ポスターセッション
Poster Session

ポスターセッション参加者プロフィル、アブストラクト、ポスター
Participants' Profiles, Abstracts, and Posters

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ポスターセッション参加者プロフィルとアブストラクト/
Poster Session Participants' Profiles and Abstracts

ポスターセッション統括 ／ Overall Coordination of Poster Session

澤田雅浩（兵庫県立大学大学院減災復興政策研究科准教授）（座長）

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1972 年 1 月 10 日 広島市生まれ
慶應義塾大学環境情報学部卒（94 年）
同大学院 政策・メディア研究科修士課程終了（96 年）
同大学院 政策・メディア研究科後期博士課程単位取得退学（00 年）
博士（政策・メディア）
2000 年 4 月より 長岡造形大学環境デザイン学科講師として着任
2007 年 4 月より 長岡造形大学建築・環境デザイン学科准教授
2010 年 4 月より 長岡造形大学復興支援センター センター長（兼任）
2017 年 4 月より 兵庫県立大学大学院減災復興政策研究科准教授
現在に至る
専門は都市計画、都市防災、災害復興計画

修士課程在学中に阪神淡路大震災が発生し、現地での調査活動・ボランティアに従事し、安全で安心な都市を作る必要性を痛感、都市計画の中でも都市防災をメインテーマとして研究を行う。海外でも 99 年に発生したトルコマルマラ地震や台湾集集地震からの復旧・復興調査を継続的に実施している。

中越地震以降は被災状況の調査を行うだけでなく、地域の復興支援や今後の防災のあり方に関する研究や実践を行っている。震災直後は GIS を活用した外部支援として「中越地震復旧・復興 GIS プロジェクト」の事務局も務めた。

現在は公益社団法人 中越防災安全推進機構 理事（長岡震災アーカイブセンターきおくみらい館長）公益財団法人山の暮らし再生機構理事、NPO 法人ふるさと未来創造堂理事長等を務めている。防災減災、復興に関連しては岩手県大船渡市復興計画策定委員会委員、兵庫県西宮市地域防災計画検討委員会委員などを務めている。

著書に「中越地震から 3800 日 復興しない被災地はない」ぎょうせい 2014（共著）「災害フィールドワーク論」古今書院 2014（共著）「都市計画とまちづくりがわかる本」彰国社 2012（共著）「都市防災学」学芸出版社 2009（共著）など

Masahiro Sawada (Associate Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo) (Session Chair)

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Prof. Masahiro SAWADA is an Associate professor at Graduate school of Disaster Resilience and Governance, University of HYOGO. He specializes in Urban and Rural Planning and has collaborated in the reconstruction of Yamakoshi Village and Higashiyama District of Ojiya-City after the Niigata-Chuetsu earthquake 2004, planning relocation and developing projects like “Kioku-mirai” Museum (Reconstruction Process Archive from the Niigata-Chuetsu Earthquake).

He has served on the board of institutes (Chuetsu Organization for Safe and Secure Society,), and written articles about the Reconstruction Process from Earthquake Disaster(A Study on Administrative Support in Revival Process from The Niigata Chuetsu Earthquake in 2004) on 6th International Conference on Urban Earthquake Engineering and about a Sharing Disaster Information(A Study on the Technique for Information Sharing and Presentation of Earthquake Disasters) in Journal of Natural Disaster Science and so on. He is currently working on support for Reconstruction Planning in 3.11 Earthquake(and Tsunami) Disaster affected Areas(Ofunato-city, etc..) He received his B.A.(Environmental Information) in 1994 from KEIO University and his Master of Media and Governance in 1996 from KEIO University. He received his Ph.D. in Media and Governance in 2006 from KEIO University.

アレサンドロ パスート（イタリア国立研究評議院・地質水文保全研究所 研究部長）（共同座長）

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学位：地質科学（パドバ大学）
専門分野：応用地質学、地形学、防災（特に地滑りリスク評価及び対策）
国際協力：EU 資金によるプロジェクト多数、イタリア研究評議院と日本国土交通省の研究協力、イタリアー日本水文地質学共同研究ラボの設立、テルネット創設メンバーほか

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Degree in Geological Sciences at University of Padova and now Research Director at National Research Council of Italy (CNR). He is currently Acting Director of the Research Institute for Geo-Hydrological Protection (IRPI). and President of the Padova CNR Research Area. His activity is mainly focused on applied geology and geomorphology as well as natural hazard with special emphasis in landslide risk assessment and management.

Since the beginning of his career he is continuously involved in many International Projects mostly funded by European Commission.

Since 1990 he is consultant of the Italian National Department of Civil Defence during emergencies related to hydrogeological disasters in NW Italy.

Since 1999 he is in charge of the CNR- MLIT (Ministry of Land, Infrastructures, Transport and Tourism of Japan) scientific cooperation. In this framework in 2003 he established GRJL, Geo-Risk Joint Lab, Italy-Japan Joint Laboratory on hydrogeological risks supported by Italian Ministry of Foreign Affairs. Moreover in 2005 he was founder member of TellNet, "International Disaster Transfer Live Lessons Network, established in Kobe during the 2nd United Nations World Conference on Disaster Risk Reduction.

Member of the Italian official delegations at the 2nd and 3rd UN World Conference on Disaster Risk Reduction (Kobe, Japan 2005; Sendai, Japan 2015).

Since 2014 he is coordinating bilateral scientific research activities between CNR-CAS (Chinese Academy of Sciences) on landslides hazard and in 2017 in cooperation with Institute of Mountain Hazard and Environment he established the Sino-Italian Joint Laboratory on Geological and Hydrological Hazards based in Chengdu (Sichuan, China).

He is member of the European Landslide Expert Group and of the Executive Committee of CERG (European Centre on Geomorphological Hazard).

He is involved in research studies in several foreign countries such as: Japan, China, Malta, Svalbard Islands (Norway), Argentina and manages research groups in Italy and abroad. Moreover, he collaborates with several universities and research centres both in Italy and abroad. He is author of more than 200 scientific papers and acts as guest editor for prestigious journals.

ポスターセッション発表者 / Poster Session Participants

ダム・リープ（国連人間居住計画（UN-Habitat）カンボジア事務所）
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ダム・リープは、UN-Habitat カンボジア事務所で防災関連プロジェクトのコーディネーターとして活躍している。プロジェクト活動全般の実施と、様々な関係団体と連携し、円滑なプロジェクトの運営に努めている。プロジェクト対象地域であるカンボジアのトボンクモム州で、パートナー、関係機関、裨益者などとのコミュニケーションや連絡調整を図り、プロジェクトの成果が住居基準に則ったものであるよう管理を行い、進捗状況のモニタリング・評価と活動内容の調整業務を担当している。 UN-Habitat で防災プロジェクトに携わる以前は、 UN-Habitat、IFRC とカンボジア赤十字、 New Humanity、 CARE International などの NGO で様々な防災プロジェクトに従事してきた。

Leap Dam (United Nations Human Settlements Programme (UN-Habitat))
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Mr. Leap Dam is a Project Coordinator for the above-mentioned DRR project of UN-Habitat. He is responsible for the implementation of overall project activities, facilitation of efficient project implementation in close collaboration with all stakeholders. He ensures: good communications and coordination with partners, stakeholders and beneficiaries; compliance of the project outputs to the shelter standards in an accountable manner, and; monitoring and evaluation of the progress and quality of all project activities in Tbong Khmom province. Prior to joining UN-Habitat, he also worked with many DRR projects with Habitat for Humanity, IFRC and Cambodian Red Cross, New Humanity, CARE International, and other NGOs in Cambodia.

災害に強い住宅を全ての人々に
－メコン川沿い集落における災害に強い住宅建設に向けたコミュニティの教訓－

ダム・リープ（国連人間居住計画（UN-Habitat）カンボジア事務所）

カンボジアは世界でも最も自然災害に脆弱な国の一つであり、洪水、台風、強風などの被害を繰り返し受けることで、多くの命が失われたり、人々の暮らしが破壊されたりした。2018 年、熱帯台風ソンティンがもたらした豪雨により、ラオスのセナムノイダムが決壊し、カンボジアのダム下流域にあたる 5 つの州では大洪水が発生、62,317 世帯の生活に影響し、16人が死亡、5,398 世帯が避難を余儀なくされる事態となった。メコン川流域に位置する農村部の貧しいコミュニティでは、多くの家屋が崩壊した。これにより、多くの世帯が自宅を離れて、十分な食料や安全な飲み水もなく、衛生状況も十分ではない避難所での生活を強いられることとなった。

この洪水被害への対応として、国連人間居住計画（UN-Habitat）は日本政府の支援の下、2019 年 4 月より「カンボジアにおける生活環境改善及び防災能力向上支援プロジェクト」を実施している。本プロジェクトは、洪水被害を受けたコミュニティで、より安全な住宅の再建に迅速に対応することを目的としている。環境に配慮した持続可能な建築資材を活用し、災害に強い住宅を供給している。UN-Habitat は、"People's Process"（人々のプロセス）と呼ばれる手法を用い、住宅再建にコミュニティメンバーの参加を促しながら、彼らの知恵と技術を活かしてプロジェクトを進めている。本プロジェクトでは、2020 年 3 月末までに200棟余りの被災住宅を再建あるいは補修することになっている（対象地域全体で2000世帯余りへの裨益）。

災害を語り継ぐという本フォーラムの趣旨に合わせ、 UN-Habitat のプロジェクトスタッフは、防災減災戦略をいかに住居建築に織り込むことができるかについて、コミュニティの視点から発表する。2018 年にメコン川流域のコミュニティを襲った大洪水の被害状況、被

災地域のマッピング作業、コミュニティの組織化、低コスト建築資材の調査、防災建築デザイン、住居再建など、プロジェクトの活動内容について紹介する。コミュニティを組織化するプロセスは、経験や教訓を互いに共有し、自然資源管理や資材の再利用、強固な社会的ネットワークなどを通して、災害への適応能力を高めていくうえで非常に重要である。本発表では、UN-Habitat がプロジェクトを実施し、カンボジアの風土に適した災害に強い住宅を建築する上で、コミュニティの経験がいかに重要な役割を果たしているかについて考える。

RESILIENT HOUSING FOR ALL

Incorporating community lessons in building disaster resilient housing of the Mekong river communities

Leap Dam（United Nations Human Settlements Programme (UN-Habitat)）

Cambodia is one of the world's most vulnerable countries to natural disasters and the country has suffered repeatedly from floods, storms and strong winds which has caused the loss of lives and destruction of livelihoods. In 2018, due to the heavy rainfall from Tropical Storm SON-TINH, the Sepa-Nam Noi dam in Lao PDR collapsed affecting 62,317 households, causing 16 deaths, and forced 5,398 households to evacuate in the five downstream provinces in Cambodia. The rural poor communities near the Mekong river have suffered the destruction of their houses. Many families have been forced to evacuate their homes to the shelters with no sufficient food and access to clean water and sanitation.

As a response to the flooding, UN-Habitat in Cambodia with the support from the Government of Japan has been implementing the "Project for Improving Living Environment and Disaster Prevention Capacity in Cambodia" since April 2019. The project consists of the reconstruction of housing to respond to the immediate need for safe shelters in the flood-affected communities. It focuses on providing housing that is resilient to disasters using environmentally sustainable materials. UN-Habitat has been taking a unique approach called "People's Process" that involves the participation of the community members in housing reconstruction and the use of their knowledge and skills. The project aims to complete the full reconstruction and repair of over 200 houses by March 2020 that will benefit over 2,000 families.

In line with the forum's theme of telling live lessons of disaster memories, UN-Habitat's project staff will present the organization's experience in incorporating disaster risk reduction (DRR) strategies into housing construction from the community perspective. The project staff will provide an overview of the impact of the 2018 flooding on the populations residing in the communities located along the Mekong river. The presentation will cover the activities of the project which include mapping of the disaster-affected villages, community establishment, low cost materials survey, disaster-resilient housing design and reconstruction of housing. The community establishment process is vital

in exchanging experiences and lessons learned and in revealing their adaptive capacity to deal with disasters through natural resource management, reuse of materials and strong social networks. The presentation will highlight how the community experiences can play a pivotal role in implementing UN-Habitat's project and in reflecting DRR strategies in resilient housing in the Cambodian context.

ジャン イ（セイブ・ザ・チルドレン 中国）

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Jiang Yi は、中国子供を救うプログラムの上級プロジェクト責任者である。また、雲南農業大学の MSW プログラムの講師を務め、新世紀教育安全科学技術研究所の研究者である。現在、彼女のプロジェクトと研究は、児童保護、学校の安全とソーシャルワーカーの臨床研修に焦点を当てている。Jiang Yi は、2008 年から 2013 年まで、Give2Asis のプロジェクトマネージャーとして、海外から中国本土へのプロジェクトを設計し、助成金を担当していた。2008 年の四川大地震の後、彼女は 1600 万ドル以上の資金で、緊急救援、復旧、再建プロジェクトのために 100 件以上の助成金を作成・管理した。経済法と国際学の修士号を取得し、Jiang Yi は 1st Summer University of East Asia の映像人類学を卒業した。2017 年、彼女は米中関係委員会の専門家であった。

Jiang Yi (Save the Children, P.R. China; Social Work Department, Yunnan Agriculture University, P.R. China; New Century Institute of Education and Safety Science and Technology, P.R. China)

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Jiang Yi is now Senior Project Officer with Save the Children China Program. She is also Tutor of MSW Program in Yunnan Agriculture University and Researcher of New Century Institute of Education and Safety Science and Technology. Currently, her project and research focuses on child protection, school safety and social worker clinical training. Jiang Yi was Project Manager with Give2Asis from 2008 to 2013, in charge of project design and grant-making from overseas to Mainland China. After 2008 Sichuan Earthquake, she made and managed over 100 grants for emergency relief, recovery and rebuilding project in amount of funds over $16million. With M.A. in Economic Law and International Studies, Jiang Yi also graduated from the 1st Summer University of East Asia Institute of Visual Anthropology. She was the 2017 Professional Fellow Program Fellow of National Committee on U.S.-China Relations as well.

中国の文脈での災害記憶

ジャン イ（セイブ・ザ・チルドレン 中国）

このプレゼンテーションでは、主に 2008 年四川地震以降の最近数十年に焦点を当てて、災害を記憶することの必要性と重要性を指摘し、中国の文脈における災害を記憶する方法について議論している。災害を記憶する方法を整理した上で、子どもを向けに、DRR の災害記憶関連教育を盛り込むことを提案し、ドラマ教育方法論を提案する。

記憶は過去と現在をつなぐ橋である。記憶は、個別および集合的に保持および保存さている。物語を語り、物語を聞くことで、記憶は生き続ける。何が起こったかを思い出すために、例えば災害、場所と時期、原因と効果、対応と責任などは、人間が同様の事件を避けたり、よりよく対応したりするのに役立つ。

中国では、いくつかの覚える方法を整理している。

まず、メディアのニュースとジャーナリズムが保存している。例えば 2008 年四川大地震後に、主流メディアの中継ニュースでは、災害の規模、死傷者数、災害損失や、政府が中心となった緊急救援と災害後の活発な復興にスポットライトを当てており、その過程を英雄主義として強調した。一部のメディアは、災害を経験した個人に関する詳細な報告を行ったが、その中の多くは、生き残るか救助するかに関する伝奇的な経験であると言われている。このような報道では、民俗的ナラティブの方法を用いる。ジャーナリストのガイドと統制により、インタビューを受けた個人とその物語をある程度に分類することが可能であるが、その物語はある程度に個人化されたものではなく、当時の社会が提唱した価値を表す可能性もある。さらに、報告された個人の災害の記憶は何度も繰り返され、その結果、雑多なものになり、物語を疎外する可能性がある。

2008 年の地震から 10 年後、中国で新しいメディアが非常に発達してきた。メディアは災害を報告・記念する主要なチャンネルになってきた。報道では、国家や政府だけではなく、徐々に人々に焦点を移し、個々の一般的な人々から家族まで、さまざまな角度からより詳細な中国の全体的な社会の変化と発展につながるストーリーを伝えるようになった。特に短いビデオやドキュメンタリーは主な動画製品となっている。VR 技術、航空写真技術、データインタラクションなどの新技術が広く使用されてきた。しかし、このような報道ではイノベーションと競争力をより重視しているため、災害そのものの記憶、教訓や経験への反省は、メディア制作の背景としては後退している。

第二に、災害博物館の建設を通じて記憶を保存している。代表的な災害博物館は、蘭州地震博物館、唐山地震記念公園、唐山地震記念館、建川博物館の紋川地震博物館、北川国立地震遺跡博物館（北川旧県の被災地を記念館として保存された）などがある。すべての博物館は、応急救援や災害後の復興、などを展示しており、災害の歴史を記録する機能を果たしている。災害に関する科学知識の普及啓発のエリアもある。

第三に、災害を保存する方法としての文学である。災害を書く際に、ルポルタージュ、映

画、テレビシリーズの脚本、フィクションなど、さまざまな形式の文学がある。ほとんどは、個人的な記憶を通して災害を書かれたものであり、書かれている個人個人は歴史的、文化的存在となり、集合的記憶の一部となる。このような文献は、人間の過去および現在の集合的記憶を再生する役割を果たし、後々、人間文化の構築に貢献する。

第四に、歌と音楽は災害記憶のキャリアとしての機能がある。私たちが知っているように、音楽は人体に独特な効果をもたらすことができる。文学や芸術という形で人々に精神的な喜び、励まし、教育を与えることに加えて、トラウマ治療も目を引いている。したがって、災害救援と災害後の再建プロセスでは、被災地で曲や音楽を書いたり歌ったりすることは多機能である。四川大地震の 10 年後に、ボランティアが作成した被災者を励ます歌は、重要な災害の記憶になってきた。

災害教育において、どうすれば子供に災害を覚えてもらうことができるか。

現在、中国の子どもに対する DRR 教育は、主に災害知識の普及、いわゆる災害の種類、災害の前兆と特徴、災害の原因、災害の規制・頻度、災害への対応能力、脱出・救助方法、心理的対応の仕方などを取り組んでいる。中国の子ども向け DRR 教育の発展に伴い、普及啓発、講義や講演、体験練習、課題学習、オンラインゲームなど、DRR 教育の形態はますます充実しているが、災害記憶に関する DRR 教育と災害の記憶方法はまだ空白である。

このプレゼンテーションでは、子どもたちに災害の歴史に心で触れさせる状況ドラマ式の教育方法論を提案する。子供たちは様々な被災状況を想定した劇を演じ、被災者や目撃者の気持ちを体験し、災害発生現場の体験やパフォーマンスを通じて共感の気持ちを生み出せてもらう。このような方法を通じ、子供たちは災害や歴史に直面するために、災害時に何が起こるか、起こったときに何をすべきかを考えてもらうことにより、個人の備えができ、被災軽減を効果的に実現する。最近、子どもたちの DRR 教育で状況ドラマを使用するパイロットがいる。例えば、子供向けのドラマ「西への旅（DRR の新バージョン）」は、四川省のセイブ・ザ・チルドレンと子供劇場が共同監督であり（2018 年）、北京教育管理局が主催した「百校百演劇」コンペティション（2019 年）がある。いずれでもさらに改善と開発の余地がある。

Remembering Disasters in China’s Context

Jiang Yi（Save the Children, P.R. China）

By pointing out the necessary and importance of remember disasters, this presentation discusses the topic of how to remember disasters in China’s context, and focuses on recent decades, mainly around 2008 Sichuan Earthquake and afterwards. After sorting out the methods of remembering disasters, this presentation proposes to include disaster memory-related education in DRR for children, and finally suggests a situational drama teaching methodology for such education.

Memory is the bridge connecting past and present. Memory is hold and preserved both

individually and collectively. By telling stories and listening to stories, the memory lives. To remember what had happened, e.g. disasters, where and when, cause and effective, response and responsibilities, etc. helps human being in avoiding or better dealing with the similar incidents/disasters in the future. Therefore, it is necessary and crucial to remember disasters.

Then, how to remember? There are several ways in China being sorted out.

First, remembering by media news and journalism. Right after each disaster, e.g. 2008 Sichuan Earthquake, occurs, pro-government mainstream media immediate reports news very much focus on the magnitude of disaster, number of casualties, disaster losses, with spotlight hitting on government-centered emergency relief and vigorous post-disaster rebuilding, and render heroism in the process. Some media conducts in-depth reports on individuals who have experienced the disasters. Many are said to have legendary experiences in survive or rescue. The report use a method of folk narratives but by journalists' guide and control, which may lead to categorization of the interviewed individuals and their narratives to some extent represent the values advocated by society at that time rather than the individualized ones. In addition, the reported individuals' memories of disasters were aroused over and over again, which results in miscellaneous and may further lead to alienate narrative.

Years later, e.g. one decade after 2008 Earthquake, when new media is very developed in China, it becomes a main channel to report and commemorate disasters. Reports gradually move their focus on people rather than only the State or government and the stories were told from different angles, from individual common people to families, detail-oriented, through a slice of live perspective to link with China's overall social change and development. Video becomes mainstream products in reporting, especially short videos and documentary. New technology such as VR technology, aerial photography technology, and data interaction were widely used in producing. However, the reports emphasize more on innovation and competitiveness, therefore, the memory of disasters itself and reflection on lessons and experiences were retreated only as the background of the media productions.

Secondly, to remember through construction of disaster museum. Some representative disaster museums include the Lanzhou Earthquake Museum, the Tangshan Earthquake Memorial Park, the Tangshan Earthquake Memorial Hall, the Wenchuan Earthquake Museum of the Jianchuan Museum, and the Beichuan National Earthquake Relics Museum (consists of the Beichuan Old County earthquake site and memorial hall). The museums all function in recording the history of disasters, including relief and post-disaster reconstruction and exhibit display. Some have disaster-related science popularization and experience area.

Thirdly, literature as a way to remember disasters. There are various forms of literature in writing disasters, such as reportage, film and TV series script, and fictions. Though mostly the disasters were written through personal memories, each individual being written becomes the historical and cultural existence, therefore, becoming part of the collective memory. The literature plays a role in restate the past and present collective memory of human beings, and then contributes to construct of human culture.

Fourth, songs and music work as carrier of disaster memory. As we know, music has unique effect on the human body. In addition to giving people spiritual joy, encouragement and education in the form of literature and art, its unique method of treating trauma is also eye-catching. Therefore, in disaster relief and post-disaster rebuilding process, songs and music being written and sung in disaster-hit areas work well multi-functional. Ten years after Sichuan Earthquake, the songs created by the volunteers that encouraged the disaster survivors ever become the important disaster memory.

How to remember disasters in DRR education for children?

Currently, China's DRR education for children mainly pay attention to disaster knowledge spread, i.e. types of disasters, damages of disasters, precursor and features of disasters, causes of disasters, and regulation and frequency of disasters, etc., skills in responding to disasters, e.g. how to relieve, how to escape, how to rescue, and how to respond psychologically. Along with the development of China's DRR education for children, the forms of DRR education has been more and more enriched, including awareness raising publicity, lessons and lectures, experiential practice, drills, on-line games. However, the DRR education on disaster memory and how to remember disasters is still in a blank.

How to let children touch the history of disasters with their heart? This presentation puts forward the use of situational drama teaching methodology. In participating the situational drama play, children are guided to experience the feelings of disaster survivors and witness, to generate empathy through the experience and performance of children in the scene of disaster occurrence. In the process, the children will be led to think what might be done in that disaster situation and then what should be done when the disaster occurs again, so as to face up to and memorize the disaster and history, and will effectively realize the individual's precautions in disaster risk reduction. There are some pilots in using situational drama in DRR education for children in recently, e.g. child drama "Journey to the West (New Version on DRR)" co-directed by Save the Children and children's theater in Sichuan (2018), and "Hundred Schools Hundred Dramas" Competition organized by Education Administration in Beijing (2019), and also have space to improve and develop.

アブデシュ クマール ガングワル（RCE（持続可な開発のための教育に関する地域の拠点）スリナガル コーディネーター・代表）

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持続可能な開発のための教育に関する地域の拠点（Regional Centre of Expertise (RCE)）メンバー、同スリナガル支部コーディネーター。防災、気候変動、持続可能性など様々な取り組みに参画。年々高まる災害の頻度や規模を踏まえ、RCE はアジア太平洋 RCD 防災・減災害ネットワークを立ち上げた。

学校を単に物的に安全なだけでなく常に全ての人々に幸せをもたらすような場所にするというプログラムも実施している。子供たちや教師が所属するコミュニティの安全を高め

ることを目指すものである。

東日本大震災の現場や人と防災未来センターを訪問したこともある。インドではそのように災害に特化したミュージアムはないが、マルチメディアで移動式の展示を作り、それを使って各地で防災意識の啓発を行っている。RCE スリナガルは、世界各地の RCE と共に、国連大学サステイナビリティ高等研究所の支援を得て、持続可能で気候に適合し災害に負けないコミュニティを作っていくことに努力している。緑の地球、青い空、災害の無い世界が私たちの夢である。

Abdhesh Kumar Gangwar (Coordinator and Focal Point, RCE Srinagar, India)
(Regional Centre of Expertise on Education for Sustainable Development)
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I retired from Centre for Environment Education (www.ceeindia.org), then became a Consultant to Government of Uttar Pradesh, India on Disaster Management.

I am an active member of Regional Centre of Expertise (RCE) community (www.rce-network.org). RCE Srinagar I started of which I am Coordinator and Focal Point. I am also Convenor, Asia-Pacific RCEs Coordinating Committee 2019. I am engaged in Disaster Risk Reduction (DRR) preparedness, climate change and sustainability education, relief and reconstruction. Realizing the need of DRR preparedness considering the increasing frequency and magnitude of disasters we have launched 'Asia Pacific RCEs DRR Network'.

'Mehfooz' a School Safety, programme we have conceived aimed at not only providing physical safety but also total wellbeing, to everyone, all the time, everywhere, not just children. Child safety and promoting an enabling environment for children to grow and develop does not end with school. The Child is in the school only for some time. For the rest of the time s/he is at home, in the community. 'Mehfooz' aimed at safety of school children in schools and beyond. A child, besides in the school, has to be safe at home also, has to be safe everywhere. Safety of a child also includes safety of all his/her other family members and friends, and safety all the time. Though named as 'School Safety', the programme covers DRR preparedness in schools as well as villages involving students and teachers and the community and Panchayati Raj Institutions. Thus 'Mehfooz' School Safety programme encompasses safety of all, everywhere, and all the time.

I visited Japan's 2011 Tsunami ravaged areas and "The Great Hanshin-Awaji Earthquake" 5:46 AM 17 January 1995 museum in March 2012. India so far doesn't have any museum dedicated to disasters. However, we have created multimedia mobile exhibitions for taking them around for creating awareness. RCE Srinagar along with the Global RCE community and with support from United Nations University- Institute of Advanced Study on Education for Sustainable Development (UNU-IAS) have been striving at creating a sustainable, climate smart and disaster resilient community. Having a Green Earth, Blue Sky and Disaster Free World is our dream.

インドの災害を語り継ぐ

アブデシュ クマール ガングゥル
（ＲＣＥ（持続可な開発のための教育に関する地域の拠点）スリナガル）

2011 年 9 月 2 日の承認以来、RCE スリナガルは「災害レジリエンス、スマート気候と持続可能な社会」を実現するため、災害リスク軽減（DRR）、気候変動（CC）とサステイナビリティ教育に積極的に従事してきた。 RCE スリナガルのさまざまなプロジェクトは、サステイナビリティ高等研究について国連から賞を授与されている。RCE スリナガルは、2017 年 12 月に、第 9 回統営 ESD 国際フォーラム、RCE 統営、韓国トンヨン市で、「アジア太平洋地域の RCE DRR ネットワーク」を立ち上げた。

RCE スリナガルはウッタルプラデシュ（UP）州をサポートしてきた。あらゆる災害時に最初の応答者として働く歳入局の職員のための研修を構築した。UP のインドの人口は 17.5 パーセントで、複数の災害に対して最も脆弱である。

2 セットのトレーニングが開催された。最初の 1 つは、上級役員をマスタートレーナー（MT）としてトレーニングするための、州レベルの 5 日間のトレーナートレーニング（ToT）であった。次の一連のトレーニングは、MT をリソースパーソンとして使用してすべての Lekhpals をトレーニングするための地区レベルでの 3 日間である。合計 426 MT は、2019 年 6 月 17 日から 8 月 9 日までの 15 回の ToT でトレーニングされた。地区レベルのトレーニングは進行中で、2019 年 12 月末までに終了する。UP には 75 の地区と 14,220 の Lekhpal が雇用されている。すべての Lekhpals は、474 の地区レベルのトレーニングを通じてトレーニングされている。 2 つのリソース教材と 2 つのトレーニングモジュール（MT 用と Lekhpal 用）が用意され、すべての参加者に提供された。災害時には Lekhpal は現場に到達し、救援とリハビリテーションのために被害とニーズを評価する最初の対応者である。

2011 年 3 月 11 日の東日本大震災後、私は津波の被害を受けた地域を訪れ、被害と進行中の復興作業を目撃した。私が訪れたのは、2012 年 3 月 27～28 日に開催された「宮城県気仙沼での第 9 回 ESD セミナー」である。また、宮城県名取市と日和山、田んぼスクールプロジェクト、有形文化財「ほらぐち」、人と防災未来センター、国際復興プラットフォーム、アジア防災センターを訪れた。

インドでの災害、2001 年 1 月 26 日のグジャラート地震、2004 年 12 月 26 日のインド津波、2005 年 10 月 8 日のカシミール地震、2010 年 8 月 5 日のレークラウドバースト、2011 年 9 月 18 日のシッキム地震、2013 年 6 月のケダルナート・ウッタラーカンド洪水、2014 年 9 月のカシミール大洪水救済と「再構築」プログラム。学校が「学校災害管理計画」を作成し、村が「村の緊急時対応計画」を作成するのを支援している。

Telling Tales of Some Indian Disasters

Abdhesh Kumar Gangwar
RCE Srinagar, India (Regional Centre of Expertise on Education for Sustainable Development)

RCE Srinagar since its acknowledgement on 2 September 2011 has been actively engaged in Disaster Risk Reduction (DRR), Climate Change (CC) and Sustainability Education striving to achieve “disaster resilient, climate smart and sustainable communities”. RCE Srinagar’s various projects have been awarded by United Nations University-Institute of Advanced Studies in Sustainability (UNU-IAS).

RCE Srinagar formed and launched ‘Asia Pacific RCEs DRR Network’ during 9th Tongyeong ESD International Forum, 12-13 December 2017 at RCE Tongyeong, Korea.

RCE Srinagar has supported the State of Uttar Pradesh (UP) in organizing DRR capacity building trainings for the staff of their Revenue Department that acts as first responder during any disaster. UP has India’s 17.5 percent population which is most vulnerable for multiple disasters.

Two sets of trainings were organized. The first one was State level, 5-day Training of Trainers (ToTs) to train senior officers as Master Trainers (MTs). The next set of trainings are 3-day at district level to train all the Lekhpals using MTs as resource persons. Total 426 MTs were trained during 15 ToTs from 17 June till 9 August 2019. District level trainings are in progress and will get over by the end of December 2019. UP has 75 districts and 14,220 Lekhpals employed. All the Lekhpals will be trained through 474 district level trainings. Two resource material books and two training modules, one for MTs and the other for the Lekhpals were prepared and given to all the participants. During disasters, a Lekhpal is the first responder to reach to the site, make damage and need assessment for relief and rehabilitation.

Post Japan earthquake, March 11, 2011, I visited the Tsunami ravaged areas and witnessed the damage and the reconstruction work in progress. My visit coincided with the “9th ESD Seminar for Building the Future in Kesennuma, Miyagi”, 27-28 March 2012 where I participated. I also visited Natori City, Miyagi seashore and Hiyori-mountain, Rice Field School Project, Tangible Cultural Property “Horaguchike”, “The Great Henshin-Awaji Earthquake” 5:46 AM 17 January 1995 museum, International Recovery Platform, and Asian Disaster Reduction Centre.

I have witnessed disasters in India, Gujarat Earthquake 26 January 2001, Indian Tsunami 26 December 2004, Kashmir earthquake 8 October 2005, Leh Cloudburst 5 August 2010, Sikkim earthquake 18 September 2011, Kedarnath Uttarakhand floods June 2013, Kashmir deluge September 2014 and involved in relief and ‘Rebuilding’ programmes. We are helping schools prepare their ‘School Disaster Management Plan’ and to villages prepare their ‘Village Contingency Plan’.

シティ マグフィラ(晃月スクール協会)
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私は 2018 年 7 月に北スマトラ大学日本学科を卒業した。現在バンダアチェにある NGO Kougetsu School Association（KSA）でスタッフとして、また KSA が運営している Kougetsu School で日本語教師として働いている。この団体は兵庫県の一般社団法人チームミライズに支援を受け協力して、災害支援、教育、芸術、文化に関するプロジェクトを運営している。KSA は津波博物館、アチェ・ジャパン・コミュニティーアート・プロジェクト、NPO 地球対話ラボともプロジェクトを協働で行っている。

昨年、アチェ津波 14 年の際にドキュメンタリー映画“サバイバル”制作のプロジェクトリーダーを担当した。

Shiti Maghfira（Kougetsu School Association）
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I graduated from Japanese Literature, North Sumatera University on July, 2018. Now, I am working as a staff and Japanese teacher at Japan NPO which located in Banda Aceh, named Kougetsu School Association (KSA). This organization cooperate with Team Miraiz in Osaka, Japan. As a staff, I create and manage project about disaster, education, art, and culture. KSA also makes collaboration project with Tsunami Museum, Aceh Japan Community Art Project, Chikyu Taiwa Labo, etc. Last year, I was project leader to manage documentary film “Survivor” for 14th Aceh Tsunami Commemoration.

