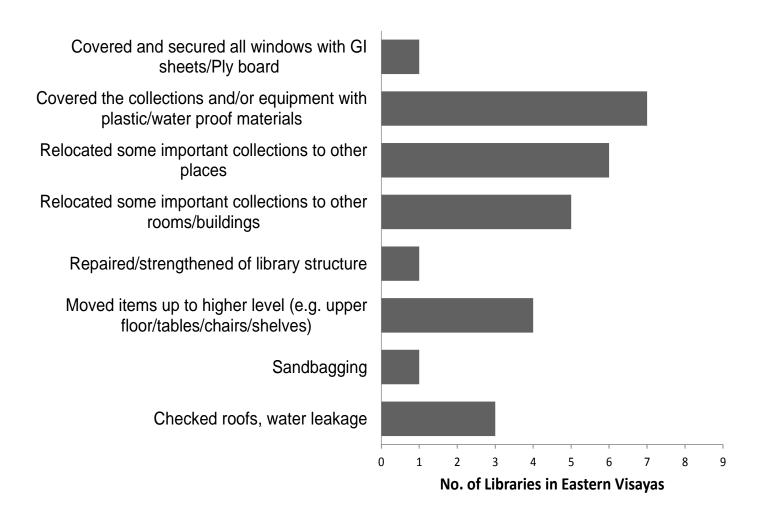


Figure 2. Preparations done in Libraries before typhoon Haiyan struck

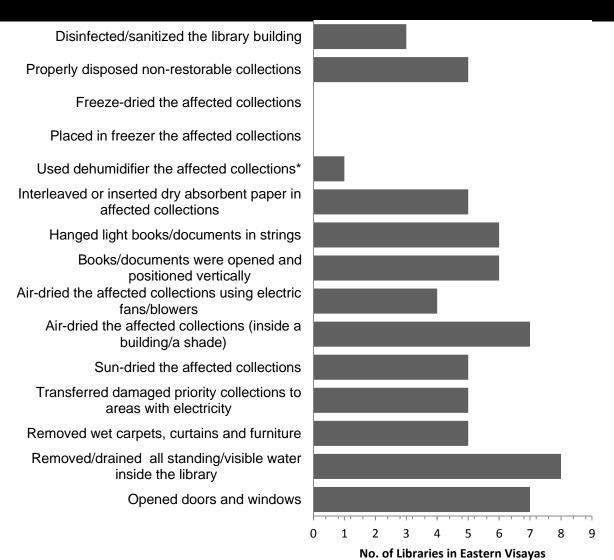


Figure 3. Recovery efforts done by librarians in Eastern Visayas

GOVERNMENT RECORDS OFFICES

- Determine the extent of damage on records
- Determine the immediate response applied after the typhoon
- Identify on-going recovery programs
- Describe the institution/office's disaster
 management practices and needs in terms of
 disaster management and preparedness program in
 the areas of:
 - Building, Environment, Storage, Housekeeping, Training Needs
- Conduct basic conservation and preservation trainings on the affected offices