生存者

シティ マグフィラ（晃月スクール協会）

14 年前、2004 年 12 月 26 日にインドネシア西部にある島々が津波に襲われた。このスマトラ沖津波でたくさんの命が失われ、公共の基幹施設が損害を受けた。津波が襲う前、午前 7 時 58 分に震度 9.1 マグニチュードの地震が 10 分ほどつづいた。インドネシアそして世界の災害記録の中でも最も巨大な地震のひとつだと言われる。15 分後、スマトラの西海岸にあるアチェを津波が襲い、死亡者は 126,741 人にのぼった。

その津波から 14 年がたったアチェは、悲しみや苦しみをのりこえ、震災復興の一つとして、インフラや経済も発展し続けている。アチェの復興としては、アチェが自然の美しさを取り戻したというだけでなく、社会的な復興として、みながワルン・コピーでゆっくりコーヒーを楽しめるようになり、笑顔で皆生活できるようになったことがあげられる。

だが、14 年経っても、やはりアチェ社会が経験したスマトラ沖津波と地震の辛い思いは

いつまでも忘れられない。特に友人や親戚を失った人や大きな津波から命からがら助かった人には忘れられない記憶がある。その被災体験験は、それぞれのアチェの人の中に、さまざまなストーリーや思いとして残っているだろう。

一方、映画は鑑賞者に対し、簡単に情報を提供できる手段だと思うので、スマトラ沖津波から生き延びた人たちの話にもとづく体験を映像化にしようと思い、ドキュメンタリー映画を制作した。震災の記憶だけではなく、それぞれの生活についてもこのドキュメンタリーでは描きたかった。

ドキュメンタリー映画を制作するにあたって、スマトラ沖津波の生還者であるブンディヤさんを主人公にした。2004 年の津波に襲われたとき、流されたブンディヤさんは奇跡的に近くに流されてきた船に乗ることができた。ちなみに、ブンディヤさんを含めて 59 人の命を乗せた船は、家の屋根にひっかかり、彼らの命を救った。現在、バンダアチェ市のランプロ村にあるその船は、「Kapal di Atas Rumah（家の上にあがった船）」と名づけられ、震災遺構として保存されている。

ブンディヤーさんは、「ワ・コラック」（コラックおばさん。小ラックは彼女が売っているアチェ料理）としてみなに知られている。現在「Kapal di Atas Rumah（家の上にあがった船）」を訪れる観光客に、ブンディヤさんは自身の津波の経験や助かった話をしているので、このドキュメンタリー映画の主人公として選ばれた。自身の津波体験やその辛い思いを観光客に話してくれるのはブンディヤさんしかいない。このドキュメンタリー映画の上映にあたっては、鑑賞者には、津波によるあの悲しみを味わってもらいたいのではなく、神様から頂いた命のありがたさ、大切さを今一度かみしめてもらいたい。人生の幸福を得るためには、がんばらなくてはならないということをみなに伝えたい。

このドキュメンタリー映画を鑑賞したみなさんには、愛しい人に亡くなられても、負けない存在になってほしいというメッセージを伝えたい。スマトラ沖津波は、生き残ったアチェの人たちの社会に辛い思いや苦しみを与えたが、神様から頂いた命を大切にし、人生をもっと幸せにするためにがんばるしかないのだ。

Survivor

Shiti Maghfira（Kougetsu School Association）

Fourteen years ago, the tsunami struck the western part of Indonesia on the December 26th, 2004, causing the loss of many lives and of a great amount of infrastructure. The earthquake with a magnitude of 9,1 occurred at 7.58 am, and lasted for 10 minutes, making it one of the strongest in modern history. Less than 15 minutes after the earthquake occurred, the tsunami hit the coast of Aceh up to 6 kilometers inland as well as the surrounding islands and caused 126, 741 people died.

Now fourteen years after tsunami, Aceh can be said free from pain. The infrastructures are managed properly. The economy of the local people also starts growing. They can casually sip a cup

of coffee in the various coffee shop. Everyone can smile because Aceh has peaceful condition once again. The beauty of Aceh has returned in the front of our eyes.

Although fourteen years have passed, Acehnese still remember about the story of December 26th, about lost their loves one, or how they survived the tsunami. Acehnese people have their own story about that day.

Based on tsunami survivor story, we decided to making the story into a documentary film. Film is one of the interesting way to display a story fastly. Film is not just focus on one side, but we also can put in others side to make the film more colorful.

For this film, we chose one tsunami survivor, her name is Bundiyah, who survived tsunami 2004 in the ship above the house. Bundiyah is one of the survivor from 59 people on that ship. She could survive the tsunami because of went up to the ship. At the present, the ship is located at Lampulo, Banda Aceh, and became one of tsunami tourism site.

We chose Bundiyah, or also known as Wak Kolak, because of she still active as a story teller about her tsunami story at The Ship above The House tourism site. No one except her wants to share about how suffering their life on tsunami was. We are sure this film will show how sorrow the tsunami was, but also can teach us about how meaningful our life and thankful to the life, so we can be strong and positively to have a happy life.

This documentary film can be useful to many people who maybe have given up for life because of their pain of lost the loves one. Tsunami made the pain, but life wants you are to be alive to make a blessing and happiness.

Link documentary film: https://youtu.be/cA2wNCSR_9c
Director: Shiti Maghfira and Ahmad Ariska

アンディ フェルダナ（Gema Merapi コミュニティラジオ）
Email: andiferdana@gmail.com

メラピ山噴火の被災者。メラピ山に関する情報を提供するためのコミュニティラジオを設立。神戸大学、名古屋大学、メルボルン大学、神戸学院大学など多くの大学からの学生の見学を受け入れている。

Andi Ferdana (Gema Merapi Community Radio)
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I am a survivor from Petung village. to provide information related to Merapi we established community radio and I became the station manager. In our right, there are often students to learn about

Merapi such as Kobe University, Nagoya University, University of Melbourne, Kobe Gakuin University and many more.

メラピ山での災害との調和に生きる

アンディ フェルダナ（Gema Merapi コミュニティラジオ）

2010 年、メラピは非常に大きな噴火を経験した。この噴火は、1872 年以来の、あるいはさらに 100 年以上以来の最悪の噴火であった。1872 年にメラピは 1 億立方メートルの物質を放出し、2010 年には 1 億 4000 万立方メートルの物質を放出した。ペトゥンは被災した集落の一つである。ペトゥン集落は、スレマンリージェンシー、カンクリンガン地区のケプハルジョ村、またはメラピ山頂から 7 km の距離にあるメラピの南側にあり、噴火が発生すると火砕流によってすべて破壊されることとなっていた。しかし、住民は家、財産、家畜を失うにもかかわらず、噴火とメラピが脅威であると感じたことはなかった。メラピの住民は、メラピが欲望を持っていると考えており、住民がまず逃げなければならなかった。噴火後、政府は再建の局面に入いった。家を失った住民は 6 か月間スタジアムで避難し、その後 18 か月間仮設住宅に移動した。居住者が一時避難所に住んでいる場合、政府と居住者は民間部門の支援を受けて恒久住宅を建設した。住宅は 2012 年初頭に完成し、これはインドネシア記録博物館の建設カテゴリーにおいて最速の記録であった。ほとんどの住宅は被災者のためのものであった。過去には、2010 年の噴火により土地がすべて破壊された後、多くのペトゥンの住民がブリーダーや農民になり、その後、古い集落が観光地になった。火山ツアーとして知られているジープを使って旅行するほか、かつて噴火に見舞われたペトゥンの村では、住民も博物館を作った。この博物館は、一般の人々や観光客が、噴火を想起し、教育を提供することを目的としている。博物館に加えて、コーヒーショップもある。9 年後、スレマン地区政府は、メラピに非常に多くの観光客がいることを指摘した。メラピの噴火は災害であるが、住民はそれを自然なサイクルと考えており、収入と教育の両面で、災害の顔を有望な観光地に変えることができる。ペトゥンの住民はこのようにして災害と調和して生きている。

Living in harmony with the disaster at Merapi

Andi Ferdana（Gema Merapi Community Radio）

In 2010, Merapi experienced a very large eruption. The eruption was the worst eruption since 1872 or more than 100 years. In 1872 Merapi released 100 million cubic meters of material while in 2010 issued 140 million cubic meters of material. One of the hamlets affected was Petung. Petung Hamlet is located in Kepuharjo Village, Cangkringan Subdistrict, Sleman Regency or on the south

side of Merapi. Petung hamlet distance of 7 km from the summit of Merapi so that when an eruption occurs all destroyed by pyroclastic flows. Even though all were destroyed and residents lost their homes, property, and livestock, residents never felt that eruption and Merapi were a threat. For residents of Merapi, residents considered that Merapi was having a desire and residents had to step aside first. After the eruption was carried out the rehabilitation phase of reconstruction by the government. Residents who lost their homes were displaced at the stadium for 6 months after which they moved to temporary housing for 18 months. When residents live in temporary shelters the government and residents are assisted by the private sector to build permanent housing. Residential remained in early 2012 and entered into the Indonesian Record Museum in the category of the fastest and most buildings for disaster victims. In the past, many Petung residents became breeders and farmers after all of their land was destroyed due to the 2010 eruption, and then the old hamlet became a tourist destination. Many residents who switch professions to work in tourism midwives such as becoming a jeep driver for jeep tours. Travel using a jeep better known as the volcano tour. Besides that, in the village of Petung that was once hit by an eruption, residents also made a museum. This museum aims to remember and provide education to the public or tourists about the impact of the 2010 Merapi eruption that was so powerful. In addition to the museum, there is also a coffee shop. Nine years later, the Sleman district government noted that there were quite a lot of tourists in Merapi. Many people consider the eruption of Merapi a disaster but residents consider it a natural cycle and then can change the face of the disaster into a promising tourist spot, both in terms of income and teaching. Such Petung residents who live in harmony with disaster.

モハメド アリザマニ（イラン住宅財団 復興計画部長）
Email: Alizamani_110 @ yahoo.com

- 復興に関する研究と計画に 30 年間従事
- 1982 年から現在までイラン住宅財団所属、現在復興計画部長
- 過去 20 年間のイランの全ての災害復興に参画、記録を作成
- 都市・農村災害リスク軽減専門委員会委員
- 建築学修士

Mohammad Alizamani (Head of Reconstruction Planning, Housing Foundation of Islamic Republic of Iran, Tehran)
Email: Alizamani_110 @ yahoo.com

Professional Profile

- 30 years experiences in Reconstruction Research and Planning

- Rural Development Planning

Professional Experience

- Housing Foundation of Islamic Republic of Iran, Tehran
- 26 July 1982 - Present
- Head of Reconstruction Planning

Achievements:

- Highly involved at all post disaster reconstruction of the past 2 decades in Iran
- Documentation of the Bam 2003, Lorestan 2005 and Buinzahra 1962 Post-Disaster Reconstruction

Responsibilities:

- Reconstruction planning of the disaster affected areas
- Directing of the Urban and Rural Settlement Disaster Risk Reduction professional committee

Education

- Master of Art in Architecture

技術支援と建築材料展示の複合施設のバム地震被災地での設立

モハメド アリザマニ（イラン住宅財団）

自然災害の割合が高いため、イランは多くの重大な災害と再建を経験している。著者は多数の事例を文書化している。また、過去 30 年以上にわたり（復興を担当する組織で）過去の復興にも積極的に取り組んでいる。これらの経験から学んだ最も重要な教訓の要約は次のとおりである。

1. 1962 年のブイン・ザーラの地震：大規模な破壊と 12,000 人以上の死傷者が政府を驚かせた。イスラム以前の復興における外国の役割は非常に鮮明であった。この経験では、日本の専門家チームがイランに来て、国の脆弱性を研究し、脆弱性を軽減する解決策を提供した。政府は日本から派遣された専門家によって提供された戦略を実施し、脆弱性を減らすことにおいて良い進展があった。

2. 1972 年の Qir 市の地震：この経験は、イスラム以前の時代にも関連している。この経験では、政府は、復興プロセス中に被災地の伝統的慣行を近代化することを意図したが、復興に野心的な目標を組み込むことに失敗した。

３．８年間の神聖な防衛における紛争地帯の再建：再建の初期段階では、明確な政策と統合された管理と政策はなかったが、政策と戦略の策定と政策立案につながる優れた知識と経験があった。再構成を管理するための統合システムを編集して、その後の災害に適用した。

４．1990 年のマンジル地震：この経験では、戦争で荒廃した地域の再建に関する有益な知識と経験が、計画と政策立案の基礎を提供した。書面による復興計画が初めて作成された。建設管理、設計、監督、建設技術、財務管理などの分野で明確なポリシーが存在することに

より、2 年以内に 20 万台を超えるユニットが完成した。一般市民の参加を重視することは、プログラムの最も重要なポイントの 1 つであり、成功要因であった。

５．2003 年のバム地震：この壊滅的な出来事では、市の住民の 3 分の 1 近くが死亡し、この歴史的な都市の物理的構造の 90%以上が破壊された。政府は、復興における 3 つの具体的な目標を掲げた。都市のアイデンティティ、被災者の復興への参加、および建物とインフラストラクチャの強度と安定性である。上記を達成するために、7 ヘクタールの土地に技術サービスと材料の展示施設が建設された。基地には、コンサルタントやエンジニアが人々と一緒に工事の設計と監督を行う部門、建築材料を展示し人々に様々な選択肢を提供する部門、建築材料を作成する作業場の 3 部門があった。上記の 3 の部門とその実施措置に重点が置かれたことが復興の成功に寄与した。

６．2006 年のロレスタン地震：この再建の最も重要な特徴は、人々が再建に広く参加したことと、政府の計画から仮設住宅の段階を省いたことで、恒久的な再建を迅速に展開できたことである。これにより、被災者たちは緊急避難所（テント）から恒久住宅に直接移動し、政府と人々は一時的な宿泊の費用を節約できた。

７．ケルマンシャー州の地震 2017：この再建の最も重要な特徴は、損傷した住宅だけでなく古い住宅の改修も行ったことと、サルエポルザハブの開発の成功でした。この再建では、深刻な経済変動と再建時の材料と労働のコストにもかかわらず、影響を受けたサルエポルエザハブの都市の建設密度はほぼ 3 倍になりました。

Establishment the Technical Services & building Materials Exhibition Complex in the Bam Earthquake (2003)

Mohammad Alizamani（Housing Foundation Consultant）

Due to the high rate of natural disasters, Iran has experienced numerous and significant disasters and reconstructions. The author has documented numerous cases. It has also been active in past reconstructions (in the organization responsible for reconstruction) for more than three decades. A summary of the most important lessons learned from these experiences is as follows:

1. The 1962 earthquake in Bouin Zahra: Massive devastation and more than 12,000 casualties surprise the government. The role of foreign countries in the reconstruction of the pre-Islamic period was very vivid. In this experience, a team of experts from Japan came to Iran to study the vulnerability of the country and provide a solution to reduce the vulnerability. The government implemented the strategies provided by Japanese expedition specialists, and there were good developments in reducing vulnerability.

2. The 1972 earthquake in the city of Qir: This experience is also related to the pre-Islamic period. In this experience, the government intended to modernize traditional practices in the disaster area during the reconstruction process, but failed to incorporate ambitious goals in the reconstruction.

3. Reconstruction of conflict zones in eight years of sacred defense: In the early stages of reconstruction, there were no clear policies and integrated management and policies, but there was good knowledge and experience that led to the formulation of policies and strategies and the establishment of a integrated system for managing reconstruction. And edited and applied to subsequent disasters.

4. The 1990 Manjil earthquake: In this experience, the useful knowledge and experience of reconstructing the war-torn areas provided the basis for planning and policy-making. The first written plan of reconstruction was prepared. The existence of clear policies in the areas of construction management, design, supervision, construction technology, financial management, etc. has led to the accomplishment of more than two hundred thousand units within two years. The emphasis on public participation was one of the most important points of the program and the success factors.

5. Bam Earthquake 2003: In this catastrophic event, nearly one-third of the city's residents died and over 90% of the physical structure of this historic city was destroyed. The government identified three specific goals in the reconstruction: the identity of the city, the participation of the affected population in the reconstruction and the strength and stability of the building and the infrastructures. To accomplish the above, a Technical Services & materials exhibition complex was built on 7 hectares of land. The base had three sections: offices for active consultants and engineers to design and supervise the construction along with people; building materials exhibition to be visited and provide people with a variety of material to select from; workshops for production of building material. The emphasis on the above three key axis and its implementing measures have contributed to the success of the reconstruction.

6. The 2006 Lorestan earthquake: The most important feature of this reconstruction was the high participation of the people in the reconstruction and omission of the temporary housing phase from the government's plans and the rapid deployment to the permanent reconstruction. This caused the affected people to move directly from emergency shelters (tents) to permanent housing, and the government and people would not bear the cost of temporary accommodation.

7. Kermanshah Province Earthquake 2017: The most important feature of this reconstruction was the renovation of the old residential units in addition to the damaged units and the success of the development of Sar-e Pol Zahab. In this reconstruction, the density of building the affected city of Sar-e-Pol-e-Zahab almost tripled, despite severe economic fluctuations and the cost of materials and labor at the time of reconstruction.

マニヴァン スヤヴォン(ラオスジェンダー開発協会)

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研究所にて開発とグローバリゼーションの分野でエクゼクティブ修士課程を修了し、「高地の人々の声：ラオス南部におけるタオイ山岳民族と地域参加型開発」というテーマで論文を発表した。２０１６年にジェンダー開発協会にディレクターとして勤務する以前は、ラオスのオックスファムで２０年以上勤務し、ジェンダー分野でコミュニティーベースのプログラム実現や、水力発電におけるジェンダーの及ぼす影響調査などに従事した。またこの間にプログラムマネージャーとして、田舎の多様な民族が共存する地域で数々の難しいプログラムの計画や実施をリードし、政府との信頼関係を築いた。

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Manivanh is a Lao Gender and Social Development Specialist. She completed her Executive MA in Development and Globalization: Between Growth and Exclusion, at the Graduate Institute of Geneva. Her thesis: Voice of an Upland People – A look into the Taoy Ethnic Community and Participatory Development in Southern Laos. Prior to joining GDA as the Director in 2016, she worked for more than 20 years with Oxfam in Laos in community based program implementation, specialising in gender mainstreaming, community resilience and gender impact assessment in the hydropower sector. In her position as National Program Manager, she led the team in strategic planning, implementing complex programmes in remote areas with multi-ethnic groups, and developed relationships with relevant government ministries.

レジリエンス（回復力）の声：ラオス人女性とコミュニティ ベースの人道支援

マニヴァン スヤヴォン（ラオスジェンダー開発協会）

２００９年９月 28 日～30 日にラオス南部を台風カツナが直撃し、人々の記憶に残る中で自然災害による最も深刻な被害をもたらした。セコン、サラヴァン、アタプーとサヴァナケート県では、広範囲の洪水被害が強風と豪雨による鉄砲水と地滑りによって更に悪化し、一部の地域では、川の水が 28 センチも増水した。また、早期警告システムや災害予備が無かったため、家屋や食糧倉庫、水道システム、インフラや人々の暮らしが崩壊し、約 18 万１千人の人々が危険にさらされ、緊急人道支援を必要とした。

当時、ビエンチャンにある国際 NGO のオックスファム・オーストラリアでナショナルプログラムオフィサーとして勤務していた私と同僚は、緊急人道支援とコミュニティーベースの災害マネジメントの為に、サラヴァンとセコン県に派遣された。そこでの私達の目的は、米、衛生用品、キッチン用具、仮設シェルターのなどの配分だった。しかし、多民族の共存による言語のバリアー、ロジスティクス問題による米不足、支援対象の村の遠さにより時には５日間歩き、更にトラックやボートでアクセス不可能な場所に行く必要があったこと、ま

た地雷によるセキュリティ面での不安など、様々な困難に直面した。

台風カツナから１０年の月日が経とうとしている中、私の中では二つのことが思い出される。一つは、どんな困難の中でも生きることを諦めず、私たちのサポートに対し感謝の気持ちを忘れない人々との出会い。そして二つ目は、困難な状況から学んだレッスンだ。私のオックスファムでのこの経験は、草の根レベルの活動へ対するパッションの原点となり、現在のジェンダー開発協会のディレクターとしての仕事に繋がった。またこの台風カツナの経験から、ラオス政府は災害予備、管理、応答に対する政策やメカニズムを向上させる為のイニシアティブを進め、貴重な資源を投資してきた。

現在、ラオスジェンダー開発協会は、災害予防市民社会グローバルネットワークの「フロントライン：コミュニティーベースの災害予防プロジェクト」の国の調整機関を務め、また気候変動による危機が深刻になる中、ラオスは、災害予防に対する緊急時計画の改善を目指している。

蓮の花が沼から現れその美しさを世界に知らしめる様に咲くように、このポスターも、災害によって被害を受けた人々の苦しみを伝えることで、悲劇がポジティブな変化に生まれ変わることを願っている。災害から１０年が経とうとする今、このポスターが忍耐、成長、そして災害を共に克服したコミュニティの絆を表すことを願う。

Voices of Resilience: Lao Women in Community-Based Humanitarian Response

Manivanh Suyavong（Gender Development Association, Lao PDR）

From 28-30 September 2009, Typhoon Ketsana (Cat 1) hit Southern Laos causing some of the most severe damage from a natural disaster in living memory. Across Sekong, Salavan, Attapeu, and Savannakhet Provinces, widespread flooding was compounded by flash floods and landslides from heavy wind and rainfall, and rivers rose to 28 meters in some areas. With no early-warning or preparation, extensive damage to houses, food storages, water supplies, infrastructure, and livelihoods left an estimated 181,000 people at-risk and in need of immediate assistance.

As National Programme Manager at Oxfam Australia (in Laos), my team was deployed to Salavan and Sekong Provinces, to provide urgent humanitarian assistance and community-based disaster management. Our primary goal was distributing rice, hygiene and kitchen kits, and temporary shelters. Our mission faced challenge after challenge, as the diversity of ethnic groups created language barriers; logistical breakdowns left us with rice shortages; the remoteness of many villages meant some had to walk up to 5 days to reach areas inaccessible by truck or boat; and security obstacles from UXOs made coordination a protracted battle.

As the 10th year anniversary of Typhoon Ketsana approaches, I am reminded of two things: firstly, the countless interactions I had with people, who despite their suffering, were determined to survive and never hesitated to show their gratitude for our support. Secondly, I reflect on the lessons

learned and acknowledge the achievements that came from devastation. The experiences I had during my time at Oxfam ignited my passion for grassroots development and lead me to my current position as Director of Gender Development Association. Since Typhoon Ketsana, the Government of Laos has taken great initiative to improve policies, mechanisms, procedures, and invested valuable resources to support programs for disaster preparedness, management, and response.

Currently, GDA is the National Coordinating Organization for GNDR's Views from the Frontlines project on community-based DRR, and with the increasing threats posed by climate change, Laos strives for continued improvement in contingency planning on DRR.

As the lotus flower emerges from the mud to show the world its beauty, our poster will use photo imagery to recount the pain of those affected, but also the positive change that sometimes only tragedy can provide. As our journey of recovery comes full circle a decade later, our poster will represent perseverance, growth, and the bond shared by communities that overcome disaster.

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学際的でコミュニティに基礎をおく研究者。環境保全と無形文化遺産の保全に取り組んでいる。現地 NGO の環境教育に従事。国際交流基金が主催する「防災と環境の教育と創造性」のメンバーに選定されて以来、防災教育にも研究の幅を広げている。北マレーシア大学人文地理学科博士課程。コミュニティの参画、コミュニティ開発と環境政策を研究の基礎的な視点としている。

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Ong Ke Shin is a multidisciplinary community-based researcher committed to both environmental and intangible cultural heritage conservation. She is also a senior environmental educator for a local based NGO and embarks on her journey on disaster education after being selected as a fellow for "Disaster and Environmental Education + Creativity" under Japan foundation. She is currently a PhD candidate under School of Humanities, Geography Section at University Sains Malaysia. Her research interest primarily centered on community engagement, community development and environmental policy.

洪水の語り継ぎ、貴方の物語と私の物語：
ソーシャルメディアを通じた洪水の語り継ぎのクラウドソーシング

オン ケ シン（マレーシアサインズ大学）

洪水はマレーシアで最も破壊的な自然災害である。洪水が起こると、それが自然であろうと人為的であろうと、両方の組み合わせであろうと、貴重な命が失われ、家族が壊れ、インフラや個人資産が無駄になる。その深刻さと気候変動の拡大による洪水の再発の可能性が高いにもかかわらず、以前に洪水の影響を受けたコミュニティの意識と準備はなまぬるく、しばらくすれば、故意または無意識に忘れられます。洪水の痕跡が消えたとき、洪水の記憶は薄れ、そのような現象は犠牲者に絶え間ない損害と損失をもたらしてきた。

このパイロットプロジェクト「洪水の語り継ぎ、貴方の物語と私の物語」は、ソーシャルメディアを使用して、2017 年にクラウドソーシングによって行われたマレーシアのペナンで最も深刻な洪水の画像、ビデオ、ストーリーを収集し、その有効性を検証する可能性を探ることを目的としている。ソーシャルメディアは、洪水の保存、解釈、反映、および内省に国民を関与させる包括的なプラットフォームとして機能する。

最後に、洪水関連のストーリー、画像、ビデオをクラウドソーシングするためにソーシャルメディアを使用することの影響、直面する課題、制限、および教訓として役立ち、災害意識を高めるアプリケーションの可能性も提示される。

Tales of flood, Yours and Mine: crowdsourcing flood stories through social media

Ong Ke Shin（University Sains Malaysia）

Flood is the most destructing natural disaster in Malaysia. When flood happen, be it natural or man-made and/or combination of both, precious lives are lost, families broken, infrastructure and personal assets are wasted. Despite its severity and the high possibility of reoccurrence of flooding due to the escalating climate change, awareness and preparedness of communities previously affected by flood remained lukewarm and is often forgotten fleetingly, deliberately or subconsciously. Memories of flood faded when traces of flooding were effaced, such phenomenon brought about incessant damages and losses to the victims.

This pilot project “Tales of flood, Yours and Mine” aims to explore the possibility of using social media to recollect images, videos and stories of the most severe flood in Penang, Malaysia that took place in 2017 via crowdsourcing and to examine its effectiveness of social media to serves as an inclusive platform to engage the public in preserving, interpreting, reflecting and introspecting on flooding.

Lastly, the impacts, challenges faced and limitation of using social media to crowdsource flood related stories, images and video and the possibility of its application to serve as a lesson learnt and to increase disaster awareness will also be presented.

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1964 生、ヤンゴン大学卒後、ミャンマー外務省で各国在外公館に勤務、2008 年参事官/副局長。外務省退職後アセアン人道問題タスクフォース調整室で、戦略的支援調整官として 2010 年までサイクロン・ナルギス対策に従事。2012 から 2015 まで在ミャンマー英国大使館でミャンマー政府連絡調整官。2006 年から現在まで在ミャンマーオランダ大使館で政務アドバイザー。

Nyi Soe (Former Strategic Support Officer, Coordinating Office of ASEAN Humanitarian Task Force (AHTF) for Cyclone Nargis)
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I was born in 1964 and studied at the Yangon University. After graduation, joined the Ministry of Foreign Affairs as a diplomat and served at various embassies at different capacities up to Counsellor/ Deputy Director till 2008. After resignation from the diplomatic service, joined the Coordinating Office of ASEAN Humanitarian Task Force (AHTF) for Cyclone Nargis as Strategic Support Officer till the end of project in 2010. From 2012 to 2015, worked as Government Liaison Officer at the British Embassy. I have been with the Netherlands Embassy from 2016 till now as Political Policy Advisor.

サイクロン・ナルギス：その後のほんとうのお話

ニ ソエ（元 アセアン サイクロン・ナルギス 人道問題タスクフォース調整室）

2008 年 5 月 2 日と 3 日に、サイクロン・ナルギスがベンガル湾から押し寄せ、大規模な人命の損失と、インフラ・財産・生活の破壊をもたらした。約 14 万人が死亡し、エーヤワディ管区とヤンゴン管区の住民の 3 分の 1 が影響を受けた。サイクロン・ナルギスは、これまでに世界で記録されたサイクロンの中で 8 番目の規模であり、ミャンマーの歴史上最悪の自然災害であった。 ASEAN-Emergency Rapid Assessment Team の勧告により、ASEAN 各国の外相は、国際社会からミャンマーへの支援の効果的な配分と活用を促進するために、ASEAN 主導の AHTF（ASEAN 人道的タスクフォース）と呼ばれる調整メカニズムを確立することに同意した。AHTF は、国際援助の流れを調整、促進、監視するための作業メカニズムとして、ヤンゴンに本拠を置く TCG（Tripartite Core Group）を設置した。ミャンマーが議長を務め、ASEAN 各国、政府、国連の代表者で構成されている。 AHTF をサポートするために、TCG の下で政府と国連の代表者と緊密に連携し、AHTF の秘書サポートを提供する調整事務所がヤンゴンに設立された。

サイクロン・ナルギスの最も困難な時期に、私はネピドーで外務省の ASEAN 部門の副局長を務めていた。荒廃の数日後、私はヤンゴンの外務省の支部で、外務副大臣が議長を務める三者コアグループを支援するよう指示を受けた。TCG で仕事をしながら、被災者への国際支援の流れを促進するために、さまざまな省庁との調整など、多くの会議に出席する必要があった。さらに、被災地への国際救援チームの渡航許可を得るために関係部署と連絡を取った。

しかしながら、困難な時期にわずらわしい仕事をしている間、私は悪夢に見舞われ、HIV の診断のために辞職を余儀なくされた。

この悲劇的なシナリオの後、私は休憩しなければならなかった。その後、2010 年初頭、AHTF 調整事務所は、定期的な評価業務を含む復旧再建活動の支援・促進を担当する戦略的支援担当官が必要であることを発表した（募集を行った）。（この職務に就いた私は）これらの活動を促進するだけでなく、世界銀行、米国、英国、ノルウェーなどのさまざまな国や国際機関からの資金についての報告書を作成することとなった。私はその仕事を、2010 年 9 月 30 日に ASEAN 人道的タスクフォースの業務が終了するまで続け、救助の初期段階から復旧と再建の段階に至るまでの支援資金についての全報告を完了させることができた。

今回の世界災害語り継ぎフォーラムでは、最悪のサイクロン・ナルギスからの救援と復興のために重要な機能を果たした組織が一致団結して行った業務の実務経験を踏まえて、災害の経験と教訓を各国からの参加者にお伝えすることとしたい。

Cyclone Nargis: A first hand Narrative of the aftermath

Nyi Soe
(Coordinating Office of ASEAN Humanitarian Task Force (AHTF) for Cyclone Nargis)

On 2 and 3 May 2008, Cyclone Nargis swept in from Bay of Bengal and resulting in large-scale loss of life and destruction of infrastructure, property and livelihoods. Almost 140,000 people were killed and one third of the inhabitants of Ayeyarwady and Yangon Divisions were affected. Cyclone Nargis was the eighth deadliest cyclone ever recorded in the world and it was the worst natural disaster in Myanmar's history. With the recommendation of ASEAN-Emergency Rapid Assessment Team, the ASEAN Foreign Ministers agreed to establish an ASEAN-led coordinating mechanism called AHTF (ASEAN Humanitarian Task Force) to facilitate effective distribution and utilization of assistance from the international community and incoming assistance to Myanmar. AHTF set up a Yangon-based TCG (Tripartite Core Group) as a working mechanism for coordinating, facilitating and monitoring the flow of international assistance. It is chaired by Myanmar and made up of representatives from ASEAN countries, the Government of Myanmar and the UN. To support AHTF, a Coordinating Office was established in Yangon to work closely with representatives from the Government and UN under the TCG and provide secretarial support for AHTF.

During the most difficult time of Cyclone Nargis, I was serving as the Deputy Director at the ASEAN Department at the Foreign Ministry. In Naypyitaw. A few days after the devastation, I got an instruction to serve at the branch office of the Foreign Ministry in Yangon to assist the Tripartite Core Group chaired by the Deputy Foreign Minister. While serving at the TCG, I had to attend various number of meetings such as coordination with different ministries for facilitation of the flow of international assistance to the victims in the affected areas. Moreover, I liaised with the concerned departments for having travel permission for international relief teams to the affected areas.

While working tediously during the hard time, I had a nightmare that I was forced to resign because of the diagnosis of HIV.

After this tragic scenario, I had to take a break. Then in early 2010, the AHTF Coordinating Office announced that they were in need of Strategic Support Officer to assist and facilitate rehabilitation and recovery activities including periodic review activities. Not only for facilitation to these activities, I had to do accountability reports for the funds from various countries and international organizations such as World Bank, the US, UK, Norway, etc. I was managed to do the accountability report for the funds provided for the initial stage of relief to the stage of recovery and rehabilitation till the end of the entire project called ASEAN Humanitarian Task Force on 30 September 2010.

Through my working experience with concerted efforts at the important organization for the period of relief and recovery from the deadliest Cyclone Nargis, I will be able to pass on the experiences and lessons from disasters to people from other countries at the forthcoming International Forum on Telling Live Lessons from Disasters if I am fortunate to be selected.