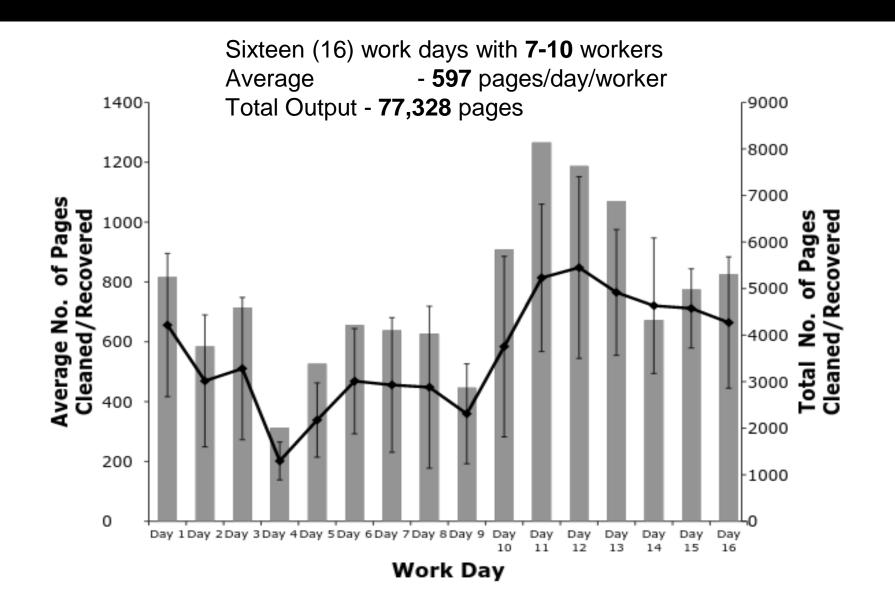


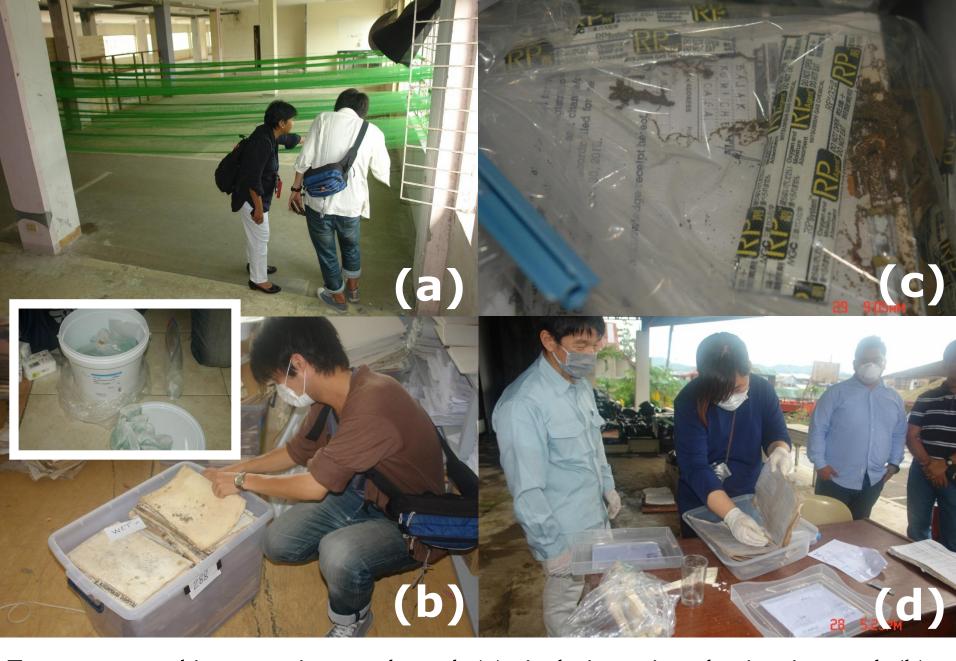
Case I. Documents to be cleaned by casual workers (a) before cleaning (b) demonstration was conducted (c) basic tools used (d) finished product

Cash for Work Program



Figure 4. Number of pages cleaned by Cash for Work program casual workers





Treatments and intervention conducted- (a) air drying using plastic wire mesh (b) silica gel (c) oxygen and moisture absorbent (d) immersion to tert-Butyl Alcohol



Examples of documents (a) to be recovered (b) enclosed in a folder (c) with ink blotting and (d) beyond recovery











(a) The use of Japanese Tissue (b) "grooming" (c) use of tapes (d) scanning and digitization

ENTRANCE FEES FOR 1st SEMESTER

	301100L TEAR 2014-2015					
MISCELLANEOUS FEES ONLY	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR	MIDTERM/FINALS: TUITION FEE 150.00/unit 1
REGULAR FEES						130.00/unit 5
Registration Fee	50.00	50.00	50.00	50.00	50.00	
* Athletic Fee	150.00	150.00	100.00	100.00	100.00	SDF (Student Development F
Library Fee	50.00	50.00	50.00	50.00	50.00	300.00 (1st-5
Sub-total	250.00	250.00	200.00	200.00	200.00	to be collect
TRUST FUND						
Medical/Dental Fee	100.00	100.00	100.00	100.00	100.00	LABORATORY FEE:
Trust Fund	50.00	50.00	50.00	50.00	50.00	70.00/hr
Student Services Fee	50.00	50.00	50.00	50.00	50.00	COMPUTER LABORATORY F
** School Organ Fee	100.00	100.00	50.00	50.00	50.00	200.00/subje
Library Trust Fund	25.00	25.00	25.00			SALES OF THE PERSON NAMED IN
*** Supreme Student Govt. Fee	50.00	50.00	50.00			
* Cultural Fee	150.00	150.00	50.00			
Student Devt. Fee	200.00	200.00	200.00	-	STATE	THE RESERVE TO SERVE THE PARTY OF THE PARTY
Scuaa Fee	15.00	15.00	15.00	MARIE		
Guidance Fee	30.00	30.00				(ISSAN/USE ONT)
NSTP/CWTS	225.00					
ID Fee	75:00	770.00	590.00	300		
Sub-total	1070.00	770.00	790.00	,	A STATE OF THE PERSON NAMED IN	The state of the s
TOTAL	1320.00	1020.00	100,00	The same of		

^{*} Board Resolution No. 21,s.2010.

TOTAL



^{**}Board Resolution No. 84,s.2010.

^{***}Board Resolution No. 61,s.2008

Findings

- The extent of damage and delay in the recovery of records reflects the current practices in terms of planning, coordination, response and delegation of responsibilities in selected libraries and offices in the affected areas in the Visayas
- Records recovery responses were not immediate due to lack of disaster management plan
- Some of the initial efforts were not responsive or have only caused further deterioration as standard practices in records response and recovery were not followed
- Unavailability of materials to be used is one of the problems that hampered the records recovery activities
- Records are not on top priority
- While some institutions have existing Disaster Management Plans, records recovery is not included.

Recommendations 1

Records recovery and restoration (Immediate)

- Continuation of the Cash for Work program, with the technical assistance of trained personnel (librarians, archivists, records officers) to hasten the recovery and preservation of records
- Rehabilitation of libraries and records offices with supplies and equipment necessary for the long-term storage and preservation of these recovered records
- Training of librarians, library staff, records officers, and other stakeholders responsible to the management of institutional records
- Practical measures could be employed to minimize risk.

Recommendations 2

Disaster Management Plan (Long-term)

- Disaster Management Plans should be developed in institutions which will also include the risk assessment and procedures for disaster response and recovery of their records.
- Establish collaboration among librarians, records officers, archivists and disaster management agencies concerned to identify the current the level of vulnerability to disasters, identify available resources, training needs assessment and collaborative procedures for immediate response

Thank you!

Assessment of the conservation intervention on the records of the **Professional Regulation Commission Regional Office in** Tacloban city, Leyte, Philippines damaged by supertyphoon "Yolanda" (International name: Haiyan)

Report of Yolanda C. Granda, Chair, and Lourdes T. David, Member, Professional Regulatory Board For Librarians

Background

 The Professional Regulation Commission (PRC) Regional Office in Tacloban City, Leyte, a government office that manages the regulation and licensing of various professions and occupations under its jurisdiction, was among the numerous government offices whose records were severely damaged on November 8, 2013 by supertyphoon "Yolanda" (International name: Haiyan).

Importance of Records

 Records are material evidences of the business processes and activities of an institution. The proper organization and preservation of these records is a primary responsibility of each agency to promote accountability and transparency for good governance, and to develop a comprehensive archive which will document the growth and development of the institution and the important contributions of its officials and staff.

The PRC Regional Office in Tacloban

- The Philippine Regulation Commission (PRC)
 Regional Office in Tacloban City, Leyte, a
 government office that manages the regulation
 and licensing of various professions and
 occupations under its jurisdiction.
- It was among the numerous government offices whose records were severely damaged on November 8, 2013 by supertyphoon"Yolanda" (International name: Haiyan).



The Commission's Regional Office is located on the first floor of this building hence all of its records were soaked in muddy seawater and rainwater.

Initial response: Telephone instructions

- keep records intact but segregate thoroughly wet records from slightly wet records;
- stabilize the area containing the records;
 and
- •start salvaging records as soon as possible but only if there is staff with knowledge on records recovery and conservation.

Problem

- People were not concerned about salvaging records. They were concerned about rebuilding lives.
- There was no trained archivist in the office
- There was no response and recovery management plan for records in case of a disaster.

Objectives of the Study

- This study aimed to assess the results of the conservation intervention rendered by the PRBoard for Filipino Librarians (PRBFL)on the vital records of the PRC Regional Office in Tacloban, Leyte damaged by supertyhoon Yolanda;
- identify problems encountered before and after the initial assistance provided; and
- Train office staff and volunteers of the Regional Office with assistance from the SFA, JICA, and JST on records salvaging and recovery.

Condition of the records before treatment



Some of the wet and muddied vital records Damaged by "Yolanda" (Haiyan) that had to be shoveled out from the mud.

Muddy Records for Washing



Cleaning the Vital Records

The washing and wrapping in nylon cloth took two and a half days. The procedure followed is standard for salvage and recovery of records soaked in water and mud, (USA National Archives and Records Administration, 1993).





Removing Mud

Washing

Washed and Wrapped Records



After washing and treating with alcohol records were wrapped and packed for freeze or air drying. Unfortunately neither electricity nor freezers were not available

Dry records for cleaning



Although the washed records were not kept in the freezer, they did not get moldy and the sheets did not stick tightly together.

Unwashed Records

 Records which were not washed and treated with alcohol became moldy





Moldy records were treated with ethyl alcohol and paradichlorobenzene

Records that are not thoroughly soaked



 Records that were not thoroughly soaked were removed from the wet envelopes for drying and cleaning.

Cash for Work Program

 After the initial work done by the Professional Regulatory Board for Librarians (PRBFL), the Society of Filipino Archivists (SFA) with assistance from JICA, a cash for work program was sponsored by JST as part of its scientific research program conducted in the disaster areas.

Outputs of the Cash for Work Program

- Certificates:
 - Washed—223
 - Dry cleaned—2787
 - Mended—190
- Permanent Registration cards (PERCS)—18 linear feet
- Identification cards
- Rating Records
- Official receipts
- Reports of Collection

Workers were trained to

- Wash muddied records
- Dry the washed records
- Separate the sheets
- Dry clean the records
- Mend sheets
- Sort and pack the records

Washing Muddied Records



Drying on Nylon Sheets



Separating Sheets



Cleaning Records



Repairing Records



Sorting Certificates



Recovered and Treated Records for Safekeeping



Conclusion

- The intervention of the volunteer teams was found effective in:
 - salvaging vital records which were thoroughly soaked in muddy salt water;
 - treating salvaged records to prevent further damage; and
 - training personnel and casual cash for work staff on the procedures to follow in salvaging and treating records thoroughly wet by salty muddy water.

Conclusion

- Problems before and after the initial assistance provided were identified:
 - The people were not concerned with recovering records because they were more concerned about recovering their lives and properties.
 - They were not trained to salvaged records damaged by seawater and rain water.
 - The office did not have a disaster management plan for records.

Conclusion

- The office staff and volunteers of the Regional Office with assistance from the SFA, JICA, and JST were trained on the salvaging and recovery of vital records.
- Washing and treating records with alcohol prevented molding.

Recommendations

- Continue the recovery and conservation of waterdamaged vital and archival records of PRC Regional Office in Tacloban;
- Provide further training to staff and volunteers on records management, archives management, records preservation, conservation and disaster management and establish a network of trained personnel in the area;
- Seek assistance from societies, agencies and volunteer groups to continue recovery work and training.

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Alcohol Treatment for Fast Drying of Flood-Damaged Documents:

A Case Study in Tacloban

Toshiharu Enomae, Ph.D. & Professor Tunchira Bunyaphiphat, Ph.D.

Life and Environmental Sciences University of Tsukuba, JAPAN

Save flood-damaged documents

Paper and books are damaged by flood, surge, and tsunami.

To inhibit mold growth





Saltwater inhibits mold growth



 As NaCl concentration increases, bacteria grew less.

Save flood-damaged

Paper and books are damaged by to flood, surge, and tsunami.

To inhibit mold growth





... time-consuming and labor-intensive

Immersion in saltwater

was proposed.