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学士（建築学）、修士（都市計画）。国家復興庁で保全建築士として勤務。18 の建築遺産（うち 7 は世界遺産）の再建の指導にあたっている。トリブバン大学建築学科非常勤講師。

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Barsha Shrestha, holds bachelor degree in Architecture and MSc in Urban Planning. She is working as a Conservation Architect for the National Reconstruction Authority (NRA), a government agency instituted for post disaster reconstruction. She is responsible for looking after post-disaster reconstruction of 18 heritage sites of which seven are world heritage sites. Besides, she lectures as a part time lecturer in Department of Architecture of Tribhuvan University.

サンジャヤ ウプレティ（トゥリブバン大学工学院建築学科 准教授）
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学士（建築学）、修士（都市計画）、博士（建築学）、職務経験 20 年。トリブバン大学工学部建築学科准教授。建築保全のコンサルタント/プランナー。現在、世界遺産を含む多くの建築遺産の再建と計画に参画している。

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Dr. Sanjaya Uprety, holds bachelor degree in Architecture, MSc in Urban Planning and PhD in Architecture and has over 20 years of experience. He works as Associate Professor in Department of Architecture in Institute of Engineering of Tribhuvan University. Besides, he works as consultant conservation architect and planner. Currently, he is involved with post disaster reconstruction and planning of several heritage sites (tentatively listed sites and world heritage sites like Pashupatinath Area, Lumbini, the birth place of Buddha and Ramagrama Area)

遺産保護のための努力：ネパール・ラニポカリにおける 2015 年ゴルカ地震復興について

バルシャ シュレスタ（ネパール 国家復興本部 中央レベルプロジェクト推進ユニット）
サンジャヤ ウプレティ（トゥリブバン大学工学院建築学科）

ネパールの 2015 年のゴルカ地震では、ネパールの重要な文化的、歴史的、宗教的遺産である約 2,900 の建物が壊滅的な被害を受けた。1664 年から 1669 年にプラタップ・マラー王によって、息子の早すぎる死を悼む妻を慰めるために造られた「ラニポカリ」（「女王の池」の意）もその一つである。池の中心には、1934 年の大地震の後「グンバズ様式」で再建された元々特徴的な「シハラ様式」のヒンドゥー教寺院（「バルゴパレシュワールマンディール」）があったが、2015 年のゴルカ地震で完全に破損した。

この池は、マラー時代の考古学に関する古代の知識と、伝統的な材料と技術を使用した水の供給・貯留・再補給を特徴とする配水システムが使われていたことの証である。このライブ遺産は、カトマンズ渓谷における文化と宗教のるつぼとして存続している。

2016 年 1 月 16 日に発表されたラニポカリの復興計画は、鉄筋コンクリート技術を駆使して、従来の文化的価値、伝統的なアイデンティティとユニークな建築物を、商業公園へと転換することを目的としたものであり、しだいに若者活動家、保護主義者、市民団体、地域コミュニティ団体などから抗議が高まり、大きな動きとなった。カトマンズ特別市当局と本件にかかる上位機関である政府考古学局のこのような方向性は、災害後の歴史的遺産の再建

に関するある種の国際標準に逆行するものであり、2017 年 8 月から 12 月にかけて、数十件を超える抗議が巻き起こった。抗議の声としては、第一に、古来の建築の知識に基づいて池と神殿を真に伝統的な形で保全することが求められた。第二に、古くからの生きた遺産を保全するため、遺跡を民間に貸し出すというカトマンズ特別市の計画にも反対の声があがった。このような抗議の声は当初は無視されていたが、結局、再建現場の閉鎖や法廷での訴訟、前例のないメディアの注目などに繋がった。政府は国民の圧力に耐えることができず、その真に伝統的な形で「ラニポカリ」を再建することとなった。

このポスター発表の目的は、災害後の復興の誤った取り組みから遺産を救うための国民の努力と、それがどのように前向きな政策への変更をもたらすことができるかを示そうとするものである。その最、使用される手法としては、価値の再構築のための歴史的文書の分析、ポスターによる訴え、その結果と良い形での結果である。スケッチ、写真、新聞の切り抜き、インタビューの抜粋、文書などがポスターの素材として使われる。これは、こっけいな大失敗に終わったかもしれない取り組みを将来世代に語り継ぐべき記憶として記録することに役立つであろう。

Struggle for Heritage Conservation: The Post Disaster Reconstruction of Ranipokhari in Kathmandu

Barsha Shrestha（Central Level Project Implementation Unit (CLPIU),
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Sanjaya Uprety（Department of Architecture, Institute of Engineering, Tribhuvan University）

The devastating Gorkha earthquake-2015 in Nepal has affected about 2,900 structures with cultural, historical and religious heritage value. Among these, was the Ranipokhari (Queens Pond) built from 1664 to 1669 AD by King Pratap Malla to console his wife who was mourned by the untimely demise of their son. The originally iconic ‘Sikhara-style’ Hindu temple (‘Balgopaleshwor Mandir’) in the middle of the pond, rebuilt in Gumbaz style after the great Earthquake in 1934, was completely damaged during 2015 Gorkha quake.

The pond is a testimony of the use of ancient knowledge of Malla-era archeology, and water distribution system characterized by supply, retention, and recharge using traditional material and technique. This live heritage site endures as a melting pot of cultures and religions in the valley.

The post-disaster reconstruction initiation of Ranipokhari, on January 16, 2016, which was aimed at turning it to a commercial park replacing its cultural value, traditional identity and unique construction through reinforced concrete technology witnessed a gradually built massive protest from youth activists, conservationists, civil society and local community groups. Notwithstanding the ‘internationally agreed framework’ for the post-disaster reconstruction of heritage sites, such initiation by Kathmandu Metropolitan City (KMC) and approving agency, the Department of Archeology (DOA), triggered over dozens of protests between August and December 2017. The protestors

demanded, first, for authenticity in the conservation of the pond and the temple by resorting to traditional knowledge of construction. Second, they opposed the KMC's plan to lease out the heritage site to the private operator so that the age-old live heritage tradition can be conserved. The initial indifference to protestor's demand resulted, among others, in the padlocking of the construction site, legal suit in the court and unprecedented media attention. Government, not being able to withstand the public pressure, decided now to reconstruct 'Ranipokhari' retaining its authenticity.

This poster presentation aims at displaying the public struggle to save heritage from the mishandling of post-disaster reconstruction and how it can bring about positive policy and decision changes. In doing so, the method used is the historic document analysis for the value establishment, charting of protest events, its consequences, and the positive outcomes. Sketches, photographs, newspaper cuttings, interview snippets and texts are used as materials for the poster. The poster presentation is helpful in documenting the whole fiasco which may serve as a memory to the future generation.

ルペシュ シュレスタ(カトマンズ盆地保存トラスト)
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トリブバン大学にて学士（建築学）、2014 年から 2016 年にかけてドイツ学術交流プログラムから奨学金を得て応用科学大学（ドイツ ケルン）にて修士（天然資源管理開発）。現在、ネパール大地震後の建築遺産再建プロジェクトに参画。研究テーマは、災害からの復旧、建築遺産の再建、災害に負けない都市づくり、防災・減災など。

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Ar. Rupesh Shrestha completed his Bachelor's in Architecture from Tribhuvan University and Master of Science in Natural Resources Management & Development from University of Applied Sciences - Cologne (TH Köln) in 2014-2016 with scholarship from German Academic Exchange Service (DAAD). Currently, he is working in post-earthquake heritage reconstruction project in Nepal. His research interests are in post-disaster recovery, heritage reconstruction, urban resilience, disaster risk reduction and sustainable built environment.

モニュメントは崩壊し、モニュメントは再建する――よみがえる知恵、スキル、記憶

ルペシュ シュレスタ（カトマンズ盆地保存トラスト）

「カトマンズ盆地保存トラスト」は、ネパールで、2015 年の地震で破壊された 15 世紀から

ら 18 世紀のパタン ダルバール広場のすべてのモニュメントを再構築する事業に取り組んでいる。ネパールでは、創造性の高い建築家、エンジニア、職人、アーティストが、パタンの天才の軌跡/場所の精神、感性、価値観、真正性を維持するチームとして集まっている。この有形遺産を作成する無形の側面はしばしば無視され、文書化されていない。ネパールでは新しい知恵が生まれている。それは、何世紀にもわたる哲学、宗教的、文化的価値観のプロセス、実践、融合から来るものである。

現在、対話、構築、修正、保存、強化が進行中である。遺産の保存は遺跡の囲い込みや保護を意味するのではなく、人々がモニュメントに触れたり、生きたり、歩き回ったり、礼拝したりできるように修正・保存することを意味するというのがネパールからの強いメッセージである。パタンは生きた都市である。それは、固有の文化と価値を持つ多層的な都市環境を持ち、有形遺産の保存に貢献している。

「カトマンズ盆地保存トラスト」の文書化や情報発信の過程は多様である。「これまでの作業の文書化」と呼ばれる本の制作や、復興のプロセスを示す掲示板、遺産の復興の背後にある本当の立役者を示す記録映画の作成、パタンのインタラクティブ地図を教育支援プロジェクトとして製作することなどである。全世界に伝えたい物語である。

Living heritage of Patan - rebuilding heritage inside Kathmandu valley

Rupesh Shrestha（Kathmandu Valley Preservation Trust (KVPT)）

KVPT is working in Nepal to reconstruct all the monuments of Patan Durbar Square dating between 15th to 18th century that was destroyed in the earthquake of 2015. No where else in Nepal can you find so many creative architects, engineers, craftsman and artists assembled and working as a team to preserve Patan's Genius loci / spirit of place, sensitivity, values and authenticity. The intangible aspect which creates this tangible heritage is often neglected and undocumented. New wisdom is being created in Nepal. It comes from process, practice and syncretism of centuries-old philosophies, religious and cultural values.

There are dialogues, constructions, modifications, preservation and strengthening ongoing – right at this moment. There is a strong message from Nepal that heritage preservation does not mean fencing or protecting the ruins rather it means modification and preservation so that people can touch the monuments, live, roam or worship inside. Patan is a living city. It has multi-layered urban environment with inherent culture and values which feeds into the preservation of tangible heritage.

The documentation and outreach process of KVPT is varied whether it be production of book called "documentation of work to date" or display boards showing the process of reconstruction or making documentary films showing the real hero's behind the reconstruction of heritage or creating an interactive map of Patan for school tours as educational outreach project. These attempts are telling stories which must be communicated to the whole world.

サルワル バリ(パッタン開発機構)

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1953 年にムルタン生まれの Bari は、積極的な社会活動家である。彼はパタン開発機構を率いており、パキスタンの疎外された、恵まれない、過小評価されているコミュニティへの関心を高めるために貢献している。Bari は、1992 年スーパー洪水に被災したコミュニティを支援し、組織化されておらず人数も少ないボランティアグループから、全国 27 の地区で行動、研究、教育、動員に携わる数十人が所属する組織を作るまで、長い道のりを歩んできた。 Bari は、DRR、選挙、ガバナンス、労働者の権利、選挙と政治改革研究、擁護と民主化の分野で働くことにより、権威とみなされるようになった。The News、Dawn、Express Tribune、Daily Post のコラムニストでもある。1977 年にクエイドアザム大学で修士号（歴史学）を取得。イギリスに亡命した頃、サセックス大学開発研究所（IDS）の名門センターで学んだ。彼は、GNDR、ADRRN、全国人道ネットワーク、地域ガバナンスに関するグローバルネットワーク、アジア改革民主主義同盟(ARDA)を含むグローバル、地域、国内ネットワークのメンバーである。2007 年から 2008 年および 2016 年から 2018 年にかけて、選挙監視に関するパキスタンの CSO の最大のネットワーク-Free and Fair Election Network（FAFEN）を設立し、指揮している。

Sarwar Bari (Pattan Development Organization)

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Born in Multan in 1953, Bari has been an active social activist. He heads Pattan Development Organization, which has been contributing to further the interest of the marginalized, the deprived and the underrepresented communities of Pakistan. Pattan has come a long way - from a group of few volunteers helping and organizing communities affected by the 1992 super floods to a well-organized team of dozens of committed personnel engaged in action, research, education and mobilization in 27 districts across the country. Pattan has grown to be considered an authority when it comes to work in the areas of DRR, elections, governance, labour rights, electoral and politics reforms research and advocacy and democratization. He is a columnist with The News, Dawn, Express Tribune, and Daily Post. He did his M. Sc (History) from Quaid-i-Azam University in 1977. During his days in exile in England, he studied at the prestigious center - Institute of Development Studies (IDS), University of Sussex. He has been an active member of global, regional and national networks including GNDR, ADRRN, National Humanitarian Network, Global Network on Local Governance, Alliance for Reforms and Democracy in Asia (ARDA). He founded and headed a largest network of CSOs of Pakistan on election monitoring - the Free and Fair Election Network (FAFEN) during 2007-2008 and 2016-2018.

民主化を通じたコミュニティのレジリエンスの構築

サルワル バリ（パッタン開発機構）

PATTAN は、1992 年のパキスタンのスーパー洪水の余波で、コミュニティと公共政策の両方のレベルで防災と備えを始めた最初の NGO である。それ以来、私たちは主に現場で活動を行い、NHN、ADRRN、GNDR が主要メンバーのネットワークを作っている。また、JICA、ADB、連邦洪水委員会、国連機関などと協力している。

われわれは神戸と仙台の防災大会に参加した。パキスタン全土には、200 以上の洪水に関する協会・組織があり、災害やガバナンスに関する多くの研究が行われている。現在、市民の視点からのリスクや危険に関する VFL 報告書(GNDR グローバル研究)を執筆しており、災害ガバナンスの現状についても整理している。

災害は大規模な破壊を意味している。しかし災害はパキスタンに有意義な変化の機会を創出するという意味もある。災害時には性別の役割が変わり、女性に対する制限が緩和される。同様に、地元の地主や影響力のある人は安全な場所に移動するので、カーストと階級の不平等は一時的に弱まる。驚くことに、正常性の回復に伴って古い秩序も戻ってくる。

この戦略的空白期には戦略的介入を必要とする。災害の後に、住宅と資産における女性の所有権を増やすことができた。例えば、1993 年に 300 件の低コストの洪水対応住宅を建設し、女性は同等の所有権を得た。私たちのプログラムは、コミュニティをベースとする災害への備えとマネジメントをするために、災害に陥りやすいコミュニティの周辺地域のボランティア（男性と女性）を増やすことをすすめている。さらに、彼らのリーダーシップとマネジメント能力を開発するために、私たちは村の組織に革新的なモデルを導入した。このモデルは、（1）リーダーの定期的な交替、（2）コンセンサスに基づいた意思決定（投票の代わりにすべてが同意するまで対話と議論を行う）、(3) PATTAN の役割を減少させること、という 3 つの柱から成り立っている。これには性別や階級の格差を平等化する優れた機能があり、対話を促進し、知識学習を強化し、相互理解を形成するとともに、共通の行動のための基礎を形作ることとなった。そして何よりも、参加型民主主義のための種をまくのに役に立った。このモデルの影響は、その後の地方選挙で明らかにされた。たとえば、各村では、コミュニティ全体（一般団体）が、女性を含むさまざまなポジションの候補者を満場一致で指名し、ほとんどの候補者が勝った。

教訓 : 災害リスクを減らすことは私たちの究極の目標でなければいけないが、災害が起こることを忘れてはならない。ハードなインフラだけでなく、性別を考慮した参加型の民主主義を打ち立てる「より良い復興」（ビルド・バック・ベター）」の機会を提供する必要がある。これにより社会レジリエンスが強化される。

ここでは以上のことについて写真とケーススタディを通じてモデルを紹介する。

Building Community Resilience Through Democratisation

Sarwar Bari（Pattan Development Organisation）

PATTAN was perhaps the first NGO who had initiated disaster mitigation and preparedness work both at community and public policy level in the aftermath of 1992 Pakistan's super floods. Since then we have been active in the field and became active member of leading networks including NHN, ADRRN and GNDR. Nationally we worked with JICA, ADB and Federal Flood Commission, UN agencies. We participated in Kobe and Sendai conferences on DRR. We formed more than 200 Flood Associations across Pakistan and conducted many studies on disaster and governance. Currently, we are writing VFL report (a GNDR global study), which will reveal citizen's perspective about risks and hazards but also it will tell about state of disaster governance.

Disasters mean massive destruction, but disasters also create opportunities for meaningful change in Pakistan. During disasters gender roles change and restrictions on the women are relaxed if not lifted. Similarly, caste and class inequalities are weakened as most of the local landlords and influential would move out to safer areas, though temporarily. Amazingly, the old order accompanies the return of normalcy.

This strategic void demands strategic intervention. In the aftermaths of disasters, we successfully increased women's ownership in housing and assets. For instance, in 1993, we built 300 low cost flood resistant houses and women got equal ownership. Our programme encouraged volunteers (male & female) from marginalized sections of disaster-prone communities for community-based disaster preparedness and management. Furthermore, in order to build their leadership and management skills and acumen we introduced an innovative model for Village Organisations, we had formed. This model stands on three pillars – 1, rotational leadership; 2, consensus-based decision making (instead of voting, hold dialogue and discussion till all agree); and, 3, diminishing role of PATTAN. This model acted as a great equalizer on gender and class disparities, encouraged dialogue, enhanced knowledge, mutual understanding and found new common grounds for common action. And above all it helped sow the seed for participatory democracy. The impact of this model manifested in the subsequent local elections. For instance, in each village the whole community (general body) unanimously nominated candidates for various positions including female quota seats. Most of their nominees won.

Lesson: While reducing disaster risks must be our ultimate goal, we must not forget that disasters do happen and do provide opportunities to "Build-Back-Better" not just physical infrastructures but also to build participatory and gender-based democracy. And this will strengthen social resilience too.

I will present our model in the said international forum through pics and a case study.

サジャ マジード（スリランカ東南大学）

Email: saja.aslam@gmail.com

サジャは 2004 年の津波で壊滅的な被害を受けたスリランカの南東海岸出身である。現在は、オルビルのスリランカ東南大学で講義を行っている。彼はクイーンズランド工科大学で災害復旧の博士号を取得した。2004 年の津波が村を襲って以来、8 年間人道支援や防災援助活動を行ってきた。彼はスリランカの 2 つの最大の NGO と協力し、災害管理の分野で豊富かつ実践的な知識を持っている。サジャは現在、災害管理、気候変動、参加型開発、エンジニアリングプロジェクト管理を教えている。

※：最新のアップデートと彼の過去の仕事については www.aslamsaja.com を参照されたい。

Saja Majeed (South Eastern University of Sri Lanka)

Email: saja.aslam@gmail.com

Saja is from the South-Eastern coast of Sri Lanka, which was devastated by 2004 Tsunami. He currently lectures at the South Eastern University of Sri Lanka in Oluvil. He just completed his thesis for his PhD at Queensland University of Technology in disaster resilience. He has been a humanitarian and disaster management aid worker for 8 years since 2004 Tsunami hit his village. He worked with two largest NGOs in Sri Lanka, bringing wealth of practical knowledge in the field of disaster management. Saja now teaches disaster management, climate change, participatory development and engineering project management.

NB：For latest updates and his past work: please visit www.aslamsaja.com.

2004 年の津波フィールドワーカーから 2019 年の防災博士号までの サジャの物語

サジャ マジード（スリランカ東南大学）

私はスリランカの美しい海岸沿いの Sainthamaruthu 村に生まれた。ここは、現在ではスリランカでも人口密度の高い都市の一つである。祖父と一緒にインド洋沿岸の学校に行った最初の日を今でも覚えている。私は週に数日ビーチに行って友達と遊んだり楽しんだりすることなしに過ごすことはほとんどなかった。このころちょうどスリランカの北部と東部で内戦が始まった。私たちは恐怖の中で生きていたが、生活は、多くの社会的な問題とともに 2009 年の終戦まで続いた。

2004 年 12 月 26 日は私のまちにとって最も暗い日であった。午後 1 時頃に、大学の食堂にいる仲間が、海水が Sainthamaruthu 村に入って約 3,000 人以上がなくなり、人口のほぼ半分が家を失ったという情報を教えてくれた。なぜ海水が私の村に来たのか、私は全く分からなかった。「津波」という言葉もそれまで誰も聞いたことがなかった。

皮肉なことに、私は 12 月 26 日に生まれた。村の隣人たちが亡くなった親戚を悼むため、今でも自分の誕生日を笑顔で祝うことはできない。私は、津波のような災害から人々や村を守るために何かしようと思っていた。数時間後には、私は学校に避難している人々の記録や浸水地域への救援援助のための組織づくり、被災者への食料や救援物資の配布などを手伝っていた。学校で災害支援センターを立ち上げ、睡眠をほぼ取らずに 24 時間運営してきた。

2006 年、私は勉強を終えた後にボランティア活動を行った。その後、RedR（災害救援を目的とする国際的 NGO）の防災プロジェクトマネージャーとして 5 年間にわたり活動を行った。そこでは防災の現場作業員の育成を立ち上げた。さらに、欧州委員会の災害対応プロジェクトに 3 年間参加した。私はこの分野にとても熱中し、修士号を取得することになった。修士論文のテーマは「津波早期警報」である。2013 年、博士課程に進学し、災害回復力の博士号を取得した。

災害のフィールドワーカーとして始まり災害管理についての深い理解に至ったという私の旅について、各国の皆さんにお伝えしたいと思う。

Disaster survivor to disaster researcher

－The story of Saja from 2004 Tsunami response worker to 2019 PhD in disaster resilience－

Saja Majeed（South Eastern University of Sri Lanka）

I was blessed to be born in a beautiful coastal village in Sri Lanka – ‘Sainthamaruthu’, now one of the densely populated city in Sri Lanka. I still remember the first day I went to school with my grandfather, which is on the coast of Indian ocean. I hardly spent my childhood without going few days in a week to the beach to play and enjoy with friends. This was also the period, when the civil war in the North and Eastern part of Sri Lanka started. We lived in fear, but life went with lots of social struggle until the end of the war in 2009.

On 26 December 2004, the darkest day for my city, which was overturned within a day. I had no idea – why the sea water came to my village as my fellow students in the canteen of the University told me at about one o’clock in the afternoon. No one heard this word – ‘Tsunami’ ever before. People told me until I went home that the sea water entered into my village and killed more than 3,000 people and left almost half of the population homeless.

Ironically, I was born on 26th December, I can’t still celebrate with smile, because people next to me in my village mourn for their lost relatives. I had a determination that I will do something to protect my people and my village from another disaster like Tsunami. No hours later, I was in the field helping to record people displaced in the schools, organizing all the relief assistance flooded into my village, and distributing food and non-food items to people. The days passed without sleep, a 24 hours operation of disaster assistance centers in schools.

I was offered a volunteer position in 2006, after I completed my studies. I was then promoted to

Project Manager for Disaster Management at RedR, which spanned for 5 years. I started to train field workers in disaster management. I then joined with European Commission for another 3 years in disaster response projects. I was so embedded into this sector, which led me to start a Master’s Degree. I chose ‘Tsunami Early warning’ for my research. I then joined as an academic in 2013, started my PhD in disaster resilience’. Now just submitted my thesis. A journey I started as a disaster worker, ended in a deep understanding of disaster management – I want to share to this world.

ラチャニーコーン ソンティップ（国際津波ミュージアム代表、NPO 法人 教育文化機構）

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国際津波博物館館長、津波記念館長。チュラロンコン大学で政治学の学士号と修士号を取得し、ラムカムヘン大学政治学科課程修了。2006 年より国際津波博物館館長、パンガー県津波記念館長。また、教育文化研究所（NPO）の学長として務めている。

Ratchaneekorn Thongthip (Director, International Tsunami Museum Institute for Education and Culture, NPO)

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Director, International Tsunami Museum, Director, Tsunami Memorial Museum. Received B.Ed. and M.A. in Political Science from Chulalongkorn University, and B.A. in Political Science, Ramkhamhaeng University. Working as Director of International Tsunami Museum and Director of Tsunami Memorial Museum, Phang-nga Province since 2006. Also working as President of Institute for Education and Culture (NPO).

津波博物館による語り継ぎ: 15 周年記念及び日タイの友情

ラチャニーコーン ソンティップ（国際津波ミュージアム、NPO 法人 教育文化機構）

2004 年 12 月 26 日、タイは史上最大の自然災害に見舞われた。スマトラ島北部の西海岸沖でマグニチュード 9.3 の巨大地震が発生し、インド洋周辺 14 カ国の海岸を壊滅させた巨大な津波が発生した。波はタイのアンダマン海岸を襲い、6 つの沿岸地域で前例のない死者数と被害があった。タイで最も被災を受けたパンガー県ではタイの津波博物館が 2 か所ある。国際津波博物館と津波記念館である。ここでは、学生リーダーが津波関連のイベントを熱心に支援している。2006 年にオープンした博物館の目的は、津波やその他の自然災害に関する認識を高めることである。非営利団体である教育文化研究所は国際津波博物館と津波記念博物館を運営しており、地域レベルでの顕著な社会貢献として認められている。教育

文化研究所で、国家社会福祉委員会、人間安全保障省及びタイ国民社会福祉協議会から賞を授与された。

年中無休で毎日 9 時から 21 時まで営業しており、どちらの博物館もほかの組織から直接の資金援助を受けていない。博物館の運営・管理は、多くの学術講演講師とソンティップ所長で構成される委員会によって運営されている。ちょっとした寄付もあり、そのおかげで博物館を管理するスタッフも雇用できている。博物館入場は、地元住民、子供、学校に対して完全に無料であり、寄付も地元の子供たちを支援するために使用されている。博物館では、津波メカニズムのアニメーションやビデオ、津波警報サイン、津波が環境に与えた影響、津波の生存者の話、早期警報システム、2004 年の大津波と同様の津波が過去にも起こったことを示すフラトン島の砂の層などの展示物が展示されている。博物館の訪問者は各国大使、海外大学の研修旅行や有名人などが含まれている。

在タイの日本大使館の紹介により、2017 年の世界津波博物館会議に博物館長が JICA から招かれ、東北大学国際災害科学研究所 Anawat Suppasr 准教授に会う機会を得た。彼は博物館に対する技術支援を続け、現在は博物館のアドバイザーである。2019 年には、津波に関する知識・情報を紹介する災害ツアーを開始し、津波被災地への旅行、災害体験の語り継ぎ、ジオパークの紹介などを行っている。知識の伝達、記憶の引き継ぎ、未来への備えの拠点としての津波博物館の役割を果たしている。

Tsunami storytelling from a museum:
The 15th memorial and friendship between Japan and Thailand

Ratchaneekorn Thongthip
(International Tsunami Museum Institute for Education and Culture, NPO)

On 26 December 2004, Thailand was hit by the greatest natural disaster in its history. A massive earthquake measuring magnitude 9.3 occurred off the west coast of Northern Sumatra, creating giant tsunami waves that devastated the shores of 14 countries around the Indian Ocean. The waves ravaged the Andaman Coast of Thailand causing unprecedented death and destruction in six coastal provinces. Tsunami museums in Thailand operating in two sites in Phang-Nga Province the most affected area in Thailand. The International Tsunami Museum and Tsunami Memorial Museum were formed by student leaders who were strongly committed to social work supporting tsunami-related events. Opening its doors in 2006, the museum's purpose is to increase awareness about tsunamis and other natural hazards. The Institute for Education and Culture, a non-profit organization operates the International Tsunami Museum and Tsunami Memorial Museum, which have recognized for its outstanding social contributions at the province level. The Institute for Education and Culture was awarded by the board of National Social Welfare and the Ministry of Social Development and Human Security as well as the National Council on Social Welfare of Thailand.

Open daily during 9:00-21:00 all year round, both museums receive no direct funding from other organizations. The museum management is administered by a committee comprised of a number of academic lectures and the Director Ms. Ratchaneekorn Thongthip. Small personal contributions allowed the hiring of an officer to take care of the museum. Most generously, entrance to the museum is entirely free for the local residents, children and school, and donation are used for supporting the local children. The museum shows the exhibits which include animations and videos of the cause of tsunami, tsunami warning sign, the impact of the tsunami on the environment, tsunami survivor stories, early warning systems, sand sheets of Phra Thong Island providing tangible evidence that the 2004 tsunami was not the first of its kind. The visitor of the museums includes ambassadors, international university study tours and notable celebrities.

By an introduction of Japan Embassy in Thailand, JICA invited the museum director to attend the World Tsunami Museum Conference in 2017 which the museum director got chance to meet Assoc. Prof. Anawat Suppasri, International Research Institute of Disaster Science at Tohoku University. He keeps supporting the technical assistance and is now one of the museum advisors. In 2019, the museum starts the Disaster Tour to show the knowledge and information about the tsunami, travel to the tsunami affected area, storytelling, telling live lessons and geopark. The Role of the Tsunami Museums as centers for knowledge transmission, passing-on the memories and prepare for the future.

マーレーン ムリー(太平洋津波ミュージアム代表)
Email: director@tsunami.org

マーレーン・ムリーは、2013 年から太平洋津波博物館の事務局長を務めている。その前は、ハワイ州津波教育カリキュラムプログラムの米国教育省助成金の主任研究員だった。博物館のための連邦、州、郡の補助金からいくつかのプロジェクトを運営している。ヒロのハワイ大学の経営学学士号を取得し、ホノルルの New Otani Kaimana Beach ホテルで 8 年間に営業や予約のディレクターとしてのビジター業界で幅広いキャリアを積んでいた。

Marlene Murray (Executive Director, Pacific Tsunami Museum) (Session Co-chair)
Email: director@tsunami.org

Marlene Murray has been the Executive Director at the Pacific Tsunami Museum since 2013. Prior to that she was the Principal Investigator for the U.S. Department of Education, grant, Hawaii Tsunami Education Curriculum Program. She manages several projects from federal, state, and county grants for the museum, as well as day to day operations. Marlene holds a B.A. in Business Administration from the University of Hawaii at Hilo and had an extensive career in the visitor industry, including eight years at the New Otani Kaimana Beach Hotel in Honolulu, as the Director of Sales and Reservations.

太平洋津波博物館が津波の記憶をどのように残しているか

マーレーン ムリー（太平洋津波博物館）

ハワイ州では、津波の死亡者数は他の自然災害の死亡者数の合計値よりずっと多い。歴史から見ると、ヒロは米国のどの地域よりも津波による死者と被害で苦しんできた。ハワイでは、津波教育の必要性に応えて、ヒロに設立された太平洋津波博物館は 1994 年に法人化され、過去 25 年間にわたって毎年数千人の住民や来館者にサービスを提供してきた。

ハワイ諸島に大きな影響を与えた最後の大津波は、ほぼ 60 年前に発生した。ハワイ諸島は、それ以来、2 世代以上にわたって、大津波による被害を経験することなく経済成長を続けてきた。ハワイ州の人口は増加しているが、特にハワイ島では人口が急増している。この地域社会にとって、観光業は重要であるが、ほとんどの観光客は津波の時にどうすれば良いか分かっていない。

ハワイでは何十年も大きな津波が起きていないため、もはや人々の頭の中に津波のイメージがない。一方、ヒロが再び津波の被害を受けるのは時間の問題だと科学者たちは考えており、リスクは高い。

毎年この博物館を訪れる何千人もの人々の中で、すべての事実や数字を覚えている人はほとんどいないであろうが、津波に関する信じられないような話は良く覚えている。この博物館は、津波の物語の人間的な部分に重点を置いて、生存者の物語と画像の展示をすることで、記憶を生かし続けるという目標を達成している。博物館は、5,000 以上の津波画像と世界中からの 600 以上の生存者の物語のビデオのコレクションを所有している。過去の津波で命を落とした人々の生きた記念碑としても機能している。博物館はまた、津波の出来事からの工芸品を展示し、物語を生かすことに役立てている。博物館では、歴史、津波の映像、科学的事実を含む有益な 25 分間のビデオが上映されている。しかし、最もインパクトのあるのは、鮮やかな描写で表現された生存者の経験に関する物語である。

心奪われる様な物語や画像を通じてこそ、教訓を学び記憶を生かし続けることができる。

How the Pacific Tsunami Museum Keeps Tsunami Memories Alive

Marlene Murray（Pacific Tsunami Museum）

Tsunamis have killed more people in the state of Hawaii than all other natural disasters combined. Hilo has suffered more death and destruction from tsunami waves in historic times than any other place in the United States. In response to the need for tsunami education in Hawaii, the Pacific Tsunami Museum was incorporated in 1994 and has provided that service to thousands of residents and visitors for the last 25 years.

The last major tsunami to significantly impact the Hawaiian Islands occurred almost 60 years ago. Since then, over two generations have grown up without ever having experienced a major tsunami, and the death and devastation that can occur. Additionally, the state, and especially Hawaii Island has

experienced a tremendous growth in population. Another very important and large sector in the community are the visitors to the islands. Most people do not know what to do in case of a tsunami.

Because a major tsunami has not occurred in Hawaii in decades, it is no longer at the forefront of people's minds. This presents a considerable risk since scientists agree that it is only a matter of time before Hilo is impacted again by a tsunami.

Out of the thousands who visit the museum each year, few will recall all the facts and figures, but what they will remember are the incredible stories. The museum accomplishes its goals of keeping the memories alive by creating exhibits with powerful survivor stories and images, placing a strong emphasis on the human component of the tsunami story. The museum has a collection of over 5,000 tsunami images and over 600 survivor story videos from all over the world. It also serves as a living memorial to those who lost their lives in past tsunami events. The museum also displays artifacts from tsunami events, with accompanying narrative which helps make the story "come alive." An informative 25-minute video is shown in the museum's theater which includes history, tsunami footage, and scientific facts. However, the most impactful aspect of the film are the survivor stories, with vivid descriptions of their experiences.