Post-drying paper properties

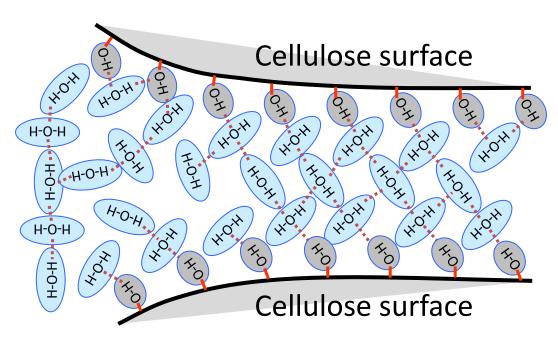
Drying method	Merits	Demerits
Air-drying Simple long drying time	Clean Strong	Shrinkage, Cohesion Brittle in water Ink jet inks runs
Freeze-drying Expensive Needs electricity	No shrinkage	Less strong after drying
Solvent exchange Needs TBA etc. Quick drying	Quick drying No shrinkage No cohesion	Some ballpoint inks run Less strong after drying

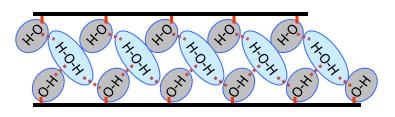
How tert-butyl alcohol works

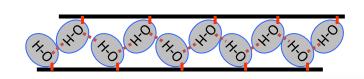
Inter-fiber bond formed by water

Interfiber approach and hydrogen bond formation due to water evaporation

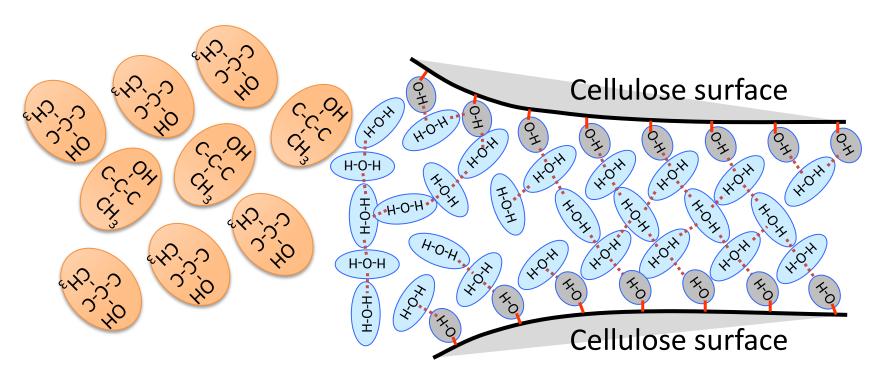
Loose hydrogen bond mediated by water





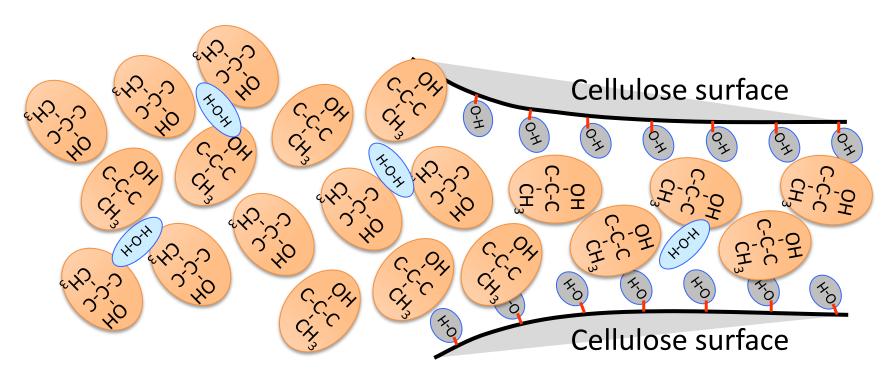


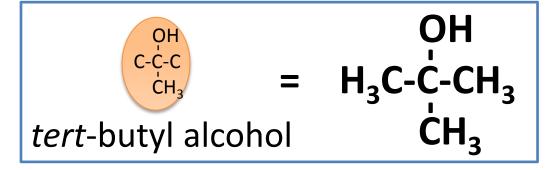
TBA dissolves water molecules.



$$C = H_3C - \dot{C} - CH_3$$
 $tert$ -butyl alcohol
 $C = \dot{C} + CH_3$

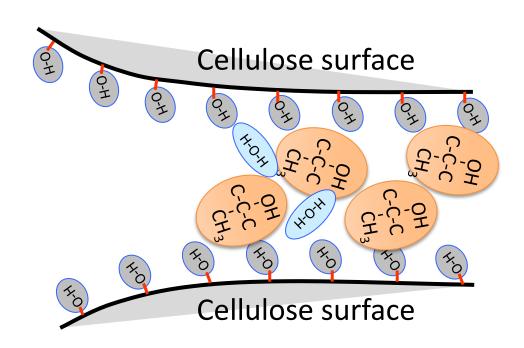
TBA dissolves water molecules.





Water molecules are replaced with TBA

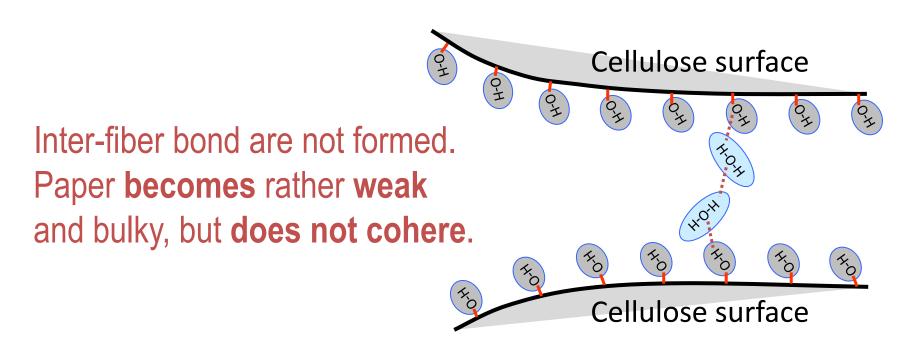
TBA evaporates more quickly than water.



$$C = H_3C - C - CH_3$$
 $tert$ -butyl alcohol

 $C = C + C + C + CH_3$

TBA evaporates.



$$C = H_3C - \dot{C} - CH_3$$
 $tert$ -butyl alcohol
 $C - \dot{C} - C + CH_3$

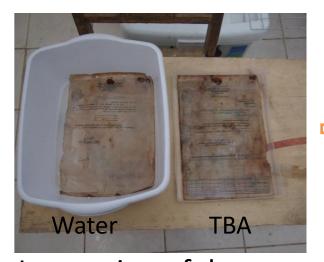
Typhoon Yolanda-damaged documents

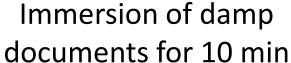












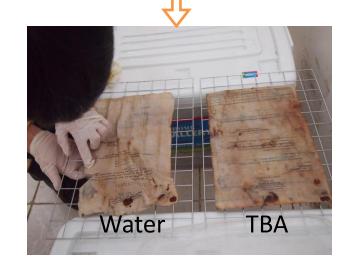


- Water reduced paper strength
- Easy handling with TBA

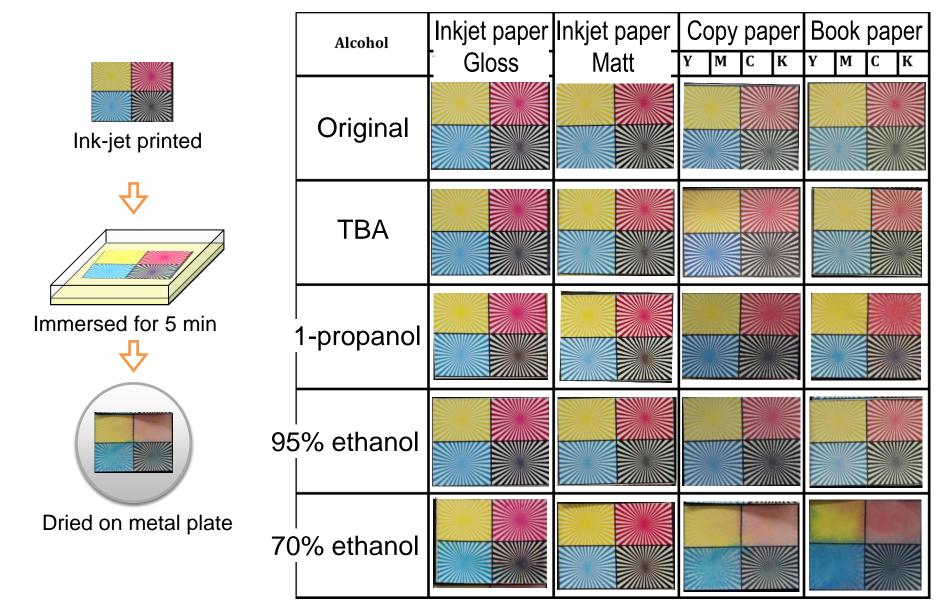




Taking out the documents

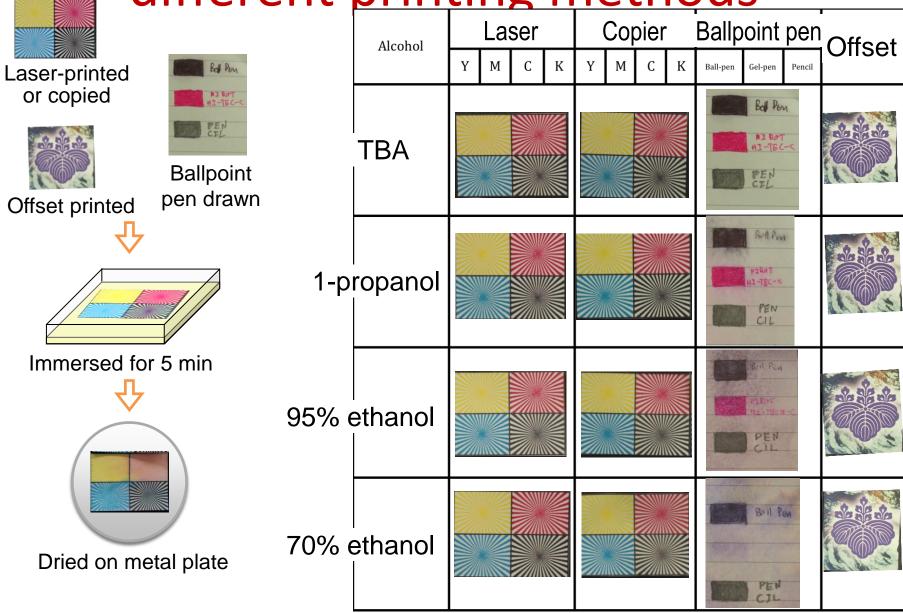


Ink bleeding test – inkjet on different papers

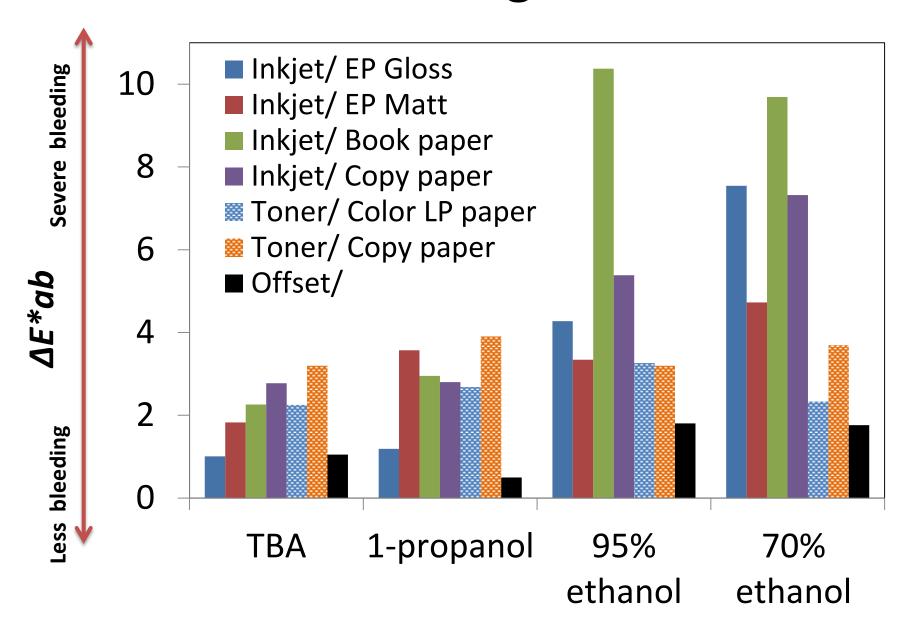


Ink bleeding test –

different printing methods



Ink bleeding test



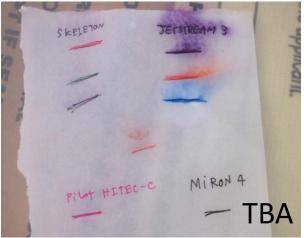
Ink bleeding test on site

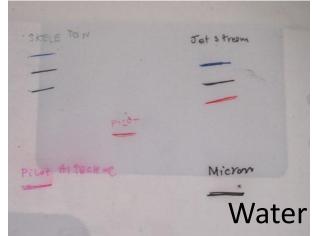
Stamp pad ink





Ballpoint-pen ink





Trying to peel adhered sheets



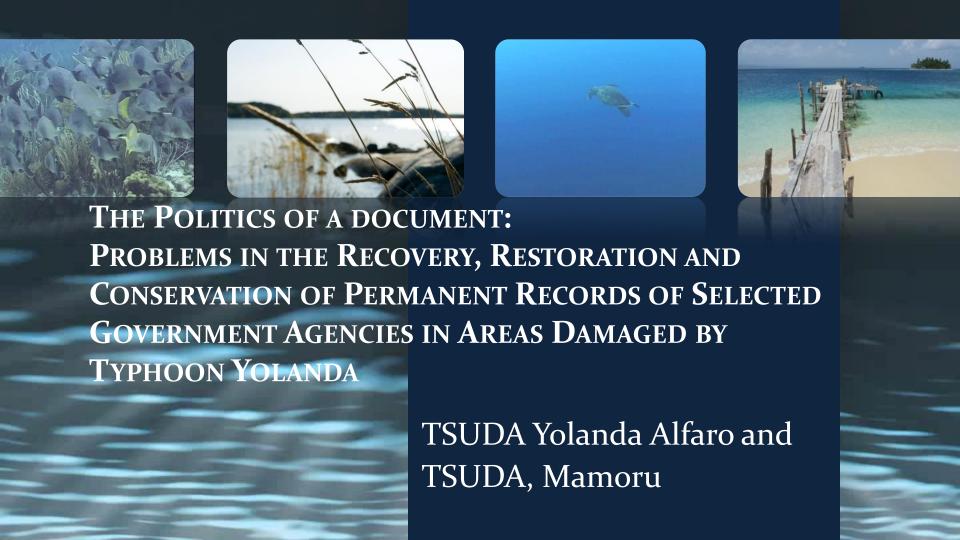
Conclusions

- TBA (t-butyl alcohol) dried damp documents quickly.
- Documents in TBA can be more easily handled than in water.
- Ink bleeding was not severe with TBA
- Adhered sheets of document was well peeled off with TBA for unknown reasons.

Thank you for attention.

Toshiharu Enomae, Professor & Ph.D. Tunchira Bunyaphiphat, Ph.D.

Life and Environmental Sciences University of Tsukuba, JAPAN



PERMANENT RECORD

This study looks at permanent records and national heritage-related documents. A Permanent record is document that retains its legal, administrative, and historical value without any time frame.

NATIONAL HERITAGE

National Heritage materials include books and manuscripts, photographs, sound recordings and moving images, archeological and ethnographic artifacts, art, and historical objects.

Impact of Disasters to Permanent Records and Heritage Collections