It is through riveting stories and images that we learn lessons and keep memories alive.

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マーケティングとコミュニケーションの実務家。人々の生活の質の向上に資するデジタルの活用に強い情熱を有する。創造的でありながらデータ主導型の考え方の下、問題の解決に鋭くアプローチする。異なる目線で世の中を探訪し、支援を必要とするコミュニティに貢献することに夢中。

Nguyen Vuong (GoViet)
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A marketing and communication practitioner with strong passion about digital and its application to improve human experience of a better life. A creative yet data driven mindset that sharpen approach to solving problem. Keen on exploring the world in different lens and contributing to the community that need help.

災害対策・対応のためのバーチャルリアリティ

グエン ヴオン（GoViet）

ベトナム財務省と世界銀行が開催した「災害リスク軽減のための金融ソリューション」フォーラムで、Nguyen Huu Chi 財務副大臣は「ベトナムは、アジア太平洋地域において、台風、洪水、竜巻、干ばつ、地滑りなどの自然災害により大きな被害を受けた国である」と述べた。自然災害による経済被害は毎年 17 億米ドル以上にのぼり、自然災害で亡くなる死亡者数は世界 22 位である。

1999 年後半、国の中央部を襲った一連の豪雨によって引き起こされた洪水は、ベトナムが経験する今世紀で最悪の被害をもたらした。595 人が亡くなり、41,846 の家屋が洪水により破壊され、570 の学校が被害を受け、経済損失は 4 億 8,800 万米ドルと推定されるなど、トゥアティエンフエ（ベトナム中北部沿岸の省）の人々にとって忘れることのできないものとなった。洪水が発生した地域の社会、経済、環境に大きな影響を与えた最も恐ろしい災害と考えられている。

ベトナム中部の豪雨では、通常 5 月から 12 月まで平均して年に 10 回を記録しており、致命的な被害をもたらしている。政府は、深刻な被害を受けた人々を支援するために様々な資金を調達し、またそれにも限りがあるため、さらに国際支援も要請した。自然災害は、経済損失をもたらしただけでなく、地域の健康、また子供たちのような最も脆弱なグループの潜在的リスクを増大させている。

ベトナム中部は、その地理的特徴のせいで、自然災害から大きな被害を受けやすい。人々の生活は貧しく、自然災害が襲うたびに生存と生活を確保するために苦労する。人的被害と経済的被害のトラウマは、災害を一度も経験したことのない他の人にとっては想像できないものである。現在の世代の人々は Digital 4.0 の時代に足を踏み入れている。人々は、オンライン VR 博物館という強力なプラットフォームを通じて、自然災害の結果や根本的原因を自ら見て理解し、被災者たちと気持ちを共有すべきである。バーチャルリアリティ（VR）は、人々に引き込まれるような感覚を提供する技術であり、そのような方向にデジタル化が進化している。これを自然災害の博物館のアイデアに適用すると、VR 技術によって、ベトナム中部の人々に実際に起こった洪水や台風を追体験することができる。it will teach them much more about disasters and how to respond better than any guidebook or documents.人々は、災害をバーチャルに体験するための機能を使いながら、わが事として災害を疑似体験できる。オンライン VR 博物館は、そのユーザーに技術的な環境設定と周到に設計された流れを提供する必要はあるものの、災害やそれへの対応方法についてガイドブックやドキュメントよりさらに多くの事を教えてくれる。

Virtual Reality for Disaster Preparedness and Response

Nguyen Vuong（GoViet）

“Vietnam is the nation that was strongly damaged by natural disaster in Asia – Pacific as: typhoon,

flood, torado, drought, landslide, etc.”, said Deputy Minister of Finance Nguyen Huu Chi, in “Financial solution for Disaster Risk” forum held by Ministry of Finance and World Bank. These damages caused over US$1.7 billion every year and make Vietnam #22 worldwide in the number of people died because of natural disasters.

In late 1999, Vietnam experience the worst flood in a century, caused by a series of storms that brought heavy rain to the central part of the country. It brought unforgettable memories to people in Thua Thien – Hue (a province in North Central Coast of Vietnam), 595 people died, 41,846 houses were destroyed by the flood, 570 schools were damaged, economy loss was estimated upto US$488 million. This is considered as the most terrifying disaster heavily impacted society, economy, environment of provinces where the flood hit.

Heavy rainfall in Central Vietnam is recorded at 10 times per year on average, usually from May to December with fatal consequences. Government has raised several funds to support those who were severely impacted and further requested for international assistance due to limited resources. Natural disasters not only brought economy loss but increased potential risks to community health, especially children, the most vulnerable group.

Natural disasters tend to have severe impact on Central Vietnam due to the geographical feature of this land. The livelihood of people is poor and they struggle to secure it after each time natural disasters hit their land. The trauma of human losses and economy impact is somehow “unimaginable” to others who have never experienced that devastation. People of current generation is stepping to an era of Digital 4.0 and they should be encouraged to see for themselves and understand the consequences of natural disasters, the root causes and share empathy with those who suffered through a powerful platform as an online VR museum. Virtual Reality (VR) is the technology that gives people an immersive experience, that is what digital is evolving into. Applying to the idea of a museum of natural disaster, VR technology can simulate the flood, typhoon that actually happened to people in Central Vietnam. They can experience the disaster in their own terms with guide that helps them go through it safely. Though there are requirements of technology setup and well-designed flow for visitors of the online VR museum, it will teach them much more about disasters and how to respond better than any guidebook or documents.

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死者へ捧げる献立

丸林　祐子（ライデン大学大学院　芸術社会研究科）

発表者は、これまでに阪神淡路大震災の遺族証言研究を行ってきた。読解した震災遺族証言のなかに、死者への「供物」に関する証言が少なからず存在することに気がついた。これらの現存する遺族証言記録の事例から、博士研究の一環として、日本の民間信仰に基づく伝統的な葬送儀礼の一つである死者への「供物」の理論的変容について考察を進めてきた。

死者の魂を鎮めるために用意する「枕飯」の意味、また、五来重、田中宣一、山田慎也らが論じている葬送の潤滑な進行を邪魔しようとする邪霊に供する「枕団子」という意味は、さらに、死者または不在者に対して捧げる「お供え」や「陰膳」の意味合いは、現在の日本社会においてなお継承されている重要な葬送儀礼の一例である。また、波平恵美子の論ずる日本人の死者の観念によれば、日本人が伝統的に死者に対して供物を与えてきた文化的歴史があることも論じられている。この死者や邪霊に食べ物を供するという行為を、本発表では、阪神淡路大震災によって近親者を亡くした遺族に「死者への献立」を想起してもらい、その作り方を記録、報告することで、記憶の語り継ぎとしようという実験的試みを行う。この試みを媒介として、新しい震災遺族証言の形態の可能性を提示する。

Recipes for the Dead

An Attempt at Integrating Japanese Death Culture and Acts of Testimony

Yuko Marubayashi（Leiden University, Center for the Arts in Society）

The research subject for this session is largely related to my doctoral dissertation, in which I discuss the relation between testimonies of families of the deceased [遺族 izoku] of the 1995 Hanshin-Awaji earthquake, and Japanese specific phenomena of quietness and silence. To put it simply, my dissertation investigates alternative expression and representation of testimonies of izoku regarding the dead, and how those styles of testimonies are influenced by cultural customs of quietness and

silence.

The concrete case studies range from common written testimonies in publications to audio-visual testimonies such as documentaries and fiction films. Moreover, I will consider how bodily movement and sensations establish a form of testimony. To this end, I plan to include practices of performance such as workshops, creating memorials, holding rituals, etc. into alternative expression of testimony. This concept of the act as testimony is, for instance, clearly embodied by the practice of preparing and offering drink, food, and meals in shisha-kuyo [死者供養]. To understand the Japanese specific cooking culture embedded within shisha-kuyo in contemporary society, it is necessary to gain a structural framework of the roles of food in death culture, particularly in the rituals of sou-sou [葬送] in post-war Japan.

In current Japan, where the majority of people still follow the Buddhist style of wake and funeral, post-funeral memorial services are called nenki-hoyo [年忌法要], which take place regularly and repeatedly up to 33 or 50 years after the death. Another Japanese practice of this kind is the aforementioned shisha-kuyo, which have various forms but all aim to console the dead and help them to a better status or circumstance. In return, the dead protect and bring good luck to the living (Ikegami 2004; 2011). Thus, it is misleading to translate shisha-kuyo as memorial ceremony or ancestor worship; Ikegami defines it as "spiritual aid for the dead". Both practices are motivated by the concept of tsuizen-eko [追善回向], which means positive actions the living take for the dead that can make the dead a better being.

Among various materials used in the practice of wakes, funerals, nenki-hoyo and shisha-kuyo, I emphasize that food is the most important medium that enables maintaining mutual communication between the living and the dead, since food and drink can, in a very concrete way, represent an intimate, private relationship that the living and the dead used to share. My research on written testimonies by families of those who died in the Hanshin-Awaji earthquake clarified that, even 20 years after the deaths of their family members, they still continue cooking and serving them meals. It is clear that osonae and kagezen are living practices that re-enact the experience of sharing meals with someone who is already dead.

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語り継ぎの担い手育成のための学生向けプロジェクトベースドラーニング

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【背景と目的】

これまで日本では多くの災害が発生し、語り部やミュージアムの活動などによってその伝承が行われてきた。しかしながら、記憶に新しい限りで災害が発生していない地域においては特に、なかなか災害が「自分ごと」となりにくく、災害が発生した際の対応が遅れたり、適切な防災・減災が行われていなかったりすることがある。東京や京都に事務所を置く弊団体も、大学生を中心に被災地支援や防災教育の活動を行っているが、被災した方のお話を伺うだけではどうしても他人ごとという感覚が抜けきらない学生も見られた。阪神淡路大震災を直接体験し、自分ごととして語り継ぐことができる方が減っていく中、語り継ぎを次世代にまで行っていくには、次世代の若者たちが災害を自分ごととして捉え、それを伝えていく必要があると考える。このようなことから、未災地の大学生を主なターゲットとして、次世代に震災を語り継ぎ、それを自分ごととしてさらに次世代へと伝えていくことを目的とした活動をしている。以下ではその活動の紹介を行う。

【方法】

特に教員志望や教育に関心がある大学生を対象に、被災地におけるプロジェクトベースドラーニングを行う。プロジェクトベースドラーニングの内容としては以下の通りである。

ⅰ）被災地におけるフィールドワーク

まずは被災地を訪問し、現地の方にインタビュー行なったり、ミュージアムを訪問して震災について学生が学ぶ。また、その中で被災地の今の課題を学生に見つけてもらう。

ⅱ）被災地での課題について解決方法を考える

フィールドワークを通して見つけた課題についてグループに分かれて自分たちができることを考える。

ⅲ）考えた課題解決の方策を実施

グループごとに考えた課題解決方策を実施する。

ⅳ）大学生が震災・防災についての研究会やイベントの開催を行う

被災地における課題解決学習を通して学んだことを、今度は自らの言葉で周囲の人々に伝えていく研究会やイベントを行う。

この活動を通して、まずは学生が震災について知った後、被災地の課題の解決方策を考える中で、震災が他人ごとから自分ごとになるとともに、震災支援にも繋がる。また、教育に関心のある大学生が震災を伝承されるだけでなく、プロジェクトベースドラーニングを通して学んだことを研究会やイベント、教育現場にて自らの言葉で伝承する立場になることでさらに次の世代までも伝承が可能になると考えられる。

【結果】

以上の活動は、被災地を訪問し、現地の方のお話を伺ったり、ミュージアムを観覧するのみよりも、学生の中で震災支援や防災活動に対する主体性が向上した。

Project Based Learning for Training Youth to Tell History of Disasters

Shun Ito（Renaissance Of Japanese Education / Osaka University）
Nagomi Nakamaru（Renaissance Of Japanese Education / Kyoto University）

Nowadays, we are facing risk of disasters including earthquake, heavy rain and typhoon. Although people working for gathering attention to disaster management and transmission of experiences of disaster, people those who do not have experiences as victims of disaster cannot have relevance for disaster management. In our organization which is located in Kyoto and Tokyo, students who are working as volunteer also cannot have relevance to disaster. Then, we launch the project which aims to transmit the memory of disaster and make relevance to disaster in future. In this presentation, we introduce our work and result of transformation of students' mind to disaster management.

In the project, we focus on students who would like to be a teacher because they will have opportunity to transmit the memory of disaster to their pupils in classroom. Method of this project is "Project-Based Learning", which students are learning from the following process.

- Fieldwork for finding the problem of the area.
- Making solutions for the problem.
- Carrying out the solutions.

- Distribution through sharing students' experiences in this project to people in outside of disaster area.

As a result of the project, students working for participation to the community on their own initiative. In comparison with other method of learning, such as observation, conducting interview to people those who live in the disaster area, students feel their self-efficacy. For future project, we are conducting self-evaluation of students fulfillness in this project.

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災害時における共助による農業支援について

朝廣　和夫（九州大学　芸術工学研究院　環境デザイン部門）

平時の里地・里山の保全と災害時の農業・農村の復旧・復興。近年、厳しい農林業生産環境、都市化により農山村の人口減少、高齢化は急速に進んでいる。一方、日本の 7 割近くを占める中山間地域は、自然景観だけでなく、農業、林業、そして、文化を支える重要な役割を果たしている。

近年、九州北部は平成 24 年 7 月九州北部豪雨、平成 28 年の熊本地震、そして、平成 29 年 7 月九州北部豪雨と度重なる災害に見舞われ、中山間地の農山村は、大変厳しい状況になっている。

ご紹介したい、福岡県八女市、うきは市、朝倉市、そして熊本県の西原村、山都町は、棚田や果樹園、畑地等の広がる風光明媚な土地柄で、長年、都市農村交流や観光で農地の保全、農業体験などの取組がなされてきた。先に述べた災害で多くの被害を被ったこれらの地域では、全国でも珍しい、農業ボランティアによる農業支援、農地・農業用施設の復旧活動が展開された。水路の土砂出し、農地の小石取り、機械の入らない農地での収穫、被災者の手が回らない作付け、棚田の石積みなどである。一般的に、災害ボランティアによる農業支援は、収益事業への支援となるため派遣されることはない。ボランティアスピリッツにも反するという声もある。農家にしても、大切にしてきた農地、生産エリアに一般の人が足を踏み入れることを許したり、復旧を依頼したりすることを良しとしない考え方が一般的である。一方、農家にとり、農地は生活の一部であり、日々の食料、健康、喜びの支えでもある。都市の消費者が、農村を支える形。これは、生産物を購入するだけでなく、様々なかかわり方があると考えられる。それは、平時の観光であるかもしれないし、災害時の農業ボランティアであるかもしれない。私は、忘れられがちな都市と農村の繋がりを、災害で顕在化した九州北部での活動と交流活動をご紹介し、皆様に問い、一緒に考える機会となることを願っている。

地域、コミュニティの力が減少している今、町の力を農山村とつなぎ、災害に強い新たなコミュニティの形成が課題と言える。これらの知見を語り継ぎ、今後の力と連帯につながることを期待する。

Support for Farmland Restoration through Mutual Assistance after Disasters

Kazuo Asahiro
(Department of Environmental Design, Faculty of Design, Kyushu University)

Today's topic is the conservation of agricultural mountain villages, especially, relationship between tourism in normal time and agricultural volunteer activities in disaster time. The activities of agricultural volunteers had been developed in the recent disasters in Northern parts of Kyushu.

In recent years, depopulation and aging are being got progress in mountain villages so that the harsh agricultural and forestry production and urbanization. On the other hand, these area plays an important role in supporting not only natural scenery but also agriculture, forestry, and cultural landscape conservation. Northern Kyushu have been suffered severe disasters such as the heavy rains in July 2012, 2017 and the Kumamoto earthquake in 2016.

Farmer in rural had not only being affected damage of crops and agricultural facilities, but also affected daily food and health. In generally, disaster volunteers have been not dispatched to agricultural support because it regards as the support for profitable businesses. However, it preserves the farmer's life, health and natural environment. If we want to maintain a sustainable and diverse farming and mountain village in the future, we need to have more involvement of volunteers after disaster.

In these damaged area, the agricultural volunteer carried out by several different sector. Those

activities were removal of sediment from water way, terraced paddy, tea field, green house and orchard. And harvest of rice and potato management support also had been seen.

Future issues are the systematization of agricultural volunteers and human resource development. Currently, Fukuoka Prefecture has started the manual publishing and the coordinator training seminar to establish an agricultural volunteer center at the Agricultural Cooperative (JA) when disaster happened in the future.

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熊本地震体験プロジェクト（KEEP）は、外国人が地震体験を共有できるように、2016 年に熊本大学の大学院生によって開始された。 当初は一度限りのイベントとして想定されていたこのプロジェクトは、自然災害時に外国人が直面する独特の問題について他の人が学ぶことを目的として、これらの経験を日本中に広めるために拡張された。

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The Kumamoto Earthquake Experience Project (KEEP) was started by graduate students at Kumamoto University in 2016, so that foreigners could share their earthquake experience. Initially envisaged as a one-off event, the project was expanded to spread these experiences across Japan with the aim of helping others learn about the unique problems foreigners face during natural disasters.

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熊本地震における外国人居住者の経験

アンドゥルー ミッチェル（熊本大学）

2016 年 4 月、九州の熊本県は、2011 年の東日本大震災以来見られなかった 2 つの大きな地震に見舞われた。日本語を話すことができず、助けを得るのに苦労した人や、事実上すべての災害情報が日本語であったために何が起こっているのか理解できなかった人もいた。ほとんどの人は、地震の認識や災害訓練を受けていなかった。他の人は、食事や宗教のニーズを満たすのが難しいと感じた。しかし、次の地震がいつ発生するのか、次の食事がどこから来るのかわからないという恐怖と不確実性を共有した。

熊本地震体験プロジェクト（KEEP）は、地震を経験した人々の物語を記録し共有するために、2016 年 5 月に設立された。自分の経験だけでなく、自分の経験を伝えることで、人々が災害への備えを改善する方法を学べることを願っている。

私たちのプロジェクトのテーマは、2020 年の国際フォーラムのテーマにぴったりだと思う。メンバー全員が熊本地震を経験し、私たち全員が異なる経験を分かち合った。私たちは貴フォーラムでの議論に多くの貢献をすることができ、また自然災害を経験した人々の経験について多くを学びたいと思っている。

ポスターには、テキストと写真による地震のスナップショットと、ワークショップで人々がどのように災害に備えることができるかについてのアドバイスを掲載する。

Kumamoto Earthquake Experience Project (KEEP)

Andrew Mitchell（Kumamoto University）

In April 2016, Kumamoto prefecture in Kyushu, Japan, suffered two major earthquakes of an intensity not seen since the Tohoku earthquake of 2011. Many foreign residents found life especially tough. Some could not speak Japanese and struggled to get help, or could not understand what was happening as virtually all disaster information was in Japanese. Most had no earthquake awareness or

disaster training. Others found their dietary or religious needs hard to fulfil. All however shared in the fear and uncertainty of not knowing when the next earthquake would strike or where their next meal would come from.

The Kumamoto Earthquake Experience Project (KEEP) was formed in May 2016 in order to record and share the stories of those who experienced the earthquakes. By conveying their experiences, as well as our own, we hope that people can learn how to better prepare for disasters.

We think that the theme of our project fits well with the themes of the 2020 International Forum. All our members experienced the Kumamoto earthquake and we all had different experiences to share. We feel that we would be able to contribute a lot to the discussion at your forum and hope to learn much about the experiences of those who have also lived through natural disasters.

On our poster we will include snapshots of the earthquake though text and photos, as well as advice we give people in our workshops on how they can better prepare for disasters.

川崎梨江（広島大学大学院総合科学研究科）

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2013 年 3 月　同志社大学社会学部メディア学科卒業　学士（社会学）
2013 年 4 月　広島大学大学院総合科学研究科人間存在研究領域博士課程前期入学
2016 年 3 月　広島大学大学院総合科学研究科人間存在研究領域博士課程前期修了
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2016 年 4 月　広島大学大学院総合科学研究科 21 世紀科学プロジェクト群リスク研究
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Mar 2013　Doshisha University
Apr 2013　Hiroshima University Graduate School of Integrated Arts and Sciences
Humanities and Science of Art Master's program
Mar 2016　Art Master's program completed, Master's degree (Arts)
Apr 2016　21st Century Science Project Risk Studies Doctoral course, Hiroshima University
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Doctoral program (up to present)

2014 年の広島土砂災害の被災者へのインタビューの分析

本研究では、被災者の証言を今後の防災にどのように活用するかを検討するために、災害体験の「個人化」に焦点を当てる。

通常、体験や記憶は時とともに風化していく。しかし、個人的コンテキストとともに解釈された体験や情報は「個人化」され、長期間記憶される。

本調査では、2014 年 8 月 20 日に広島市で生じた集中豪雨による土砂災害の被災地を対象地域とし、最も被害が大きかった安佐南区の八木・緑井地区に居住する 19 名の被災者を対象に、発災から 3 年目と 5 年目の 2 度にわたりインタビューを実施し、証言内容の変化を分析した。そして、この「個人化」のモデルを検証することで、被災者の体験や証言を今後の防災にどのように活用していくかを検討した。

「発災期」は、自分の身の回りのことで手一杯の状態である。しかし、「復旧・復興期」では、広範囲の周囲の状況を、口伝えやマス・メディアの報道などから知る。そして、共有されやすい表層的な体験や情報によって、被災者同士が共感し合い、一体感をもつ傾向がある。しかし、「平常期」に移行すると、表層的な体験や記憶は風化していく。一方で、語りの主語を不特定多数の“被災者”ではなく“自分”に変えて被災体験を再解釈するようになる。これが「個人化」のメカニズムである。

2 度の被災者インタビューのテキスト分析の結果、同じ条件において抽出された語が、3 年目のインタビューでは 38 語あったのに対し、5 年後には 15 語となっていた。この結果から、発災から間もない時期には、被災者たちは共有されやすい表層的な言葉や表現で語るが、時間が経過すると、その人にしかわからない、「個人化」された体験や記憶が語られていることがわかった。

悲惨な出来事が生じると、身を以て体験したという本物性を求めて、人びとは被災者の体験談を求める。しかし、被災者は聞き手に共有してもらえるように、表層的な体験や記憶を語る。その結果、共有されやすい表層の記憶ほど想起する機会が多くなるため、ますます「個人化」した体験は語られなくなる。しかし、被災者の語りにリアリティをもたせるのは、「個人化」されたエピソードのはずである。ただし、「個人化」された体験や記憶は、「個人化」されているがゆえに共有されにくい。今後は、「個人化」された体験や記憶を共有するための表現方法の効果の有無や程度について検討していく。

Study of Survivors' Storytelling about Sediment Disaster in Hiroshima, 2014

Rie Kawasaki, Atsushi Hikita（Graduate School of Integrated Arts and Science）

In this study, we focused on “personalization” of disaster experience and examines how to use the storytelling of survivor for future disaster prevention. Experiences and memories are usually weathered with time. However, they interpreted with personal context are remembered for a long time.

In contract, even if people suffer the same disaster, personal experience and memories tend to remain over time.

We interviewed 19 survivors living in the Yagi and Midorii districts of Asaminami Ward, the most damaged area. We interviewed the survivors twice. The first is the in 3 years and the second is the 5 years after disaster.

The survivors don’t know the full extent of the damage during the “Disaster period” immediately after the disaster. However, when they move to “Reconstruction and Recovery period”, they will know the situation throughout the disaster areas through word to mouth and media reports. They have a sense of unity through superficial experiences and information that easier to share. However, as they move into the “Normal period”, the superficial memory will be weathered, and they change the narrative subject to “self” instead of an unspecified number of “survivors” and re-interpret the disaster experience. This is the “personalization” mechanism.

As a result of text analysis of these two interviews with the survivors, the number of common words in the 1st interview was 38, but in the 2nd interview it was 15. In other words, the superficial memories that easy to share are no longer spoken, and personalized experiences and feeling are still spoken.

When a miserable event occurs, people seek out the narratives of the person who actually experienced the event. They tend to talk about superficial experiences and memories as shared by the audience. Then, the more easily shared the superficial memories, the more opportunities to remember, and they don’t talk about personalized experiences. However, if people who are not disaster survivors want to know the superficial experience and information, it is not necessarily to talk by survivors. The survivors’ reality actually should be a personalized episode. In contract, personalized experiences and memories are difficult to share because they are personalized. We will continue to examine the existence and extent of the effects of expression methods of sharing personalized experiences and memories.

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1995 年の大震災 における 淡路島での個人的な体験

森　康成（北淡震災記念公園震災の語り部ボランティア）

語り部をしていると、震災前の地震に対する認識はどうかと聞かれることがある。ここで

はその話から始めて、地震の体験、家の再建、語り継ぎという内容を時系列で述べてみたい。

地震の 2 年前から前年にかけて家を 2 つの理由でリフォームした。一つは母親が身体障がいで歩行困難になったためで、築 40 年の木造の家をバリアーフリー化し、寝室横にトイレを造った。2 つ目は築 70 年木造の家が少し傾き、すき間風が入るようになっていたのをジャッキで揚げて、内装も改めた。少し傾いていたのは、地辷地帯にあるせいなのか、後でわかったことだが、断層と言われていることが影響していたのかもしれない。地震のことなど全く頭になかった。小さな家なら 1 軒建つかもしれない 800 万円以上かかった。そのリフォームの直後のため、両親の寝室には棚の物や箪笥をのけており、地震でも落ちたり倒れたりするものがなく、けがもしなかった。

地震が 1 月 17 日の明け方に発生し、古い家は一瞬でつぶれるかと思うくらいの大きな音をたてた。私は逃げ道確保だと常に考えているため、揺れている間に障子を開け、何とか縁側のガラス戸を開けるところまで行った。その時、瓦がガラガラ落ちていた。妻は揺れが収まって布団から出てきた。幸い家は立っていた。別棟から出て来れない両親は、余震が怖かったが中へ入り、母親の方は抱きかかえて助けた。3 棟の家は、屋根瓦が落ち、傾き、内部は柱が折れ天井が落ちかけになっていた。2 棟は全壊判定で、2 月に入り取り壊した。その後、農業倉庫と、壊れかけの台所棟で 2 年間生活をした。

地震後、近所のお年寄りが次のように話してくれた。私の家は 3 方が切り立った崖になった昔は城があったと言われる山の上に立っていた。「昔、カンドラの所が落ちたと言いよったけど、城山のこの横も両方とも落ちているのは地震だったという話もじいから聞いたことがある。」という話である。それはいつ頃の事なのかも分からない。このたびの地震でも一つの崖が落ちた。ここから野島断層方向に数百ｍ離れた小高い山の所の崖がカンドラという。今回、近所のその方向の家も数軒全壊になった。

家の再建を家族で相談し、断層のあるような所ではよくないだろうと、200m近く離れた土砂災害もあまりなさそうな段々畑を数枚切土して宅地に替え、震度 7 に耐えられるというプレハブ系の家を建てた。費用はすべて自前とローンである。

勤めていた野島断層に一番近い高等学校で日本で初めてといわれる高等学校の防災科目が 1999 年に開講され、その科目を 2000 年から 12 年間担当した。

今は北淡震災記念公園で震災の語り部をし、そこの断層の横に立つ家で、私自身の家と断層の話もしている。

A Personal Story of Catastrophe of the 1995 Earthquake in Awaji Island in Japan

Mori Yasushige（Volunteer Story Teller, Hokudan Earthquake Memorial Park in Awaji）

“What was your preparation for an earthquake before the 1995 earthquake?” I will begin with the answer to this question. The events unfold two years before the 1995 earthquake. From this time until 1994 we were in the process of renovating our house for two reasons. One was the direct response to the invalidity of my mother. We had made part of our 40-year-old house a kind of barrier free. The

other was that another older house suffered from tilting. Tilting was probably caused by or affected by the fact that our property was located on a fault, which became a point of discussion after the earthquake. We had no inclination that we were about to experience a huge earthquake event.

The earthquake happened on the early morning of January 17. My number one priority was to secure a safe route of exit. As the building shook, violently swaying from left to right I managed to crawl to open the paper sliding door, reaching the corridor glass sliding doors, and open one of them. Outside, roof tiles were falling.

Fortunately, the house was not felled. My parents still hadn't emerged from the other house. Being worried of the aftershocks, I went into the house and carried out my mother in my arms accompanied with my father. Thanks to the renovation, things had been still away, it became unlikely that objects could fall from a shelf or a wardrobe falling over.

Our houses were located on a hill top. After the earthquake, an old man from our neighborhood told me a story. "My grandfather told me that two of the three cliffs at your hill collapsed due to an earthquake." One of the cliffs also collapsed in 1995 as a result of the earthquake. Some of the houses in my neighborhood were completely destroyed. It is said that the houses stood on a fault line connected to the Nojima Fault Line which appeared in the immediate aftermath of the 1995 event.

Our two houses were registered as totally damaged. For 2 years we lived between a farm building and a kitchen house. For our new house, we chose a flattened terrace field located 200 meters from the site of the previous house.

At a senior high school nearest to Nojima Fault, 3 disaster mitigation classes were introduced to the school curriculum in 1999. I started teaching one of them in 2000, and taught for a further 12 years.

Now, I do a kataribe, storyteller at the Hokudan Earthquake Memorial Park.

浅利満理子（3.11 メモリアルネットワーク）
Email: info@311support.com

2012 年 6 月　　（前身）石巻ビジターズ産業ネットワーク 設立
2017 年 11 月　　3.11 メモリアルネットワーク 設立
会員数：個人会員 442 名／登録団体 68 団体（2019 年 11 月 22 日時点）

Mariko Asari (3.11 Memorial Network)
Email: info@311support.com

June 2012　　Establishment of Ishinomaki Visitors Industry Network (predeceasing bocy)
November 2017　　Establishment of 3.11 Memorial Network
Individual Members: 442 / Corporate Members: 68 as of 22 November 2019

東日本大震災被災地における民間伝承ネットワークの取り組み紹介

浅利　満理子（3.11 メモリアルネットワーク）

2011 年 3 月 11 日に東北太平洋沿岸を中心に発生した地震、津波、原子力災害の被災地では、未災地あるいは将来の世代に向けて震災を伝える活動が行われてきた。一方で、時間の経過とともに、資金不足や高齢化等を理由に活動継続が困難になったり、震災学習プログラムの参加者減少といった課題も明らかになってきた。こうした現場の課題を受け、将来にわたる伝承を支える仕組みとして、2017 年、伝承の担い手や関係者からなる民間の広域連携組織・3.11 メモリアルネットワークが発足した。発足から約 2 年間で、会員も 400 名／60 団体以上に増加し、特に被害の大きかった岩手・宮城・福島の 3 県を中心に広域で連携し、協働企画の実施や人材育成に取り組む基盤構築が目指されている。

設立当初より人材の育成を掲げており、震災当時小中学生だった世代の若者が語りを行う機会の創出や、原爆被害を伝える継承者を広島から招く交流会の開催など、低頻度の巨大災害に備え、世代を超えた継承に取り組み始めている。

今回のポスター発表では、3.11 メモリアルネットワークの発足経緯や活動内容を紹介するとともに、超広域にわたる被災　各地の個別の取り組みが結びつき地域と世代を超えて連携・交流が広がりつつある事例を通じて、民間の担い手をはじめ多様な主体からなるネットワークの意義や課題を整理する。

Introduction to the Approach of a Non-governmental Network of Community Organizations Devoted to Preserving & Disseminating Information Relating to the 2011 Great East Japan Earthquake & Tsunami

Mariko Asari（3.11 Memorial Network）

In areas affected by the Great East Japan Earthquake, activities have been carried out to convey the experience of the earthquake to unaffected areas or future generations. On the other hand, over time, issues such as difficulty in continuing activities due to lack of funds and aging, and issues of reducing the number of participants in earthquake disaster learning programs have become clear. Therefore, as a scheme to support those activities, in 2017, the "3.11 Memorial Network", a private, wide-area cooperative organization consisting of people responsible for preserving and disseminating and related parties, was established. In the two years since its establishment, the number of members increased to more than 400 people / 60 organizations. The "3.11 Memorial Network" is collaborating over a wide area, especially in the three prefectures of Iwate, Miyagi, and Fukushima, which were particularly damaged, to build a foundation for collaborative planning and human resource development.

The “3.11 Memorial Network” has been aimed at developing human resources since its establishment. The “3.11 Memorial Network” is designed to prepare for the occurrence of infrequent catastrophes, such as creating opportunities for young people who were elementary and junior high school students at the time of the earthquake to talk, and holding exchange meetings that invite successors from Hiroshima to tell about the damage of the atomic bomb. We are beginning to work on succession beyond.

In this poster presentation, I will introduce the history and activities of the 3.11 Memorial Network. Also, we will introduce examples of disasters over a wide area, as well as cases in which individual initiatives in each region are linked, and cooperation and exchanges are spreading across regions and generations. I will discuss the significance and issues of the network consisting of various actors including private players.