- Global catastrophes have increased by 250% (IDP, 2014). Since the 1970s, 68% of the world's population will reside in cities by 2050.
- Many of these cities are located near coasts, floodplains and fault lines, and are therefore vulnerable to floods, storms, earthquakes and other natural hazards.
- In calculating the impact of disasters, very little information is available regarding the damage to documents and heritage collections. This is true not only in the Philippines, but in most countries throughout the world (World Bank Working Paper on Climate Change, 2013).

RESEARCH WAS CONDUCTED ON MORE THAN 60 PUBLIC, PRIVATE, EDUCATIONAL AND RELIGIOUS INSTITUTIONS:

Preparedness Plan (Pre disaster phase)

Response Plan (On-going disaster phase)

>Recovery Plan (Post disaster phase)

PREPAREDNESS

- Onsite and Offsite copies at designated areas
- Dissemination of plans to all personnel (agency officers and staff, members of Response and Recovery Team/s) and emergency service providers
- o Familiarization of staff of records use and value
- Training of team members and others involved to be competent and committed to implement the plan
- o Regular testing, evaluation and revision of plan

INITIAL RESPONSE

- ❖ NATURE OF RESPONSE
 - Immediate/Timely
 - Effective
- ❖ INITIAL RESPONSE PROCEDURES
 - Implement response procedures set for a particular risk
 - Evacuation of people and removal of prioritized collection,
 - Emergency services, mobilization of response and recovery team/s and other needed resources

SECOND RESPONSE

- Documentation and assessment
- Stabilization of the environment for the collection

RECOVERY PLAN MAINTENANCE RECOVERY

Were permanent documents and heritage collections of national importance given priority in salvaging damaged materials?