中川政治（公益社団法人 3.11 みらいサポート）
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2011 年 5 月　（前身）一般社団法人石巻災害復興支援協議会 設立
※その後、2012 年に改称、2015 年に公益法人へ移行、2019 年に改称
2015 年 1 月　総務省の地方創生に資する「地域情報化大賞」特別賞受賞
2017 年 12 月　石巻南浜津波復興祈念公園における市民の伝承活動が 3 団体共同で国土交通省「手づくり郷土賞」受賞
2018 年 8 月　復興大臣から感謝状受贈

Masaharu Nakagawa (3.11 Future Support Association)
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2002 MA, Graduate School of Human and Environmental Studies, Kyoto University
2007- Director in Jordan office and Haiti Office, Nippon International Cooperation for Community Development
2011- Volunteer work in Ishinomaki just after Great East Japan Earthquake
2012 Managing Director, Ishinomaki Future Support Association
2014 Kawata Awards, Japan Society for Disaster Information Studies

東日本大震災時の避難行動可視化の取り組み

中川　政治（公益社団法人 3.11 みらいサポート）

東日本大震災で壊滅的な被害を受けた宮城県石巻市南浜・門脇地域において、2011 年 3 月 11 日当日の詳細な避難行動を 100 人の生存者から聞き取り、津波シミュレーションと組み合わせ、避難を促す映像として可視化した。

被災地域から移住した生存者にコンタクトして丁寧な避難行動の聞き取りを行い、ヒアリング項目の設定、避難者位置情報の可視化手法等について東北大学災害科学国際研究所と共同研究を行った。

この地域では、死者 389 名、行方不明 150 名の被害があったが、生存者の証言や津波シミュレーションによれば、津波が堤防を越えた後は、3~4 分間で高台を除くエリアが約 7m の津波で覆われたものの、地震から津波襲来までは約 1 時間あったため、早期避難により全員が助かった可能性があった。

100 名の聞き取り内容を動画で可視化した結果、学校や施設での迅速な避難の例が再確認出来た一方、地震直後は揺れの継続や片付けによる即時避難の阻害や遅れ、高台や内陸からの浸水区域に向かう移動、高台避難後の低地への再帰還、家族や知人を探しまわる行動など、多くの教訓が一目でわかる結果となった。

学校や大企業、町内会での避難訓練に参加しない住民には防災教育を啓発する仕組みが不足しており、南海トラフ地震などの巨大災害が想定されている日本において、住民の避難行動を促す取り組みが求められている。

南浜地域には、国・宮城県・石巻市によって、犠牲者を追悼し、津波避難の教訓を伝える復興祈念公園を整備予定であり、将来の災害から命を守る取り組みの一つとしてこの公園内に位置する民間展示施設において、本研究成果の発信を継続してゆく。

Visualization of evacuation behavior patterns in the 2011Tohoku Tsunami

Masaharu Nakagawa（3.11 Future Support Association）

The giant tsunami of March 11th 2011 took 3 - 4 minutes to flow over the existing floodwalls and flood the Minami-Hama District of Ishinomaki City to a height of approximately 7m (excepting high ground). However, since there was a duration of about one hour from the initial earthquake to the actual arrival of the tsunami, one can posit that all lives in the area could have been saved by speedy and early evacuation.

Realization into video of the evacuation behavior patterns of approximately 100 of the survivors brings to light such issues as the small number of people who initiated evacuation promptly directly after the quake, and also people who only evacuated to high ground after they had observed the tsunami from close by. This method effectively exposes many important lessons to be learned regarding evacuation procedure, from instances of speedy evacuation to schools and other designated facilities, to cases where some returned to low-lying and flood-prone areas from high

ground, some people returning again to high ground afterwards, and some spent time searching for family and friends.

The Great East Japan Earthquake & ensuing tsunami on March 11th 2011 caused catastrophic damage to the Minami-Hama District of Ishinomaki City, resulting in 389 deaths and 150 missing presumed dead.

After carefully interviewing approximately 100 survivors of the 3.11 disaster regarding their feelings and thoughts while evacuating after the quake and the routes they took in their evacuation, their evacuation behavior patterns for the 60 minutes after the quake were then visualized in conjunction with a tsunami simulation (joint design by IRIDeS International Research Institute of Disaster Science, Tohoku University).

The resulting evacuation behavior pattern video has proved an excellent tool for emphasizing the importance of correct and speedy evacuation, being shown at the privately-run tsunami information center in the Minami-Hama District which is visited by over 17,000 people yearly. It is to be hoped that the method will continue to be used to analyze the influence of societal relationships between family, other members of the community and local ventures on evacuation behavior, and also be of use in promoting evacuation procedures in the event of other large-scale disasters such as the possibly imminent Nankai Trough Earthquake.

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避難行動を日常化する

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気象災害は，地震や火山噴火と異なり，事前予測の確度がきわめて高い。我が国では，その予測は気象庁や自治体を通じて逐次発信される。よって，気象災害の多くは発災前の避難行動が可能である。にもかかわらず，過去の洪水，土砂災害事例における「避難率」は総じて低い。そのため，政府はこれまで避難情報を幾度となく改定してきた。しかしながら情報伝達の表現を今以上に洗練したとしても，その効果には基礎的な限界があるように思われる。過去の調査結果はそのことを示唆している（内閣府 2010，国交省 2019）。ではどうすればよいのか。

2011 年の紀伊半島大水害は，死者・行方不明者 98 名の人的被害をもたらした。その主要な被災地，十津川村の K 集落で被災した一人暮らしの O さん（70 代女性）は，いったん村外の親戚宅で避難生活を送るも，住み慣れた元の場所で再び暮らすことを決めた。住まいは急峻な斜面地にある。今では，雨が降り続くとすぐに近くの知人宅に「避難」する。梅雨や台風の時期は頻繁に行き来することになる。それは「避難」というよりは，日常の訪問と言ってよい。

2014 年の広島豪雨は死者 77 名の犠牲者を出した。安佐南区 Y 地区で被災した T さん（80 代女性）は，もともと娘夫婦と一緒に暮らしていた。自宅は床上浸水の被害に見舞われ，水害リスクの少ない場所へ移転することになった。しかし彼女はどうしても元の場所に戻りたいと主張した。親子が出した結論は，避難勧告が出たらすぐに娘夫婦の家に行くという約束だった。以後，その約束は果たされ，彼女は定期的に娘夫婦宅を訪問する。

同じく広島豪雨で被災した M さん（60 代男性）は，妻と二人暮らしである。被災前は防災のことなどまったく考えもしなかった。今では避難準備情報が出ると，車で妻と一緒に自宅から離れたショッピングセンターに行き，コーヒーを飲んだり買い物をしたりする。

彼ら彼女らの避難行動は，すでに日常生活に織り込まれている。散歩に出かけるように，繰り返し知人の家に，娘夫婦の家に，あるいはショッピングセンターに，危機が迫る手前

の段階で「避難」する。避難行動は，日常化されることによって確実になる。避難情報の洗練は確かに重要である。しかし，いざという緊急時に焦点化した方法には限界がある。実際の避難行動につなげるためには，脱「避難行動」化，すなわち日常化することが求められる。

Making Evacuation Behavior a Daily Routine

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Unlike earthquakes and volcanic eruptions, meteorological disasters can be predicted with high probability. Therefore, evacuation action before such disaster occurs is possible. Nevertheless, the “evacuation rate” is generally low. In order to increase the “evacuation rate”, the government has revised the evacuation information expression method several times. However, no matter how refined the expression is, the effect seems to have fundamental limitations.

For example, the heavy rain in West Japan in 2018 resulted in 232 dead and missing people. Its “evacuation rate” is said to be only 4.6%. In response to this, a “warning level” was added in parallel with the conventional “evacuation advisory” and “evacuation instruction”. However, according to a research by the Ministry of Land, Infrastructure, Transport and Tourism (2019) regarding this disaster, the reasons for not evacuating were: “Home is considered safe” “Nearby residents were not evacuating” Etc. On the other hand, there are little response of "I do not recognize evacuation advisories". In other words, the low “evacuation rate” is not mainly due to the fact that evacuation information is not transmitted.

Therefore, this study investigated changes in evacuation awareness and evacuation behavior among people who actually experienced disaster. The research areas are Totsukawa village in Nara prefecture, which was affected by the 2011 landslide disaster in the Kii Peninsula, and Hiroshima city, Hiroshima prefecture, which was affected by heavy rain in August 2014.

There was something in common between their actions that experienced severe damage. It is to make evacuation behavior a daily routine. For example, the behaviors are to stay at a low-risk acquaintance's house or to go to a shopping center with few hazards. Those “evacuations” are inevitably more frequent because it takes place much earlier than the crisis is imminent. In other words, those “evacuations” are repetitive and periodic. In order to promote appropriate evacuation behavior, it is considered necessary to incorporate the behavior into daily life.

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震災 25 年 語り継ぐ学校防災 ーその時学校では何が起こっていたのかー

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1995 年に発生した阪神・淡路大震災から 25 年が経過しようとしており、様々な立場で被災した人達が高齢化している。彼らの体験を若い世代へ伝承する方法を検討することが喫緊の課題である。ここでは、被災地の学校現場を対象とする。学校現場では、初動体制の確立、避難所開設・運営、教育再開等に係わる現場で起こった現実とそこでの難しい判断が存在していたはずである。特に、難しい判断を行った当時の教員のほとんどは、教育現場から退いており、その経験が個人の記憶となっている。

ここでは、学校現場で何が起こっていたのかを明らかにし、多くの人と共有するために、まず、当時の西宮市の教職員の方々にインタビュー調査を行った。当時の様々な校種、役職、立場の教職員を対象に、当時の様子や体験のありのままを語っていただいた。それらの語りから「避難所における教職員の振る舞い」「教育再開に向けての動き」「災害時に迫られる判断」「災害前に準備できること」などを明らかにできつつある。そこで得られた手法をもとに、当時の神戸市の教職員の方々にも同様のインタビュー調査に展開し、そのインタビューを映像として記録する。その語りから得られた現実は学校の立地に影響していることも考えられ、学校の立地している地域の被害状況等とも重ね合わせて分析する。

それと同時に、現場で役立つ学校防災マニュアルを検討し、阪神・淡路大震災の現場で起こった語りの映像等から現場の現実を想像し、マニュアルによる災害対応業務内容から学校の危機管理能力向上に役立てる。そういった内容を踏まえた、阪神・淡路祭震災を経験していない教員への防災教育教材作成を目指している。

Dissemination of various kinds of Experience at Educational Site
－The Case Study of the Great Hanshin-Awaji Earthquake－

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25 years have passed since the 1995 Great Hanshin-Awaji Earthquake. People affected by various situations are aging. It is an urgent task to consider how to pass on their experiences to the younger generation. This time, the school site in the affected area is targeted. At the school site, there must have been the reality and difficult judgments that occurred in the field related to the establishment of an initial action system, the establishment and operation of shelters, the resumption of education, and the like. In particular, most of the teachers at the time who made difficult judgments were retired from the field of education. These experiences are getting each memory of them.

First, we interviewed the teachers of Nishinomiya City at that time, in order to clarify what was happening at the school site and share it with many people. We had teachers of various school types and positions at that time talk about their experiences at that time. For these stories, “behavior of teachers at shelters”, “movement toward resuming education”, “judgment to be made at the time of disaster”, “preparation before disaster”, etc. are being clarified. Based on the technique obtained there, we interviewed teachers in Kobe at that time and recorded the interview as a video. The reality clarified from the narrative seems to have a great relationship with the location of the school. Therefore, we analyze the damage situation in the area where the school was located.

At the same time, we consider school disaster prevention manuals that are useful in school settings. We think that it can be used to improve the crisis management ability of the school by imagining the actual situation from the interview video and connecting it with the disaster response work in the manual. We are aiming to create teaching materials for disaster prevention education for teachers who have not experienced the Great Hanshin-Awaji Earthquake.

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Responding to earthquake disasters and working on reconstruction through cooperation between volunteers and local residents

災害に負けない地域づくり
～備えあれば憂いなし 神戸市長田区認定 NPO 法人まち・コミュニケーションの事例～

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阪神淡路大震災では、神戸市長田区は、大きな被害を受け、128 名の命を、建物による圧死や、火災により奪われた。人々が幾世代にもわたって築きあげてきた地域社会や日々の暮らしを凄まじい力で破壊された。

一方、悲惨な災害の経験でありましたが、毎日を大切に生きること、自然との共生など、普段は気づかないことにも、大事さを感じる機会でもあった。私達の地区は、災害で家屋の 8 割が延焼し、離れ離れになった被災者が、少しでも多く元住んでいた地区に戻ろうと、協力しあい地域づくりに関わってきた。

その後、地域づくりを行う中で、ネットワークができ、世界の方々と交流をする機会が増え、被災地同士の視察・交流をしてきた。多くの気づき、学びがあった。そこで、伝える事の大切さを学び、伝える活動を 25 年間、続けてきた。

発表内容としては、大きな被害を受けた長田区での住民とボランティアが協働したコミュニティ活動支援を基礎とした、住民自らの語り継ぎ、小中学生への震災体験学習、語り継ぐことによりコミュニティへの効果、記憶の継承のための災害遺構の保存、被災地同士の交流を伝え、次世代の担い手へ繋がることを目指したい。

例えば、小中学生の震災体験学習を通じた小中学生の学習とその後の実践活動への効果の事例を紹介する。また、語り継ぐ機会を持つことにより、被災者がどのように辛い経験であった災害を受け止めていくことになるか、心境の変化、その後の日常生活への効果を紹介する。具体的には遺族が、語り継ぎに向けて、どのように回復してきたのかを事例で示す。記憶の継承のための災害遺構の保存に対する地域住民の受け止め方の被災者一人一人の差異を示すことにより、災害を受け止めるには多くの時間がかかること、そこには語り継ぎの交流が重要なことを示す事例を紹介する。

昨今の災害が頻発する世界の中で、語り継ぐ交流のネットワークを実践することにより、各被災地の地域社会が、災害への備えを強め、防災や地域づくりに役立っていることを示すことにより、次世代の命を守るための発表を行う。

Telling disaster prevention like cherry blossoms(SAKURA)
～ Prepare first, Safety and Lively life later, for disaster. ～

Akira Miyasada

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In the Great Hanshin-Awaji Earthquake, Kobe City Nagata Ward was severely damaged, and 128 people were killed by building destruction and fires. The community and everyday life that people had built for generations was destroyed with tremendous power.

On the other hand, while it was a tragic disaster experience, it was also an opportunity to feel the importance of things not being noticed normally, such as living carefully and living together with nature. In our district, 80% of the households moved out due to the disaster, and the survivors who have left their homes have been aiming to return to the district where they lived.

Opportunities (field visits and exchanges) to interact with people around the world have increased as the survivors and volunteers from outside collaborated to create communities for recovery from the disaster, which lead to a lot of growing awareness and learning. We have learned about the importance of conveying experiences and have been carrying out exchange activities for 25 years.

The contents of the report will be based on community activity support in which the residents in Nagata Ward collaborated. The aims of these activities are to lead to the next generation of leaders by passing on the stories of the residents themselves, learning about earthquake disaster experience for elementary and junior high school students, communicating the effects on the community, preserving disaster remains for the sake of memory succession, and exchanges between affected areas.

For example, we will introduce an example of the effects of elementary and junior high school students' learning through earthquake disaster experience learning and subsequent practical activities. In addition, we will introduce how disaster survivors will be able to receive disasters that have been a painful experience by having the opportunity to pass on stories, changes in their feelings, and subsequent effects on daily life.

Specifically, I will show how the bereaved family has recovered against the emotions from the damage.

By showing the differences in the way each survivor and local resident perceives the preservation of disaster remains for the sake of memory succession, some examples will be introduce showing the importance of passing-on exchanges, along with the long time it takes for the effect of the disaster.

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阪神間における災害デジタルアーカイブの構築とそのプロセス
～ 1938 阪神大水害と 1995 阪神・淡路大震災を例に ～

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過去の災害や我々が経験した事象に目を向け、そこから教訓を引き出し、社会的な記憶として保存・継承することは非常に重要なことである。しかし、残されている資料の多くはアナログ媒体であり、個人の所有、記憶で留まるものも多数ある。また、当時の被災体

験者は年々減少している。本取り組みでは、兵庫県下で発生した 1938 年の阪神大水害と 1995 年の阪神・淡路大震災に注目し、過去の災害に関する写真等紙媒体の情報と、被災者の記憶に基づいて災害デジタルアーカイブを構築した。また、地域の中学生・高校生・大学生が参画し、経験者や伝承者との口述のコミュニケーションやフィールドワークを通して、防災教育のプロセスも実施した。

阪神大水害の事例においては、国土交通省六甲砂防事務所らがチラシやポスター、新聞掲載などで被災体験者などに情報提供を呼びかけた。これらの情報に加え、災害に関する情報、有識者からの情報、中学生・高校生のフィールドワークで得た情報も情報源とした。阪神・淡路大震災の事例では、主に復興期における活動に注目した。研究機関等が持つ災害の被害に関する情報、行政が持つ避難所等の情報、復興支援活動者から提供されるエピソードおよび写真を情報源とした。こうした情報をもとに、デジタルマップアプリケーションを作成した。クラウド GIS を活用し、位置が特定できる写真には、絶対位置情報を付与した。位置の特定が曖昧な写真には、この辺り（エリア）として表現した。これらは、災害の全体像をより俯瞰的に表すだけではなく、個人が持つ写真をはじめとした多くの情報にまつわる物語を可視化した。

本取り組みにおける災害デジタルアーカイブの構築は、収集した情報の保存だけが目的ではなく、活用されることを想定している。いわゆるオープンデータのような形で公開され、多くの人が様々なアイデアをもとにアプリケーションや各種コンテンツとして展開していくことが望まれる。

The Construction and its Process of Digitally Archiving Records of The Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake

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It is very important to pay attention to past disasters and events that we have experienced, draw lessons from them, and preserve and inherit them as social memories. However, most of the remaining materials are analog media owned and stored privately. The number of people experiencing disasters in the past has been decreasing year by year. In this paper, we focused on the Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake that occurred in Hyogo Prefecture and constructed digital archives of these two disasters using information on paper media such as photographs related to them and memories of the victims. In addition, local junior high school, high school, and university students participated in the disaster prevention education process through oral communication and fieldwork with experienced persons and lore of the disasters.

In case of the Great Hanshin Flood, the Rokko Sabo Office of the Ministry of Land, Infrastructure, Transport and Tourism gathered information from the victims using flyers, posters and newspapers.

In addition, information on disaster itself, information from experts, and information obtained from fieldwork for junior and senior high school students were used to construct the archive. In the case of the Great Hanshin-Awaji Earthquake, we focused mainly on activities during the reconstruction period. We collected information on damages from research institutions, information on evacuation shelters and episodes and photos provided by activists in reconstruction process. Based on this information, a digital map application was created. For photos that can be located, we used Cloud GIS to give absolute position information. An area information is assigned for photographs where the location is ambiguous. These digital archives not only provide a bird's-eye view of the entire disaster, but also visualize a story about a lot of information, including photos of individuals.

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地域の災害経験の共有－災害記念碑デジタルアーカイブマップの公開－

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災害記念碑（以下、石碑）は地域の災害情報を伝承する資料のひとつである。伝承する災害種別は様々で日本全国に存在し、中には 1380 年に建立されたものも確認されている。石碑の内容は慰霊や鎮魂を示すもの、地域の被害の記録や将来への災害教訓などが記載されているほか、設置された地点自体が過去の津波や洪水の到達点などを示す情報となりうる点にも資料的価値がある。そのため以前より、石碑の情報は災害や地域などの単位で調査、集約されてきた（例えば卯花，1991；武村ほか，2014；徳島県教育委員会，2017 など）。近

年では、石碑の 3 次元モデルを作成し、現状を保存するデジタルアーカイブも取り組まれている（例えば谷川ほか，2016）。そこで徳島県、高知県、宮城県、岩手県の沿岸地域の石碑の情報を地図化し、Web-GIS を用いて「災害記念碑デジタルアーカイブマップ（https://dil-db.bosai.go.jp/saigai_sekihi/）」として公開した。背景地図は地理院地図を使用し、ESRI 社製 ArcGIS ONLINE Story Map Shortlist を使用した。石碑の地点は経緯度情報から取得した。表示は災害事例ごとに表示を分け、地図上またはサムネイルから石碑を選択し、写真と石碑の情報（石碑名称、碑文または概要、所在地、災害名称、建立日、碑の種類、調査機関）を閲覧することができる。石碑の詳細情報は地図から「地震津波碑デジタルアーカイブサイト（ http://www.jamstec.go.jp/res/ress/tanikawa/）（谷川，2019）」へリンクし、石碑の 3 次元モデル等を閲覧することが可能である。

デジタル技術と地域に伝承されてきた資料を組み合わせることで、例えば過去の浸水実績や津波浸水予測データなどの予測データと重畳して閲覧するなど石碑のもつ情報を現在の防災に活かすことや存在を多くの人に周知する方法となる。自然災害伝承碑の地図記号が制定され、2019 年より国土地理院 2 万 5000 分の 1 地形図や地理院地図上に表示されることとなった。今後、情報の追加をはじめ、外部との連携を進めていきたい。

Sharing communities' disaster experiences
－Disclosing digital archive map of disaster monuments－

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Disaster monuments (hereinafter referred to as stone monuments) are a medium used to convey historical information about local disasters. They are located throughout Japan and tell the stories of different types of disasters. The oldest was built many centuries ago, in 1380. Stone monuments are valuable as information media, not only because the words carved on their surface commemorate the victims, express mourning, provide a record of local damage and warnings of future disasters, but also because the site on which the monument was built can itself mark the reach of a past tsunami or flood. These stone monuments have therefore been investigated and categorized by type of disaster or region (Uhana 1991; Takemura et al., 2014; Tokushima Prefectural Board of Education 2017). Digital archives have been under development in recent years, aiming to preserve current knowledge by producing 3D software models of stone monuments (Tanikawa, et al. 2016). We have mapped the data on stone monuments in coastal areas of Tokushima, Kochi, Miyagi, and Iwate Prefectures and published a Digital Archive Map of Disaster Monuments (https://dil-db.bosai.go.jp/saigai_sekihi/) using Web GIS. We employed a digital map provided by the Geospatial Information Authority of

Japan (GSI) as a background map, combined with the ArcGIS ONLINE Story Map Shortlist (Esri Japan Corporation, Tokyo). Information on the location of stone monuments was obtained from latitude-longitude data. Disasters are displayed individually on the screen. Pictures of and the information carried by each stone monument (monument name, epigraph or its summary, location, disaster name, date of construction, type of monument, and investigation agency) can be browsed by selecting the desired monument on the map or from thumbnails. Detailed information, including 3D software models of stone monuments, is made available by linking the map to the website of the Digital Archive Site of Earthquake Tsunami Monuments (http://www.jamstec.go.jp/res/ress/tanikawa/) (Tanigawa 2019).

A combination of current digital technologies and the material handed down in each region enables us to know the presence of the stone monuments and to apply the information they contain for contemporary disaster prevention: for example, by superimposing data on past flood data or on predictive data for tsunami flooding. A map symbol marking a natural disaster monument has been registered and has been displayed on the Topographic Map 25,000 and GSI maps since 2019. We intend to add more information and promote cooperation with external partners.

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ボランティアグループ「ひまわりの夢企画」
NPO 法人ひまわりの夢企画（10 年間）
人と防災未来センター「語り部」ボランティアを 16 年継続

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NPO Dream of Sunflower (10 years)
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あなたにも出来る被災者支援

荒井　勲（NPO ひまわりの夢企画）

1995 年、阪神淡路大震災が起きた時に、神戸の住民として被災者から支援者になろうと立ち上げたのが「ひまわりの夢企画」というボランティア団体だった。

その後 NPO 法人化し、中越地震、東日本大震災、熊本地震などで、被災者支援活動を続けてきた。しかし会員の高齢化のため、現在は法人格を返上して、法人格の無い NPO として、出来る範囲の支援を続けている。

私達の被災者支援活動は 25 年を迎える。

色々とオリジナルな被災者支援活動が数多くある。この多様な支援活動の手法を公開し、語り、次の世代へ繋いでゆくことが私達の使命と考えている。

今回の Tell-net のイベントでは、事例写真を公開する。その写真によって、関連国の関係者にも支援活動の手法を伝えたい。

Handmade support for survivors

Isao Arai（NPO Sunflower's Dream）

In 1995, when the Great Hanshin-Awaji Earthquake occurred, a volunteer organization called “Sunflower Dream Planning” was launched as a Kobe resident to become a supporter from the victim.

Since then, the Sunflower Dream Planning became an NPO and had continued to support victims of the Chuetsu Earthquake, the Great East Japan Earthquake, and the Kumamoto Earthquake. However, due to the aging of the members, the legal status is now raised, and as a non-corporate NPO, we continue to support as much as possible.

Our disaster relief activities will be 25 years old.

There are many original disaster relief activities. We believe that our mission is to publish, talk, and connect the experiences of those activities to the next generation of various support activities.

Case photos will be made public at this Tell-net Forum. The photos convey the methods of support activities to those in the relevant countries.

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2018 Executive Director, Chuetsu Organization for Safe and Secure Society (incumbent)

中越メモリアル回廊のための取り組み

稲垣 文彦（公益社団法人中越防災安全推進機構）

中越メモリアル回廊は「中越まるごとアーカイブ」をキーワードに被災した現場をなるべく現状のまま残すことで、震災経験の風化を防止することを目的としている。回廊施設として 4 施設 3 パークを被災各地に震災の記憶を伝える場として整備し、震災アーカイブの収集・活用の拠点としている。

4 つの拠点施設は、それぞれに特徴を持った施設となっている。「長岡震災アーカイブセンターきおくみらい」は、中越メモリアル回廊のゲートウェイを担っており、回廊の中核施設と位置づけられている。きおくみらいで、震災の全体像を知り、より詳細な情報を他の施設で学んでもらう仕掛けを意図している。「おぢや震災ミュージアムそなえ館」は、防災教育を担っている。震災の経験から得た教訓をわかりやすく伝え、日頃からの備えに生かすことを目的に、災害から 3 日後、3 ケ月後、3 年後とフェーズを区切り、そのフェーズ毎に必要な備えがわかる展示の工夫をしている。「川口きずな館」は、震災をきっかけに生まれた人と人との絆（住民同士、住民と外部者等）を伝える役割を担っている。震災当時の過去の絆を伝えるだけではなく、現在進行形で広がり続ける絆を伝えている。「やまこし復興交流館おらたる」は、故郷の歴史と文化や復興の歩みを伝える役割を担っている。住民が震災で甚大な被害を受けても、山古志に戻り、故郷を再生した歩みを住民自身の語りで伝えている。

3 メモリアルパークは、震災の象徴的な場所に設置されている。「震央メモリアルパーク」は、中越地震の本震震源地に位置し「はじまりの公園」として設置されている。ちなみに、この震源は、震災 1 周年のイベントの中で、地域住民が GPS を使って探し当てた。震源地は棚田の中心に位置し、現在ではその田んぼで「震央米」と名付けられた米の作付が行われ、名産品としてよろこばれている。「妙見メモリアルパーク」は、大規模な土砂崩落により数台の車を巻き込んだ被災現場近くに位置し「祈りの公園」として設置されている。毎年の 10 月 23 日には、設置されている献花台にいくつもの花が手向けられている。「木籠メモリアルパーク」は、中越地震最大の土砂崩落により発生した河道閉塞によってできた水没集落の

近くに位置し「記憶の公園」として設置されている。現在では、公園近くに住む地域住民が、交流施設「郷見庵」を設置し、外部から来た観光客に、震災の教訓を伝えている。

Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor

Fumihiro Inagaki（Chuetsu Organization for Safe and Secure Society）

Niigata Chuetsu earthquake occurred on October 23, 2004. A feature of this earthquake is a ground disaster. Damage of hilly and mountainous areas has become a major issue of reconstruction. Because the area was heavily damaged, many people left local area after the earthquake disaster. Therefore, population decline and aging has progressed rapidly. In this region, regional development was also the issue of reconstruction and revitalization.

In order to hand down the lessons learned from the disaster to next generation, The CHU-ETSU Earthquake Memorial Corridor has been established in the affected areas.
We planned so that the specialized agencies and local residents work together. Chuetsu Organization for Safe and Secure Society aims to be a hub organization to connect them. In this paper, we will explain the efforts of earthquake-related collection utilization in . The CHU-ETSU Earthquake Memorial Corridor.

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妖怪伝承を知的資源として活用した防災教育プログラム

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妖怪伝承のなかには，地震や津波，洪水，水難事故といった災害と関連するものが多数存在する．そのなかでは，妖怪の働きが，災害の誘発要因，災害の予兆前兆，災害状況の説明，災害の回避方策，災害履歴の伝達，という 5 つの類型で語られる．リスクの伝達装置としての妖怪伝承の構造をふまえ，社会実験として，子どもたちが新たな妖怪を考え出す作業を通じて，地域の多様な危険を認識し，その対策を検討する「妖怪安全ワークショップ」を展開した．その成果として，子どもたちが経験したことのないような大規模自然災害のリスクも適切に把握し，危険を回避するための方法を導き出すことができた．

A Study on Education Framework for Disaster Risk Reduction by Utilizing “Yokai” as Intellectual Resources

Tomoki Takada（Kobe City College of Technology）

The purpose of this study is to suggest an education framework for disaster risk reduction by utilizing Yokai, namely Japanese traditional monsters. In the pre-modern Japanese society, people understood that mysterious phenomenon are caused by work of Yokai. In addition, Yokai lore often tells us how to act when tsunami, earthquake, flood are occurred. Work of Yokai relating natural disaster can be classified in occurrence factor, omen, situation description, prevention scheme and disaster history transduction.

In this study, we conducted “Yokai Safety Workshop” as a social experiment, based on a role of Yokai lore as a social device to transmit disaster risks. Through the work to create new Yokai, the children who participated in the workshops were able to recognize the risks in the region and suggest how to avoid disaster risks.

東山陽次（雲仙岳災害記念館）

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2014 年熊本大学大学院自然科学研究科修了。2018 年より雲仙岳災害記念館で勤務。現在まで、教育普及、ワンダーラボのイベント企画、企画展示の製作等に従事。専門は火山岩岩石学・地球化学。学芸員資格。日本火山学会所属。いのりの灯事業や教育プログラムを通してボランティア語り部ガイドとの交流を行っている。

Yoji Higashiyama (Mt. Unzen Disaster Memorial Hall)

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I got my master's degree from Kumamoto University in 2014. I have been working at Mt.Unzen Disaster Memorial Hall since 2018. I am currently in charge of the projects of Wonder Lab and exhibition planning. My specialties are Petrology and geochemistry. I am a member of the Volcanological Society of Japan. Certificated Curator. I also work together with the narrating guides through the praying ceremony and educational program.

雲仙岳噴火災害の長期的な語り継ぎとその課題

東山　陽次（雲仙岳災害記念館）

本発表では、雲仙岳噴火災害から２８年が経過する中、火山災害や防災に関する学習体験の中核施設として位置づけられる雲仙岳災害記念館のこれまでの取り組みについて発表する。具体的に、従来ある災害伝承が市民にどのように伝わり、どのような課題があるのか、そして現在取り組んでいる新たな取り組みを紹介する。課題として取り上げると、(1)語り部ガイドの高齢化と特定のガイドへの負担、(2)スタッフを含め若者への教育不足、(3)ボランティア募集の枠組みや教育体制の制度不足、などがある。災害当初から、語り部ガイドは当時を語る上で災害伝承の担い手として役割を果たしてきたと考えられ、同時に雲仙岳災害記念館では、災害時の臨場感や状況が理解しやすい展示の工夫などを行ってきた。しかし、語り部ガイドの高齢化や復興を含む被災地の変化などから、次第に語り部の認知度が薄れ、災害の風化が進み、災害伝承の新しい方法の検討が求められてきた。そこで、当館では今年から新たな試みとして、小学生高学年から中学生を対象とする火山ジュニアマイスタースクールを始め、将来の地域の防災を担う若者を育てるための様々なプログラムを実施している。

Passing Down the History of the Damages Caused by Mt.Unzen Volcano and the Issues at Hand

Yoji Higashiyama（Mt. Unzen Disaster Memorial Hall）

In this presentation, I will brief about how the lesson from the disaster of Mt.Unzen Eruption was passed down amongst the citizens and the issues that we currently face, evaluating through the projects taken in Mt.Unzen Disaster Memorial Hall, the core facility dedicated for education of volcanic disasters, 28 years after the happening of Mt.Unzen Eruption. I will also introduce to you one of the projects we are currently working on for solving one of the issues.

Starting from the issues that we have at hand, these 3 are some of the issues that we are currently facing: 1) The aging and limited staffs as narrating guides 2) The younger audiences, including staffs, lack knowledge regarding volcanic disasters, 3) The lack of a system for recruiting and training volunteers, and etc.

Right after the happening of the disaster, the narration guides played one of the largest role in the educating the lessons of the disaster to the public. Accompanying the narrations with the exhibitions at Mt.Unzen Disaster Memorial Hall, the public was able to truly understand the disasters through a close simulation of the experience. However, as the narration guides gradually age and the disaster areas were restored, it became necessary to consider new methods in continuing the education of the volcanic disasters. As one of the plans to tackle this problem, we have started a project that will begin this year, targeting elementary upperclassmen to middle school students. These students will be educated to become capable of making the right judgement and take actions during the actual happening of a disaster through “volcano junior master school,” where we will hold many more programs to achieve such goal.