Were all actions coordinated and documented?

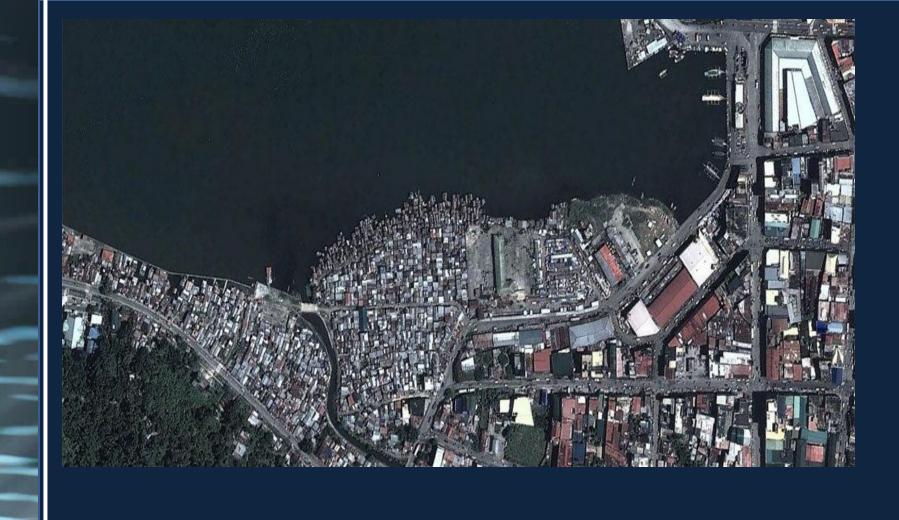


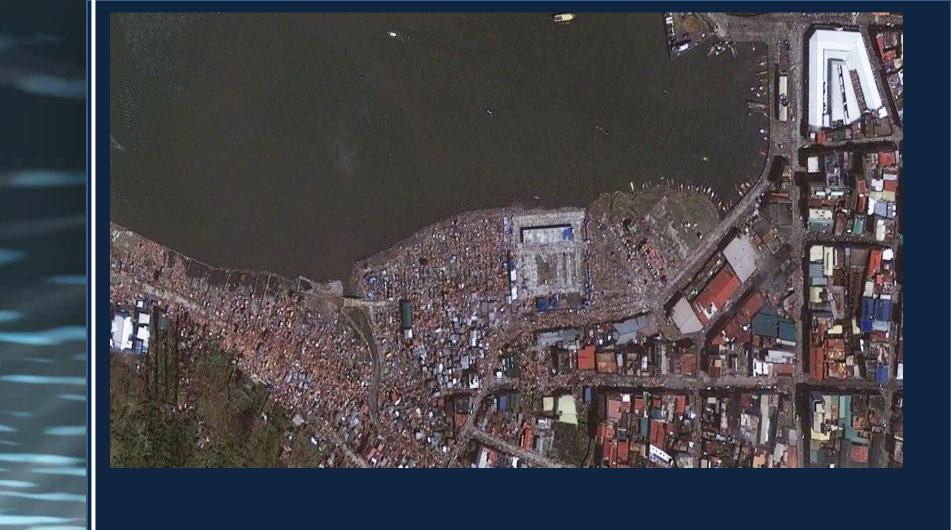
 No unified planning regarding documents conservation, preservation and rehabilitation

• Except for large educational institutions with libraries, there were no trained personnel in government agencies.

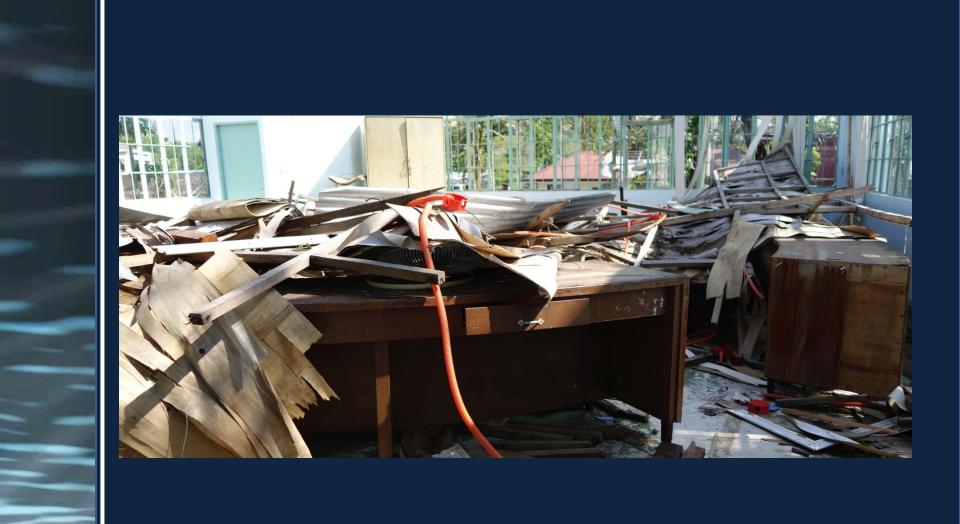
Physical Problem

Many of the government offices were located near the waterfront, particularly in the Government Center in Palo area and Tacloban City.