ポスターセッション発表ポスター/
Poster Session Presentations

リープダム
Leap Dam

UN HABITAT
FOR A BETTER URBAN FUTURE

Incorporating community lessons in building disaster resilient housing of the Mekong river communities

RESILIENT HOUSING FOR ALL

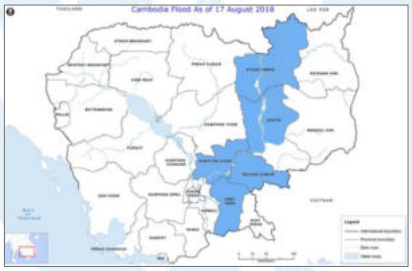


BACKGROUND

Cambodia is one of the world's most vulnerable countries to natural disasters and the country has suffered repeatedly from floods, storms and strong winds which has caused the loss of lives and destruction of livelihoods.

In 2018, due to the heavy rainfall from ***Tropical Storm SON-TINH***, the Sepa-Nam Noi dam in Lao PDR collapsed affecting 62,317 households, causing 16 deaths, and forced 5,398 households to evacuate in the five downstream provinces in Cambodia.

The rural poor communities near the Mekong river have suffered the destruction of their houses. Many families have been forced to evacuate their homes to the shelters with no sufficient food and access to clean water and sanitation.



As a response to the flooding, UN-Habitat in Cambodia with the support from the Government of Japan has been implementing the "***Project for Improving Living Environment and Disaster Prevention Capacity in Cambodia***" since April 2019. The project aims to complete the full reconstruction and repair of over 200 houses by March 2020 that will benefit over 2,000 families.

PROJECT

With the generous fund from the Government of Japan (JPY 100,000,000), the "***Project for the Support for Improving Living Environment and Disaster Prevention Capacity in Cambodia***" (Total duration: 12 months) aims to reconstruct housing to respond to the immediate need for safe shelters in the flood-affected communities Tbong Khmom Province. The project focuses on providing housing that is resilient to disasters using environmentally sustainable materials. Final beneficiaries are:

At least 200 households (1,000 persons based on average family size of 5) supported with core shelters

Approximately 2,148 households (10,740 persons based on average family size of 5) in total get benefit from hazard maps, community development support, and livelihood assistance

Approximately 50 construction workers in the flood-affected community get benefit from trainings on resilient construction methods

Approximately 50 national and subnational government officials will get benefit from capacity building on policy development skills of disaster risk management policies

ACTIVITIES

This project activities contribute to the implementation of National Housing Policy, which was formulated by the Ministry of Land Management and Urban Planning and Construction with the technical support of UN-Habitat to promote sustainable housing sector.

1. Conduct field recovery assessment in target province and select community organization and involvement of all relevant actors
2. Conduct detailed mapping of shelter (material) needs and safe areas (flood map) in target communes
3. Reach consensus with communities and affected families on which households will be assisted and on the safe locations for rebuilding houses, including sanitation facilities (toilets), based on the flood risk information collection and mapping – ***Selection of 200 households***
4. Identify low cost and local materials that can be used to construct resilient houses
5. Select community carpenters, masons, and skilled workers to participate in the housing construction and train them in disaster resilient construction methods – ***50 artisans (including youth)***
6. Community mobilization for housing construction – ***200 households***
7. Design and construct resilient houses using local low -cost materials – ***200 housing units***
8. Integrate disaster risks reduction elements into local plans
9. Conduct lessons learned workshop and disseminate the results at national level – ***100 people***

PEOPLE'S PROCESS

UN-Habitat has been taking a unique approach called ***"People's Process"*** that involves the participation of the community members in housing reconstruction and the use of their knowledge and skills. The People's Process brings about a paradigm shift moving from a model of control by authorities to one of support to people — this is done through a participatory community development methodology built around 5 steps.

KEY PARTNERS

UN-Habitat has a strong track record providing shelter and WASH assistance in Cambodia, which works closely with the Royal Government of Cambodia, Ministry of Land Management; National Committee on Disaster Management (NCDM); Provincial committees on Disaster Management (PCDM); Local Authorities; NGOs; and Communities.

UN-Habitat is also a member of Humanitarian Response Forum and Shelter Working Group that actively works to produce Low Cost Resilient Housing Construction Guidelines and for build back better to communities most severely hit by flood and cyclones in 2014 .

Photos from the field © UN Habitat Cambodia






ジャンイ
Jiang Yi

Keep Memories Alive

Situational Drama in
DRR Education for Children

Painting of The Dancer, by Henri Matisse (1869-1954)

Designed by Jiang Yi , 2019

アブデシュクマールガングワル
Abdhesh Kumar Gangwar

RCE Srinagar

TeLL-Net 2020

2020 International Forum on Telling Live Lessons from Disasters
24-26 January 2020 Kobe, Japan

Tales from Indian Disasters

Indian Tsunami

26 December 2004
07:58 hrs, 9.3 Richter Scale

Undersea (depth 30 km)
Waves 30 m high
Deaths 18,045



Kashmir Earthquake

8 October 2005
09:20 hrs, 7.6 Richter Scale

Deaths 945, Injured 6,149
Houses damaged 92,608
Population affected 4,50,000





Leh Cloudburst

6 August 2010
00:00 - 00:30 hrs

Deaths 255
Missing 29
Houses damaged 1,500




Kedarnath Uttarakhand floods

16-17 June 2013

Deaths 5,700




'Mehfooz' School Safety

Safety of all Everywhere All the time



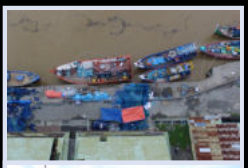

Design: Rambabu

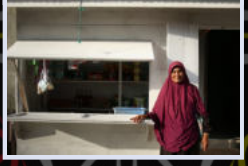
Photo Credits: Abdhesh Kumar Gangwar, G.S. Bedi, CEE Himalaya, RCE Srinagar

シティ マグフィラ
Shiti Maghfira

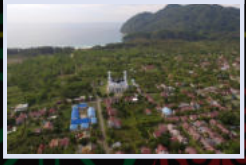
SURVIVOR

Fifteen years ago, the tsunami struck the western part of Indonesia on the December 26th, 2004, causing the loss of many lives and of a great amount of infrastructure. The earthquake with a magnitude of 9,1 occurred at 7.58 am. After the earthquake occurred, the tsunami hit the coast of Aceh caused 126, 741 people died and left a memory that has became a tsunami tourism site in the Lampulo, Banda Aceh, Boat on the Rooftop.

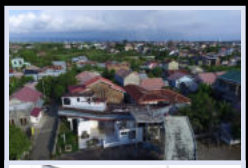




This village is named Gampong Lampulo and really close to the shore. This is where I used to selling breakfast. We call it TPI (fish auction). At that time, many anglers stopped by. When they came back from the sea, loading and unloading fish, I sold the breakfast for them there.



When earthquake happened, I sat here. After the earthquake stopped, I went home. Then returned to the port once again. A boat came from the sea and the crew yelled, “The tide is coming. The tide is coming.” It was very high. The color was black. I ran to my neighbor house and went to the second floor. At that moment, a boat somehow hooked on the top of the house.



There were 59 people on the boat. We spend 9 hours here. There is a wisdom under this calamity. We do not carry our properties. We only bring our charity. This is what I can conclude that our life is just a moment. Now fifteen years after tsunami, the infrastructures are managed properly. The economy of the local people also starts growing. Everyone can smile because Aceh has peaceful condition once again.

PHOTO : AHMAD ARISKA
TEXT : SHITI MAGHFIRA

DESIGN : AMONDAYA CREATOR

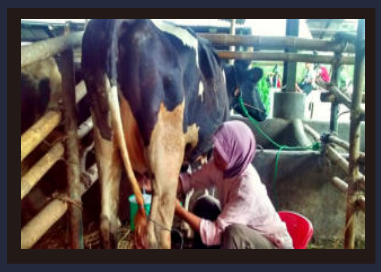
LIVING IN HARMONY WITH DISASTER AT MERAPI.

アンディ フェルダナ
Andi Ferdana

This Poster Contains the Desription of Petung Citizens “Before And After Eruption 2010"

find me : andi_ferdana | andiferdana@gmail.com

BEFORE ERUPTION 2010



Petung vilages is 7 Km from the peak of Merapi. Before the eruption of residents raising livestock, have a cofffe garden so that it becomes a tourist village.

ERUPTION 2010

Petung exposed to pyroclastic flow and thann all destroyed and residents must move to relocation.

AFTER ERUPTION 2010

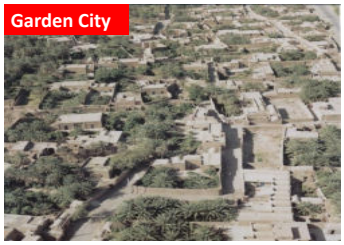
Residents who moved to relocation made their old village a tourist destination. For residents of Merapi is not a threat, they can coexist with Merapi in harmony.

モハメド アリザマニ
Mohammad Alizamani

2020 INTERNATIONAL FORUM ON TELLING LIVE LESSONS FROM DISASTERS, 24-26 JANUARY 2020. KOBE, JAPAN

The role of Technical Services & Building Materials Exhibit Complex in Bam Earthquake(2003)

BAM BEFORE THE EARTHQUAKE



BAM AFTER THE EARTHQUAKE

Bam earthquake- Total damaged Units		
Magnitude: 6.6 (R.Sc.)-Date: December 26- 2003- 26721 Dead		
URBAN RESIDENTIAL & COMMERCIAL UNITS	To Be Reconstructed	25562
	To Be Repaired	828
RURAL RESIDENTIAL UNITS	To Be Reconstructed	24332
Total		50722

KEY GOALS

PRESERVATION OF IDENTITY + PARTICIPATORY RECONSTRUCTION + PHYSICAL RESILIENCE

THE PROBLEM
HOW TO REALIZE THESE GOALS?

THE IDEA

ESTABLISHING TECHNICAL SERVICES & MATERIAL EXHIBIT COMPLEX

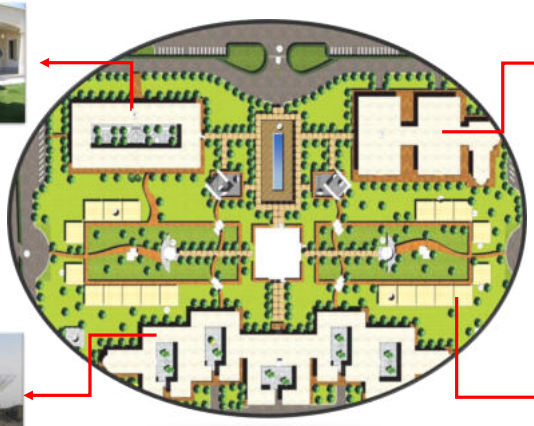
1. CREATING A SUITABLE SPACE FOR INTEGRATED PROCESS IN DESIGNING THROUGH THE VICTIMS, DESIGN CONSULTANTS
2. EXHIBITION OF BUILDING MATERIALS FOR THE LOCAL PROFESSIONALS, ARTISANS AND TECHNICIANS
3. PRODUCING DOORS, WINDOWS, FIXTURES AND JOINERY ELEMENTS
4. PROVIDING HOUSING APPROPRIATE SAMPLES PROPOSING ARCHITECTURAL & STRUCTURAL PATTERNS

Technical Services & Building Materials Exhibit Complex

Participatory Design

- URBAN & ARCHITECTURAL PRINCIPLES
- SPECIAL BUILDING CODES

Building Materials Workshops



Building Materials Exhibition

Architectural patterns & building technology

BAM AFTER THE RECONSTRUCTION

RECONSTRUCTION OPERATIONS	
CREDIT AMOUNT (By Government & donors)	1.7 billion $
RESIDENTIAL UNITS	5.2 million m2
RECOVERED AGRICULTURE AREA	625 ha.
EDUCATIONAL BUILDINGS	194 units
GOVERNMENTAL BUILDINGS	81 units
RELIGIOUS BUILDINGS	52 units
HOSPITAL & HEALTH CENTER	35 units (20000 m2)

Background: From **28-30 September 2009, Typhoon Ketsana** hit Southern Laos causing some of the most severe damage from a natural disaster in living memory. Across **Sekong, Salavan, Attapeu, and Savannakhet** Provinces, widespread flooding was compounded by flash floods and landslides from heavy wind and rainfall, and rivers rose to 28 meters in some areas. With no early-warning or preparation, extensive damage to houses, food storages, water supplies, infrastructure, and livelihoods left an estimated **181,000** people at-risk and in need of immediate assistance.

マニヴァースヤヴォン
Manivanh Suyavong

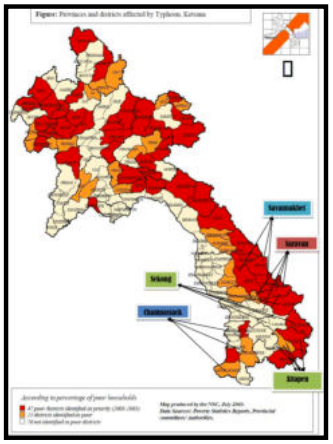
Voices of Resilience: Lao Women in Community Based Humanitarian Response

As National Programme Manager at Oxfam Australia (in Laos), my team was deployed to Ta Oy and Samoui Districts in Salavan Province, and Kalum District in Sekong Province to provide urgent humanitarian assistance and community-based disaster management. Our primary goal was distributing rice, hygiene and kitchen kits, and temporary shelters.

Our mission faced challenge after challenge as the diversity of ethnic groups created severe language barriers; logistical breakdowns left us with rice shortages; the remoteness of many villages meant some had to walk up to 5 days to reach areas inaccessible by truck or boat; and security obstacles from UXOs made coordination an uphill battle.

As the 10 year anniversary of Typhoon Ketsana approaches, I am reminded of two things. Firstly, the countless interactions I had with people who despite their suffering, were determined to survive and never hesitated to show their gratitude for our support. Secondly, I reflect on the lessons learned and acknowledge the achievements that came from devastation. The experiences I had during my time at Oxfam ignited my passion for grassroots development and lead me to my current position as Director of Gender Development Association. Since Typhoon Ketsana, the Government of Laos has taken great initiative to improve policies, mechanisms, procedures, and invested valuable resources to support programs for disaster preparedness, management, and response.

Our journey through recovery comes full circle; representing perseverance, growth and the bond shared by communities who overcome disaster



Manivanh Suyavong
Director, Gender Development Association
Vientiane, Lao PDR

TALES OF FLOOD YOURS AND MINE

crowdsourcing flood stories through social media

Ong Ke Shin
PhD Candidate, Universiti Sains Malaysia
Fellow, Japan Foundation HANDs Program 2017/2018
keshinong@gmail.com

Background

Flood is the most destructive natural disaster in Malaysia. When flood strikes Penang, be it natural or man-made, precious lives are lost, families broken, infrastructure and personal assets are wasted. Despite its severity and the high possibility of reoccurrence of flooding due to the escalating climate change, awareness and preparedness of communities previously affected by flood remained lukewarm. Memories of flood faded, forgotten fleetingly, deliberately or subconsciously when traces of flooding were effaced.

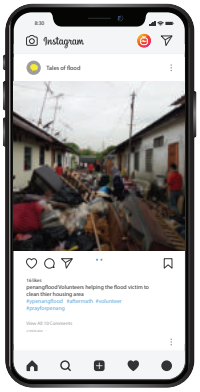
Objectives

This pilot project "Tales of flood, Yours and Mine" aims to

- explore the possibility of leveraging social media to recollect memories of the most severe flood in Penang, Malaysia that took place in 2017 via crowdsourcing
- to provide a virtual platform to engage the public in preserving, interpreting and reflecting and remembering on flooding
- better understand how public perceive flood.

Problem statement

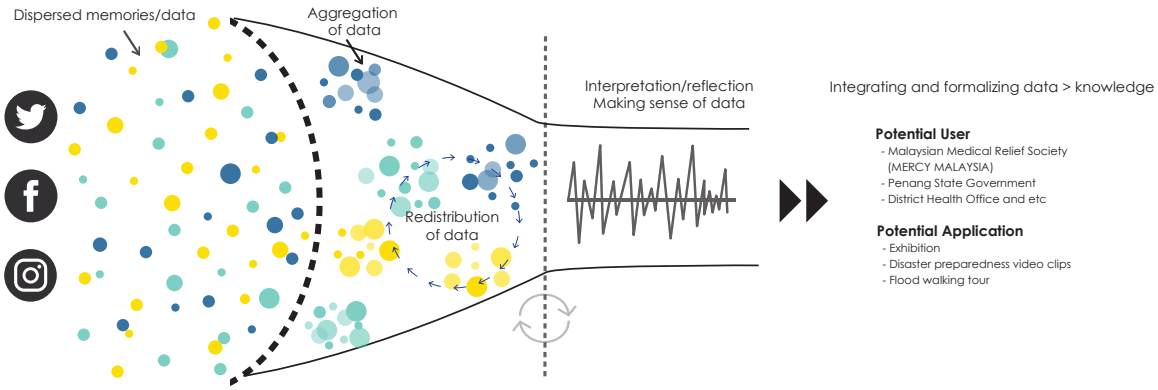
Growing interest in and active contribution on social media provide a new approach for flood victims and witnesses to record and construct disaster memory. The 2017 disastrous flood that occurred in Penang, Malaysia left tremendous traces and valuable records in social media, yet loads of these informal public generated data remain unstructured and dispersed, therefore underexplored.



Why Crowdsourcing

- "Process of leveraging public participation in or contributions to projects and activities." (Hedges & Dunn, 2018)
- Foster civic participation and discussion by engaging public that is not part of a formal institution
- Collect bottom up resources, amplifying citizen's voices.

Conceptual framework



Sources: Adapted from the crowd capital perspective (Prpić, Shukla, Kietzmann, & McCarthy, 2015)

Application of the framework to crowdsource flood memories in Penang, Malaysia

Constructing the crowd	Acquisition	Assimilation	Harnessing crowd capital
Who? • Social media user • Flood victims • Flood witnesses • Public Type of content • Photo • Video • Written narrative	**How?** • Invite and engage potential participant • Submit stories / photos through social media • Data mining • Interaction, exchange between participants • Identify emerging theme #tagging • Prompt to trigger response	**Then?** Making sense of the information • Value creation • Value capture • Curate, process and contextualize information • Periodizing emerging and interesting content	**How?** • Invite and engage potential participant • Submit stories / photos through social media • Data mining • Interaction, exchange between participants • Identify emerging theme # tagging • Prompt to trigger response

Challenges

The challenges faced executing this on-going pilot project is

- While the aim is to provide an inclusive platform for citizens to share their stories, relying on social media exclude non – social media users
- Users' information privacy concern limits participation and data collection
- Time consuming to create and maintain active crowd (Martí, Serrano-Estrada, & Nolasco-Cirugeda, 2019)

Acknowledgements

The author wishes to thank Universiti Sains Malaysia, The Japan Foundation Tokyo, The Japan Foundation Kuala Lumpur , Mercy Malaysia and Secretariat of TeLL-Net for supports rendered

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Cyclone Nargis: A First Hand Narrative of the Aftermath (Presented by Nyi Soe, Myanmar)

ニソエ
Nyi Soe

The Worst Natural Disaster in Myanmar

Myanmar is the largest country in mainland Southeast Asia with a total land area of 676,578 square kilometers and a population of 51.5 million. Its long coastline of about 2,000 km covers almost the entire coast of the Bay of Bengal. As a country prone to heavy rainfall, floods occur regularly during the mid-monsoon period (June to August) in areas traversed by the rivers.

On 2 and 3 May 2008, Cyclone Nargis, category 4 cyclone, swept in from the Bay of Bengal and made landfall in Myanmar's Yangon and Ayeyarwady Regions, resulting in large-scale loss of life and destruction of infrastructure, property and livelihoods. Approximately 140,000 people were killed or unaccounted for following the Cyclone. One third of the inhabitants of Ayeyarwady and Yangon Regions, 2.4 million people were affected. The Cyclone struck 37 townships, covering an area of 23,500 square kilometers, a landmass slightly smaller than the country of Haiti. Globally, Cyclone Nargis was the eighth deadliest cyclone ever recorded and it was by far the worst natural disaster in Myanmar's history. Strong winds and heavy rain caused the greatest damage in the Ayeyarwady Delta where a storm surge compounded the impact of the cyclone.

Cyclone Nargis had a substantial long-term impact on people's livelihoods and resulted in enormous physical losses, including the destruction of homes and critical infrastructure such as roads, jetties, fuel supplies, electricity and water and sanitation systems. A large proportion of water supplies were contaminated and food stocks were damaged or destroyed. The damage was most severe in the Delta region also known as the country's rice bowl, where the effects of extreme winds were compounded by a 3-4 metre storm surge, devastating most of the fertile areas and submerging countless villages. Cyclone Nargis caused devastation to the environment of the two regions where local livelihoods are heavily reliant on the natural resource base. It destroyed 38,000 hectres of natural and replanted mangroves, submerged over 63 percent of paddy fields and damaged 43 percent of fresh water ponds. Immediate action was required to address the basic humanitarian needs of the Nargis-affected population given the immensity of human suffering and the social and economic toll the disaster had on families and communities. An early recovery programme that could ensure that transition into medium and long-term recovery was an urgent need to focus on the restoration of livelihood, assets of the poor and essential services.

Source: ASEAN Secretariat

National Response and International Assistance

Though the National Disaster Preparedness Central Committee (NDPCC) was activated the next day and assigned rescue, relief and rehabilitation tasks to ministers and deputy ministers, the scale of the devastation quickly proved overwhelming and supply stocks existing within the country were limited and soon exhausted. In this context, it was vital that the international community be granted access to bring in relief for the Cyclone-affected communities. The government's reaction to the international assistance sparked confusion and it said that it would only accept bilateral aid and welcomed donations of cash and emergency aid but was not ready to receive search and rescue teams or journalists from foreign countries.

Coordinating Mechanism for International Aid

Amidst the chaos and confusion ASEAN took the lead in braking down the communication and trust barriers that were preventing the flow of aid and international relief workers into the country. The Secretary-General of ASEAN personally persuaded the leaders of Myanmar to permit the entry of relief workers in to the country to assist Cyclone survivors in the spirit of ASEAN Agreement on Disaster Management and Emergency Response (AADMER) so ASEAN-Emergency Rapid Assessment Team (ASEAN-ERAT) was permitted. He was then urged by the governments and organizations around the world to broker agreements with Myanmar to open up space for humanitarian assistance. As a result, the ASEAN led mechanism was agreed and the ***ASEAN Humanitarian Task Force (AHTF)*** was established. Aid and relief workers from international community as well as medical teams were allowed. After the establishment of ASEAN Task Force, ASEAN-UN International Pledging Conference attended by representatives from 51 countries was successfully held on 25 May.

Message on Cyclone Nargis and is aftermath

- The devastation of Cyclone Nargis was ***enormous***.
- Imagine the ***enormity*** of the Cyclone : killed 140,000 people and affected 2.4 million people.
- Estimated damage : US$ 4 billion
- Winds up to 215 km/h and 3.5meter storm surge which travelled 40 km up the 2 regions and the tide was like a monster.
- ***Unpreparedness*** & ***Negligence*** on the effective early warning system.
- Lessons learnt from this tragic experience : **must not underestimate the natural disasters.**
- One big challenge : ***Resilience from the people*** living in remote areas.
- ***Disaster awareness and DRR trainings*** : a "must" for areas prone to disasters.
- ***Updating early warning systems*** : vital in the struggle to prevent disasters and save lives.
- Blessing in disguise : A few years after Cyclone Nargis, 2010 General Elections: ***political change began to open Myanmar up to the outside world.***

HTF set up a Yangon based ***TCG (Tripartite Core Group composed of representatives from ASEAN, Myanmar and United Nations)*** as a working mechanism for coordinating, facilitating and monitoring the flow of international assistance to Myanmar. To support the ASEAN led coordinating mechanism, a Coordinating Office was established to work closely with representatives from the government and UN under the TCG. The first meeting of TCG agreed to conduct a Post-Nargis Joint Assessment (PONJA) to determine the full scale of the impact of Cyclone Nargis and requirements for both immediate humanitarian assistance needs and medium-to longer-term recovery. In early 2009, TCG launched the Post-Nargis Recovery and Preparedness Plan (PONREPP) to provide a platform for the transition from emergency relief and early recovery towards medium-term recovery. The TCG set 3 levels of coordinating mechanisms:

1) Recovery Forum: focused on strategy and policy with wide stakeholder membership;

2) Recovery Coordination Centre : technical coordinating unit at the operational level and aimed to exploit opportunities for enhanced coordination of funding;

3) Recovery Hub : coordinating unit at the field level both at township and village levels.

The TCG set out a three-year framework to guide recovery efforts following Cyclone Nargis provided a platform for transition from emergency relief and early recovery towards a medium-term recovery with three themes: productive lives, healthy lives and protected lives. commissioned a series of interim assessments refers to as Periodic Reviews to gauge the status of relief and recovery and revolving needs of the Cyclone affected population and could implement up to Periodic Review IV.

The TCG was successful in building trust and confidence in the post-Nargis humanitarian relief and recovery effort and facilitating cooperation between the Myanmar Government and the international community. The TCG has been lauded as an innovative example of a body that ASEAN and other regional associations around the world could replicate in response to future emergencies. The mandate of the AHTF and TCG were extended to the end of July 2010 by the ASEAN Summit and the ASEAN led coordinating mechanism completed on 31 July 2010.

Lessons Learnt

High-level government leadership is critical to the success of any disaster response especially in the case of large-scale disasters. Myanmar's high-level natural disaster coordinating body called the National Disaster Preparedness Central Committee was established in 2005 in accordance with the Hyogo Framework for Action. A key strength of the NDPC was that it was positioned at the highest level of government and its strong leadership helped ensure continuity throughout the recovery process and the smooth transition from one phase to another, from relief to early recovery, early to mid-term recovery and eventually to long-term development.

Post-Nargis experiences underline the need for any other ***countries to be prepared for disaster but also to possess the knowledge and skills to respond***. Methods and needs for assessing needs, damage and loss, community-based monitoring systems, aid tracking systems and all the other tolls and mechanisms required for post-disaster relief and recovery efforts ought to be readily available prior to disasters. Training for assessment teams should be conducted on a periodic basis and their capacity needs enhanced and supported so that they can be easily dispatched when the need arises.

Effective assessment and monitoring are vital to guiding the coordination and implementation of aid programmes and ensuring that relief and recovery efforts reflect the needs of the affected community. According to periodic reviews, the affected population must be active participants in surveys and results must be grounded in meaningful consultation. The initiatives were part of wider efforts to ensure that the post disaster relief and recovery programmes were people-centred and focus squarely on the needs of the affected communities.

The aftermath of disaster like Cyclone Nargis provided an entry point to integrate DRR (Disaster Risk Reduction) into relief and recovery programmes. Several studies have concluded that ***investing in DRR initiatives is more cost-effective than conducting post-disaster activities***. DRR is valuable because it encompasses a multi-hazard risk reduction approach to ensure sustainable development. The outcomes of implementing DRR in Nargis-affected areas: enhanced engagement by communities in DRR measures; improved capacity to disseminate and act on early warning; strengthened locally-adapted mitigation measures in vulnerable areas; integration of disaster mitigation into current recovery and reconstruction efforts; and improved preparedness, mitigation policies and response mechanisms among national and local institutions.

Cyclone Nargis made ASEAN to challenge its collective response to a major disaster in a Member State. The experiences helped ASEAN better understand the nature of humanitarian architecture after a major-scale disaster and how DRR initiatives can mitigate the impact of a disaster. It was the ***first time for ASEAN to work so closely with the United Nations at the operational level*** in the coordination of a joint humanitarian effort in response to on the worst natural disasters to strike the region in decades.

Applying the lessons from Cyclone Nargis requires ***recovery and development efforts to focus on the protection, restoration and enhancement of the environment in Nargis-affected areas,*** particularly forests, land and freshwater resources. Investing in sound environmental management can provide a more sustainable basis for livelihoods and food security and build resilience to future disasters and climate change.

Source: ASEAN Secretariat

Cyclone's impacts were exacerbated by earlier damage to the environment, including deforestation and degradation of mangroves, over-exploitation of natural resources such as fisheries, and soil erosion. The heavy loss of life as a result of the storm surge was primarily due to prior loss of about 75 percent of the original mangrove cover n the Delta which could have served as buffer against the storm surge.

Experiences from Cyclone Nargis clearly demonstrate ***the vicious circle in which pre-existing environmental degradation increased vulnerability, turning a natural hazard into a major disaster.*** The disaster resulted in in further environmental damage, jeopardizing the sustainability of livelihoods and ecosystem functions.

The areas of affected by Cyclone Nargis illustrated the interdependent linkages between the environment, livelihoods and disaster vulnerability. The driving forces of degradation in the Delta and Yangon Region are closely related to people's livelihoods and their natural resource management practices as well as the way in which government policies are implemented. Low input and unsustainable farming practice, lack of awareness and knowledge, deforestation and over-exploitation of forest resources, over harvesting of fisheries, weak land use planning, inadequate information on natural resources are the key factors for environmental degradation.

Last but not least, Cyclone Nargis provided opportunity to the Government of Myanmar which was a military regime in power for twenty years to have cooperation with international community not only with the regional associations and international organizations but also with donor countries especially the western world and a few years later, ***political change began to open Myanmar up to the outside world.*** In 2010 Myanmar citizens voted for their first elected leaders in two decades and the political opening pushed the country to collaborate with neighboring countries and international partners.

Struggle for Heritage Conservation:

Post 2015 Gorkha Earthquake Reconstruction of Ranipokhari in Kathmandu, Nepal

バルシャ シュレスタ
Barsha Shrestha

サンジャヤ ウプレティ
Sanjaya Uprety

Introduction/ Background

The devastating Gorkha earthquake-2015 in Nepal has affected about 2,900 structures with cultural, historical and religious heritage value. Among these, was the Ranipokhari (Queens Pond) built from 1664 to 1669 AD by King Pratap Malla to console his wife who was mourned by the untimely demise of their son. The originally iconic 'Sikhara-style' Hindu temple (*'Balgopaleshwor Mandir')* in the middle of the pond*, rebuilt in Gumbaz style after* the great Earthquake in 1934, was completely damaged during 2015 Gorkha quake. The popular myth is that the pond was constructed filling it with holy waters from 51 different holy pilgrimages of Nepal and India.

Ranipokhari Complex
(Source: Creative Commons, 2014)

Temple in Shikhara Style by Pratap Malla
(Source: Study Report of Ranipokhari Restoration, 2018)

Temple reconstructed by Jung Bahadur Rana
(Source: Study Report of Ranipokhari Restoration, 2018)

Ranipokhari before earthquake
(Source: Creative Commons, 2006)

Heritage Value

The pond is a testimony of the use of ancient knowledge of Malla-era archeology and water distribution system of medieval city of Kathmandu which is characterized by:

- Construction of several wells in pond bed for water supply, recharge and drainage with sand and black cotton soil, construction of dykes using traditional bricks (Ma Appa) in lime mortar
- The live heritage site serves as a melting pot of various cultures and religions in the Kathmandu valley; Bhai Tika (festival for brother), Chat Puja (worship to Sungod by Terai people)

During Chatth Festival
(Source: The Kathmandu Post, 2015)

During Bhaitika Festival
(Source: Creative Commons, 2010)

Civic /Community Protest

Ranipokhari after earthquake
(Source: Creative Commons, 2016)

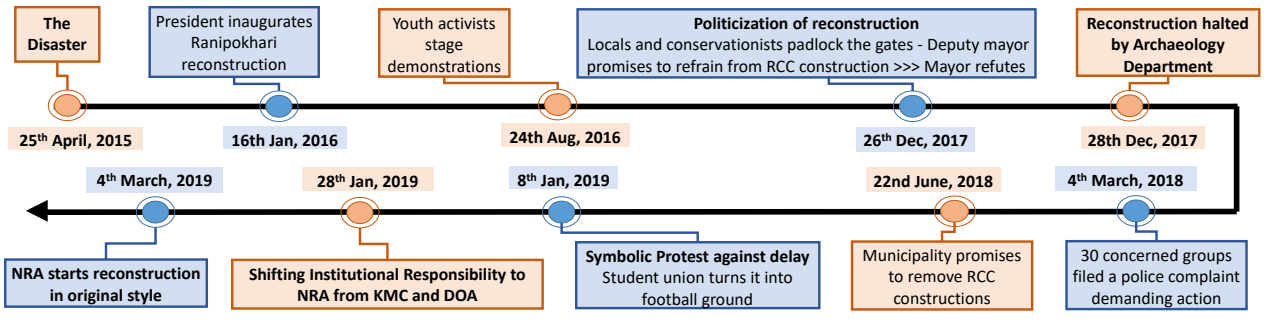
Under-construction in 2016
(Source: Kantipur, 2016)

Use of bull dozer and excavator
(Source: The Himalayan Times, 2017)

Breaking gate in Mayor's presence
(Source: The Himalayan Times, 2017)

Heritage Risk

- Loss of traditional wisdom of water urbanism and cultural faith
- Planning to turn the pond complex into a commercial park using RCC construction of pond bed, dykes, temple
- Use of bulldozer and excavators for removing of debris-loss of traditional bricks 'ma appa'



Impact

Activists and conservationists united for authenticity in heritage reconstruction >>>> Activism led Government to change its reconstruction approach to authentic conservation of several other heritage sites in the valley

Lessons Learnt

Civic protests can be instrumental in bringing positive decision and policy changes to save heritage from mishandling of post-disaster reconstruction

Protest as football ground
(Source: The Himalayan Times, 2019)

Protest by gifting grass to Deputy Mayor
(Source: The Kathmandu Post, June 2018)

Protest by activists
(Source: Glocal Khabar, September 2016)

Reconstruction by the NRA
(Source: The Kathmandu Post, November 2019)

DOA- Department of Archaeology; KMC – Kathmandu Metropolitan City; NRA – National Reconstruction Authority

ルペシュ シュレスタ
Rupesh Shrestha

Living heritage of Patan -
rebuilding heritage inside Kathmandu valley

Submitted by:-
Mr. Rupesh Shrestha, B.Arch, M.Sc.
Affiliation: Kathmandu Valley Preservation Trust- Nepal
email: rupeshshrestha2005@gmail.com

Abstract

Monuments fall & monuments rise. That is a reality. It is also true that during the rise - wisdom, skills, memory come alive and contribute to something which can be truly remarkable.

Kathmandu Valley Preservation Trust (KVPT) is working in Nepal to reconstruct all the monuments of Patan Durbar Square dating between 15th to 18th century that was destroyed in the earthquake of 2015. No where else in Nepal can you find so many creative architects, engineers, craftsman & artists assembled and working as a team to preserve Patan's Genius loci/spirit of place, sensitivity, values & authenticity. The intangible aspect which creates this tangible heritage is often neglected & undocumented. New wisdom is being created in Nepal. It comes from process, practice and syncretism of centuries-old philosophies, religious and cultural values.

Real heroes - the newar craftsmen

Newar craftsman who are indigineous people of Kathmandu valley are creating unique items from materials like brick, timber, stones and metal. Heritage of Patan are not just temples and monasteries but also the craftsmen with their extra ordinary skills - which they didnt acquire by studying in a vocational school or taking course in a training institute. Most craftsmen working here is able to do his/her work, by copying & looking up to his father, who was doing this same work. Again his father learned it from his grandfather. This skill dates back to many generations. The craftsmen are also - **living heritage of Patan.**

Knowledge revival and transfer

- Although 2015 earthquake was a calamity, it has also given an opportunity to revive the craftsmen's skills & livelihood.
- Gender stereotype is decreasing and females are increasing taking part in reconstruction and in some cases learning the crafts which traditionally only men were doing
- The concept of Build Back Better and Safer is being translated into the construction sites

Rebuilding with community

This is an ancient 200 years old community building & rest house called Om Bahal sattal located in Patan city. This building was heavily damaged after 2015 earthquake in Nepal. Date:- May 13 2019

Community of Om Bahal is rebuilding its heritage with support from Nepal Government and technical support from KVPT. Newar craftsmen & community play a pivotal role in rebuilding. Date:- July 28 2019

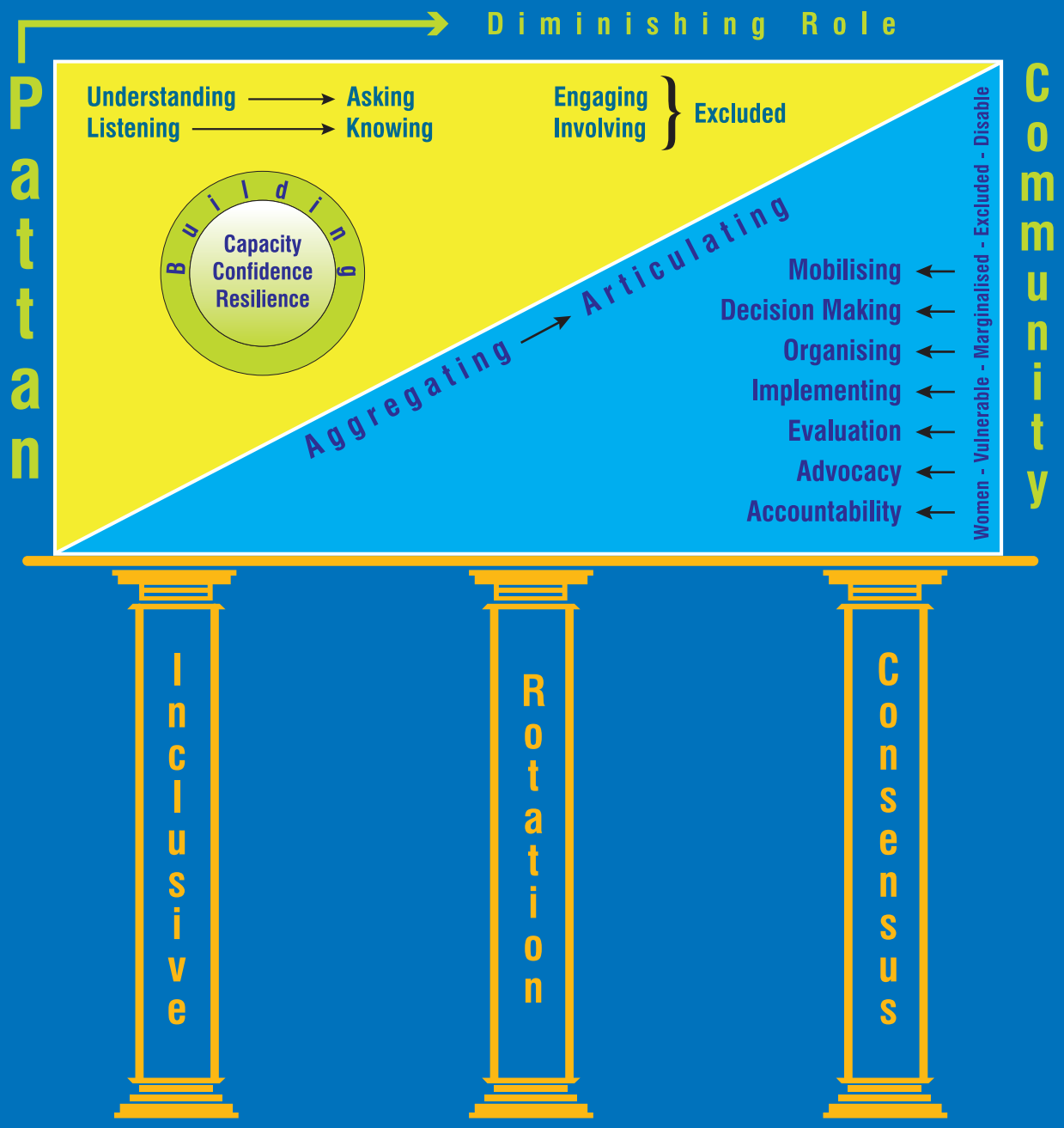
- Young generation are enthusiastic about heritage & culture.
- There is a lack of skilled manpower which also means knowledge transfer is ongoing to create skilled manpower to continue rebuilding works. Young craftsmen are being trained & they can practice their new skills in coordination with the skilled craftsman.

Message

There are dialogues, constructions, modifications, preservation and strengthening ongoing – right at this moment. There is a strong message from Nepal that heritage preservation does not mean fencing or protecting the ruins rather it means modification and preservation so that people can touch the monuments, live, roam or worship inside. Patan is a living city. It has multi-layered urban environment with inherent culture and values which feeds into the preservation of tangible heritage.

サルワル バリ
Sarwar Bari

Building Local Resilience Through Democratisation



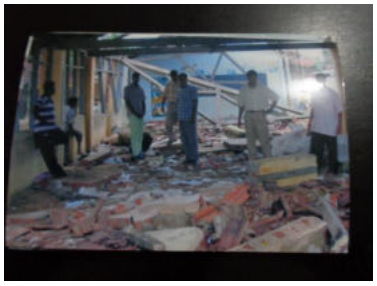
House 5, St.58, F-10/3, Islamabad, Pakistan. Email: info@pattan.org www.pattan.org

サジャ マジード
Saja Majeed

Disaster survivor to disaster researcher

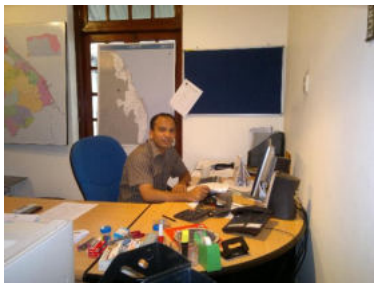
The story of Saja from 2004 Tsunami response worker to 2019 PhD in disaster resilience

2004 Tsunami in the East coast of Sri Lanka



2005-06 Tsunami Response

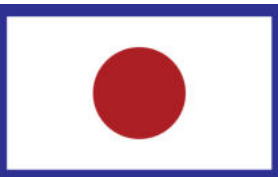
2006-10 Humanitarian crisis in the middle of Tsunami recovery



2010-13 Post-war recovery and rehabilitation

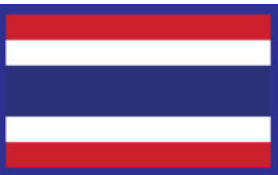
2013-16 Teaching/Research on disaster risk reduction

2016-19 PhD studies on building community resilience to disasters



ラチャニーコーン ソンティップ
Ratchaneekorn Thongthip

INTERNATIONAL TSUNAMI MUSEUM
KHAOLAK, THAILAND



Tsunami storytelling from a museum
The 15th memorial and friendship between Japan and Thailand
津波博物館による語り継ぎ: 15周年記念及び日タイの友情

On 26 December 2004, Thailand was hit by the greatest natural disaster in its history. A massive earthquake measuring magnitude 9.3 occurred off the west coast of Northern Sumatra, creating giant tsunami waves that devastated the shores of 14 countries around the Indian Ocean. The waves ravaged the Andaman Coast of Thailand causing unprecedented death and destruction in six coastal provinces. Tsunami museums in Thailand operating in two sites in Phang-Nga Province the most affected area in Thailand. The International Tsunami Museum and Tsunami Memorial Museum were formed by student leaders who were strongly committed to social work supporting tsunami-related events. Opening its doors in 2006, the museum's purpose is to increase awareness about tsunamis and other natural hazards. The Institute for Education and Culture, a non-profit organization operates the International Tsunami Museum and Tsunami Memorial Museum, which have recognized for its outstanding social contributions at the province level. The Institute for Education and Culture was awarded by the board of National Social Welfare and the Ministry of Social Development and Human Security as well as the National Council on Social Welfare of Thailand.

Open daily during 9:00-21:00 all year round, both museums receive no direct funding from other organizations. The museum management is administered by a committee comprised of a number of academic lectures and the Director Ms. Ratchaneekorn Thongthip. Small personal contributions allowed the hiring of an officer to take care of the museum. Most generously, entrance to the museum is entirely free for the local residents, children and school, and donation are used for supporting the local children.
The museum shows the exhibits which include animations and videos of the cause of tsunami, tsunami warning sign, the impact of the tsunami on the environment, tsunami survivor stories, early warning systems , sand sheets of Phra Thong Island providing tangible evidence that the 2004 tsunami was not the first of its kind. The visitor of the museums include ambassadors, international university study tours and notable celebrities.

By an introduction of Japan Embassy in Thailand, JICA invited the museum director to attend the World Tsunami Museum Conference in 2017 which the museum director got chance to meet Assoc. Prof. Anawat Suppasri, International Research Institute of Disaster Science at Tohoku University. He keeps supporting the technical assistance and is now one of the museum advisors. In 2019, the museum starts the Disaster Tour to show the knowledge and information about the tsunami, travel to the tsunami affected area, storytelling, telling live lessons and geopark. The Role of the Tsunami Museums as centers for knowledge transmission, passing-on the memories and prepare for the future.

Ms. Ratchaneekorn Thongthip
Director, International Tsunami Museum
Director, Tsunami Memorial Museum
Received B.Ed. and M.A. in Political Science from Chulalongkorn University, and B.A. in Political Science, Ramkhamhaeng University.
Working as Director of International Tsunami Museum and Director of Tsunami Memorial Museum, Phang-nga Province since 2006.
Also working as President of Institute for Education and Culture (NPO).

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Phone: (+66)081 442 5660

マーレーン　ムリー
Marlene Murray

SHARING STORIES

How the Pacific Tsunami Museum Keeps Tsunami Memories Alive

Tsunamis have killed more people in the State of Hawai'i than all other natural disasters combined. Tsunamis are a fact of life in Hawai'i, especially in Hilo, which has suffered more damage and loss of life than any other area of the islands. From 1900 to 1964, a tsunami with runup exceeding one meter occurred an average of once every five years. On April 1, 1946 and May 23, 1960, Hilo experienced devastating tsunamis that completely reshaped the social and economic structure of the community.

In recent years, Hawai'i has experienced enormous growth in both resident and visitor populations, with extensive development in potential inundation areas. During this same time period very little destructive tsunami activity has occurred. Consequently, generations of people have grown up without experiencing a major tsunami. Less than half our resident population and few visitors to Hawai'i have had any experience with tsunami hazards. Aging tsunami survivors, many of whom still reside within the State, are passing on. These tsunami survivors have invaluable stories to tell that can help document the cultural history and socio-economic development of Hawai'i. In the Hawaiian Islands, natural disasters, especially tsunamis, have played a significant role in determining where people live and conduct business. Currently, few tsunami education programs reach the general public or Hawai'i's school children.

DEADLY TSUNAMIS TO STRIKE HAWAI'I ISLAND IN HISTORIC TIMES

YEAR	SOURCE	AREAS IMPACTED	DEATHS	WAVE HEIGHTS (METERS)
1837	Chile	Hilo	14	20
1868	Hawaii	Kau	46	20
1877	Chile	Hilo	5	5
1923	Kamchatka	Hilo	1	6
1946	Aleutians	Hilo	96	10
		Rest of Hawaiian Islands	63	17
1960	Chile	Hilo	61	11
1975	Hawaii	Halape	2	8

Men running as third wave in 1946 tsunami crashed ashore near Kamehameha Avenue and Ponahawai Street in downtown Hilo.
Image from the Cecilio Licos Collection, Pacific Tsunami Museum

In response to the need for tsunami education in Hawaii, the Pacific Tsunami Museum was incorporated in 1994 and has provided that service to thousands of residents and visitors for the last 25 years.

KEY QUESTIONS
THAT DRIVE THE MISSION OF THE MUSEUM

- How do we learn from the disaster experience?
- How do we tell the stories?
- How do we honor those who have lost their lives?
- How do we remind people of the danger that exists?
- How do we prepare people for the next event?

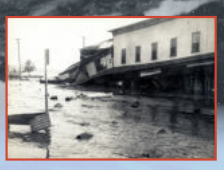
OUR MISSION

- Through education and awareness, we believe that no one should die due to a tsunami.
- The goals of the Museum are to promote public tsunami education and to preserve history.
- The Museum serves as a living memorial to those who lost their lives in past tsunami events.

HOW WE ACHIEVE OUR MISSION

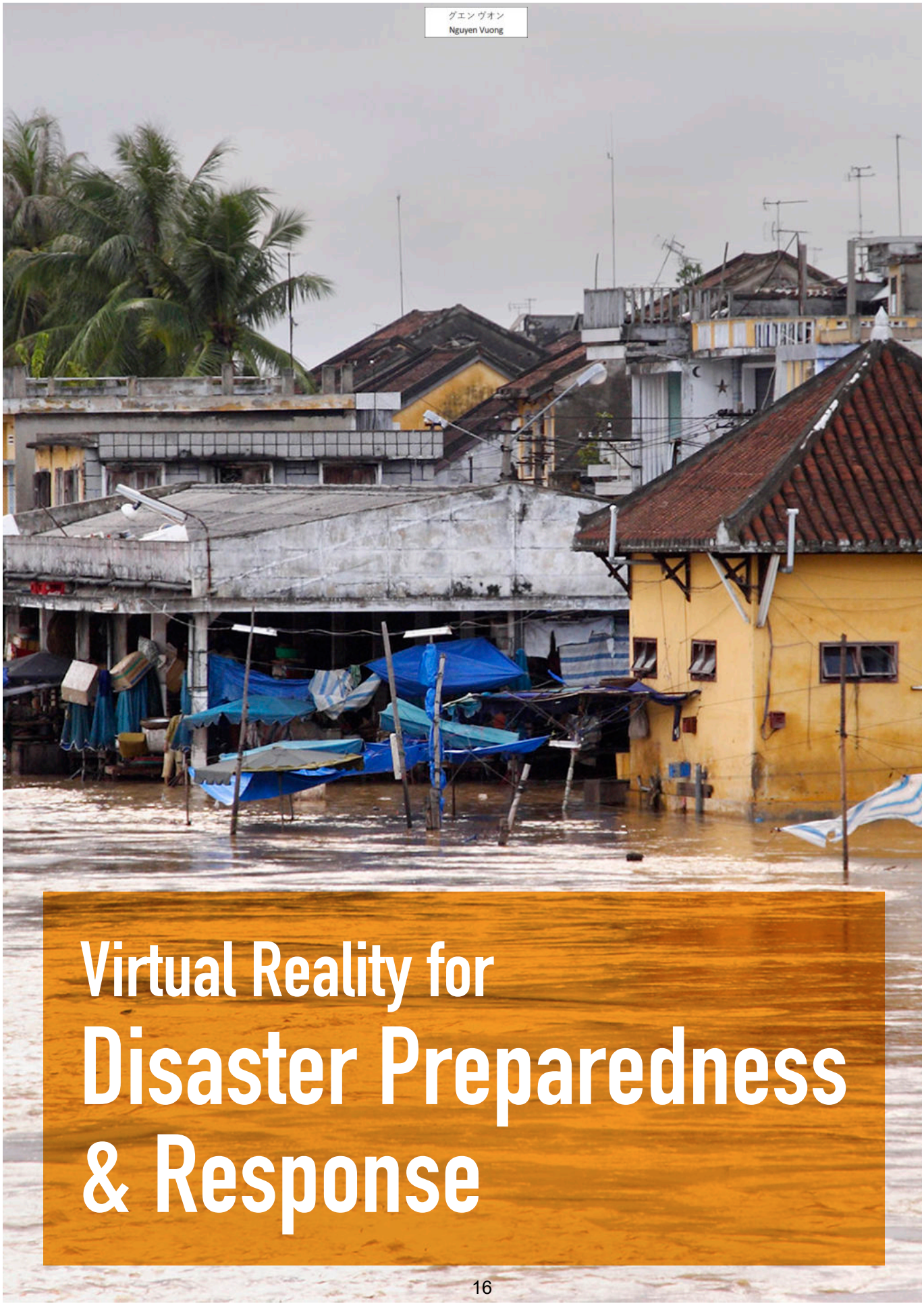
- Collection, preservation and dissemination of powerful materials.
- Museum Displays — Photos, Stories, Science
- Outreach — Tsunami Awareness Month, Workshops and Lectures, School Groups, Documentaries, News Outlets
- School Curriculum and Preparedness
- Scientific Research
- Support Emergency Management Agencies

"Experts agree, it is not a matter of *if*, but *when* the next tsunami will strike again."



CHALLENGES

- It is increasingly more difficult to collect tsunami survivor stories in Hawai'i since many are passing on.
- Some survivors find that talking about the experience is just too painful.
- Some people choose not to come to the museum because they believe that tsunamis are depressing.
- There is a general feeling of complacency since a major tsunami has not affected the Hawaiian Islands in 60 years.



Virtual Reality for Disaster Preparedness & Response

丸林祐子
Yuko Marubayashi

Recipes for the Dead

An Attempt at Integrating Japanese Death Culture and Acts of Testimony

Some records of written testimonies of families of the deceased of the 1995 Hanshin-Awaji earthquake show that these family members contemplate the dead by means of sharing meals. These particular personal acts in the domestic space derive from internalized rituals of communicating with the dead via food. My research will be able to present how food embodies testimony of the dead.

I consider practices of performance such as workshops, creating memorials, holding rituals, etc. as alternative expressions that further revitalize the relation between a family and their lost loved one. This concept of an act as testimony is clearly embodied by the practice of preparing and offering drink, food, and meals prepared for the dead in Japan, that is called *shisha-kuyo.*

Inari Sushi, inspired by image of late daughter

Yuri Nakakita

Cook white rice with two table spoons of black rice

Add vinegar to rice

Slice thinly ginger and *myoga*, and add the to the rice

Add sesame seeds and gently mix all ingredients well, cooling temperature down by using a fan

Put a damp towel on rice while setting aside, to prevent rice getting dry and hard

Steam mushrooms for a few minutes

Season steamed mushrooms with *dashi*/soy sauce

Cook deep-fried tofu with sugar, *mirin*, sake, soy sauce until tofu absorbs all liquid

Boil some shrimps for a few minutes

Get rid of remaining liquid from shrimps using a tea towel

Gently place rice ball inside tofu

Decorate with shrimp, mushroom, and bean

Peel skin off the black beans

All ingredients are ready

The on-going relationship between Yuri Nakakita, Tomiyo Nakakita, Koh Nakakita is embodied by the recipe for the late daughter. This aesthetic experiment is not specifically about memory of her but an example of a transformed way of expressing their testimony of loss.

Make small rice balls

Gently place each rice ball within a pocket of deep-fried tofu

Yuri Nakakita in her cradle

2020 International Forum on Telling Live Lessons from Disasters

伊藤駿 / 中丸和
Shun Ito / Nagomi Nakamaru

語り継ぎの担い手育成のため 学生向けプロジェクトベースドラーニング

Project Based Learning for Training Youth to Tell History of Disasters

伊藤　駿　Shun　ITO　（OSAKA University / ROJE）
中丸　和　Nagomi NAKAMARU　（KYOTO University / ROJE）

BACKGROUNDS／背景と目的

これまで日本では多くの災害が発生し、語り部やミュージアムの活動などによってその伝承が行われてきた。しかしながら、記憶に新しい限りで災害が発生していない地域においては特に、なかなか災害が「自分ごと」になりにくく、災害が発生していない地域においては特に、災害が発生した際の対応が遅れたり、適切な防災・減災が行われていなかったりすることがある。東京や京都に事務所を置く弊団体も、大学生を中心に被災地支援や防災教育の活動を行なっているが、被災した方のお話を伺うだけではどうしても他人ごとという感覚が抜けきらない学生も見られた。阪神淡路大震災を直接体験し、自分ごととして語り継ぐことができる方が減っていく中、語り継ぎを次世代にまで行なっていくには、次世代を担っていく若者たちが災害を自分ごととして捉え、それを伝えていく必要があると考える。このようなことから、未災地の大学生を主なターゲットとして、次世代に震災を語り継ぎ、それを自分ごととしてさらに次世代へと伝えていくことを目的とした活動をしている。以下ではその活動の紹介を行う。

Nowadays, we are facing risk of disasters including earthquake, heavy rain and typhoon. Although people working for gathering attention to disaster management and transmission of experiences of disaster, people those who do not have experiences as victims of disaster cannot have relevance for disaster management. In our organization which is located in Kyoto and Tokyo, students who are working as volunteer also cannot have relevance to disaster. Then, we launch the project which aims to transmit the memory of disaster and make relevance to disaster in future. In this presentation, we introduce our work and result of transformation of students' mind to disaster management.

METHODS／方法

特に教員志望や教育に関心がある大学生を対象に、被災地におけるプロジェクトベースドラーニングを行う。プロジェクトベースドラーニングの内容としては以下の通りである。

In the project, we focus on students who would like to be a teacher because they will have opportunity to transmit the memory of disaster to their pupils in classroom. Method of this project is "Project-Based Learning", which students are learning from the following process.

1）被災地におけるフィールドワーク

Fieldwork for finding the problem of the area.

まずは被災地を訪問し、現地の方にインタビューをしたりミュージアムを訪問したりして震災について学生が学ぶ。また、その中で被災地の今の課題を学生に見つけてもらう。

We start finding the problem by observation museum and interviewing with people who live in the area.

岩手県大槌町にてフィールドワークを行なったときの様子。

2）被災地での課題について解決方法を考える

Considering solutions for the problem.

フィールドワークを通して見つけた課題についてグループに分かれて自分たちができることを考える。

We discussion what problem we focus on and making solutions for the problem.

3）考えた課題解決の方策を実施

Carrying out the solutions.

グループごとに考えた課題解決方策を実施する。

We are carrying out the solutions for the target and problem we found.

大学や関西について知れる子ども向けイベントを開催。
Ex) We made activity for pupils to know about university.

4）大学生が震災・防災についての研究会・イベント開催

Distribution through sharing students' experiences in this project to people in outside of disaster area.

被災地における課題解決学習を通して学んだことを、今度は自らの言葉で周囲の人々に伝えていく研究会やイベントを行う。

We distribute our experiences for people in outside of disaster area.

この活動を通して、まずは学生が震災について知った後、被災地の課題の解決方策を考える中で、震災が他人ごとから自分ごとになるとともに、震災支援にも繋がる。また、教育に関心のある大学生が震災を伝承されるだけでなく、プロジェクトベースドラーニングを通して学んだことを研究会やイベント、教育現場にて自らの言葉で伝承する立場になることでさらに次の世代までも伝承が可能になると考えられる。

As a result of the project, youth people are working for participation to the community on their own initiative.

Conclusion／結果

以上の活動は、被災地を訪問し、現地の方のお話を伺ったり、ミュージアムを観覧するのみよりも、学生の中で震災支援や防災活動に対する主体性が向上した。

In comparison with other method of learning, such as observation, conducting interview to people those who live in the disaster area, students feel their self-efficacy. For future project, we are conducting self-evaluation of students fulfillness in this project.

朝廣和夫
Kazuo Asahiro

Support for Farmland Restoration through Mutual Assistance after Disasters

Dr. Kazuo Asahiro
Department of Environmental Design, Faculty of Design, Kushu University, Japan

Introduction.

Today's topic is the conservation of agricultural mountain villages, especially, relationship between tourism in normal time and agricultural volunteer activities in disaster time . The activities of agricultural volunteers had been developed in the recent disasters in Northern parts of Kyushu. I'll introduce it and future issues.

Phase of depopulation in countryside.

In recent years, depopulation and aging are being got progress in mountain villages so that the harsh agricultural and forestry production and urbanization. On the other hand, these area, which extend for nearly 70% of Japan, plays an important role in supporting not only natural scenery but also agriculture, forestry, and cultural landscape conservation.

Disaster and difficulties in countryside.

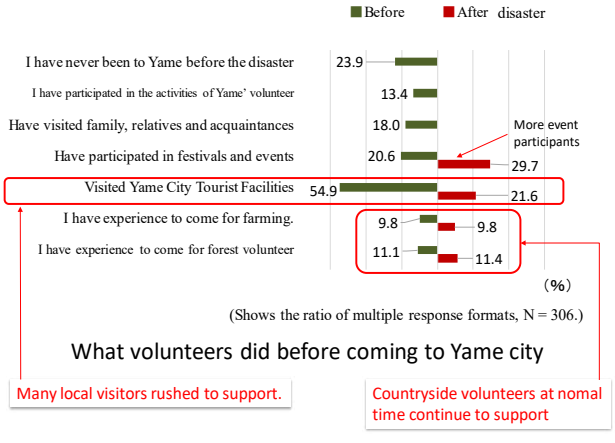
Northern Kyushu have been suffered severe disasters such as the heavy rains in July 2012, 2017 and the Kumamoto earthquake in 2016 too. In some areas, it was said that the depopulation got progress for 10 years by disaster happened.

What issues occurred after disaster ?

Farmer in rural had not only being affected damage of crops and agricultural facilities, but also affected daily food and health. If you saw a landscape that have severely damaged, you would had been felt like giving up, and mental damage such as loss of self-confidence. In generally, disaster volunteers have been not dispatched to agricultural support because it regard as the support for profitable businesses. Some say it is against the volunteer spirits. Agriculture is a profitable business. However, it preserves the farmer's life, health and natural environment. If we want to maintain a sustainable and diverse farming and mountain village in the future, we need to have more involvement of volunteers after disaster.

What sorts of people joint to volunteer? Kyeword is "tourism" before disaster.

A questionnaire was sent to participants of agricultural volunteers at the NPO Sansonjyuku（山村塾）, which had carried out in 2012's flood disaster.



Stood up volunteer in these region.


Removal of sediment from waterways in Kurogi, Yame city, Fukuoka in 2012' flood disaster.


Removal of sediment from waterways in Yase, Mifunemachi, Kumamoto in 2016' earthquake .


Rice harvesting at side of flooded river in Kurogawa, Asakura city, Fukuoka in 2017.


Potato management support in Nishihara, Kumamoto in 2016' earthquake .


Soil removal at Kaki orchard in Asakura city, Fukuoka in 2017' flood disaster site.

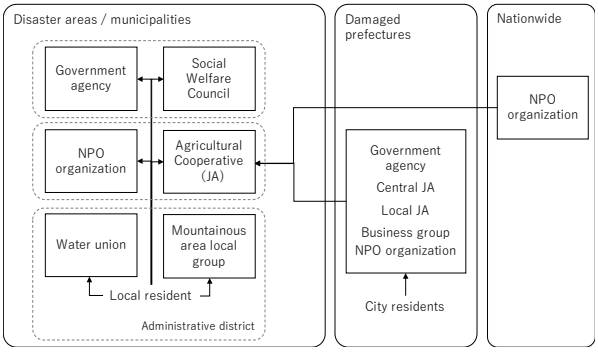

Pebble removal of terraced rice paddy in Kurogi, Yame city, Fukuoka in 2012' flood disaster.


Pebble removal of tea garden in Kurogi, Yame city, Fukuoka in 2012' flood disaster.


Green house cleanup in Kurogi, Yame city, Fukuoka in 2012' flood disaster.

Future task for more empowerment.

Future issues are the systematization of agricultural volunteers and human resource development. Currently, Fukuoka Prefecture has started the manual publishment and the coordinator training seminar to establish an agricultural volunteer center at the Agricultural Cooperative (JA) when disaster happened in the future.



Kumamoto Earthquake Experience Project (KEEP)

アンドゥルーミッチェル
Andrew Mitchell

Introduction

- In April 2016, Kumamoto Prefecture in Kyushu, Japan, suffered two major earthquakes. Many foreign residents found their lives tough, especially who could not speak Japanese and struggled to get help and information.
- The Kumamoto Earthquake Experience Project (KEEP) was started in May 2016 with the support of Kumamoto University, by Kumamoto University students. Our initial ambition was to hold a single workshop to allow both Japanese and foreign residents to share their earthquake experience
- The feedback from our first event in Jul 2016 was so positive we decided to carry on our activities and keep the voice of the foreign experience of the earthquakes alive.

Our Aim

- Spread the message of the foreign residents who experienced the earthquakes to people so that they can learn and better prepare
- Help with the creation of better disaster policy for foreigners
- Help Japan to become a more multicultural country

Voices from the disaster

... No sooner had I found a place and laid down, the second earthquake began – the main shock. The basketball hoops were moving so strongly that I thought they were going to be torn off and fall on people. Then the lights went out and all was dark. !!!
... My Skype was always on. My parents went so worried that my mom even didn't get to work in order to be able to be in touch with me all day long.
... During my stay at my apartment for my own safety, I wore a helmet which I got from a friend. I didn't take it off even while sleeping.
... In 2011, during the Tohoku Pacific Ocean Earthquake at Tokyo, I was living in a dormitory for foreign students. We were young, inexperienced and lost, not knowing what to do. And actually we did nothing. Just gathered together in one room and followed the news. Comparing my behavior back then and now, I can proudly say that I have grown a lot, and partially it is thanks to Japanese people.
...

Mariam Pirutyan
Docenal Student
Department of Molecular Medicine
Graduate School of Pharmaceutical Sciences
Kumamoto University

.... I summoned courage after a while and tried getting the server rack out of my way so I could open the door and get out of the room. My laboratory room is on the 7th floor and I was horrified at the extent of damage the building had suffered as I made my way out of the building via the stairs as the elevators had stopped working.

Bilkisu Mohammad-Bello
Doctoral Student
Computer Science and Electrical Engineering
Kumamoto University

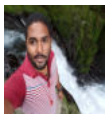
....Within one month of my arrival in Japan, I had to pass through a lot of difficult situations. Still now it seems to me a nightmare whenever I remember it. Beside these events, I would like to mention about the help of well hearted Japanese people and the tremendous helps from my Bangladeshi fellows ....

Fatema Akter
Doctoral student
Department of Medical Biochemistry
Faculty of Life Sciences
Kumamoto University.

Current members

Andrew Mitchell
(United Kingdom)

Francis Wargirai
(Papua New Guinea)



Luis Francisco Japa Soto
(Dominican Republic)

Media appearances

- KEEP have appeared on Kumamoto TV and radio shows since 2016
- Received an award from the Kumanich Shimbun in 2017 for keeping the voice of the foreign residents alive
- KEEP has been featured on NHK twice this year: once on TV with Andrew Mitchell discussing his earthquake experience, and once on NHK radio with all members discussing their unique experiences and challenges from the earthquake
- You can see KEEP's KKT interview online at tiny.cc/kumakeep

Some of KEEP's Activities

- Grand Challenges Workshop, Kumamoto (Jul 2016)
- The Council of Local Authorities for International Relations (Jan 2017)
- Kagoshima University (Feb 2018)
- Kobe disaster forum and Life in a Evacuation Shelter event, Kobe
- Sophia University, Tokyo International Communication Committee (Nov 2018)
- Sociological Society of West Japan Annual Meeting, Saga (May 2019)
- Saga University (Nov 2019)
- Many of Kumamoto International Foundation events (2016 - now)






Kumamoto Earthquake Experience Project
Let's KEEP together

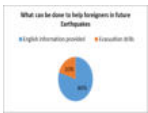
KEEP LOGO

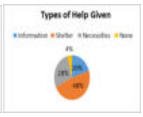
- The castle represents the damage and suffering of those in Kumamoto
- Two helping hands in different colours represents the local and international communities, together embracing Kumamoto with care and love, forming a heart
- With our motto – Let's Keep Together !!!