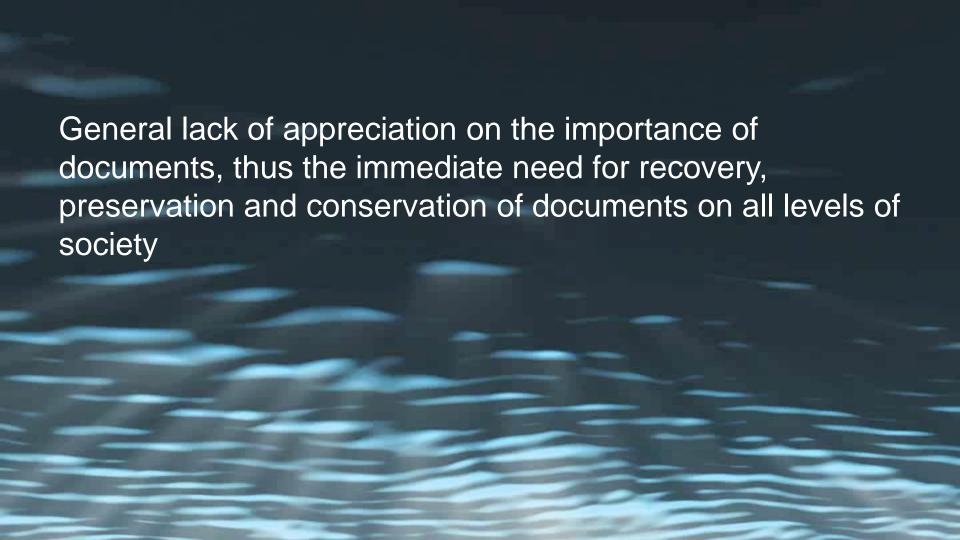
 While Disaster Programs were in place, little training was conducted; most of the staff were not trained for postdisaster scenarios in handling documents and records. Government personnel were trained for fire evacuation, not for inundation-related situations. Personal and political conflicts at the national and local levels (commonly referred to as "The Politics of the Family" i.e., between the Aquino and Marcos families and their allies in local, provincial and regional government offices), impacted on how the post-disaster work on conservation and preservation on permanent documents.

 The result was that there were competing and/or conflicting disaster-related mitigation in government offices exacerbated by centralized, Manila-based decision-making process

Lack of financial, including lack of funds to buy emergency supplies and employ temporary workers for the arduous work of salvaging, restoration and preservation.

Lack of leadership from government offices that are mandated with the task of salvaging and preserving permanent documents

Lack of coordination with local and international experts



Truck hauling away 5 tons of records





CASE STUDIES

CASE STUDY NO. 1: CIVIL SERVICE COMMISSION (CSC)

Central personnel agency of the Philippine government. Employees in the National Government Agencies (NGAs including SUCs) comprised 63.6% or 834,327 personnel, while Government Owned and Controlled Corporations (GOCCs) has a total of 94,759 personnel or 7.2%. In Region 8 alone, the total personnel complement in the Local Government Units (LGUs) was reached 60,000.

- Leadership of CSC was exemplary
- Despite lack of financial resources or staff with expertise in preservation, its top heads used personal linkages to look for funding
- The said leaders also were instrumental in moving wet and damaged documents from its storage facilities located near the pier and instigated drying process

CASE NO. 2:

DENR (DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES)

Its functions and responsibilities management of a wide range of natural resources, such as forest inventory and protection, land classification, watershed protection, water, biodiversity and mineral resources conservation and climate change. Bureaus include environmental management, mines and geosciences, ecosystems, land management and classification,

PENRO and CENRO – Palo, Leyte

LAND SECTOR Cadastral Survey, Handog Titulo

Protected Area Management Program

Wildlife Management Program

Coastal and Marine Management Program

LAND REGISTRATION AUTHORITY (LRA)

- Central repository of all land records involving registered or titled lands
- Keeps the title history or records of transaction involving titled or registered lands
- Exercises control over the disposition or alienation of lands
- Extends assistance in the implementation of the agrarian program
- Its a revenue-collecting agency of the government.

- DENR offices suffered heavily due to proximity to the seafront
- Records are made of paper (maps,titles, etc.) that are important to people's livelihoods and property
- Lack of funds to continue the arduous task of refiling land titles
- Lack of skilled personnel to handle American-era documents made of specialized paper

Case Study No. 3 COMMISSION ON ELECTION (COMELEC)

- Constitutionally independent body from the executive, legislative and judicial branches of government;
- Tasked to ensure the conduct of free, fair and honest elections.
- Voter's ID is the most commonly used in the Philippines (more than driver's license, passport, etc.)

	•	•		
		֡		

- Like the Civil Service Commission (Case Study 1), COMELEC leadership were instrumental in early salvaging, restoration and preservation of voters' IDs
- Being a specialized government office, it faced more severe monetary problems
- Officials exercised exemplary leadership in personally looking for ways to employ workers in restoration and preservation efforts.

DEPARTMENT OF AGRARIAN REFORM

- It is the lead implementing agency of Comprehensive Agrarian Reform Program (CARP). It undertakes land tenure improvement, development of program beneficiaries, and agrarian justice delivery.
- Its mission is to lead in the implementation of agrarian reform and sustainable rural development in the country through land tenure improvement, the provision of integrated development services to landless farmers, farm workers, small landowner and landownercultivators, and the delivery of agrarian justice, as key to long lasting peace and development in the countryside".

			=

- Like DENR, its records were almost completely destroyed due to proximity to the seafront.
- Changes in leadership made the salvaging, conservation and preservation efforts very difficult
- Lack of financial resources to initiate restoration and preservation
- Despite a good pre-disaster records management, lack of expertise and small number of staff made the salvaging, conservation and preservation efforts very difficult

•

DOCUMENTS ARE DIRECTLY/INDIRECTLY RELATED TO:

- Governance
- Human Rights
- Legal
- Security (Police and other peace and order-related institutions)
- Identity
- Revenue and Taxation
- Community and Familial Relations
- Property

The experiences during the post-Typhoon Yolanda restoration, preservation and conservation of permanent documents should be used as a model to prepare all governmental, educational, private and religious institutions as to the importance and ways of pre and post disaster records management.

Records are at the heart of good governance.