KEEP Official Booklet

- In 2016 KEEP conducted a questionnaire survey, focus groups and 1-1 interviews, as well as collecting essays, in order to better understand the needs of foreigners during emergencies
- We published these results in our KEEP booklet, along with information about and photos of the disaster
- The booklet is free to download at tinyurl.com/KEEPBo





Social Media and Web Presence

facebook.com/kumadaiquake

- KEEP's Facebook page is the main way which KEEP shares information about it's activities and information related to disaster prevention. Through our page we have made contact with many people from across the world.

kumadaiquake.wordpress.com

- We also launched a WordPress site which contains shared experience stories, photos, and all the activities of the project.
- This site is no longer updated but contains a lot of information, essays, etc. from our activities between 2016-17

Future Activities

We are currently conducting research into the Islamic experience of the Kumamoto earthquakes; how they came together as a community and some of the problems they faced in interacting with the Japanese community.

KEEP are key organising members for the The National Solidarity Forum with Migrants Japan (NSFMJ), which will be held in Kumamoto in 2020

Despite being a volunteer project, we are still working hard to collect more experiences and to spread these across Japan.

Words from KEEP

- We have two mottos at KEEP: "Let's KEEP together!" and "We can't predict, we can't prevent, but we can prepare"
- By preparing for disasters together, and by working together as one community when they happen, we can all live much safer and richer lives

Words from KEEP's members

- "Everybody told me that Kumamoto doesn't have natural disasters so I didn't make any preparations"
- "Preparation is very important. If you're prepared you won't panic, and that might save your life and the lives of those you love."

- "By working together with my neighborhood, I felt relieved and safe being part of a community."
- "Most of the information I couldn`t understand from the media, I got from talking with my neighbours."

- "The signs on the street and the information on the news were hard to understand for most foreigners."
- "Foreign residents should learn some Japanese so that they can communicate in yasashii Nihongo during a disaster"

HIROSHIMA UNIVERSITY

川崎梨江 / 匹田篤
Rie Kawasaki / Atsushi Hikita

2020 INTERNATIONAL FORUM ON TELLING LIVE LESSONS FROM DISASTERS

Study of Survivors' Storytelling about Sediment Disaster in Hiroshima, 2014

Rie KAWASAKI, Atsushi HIKITA

HIROSHIMA UNIVERSITY Graduate School of Integrated Arts and Sciences

Introduction & Method

In this study, we focused on "personalization" of disaster experience and examines how to use the storytelling of survivor for future disaster prevention. Experiences and memories are usually weathered with time. However, they interpreted with personal context are remembered for a long time. In contract, even if people suffer the same disaster, personal experience and memories tend to remain over time.

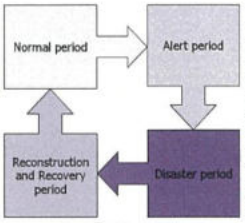
This photo is the sediment disaster caused by heavy rain that occurred in Hiroshima City on August 20, 2014. (taken by a survivor)

Human Damege

Ward	District	Dead	Injured
Asaminami	Yagi	53	53
	Midorii	16	
	Yamamoto	2	
Asakita	Miiri	1	15
	Kabe, Kabehigashi	5	
	obayashi	0	
total		77	68

Hiroshima Prefecture Civil Engineering Bureau Erosion Control Division, (2015), *Occurs on August 20, 2014, 8.20 Earth and sand disaster*

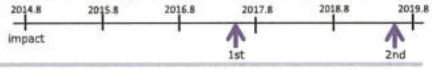
We interviewed 19 survivors living in the Yagi and Midorii districts of Asaminami Ward, the most damaged area.



Created baced on Mitsuaki Okamoto, (2011), *Characteristic changes and problems in media disaster reporting in the Great East Japan Earthquake*, Reference, National Diet Library Survey and Legislation Examination Bureau

	1st interviews	2nd interview	male / female	Age of disaster	Damage to housing
a	12th Jan. 2017	11th Jul. 2019	male	60s	Inundation above floor level
b	19th Jan. 2017	10th Jul. 2019	female	50s	Inundation above floor level
c	20th Jan. 2017	13th Jul. 2019	male	60s	Inundation above floor level
d			female	60s	
e	5th Feb. 2017	18th Aug. 2019	male	30s	half collapse
f			female	30s	
g			female	30s	
h	5th Feb. 2017	18th Aug. 2019	male	60s	half collapse
i			female	60s	
j	5th Mar. 2017	20th Jul. 2019	female	20s	inundation below floor level
k	21th Mar. 2017	18th Jul. 2019	female	80s	large scale destruction
l	17th Apr. 2017	28th Jul. 2019	female	50s	complete collapse
m	21th Apr. 2017	9th Jul. 2019	female	50s	large scale destruction
n	21th Apr. 2017	9th Jul. 2019	female	20s	large scale destruction
o	22th Apr. 2017	14th Jul. 2019	female	60s	inundation above floor level
p	24th Apr. 2017	18th Jul. 2019	female	50s	half collapse
q	27th Apr. 2017	11th Jul. 2019	female	50s	large scale destruction
r	28th Apr. 2017	18th Jul. 2019	female	50s	× (Lifeline damage only)
s	15th May 2017	9th Jul. 2019	male	60s	large scale destruction

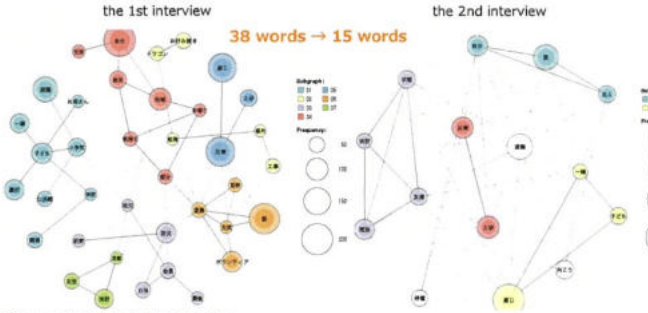
We interviewed survivors twice. The first is the in third year and the second it the fifth year after disaster. These two periods were set based on the location of the prefecture's maintenance plan. At first interview, structures were under maintenance, so it is "Reconstruction and Recovery period". At second interview, structures were after maintenance, so it is "Normal period".



Results

We text mined the contents the 1st and 2nd interviews respectively.

Co-occurrence networks based on text analysis of two interviews



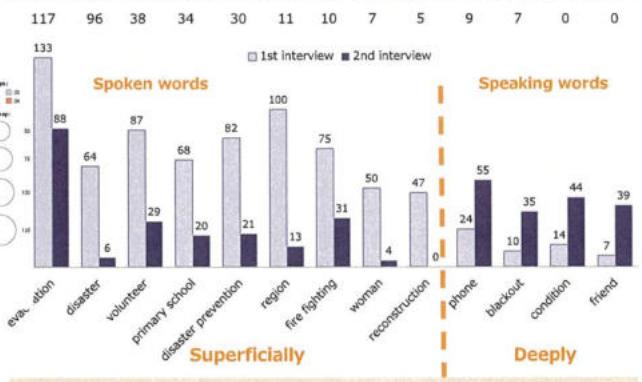
Change from the 1st to the 2nd

1. **The number of common words is less than half.**
2. **The number of superficial words that are easy to share is decreasing or disappearing.**

The content analysis of the two these interviews with the survivors provided results that supported this theory. In the second interview, personalized experiences began to talk about personalized experiences and feelings that they only know. However, they no longer talked a little about the superficial memories that are easy to share.

Superficial words may appear frequently in newspaper. We compared the words used in the titles of newspaper articles with fewer or missing words from 1st interview to the 2nd.

number of titles in Chugoku(local) newspaper articles from August 20th to September 19th, 2014



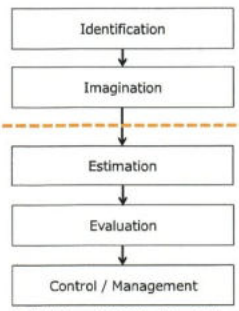
As a result of analyzing the titles of newspapers, we confirmed that the words frequently mentioned in newspaper articles tend not to be spoken in 2nd interview. We consider these words are superficial expressions as "spoken words". On the other hand, we consider the words that increased in 2nd interview are deep and personalized expressions as "speaking words.

Discussion

When a miserable event occurs, people seek out the narratives of the person who actually experienced the event. They tend to talk about superficial experiences and memories as shared by the audience. They then increase their chances of recalling the more easily shared superficial memories. As a result, they are less likely to talk about personalized experiences because the more easily shared surficial memories are recalled. There are **two** challenges.

1. If people who are not disaster survivors want to know the superficial experience and information, survivors don't necessarily have to talk..

Citizen's risk recognition process



Takashi Kusumi, (2006), *Citizens' risk recognition process*, Risk encyclopedia Augmented edition, Hankyu Communications

【Identification】 Awareness of the existence of risks.

【Imagination】 Form an image of risks. There are two types of images. 1) seriousness / fear, 2) unknown

Identification and Imagination are formed by providing information in one direction, such as mass media. The story of survivors also provides one-way information.

【Estimation】 The experts calculates based on the probability of occurrence based on past statistical. On the other hand, citizens make intuitive judgments using heuristics.

【Evaluation】 Assessing whether citizens can accept risks. They weigh the benefits that can be obtained and the risks that may occur.

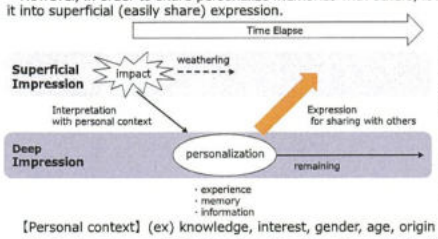
【Control and Management】 Actions to reduce the probability of the the perceived risk and the extent of damage.

Finally the conditions for risk communication are established.

In other word, just listening to the survivor's story does no lead to risk communication.

2. Personalized experiences and memories are difficult to share because they are personalized.

The personalized episode is the reality of the survivors.
However, in order to share personalize memories with others, it is necessary to convert it into superficial (easily share) expression.



People experience and memorize certain impacts through the interaction three contexts: **personal context**, **sociocultural context**, and **physical context**.

Therefore, in order to share personalized memory and experience with others, we need to consider these three contexts.

【Personal context】 (ex) knowledge, interest, gender, age, origin

【Sociocultural context】 Relationship with others. For example, the effect is different if person accepts the same information alone and accepts it at the same time as others.

【Physical context】 environment and situation. There are different ways to receive the stories of survivors in the lecture room and in the disaster area.

We will continue to consider effective methods to share personalized experiences and memories.

森康成
Yasushige Mori

A Personal Story of Catastrophe of the 1995 Earthquake in Awaji Island in Japan

Mori Yasushige
Volunteer Story Teller, Hokudan Earthquake Memorial Park in Awaji

1993-4 We recently had our house renovated at a cost of about 8 million Japanese Yen. I never thought any big earthquake would happen.

1995 Jan 17 AM5:46

A fault line appeared on the north-western coast of Awaji Island.

Town of Toshima
26 were killed

Our house before the earthquake
The hill nicknamed 'Joyama, castle mountain'

An old man in my neighborhood:
'My grandfather told me that two of the three cliffs at Joyama collapsed due to an earthquake."
People think there is a fault around there
One of the cliffs also collapsed in 1995, as a result of the earthquake.

1995 Feb 4 A damaged house is pulled down and demolished.

The intervening two years spent living in the farm barn

1996 Flattened terrace fields for the new house, located 200 meters from the site of the previous house. Cost of rebuilding:10 million yen (with no financial aid from outside)

1997 Jan. 1, Rebuilt our house with loaned money

2000 Started teaching disaster mitigation subject at a senior high school nearest to Nojima Fault. Taught this subject for 12 years

2012 Started telling my story at the Hokudan Earthquake Memorial Park in Awaji

浅利満理子
Mariko Asari

Introduction to the Approach of a Non-governmental Network of Community Organizations Devoted to Preserving & Disseminating Information Relating to the 2011 Great East Japan Earthquake & Tsunami

3.11Memorial Network

About 3.11 Memorial Network

3.11 Memorial Network takes as its aim: "working towards a society where as many lives as possible can be saved in the event of a disaster" and "working towards a society in which reconstruction can be carried out as easily and efficiently as possible, reducing the burden on both disaster victims and the disaster area." In order to achieve this goal, and using experiences garnered from the 2011 Great East Japan Earthquake & tsunami as its basis, a group has been formed consisting of various individuals, groups and focal facilities spanning both geographical boundaries and age groups, all devoted to preserving and disseminating the lessons learned from the disaster, in order to prepare for future events, and share this valuable knowledge resource with both the rest of Japan and the rest of the world.

The group is geographically based around the 3 prefectures of Iwate, Miyagi & Fukushima, and works towards its aims of knowledge-sharing and disaster prevention & reduction by taking a three-fold approach: networking, planning/projects & human resource development.

While the Network originated in Ishinomaki City, Miyagi Prefecture, it currently has a membership of 450 members and 70 organizations from across the country, and, under the direction of 10 directors democratically elected by the members, sees cooperation & coordination across geographical boundaries and generations.

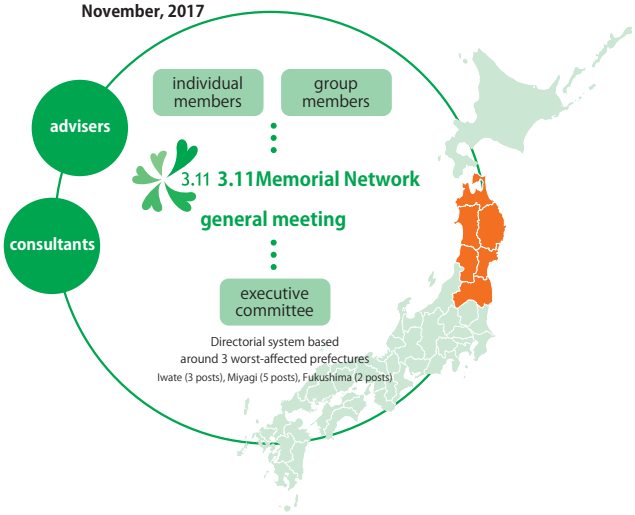
After March, 2011 — Disaster area guides working separately in each area

June, 2012

Ishinomaki Visitor Support Network, Disaster guide section

a forum for disaster-related guides in the Ishinomaki area to exchange information & ideas

November, 2017

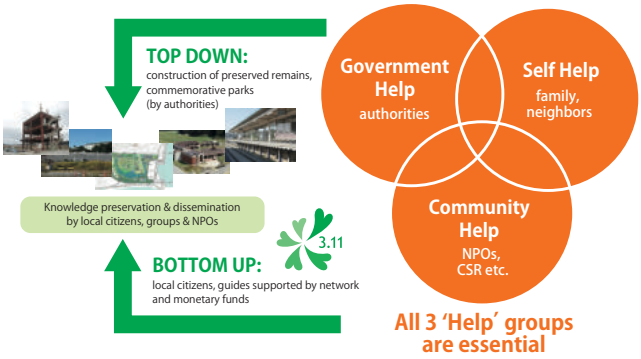


Significance of the Network & Issues Related to Keeping the Memory of the Disaster Alive

As part of the reconstruction process that has been planned out for 10 years since the disaster, over 80 preserved ruins, info facilities and memorial parks are being completed throughout the disaster area. Amidst this, issues of concern include the creation of networks connecting disaster-related facilities over and above the level of individual municipalities, and securement of funds to continue 'soft' intangible projects with a view to handing the reins down to future generations.

- training of disaster info-related positions such as guides, escorts, coordinators etc.
- improvement in planning power for disaster-related activities
- promotion of cooperation between diverse groups in the community, industry, government, academia and the media
- creation of a collaborative framework & information-sharing between relevant individuals & organizations with shared aims regarding DRRM regardless of geographical location

By networking across geographical boundaries and age groups, we are looking to solve these problems which we have in common



Main Activities Carried Out by 3.11 Memorial Network

NETWORKING

networking between 3 main disaster area prefectures

ORIGINAL PROJECTS

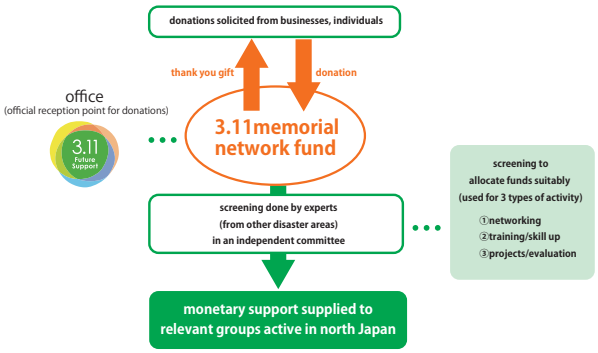
original projects organized by members

FUTURE GENERATIONS

preparation/training for future generations

Community Activities Supported by the Community

Monetary donations from individuals & businesses are used to assist in networking, training and other projects carried out by groups involved in recording and educating about the disaster and its aftermath, particularly in the 3 worst affected prefectures. 1st invitation for donations carried out in autumn 2019.

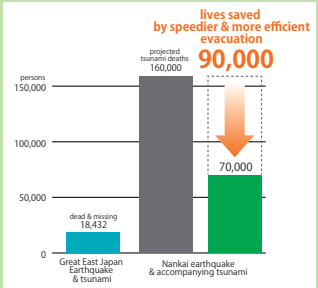


"to avoid repeating the same mistakes"

The number of casualties from the Great East Japan Earthquake & tsunami is 18,432 (includes directly related deaths and those missing presumed dead).

However, many of these deaths could have been prevented.

Making use of, and disseminating the lessons learned from the 3.11 disaster to a wider audience could result in more lives saved in the future from other disasters yet to occur in Japan.



Working towards the realization of a society where as many lives as possible can be protected in the event of a disaster, we who experienced the tsunami firsthand have a responsibility to keep the memory alive and hand the lessons learned down to future generations. 3.11 Memorial Network is supporting efforts to do this all over the Tohoku area.

中川政治
Masaharu Nakagawa

Visualization of evacuation behavior patterns in the 2011 Tohoku Tsunami

公益社団法人
3.11 みらいサポート
3.11 Future Support Association

Abstract

The giant tsunami of March 11th 2011 took 3 – 4 minutes to flow over the existing floodwalls and flood the Minami-Hama District of Ishinomaki City to a height of approximately 7m (excepting high ground).

However, since there was a duration of about 1 hour from the initial earthquake to the actual arrival of the tsunami, one can posit that all lives in the area could have been saved by speedy and early evacuation.

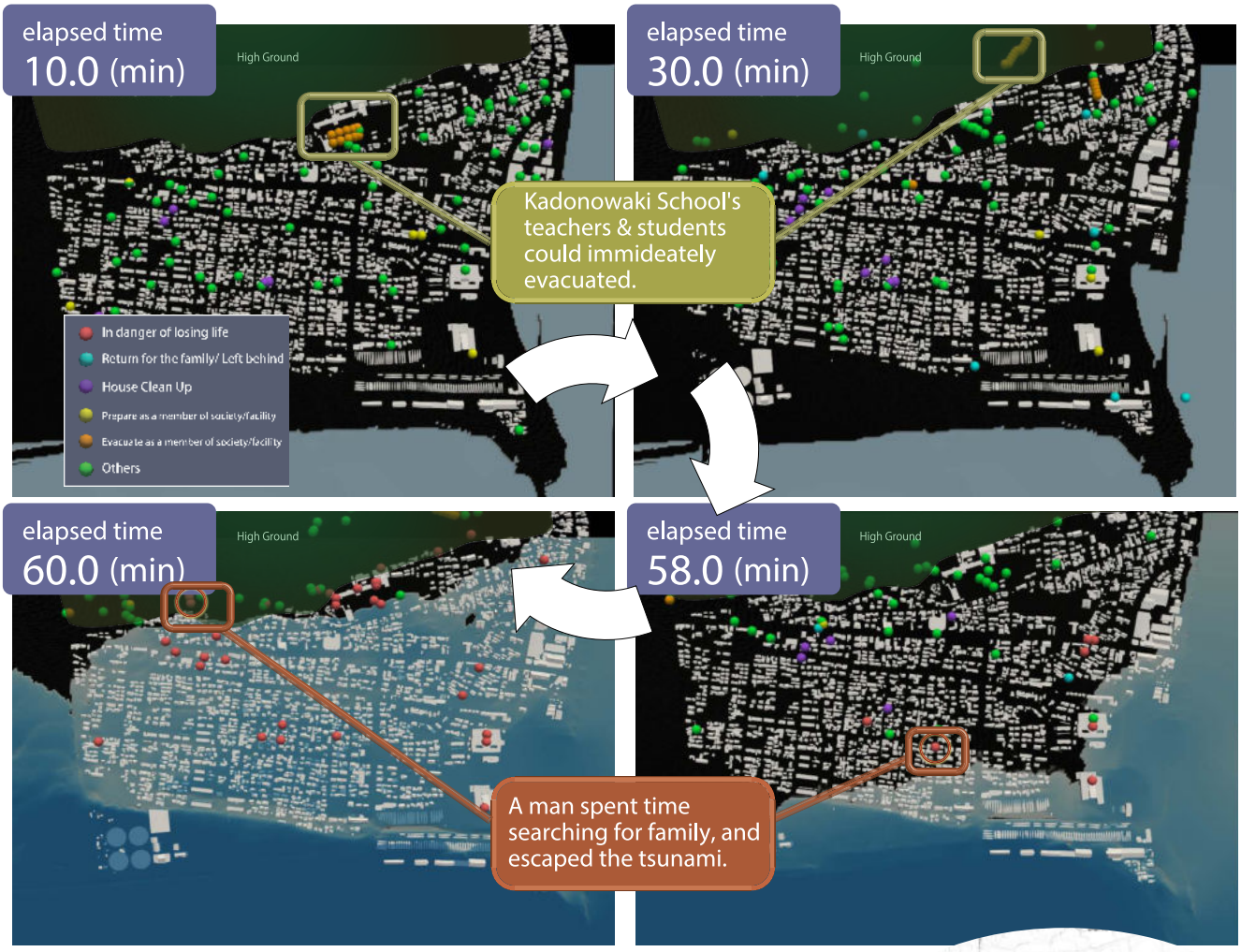
Realization into video of the evacuation behavior patterns of approximately 100 of the survivors brings to light such issues as the small number of people who initiated evacuation promptly directly after the quake, and also people who only evacuated to high ground after they had observed the tsunami from close by.

This method effectively exposes many important lessons to be learned regarding evacuation procedure, from instances of speedy evacuation to schools and other designated facilities, to cases where some returned to low-lying and flood-prone areas from high ground, some people returning again to high ground afterwards, and some spent time searching for family and friends.

Methods

The Great East Japan Earthquake & ensuing tsunami on March 11th 2011 caused catastrophic damage to the Minami-Hama District of Ishinomaki City, resulting in 389 deaths and 150 missing presumed dead.

After carefully interviewing approximately 100 survivors of the 3.11 disaster regarding their feelings and thoughts while evacuating after the quake and the routes, their evacuation behavior patterns for the 60 minutes after the quake were then visualized in conjunction with a tsunami simulation (joint design by IRIDeS: International Research Institute of Disaster Science, Tohoku University).



Prospects

The resulting evacuation behavior pattern video has proved an excellent tool for emphasizing the importance of correct and speedy evacuation, being shown at the tsunami information center in the Minami-Hama District which is visited by over 17,000 people yearly. It is to be hoped that the method will continue to be used to analyze the influence of societal relationships between family, other members of the community and local ventures on evacuation behavior, and also be of use in promoting evacuation procedures in the event of other large-scale disasters such as the possibly imminent Nankai Trough Earthquake.

田中正人，江川未紗
Masato Tanaka, Misa Egawa

Making Evacuation Behaviors a Daily Routine

Masato Tanaka* and Misa Egawa**
* Professor, Department of Regional Development Studies, Otemon Gakuin Univ.
** Student, Department of Regional Development Studies, Otemon Gakuin Univ.

Unlike earthquakes and volcanic eruptions, meteorological disasters can be predicted with high probability. Therefore, evacuation actions before such disasters occur are possible. Nevertheless, the "evacuation rate" is generally low. In order to increase the "evacuation rate," the government has revised the evacuation information expression method several times. However, no matter how refined the expression is, the effect seems to have fundamental limitations.

For example, the heavy rain in West Japan in 2018 resulted in 232 dead and missing people. The "evacuation rate" was said to be only 4.6%. In response to this, a "warning level" was added in parallel with the conventional "evacuation advisory" and "evacuation instruction."

However, according to research by the Ministry of Land, Infrastructure, Transport, and Tourism (2019) regarding this disaster, the reasons for not evacuating were: "Home is considered safe," "Nearby residents were not evacuating," etc. On the other hand, there were few responses like "I do not recognize evacuation advisories." In other words, the low "evacuation rate" is not mainly due to the fact that evacuation information is not transmitted.

Therefore, this study investigated changes in evacuation awareness and evacuation behavior among people who actually experienced disasters. The research areas included Totsukawa village in Nara prefecture, which was affected by the 2011 landslide disaster in the Kii Peninsula, and Hiroshima city, Hiroshima prefecture, which was affected by heavy rain in August 2014.

There was something in common among the actions of those who experienced severe damage, which was to make evacuation behaviors a daily routine. For example, the behaviors include staying at a low-risk acquaintance' s house or going to a shopping center with few hazards. These "evacuations" are inevitably more frequent because they take place much earlier than when the crisis is imminent. In other words, these "evacuations" are repetitive and periodic. In order to promote appropriate evacuation behaviors, it is considered necessary to incorporate these behaviors into daily life.

Landslide Disaster in the Kii Peninsula (2011)

十津川村の人口は 3,774 人，1,894 世帯（2013 年 7 月現在），面積は 672.4km2 を占める。全域が急峻な地形で，小規模な集落が斜面地に張り付くかたちで散在している。
台風 12 号では，12 名の死者・行方不明者が発生した。河道閉塞，土砂ダムの形成により，災害対策基本法第 63 条に基づく警戒区域が設定され，長期にわたって避難指示が発令された。応急仮設住宅は被災集落の位置を考慮し，30 戸が 4 つの地区に分散的に建設された。その後，災害公営住宅が谷瀬，高森という 2 つの集落に埋め込むかたちで建設されている。
十津川村は，過去にも繰り返し水害に見舞われており，よく知られるように 1889 年の大水害からの復興にあたっては，再被災リスクを避けるべく，北海道への大規模な集団移転が行われた。

“雨が降り続くとすぐに近くの知人宅に「避難」する。梅雨や台風の時期は、頻繁に行き来する”
一人暮らしの O さん（70 代女性）

8.20 Hiroshima Heavy Rain (2014)

広島県は過去，繰り返し風水害の被害を受けてきた。第二次世界大戦直後の枕崎台風をはじめ，土砂災害防止法制定のきっかけとなった 1999 年豪雨，同法の真価が問われた 2014 年豪雨，そして西日本広域に被害をもたらした 2018 年豪雨。
広島市は，太田川流域に形成された沖積平野からなり，花崗岩が風化した真砂土が表層に堆積している。山麓部は集中豪雨等による斜面崩壊や土石流の発生しやすい地形的・地質的特性を有している。
2014 年 8 月の豪雨では，広島市安佐南区を中心に，前日の夜から明け方にかけて線状降水帯が形成され，3 時間累加雨量が 200mm を超える局地的な集中豪雨により，大規模な土石流が発生した。犠牲者は 77 名（関連死 3 名を含む）に及んだ。

“避難勧告が出たら、とりあえず娘夫婦の家に行くという約束で元の家に残った”
一人暮らしの T さん（80 代女性）

“避難準備情報が出ると、自宅から離れたショッピングセンターに妻と一緒に行ってコーヒー飲んで買物したり”
夫婦で暮らす M さん（60 代男性）

Dissemination of various kinds of Experience at Educational Site
—The Case Study of the Great Hanshin-Awaji Earthquake—

Yosuke Nakamura , Asuka Maebayashi , Go Urakawa and Hayao Morinaga
(Graduate School of Disaster Resilience and Governance , University of Hyogo)

中村洋介
Yosuke Nakamura

Contents
(previous research, documents)

Analyze

When, Where, What Happened?
Who did mission?

+

Characteristic of Damage level and Damage area
method : GIS

Imagination

Realities on Site
What teachers had experienced at school
method : interview

Educational materials for disaster response
movie / manual

Codified Knowledge from Individual Memory

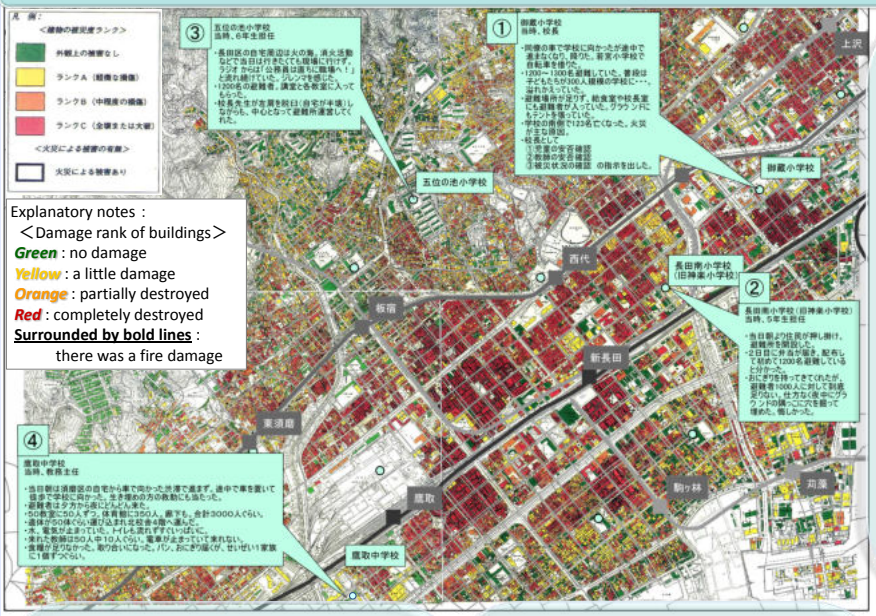
When the Great Hanshin-Awaji Earthquake occurred, many teachers had to support victims in the shelter at school in spite of their suffering damage. It was very hard for them to implement operations because they had never experienced them. It was also difficult to resume education for students. 25 yeas have already passed since the disaster, teachers who had experienced disaster were more less. Their valuable experiences will be a personal memory. It is indispensable for us to conserve memories and share as social knowledge.

Collecting of various kinds of experiences

We held forums to research realities what teachers had experienced disaster responses at school in those days. We invited some teachers and undergraduates in University of Hyogo interviewed each one as shown pictures. In addition, I collected various kinds of experiences by visiting others. It is not only important to collect information but also education for students.

Interviewee : Kobe city teachers
Interviewer : University of Hyogo students

True Story-map (Nagata-ku Ward, Kobe City)



①Mikura elementary school 御蔵小
The principal

- On that day, I went to my school by a colleague's car. But we were caught in traffic, so I get off the car. I rented a bike at Wakamiya elementary school (3.5km from my school).
- There were 1200~1300 evacuees in the school. (Usually, there are 300 children.)
- We were short of space, so evacuees were also in the kitchen , the principal's room, and setting up a tent on the ground.

- 123 people were died in the south area because of fire.
- I gave three directions to my subordinates.
  1 Make sure children 's safety.
  2 Make sure teachers' safety.
  3 Make sure the damage situation.

④Takatori junior high school 鷹取中
The teacher of curriculum coordinator

- On that morning, I went to school on foot because of traffic jam. I rescued people buried alive.
- Evacuees were in the classroom, a gym, and corridors. There were almost 3000 evacuees.
- We laid about 50 dead body at fourth floor.
- Supplying water and electricity stopped, so the toilet was clogged.
- We ran short of food. There was a scene of competing for food between evacuees.

③Goinoike elementary school 五位の池小
The teacher in charge of the sixthgrade

- On that day morning, the area around my house was a disastrous fire. I wanted to go my school, but I had to do fire fighting. I felt a dilemma
- There were 1200 evacuees. We asked them to enter a lecture hall and classrooms.
- A principal got injured because of his house was damaged. But he led the operation shelter.

②Nagataminami elementary school
The teacher in charge of the fifth grade

長田南小
(旧神楽小)

- It's former name is Kagura elementary school.
- On that day morning, many evacuees rushed for the school.
- On the second day, It was not until we distribute lunch box that we knew there were 1200 victims in the school.
- A kind person brought rise balls for evacuees. But they were smaller than number of evacuees. I had no choice but to threw away it.

宮定章
Akira Miyasada

Telling disaster prevention like cherry blossoms(SAKURA)
～ Prepare first, Safety and Lively life later, for disaster. ～

Lessons we learned from disaster

① Real reconstruction requires improved local appeal and sustainability
Due to urbanization, regional recovery requires a perspective of population decline and aging
② Disaster victims cooperate with related parties to create a community with their own power.
In order to collaborate after a disaster, it is necessary to collaborate before the disaster.
③ Humans cannot overcome the threat of natural disasters. A flexible reconstruction that coexists with nature is necessary for reconstruction in the future.

Information about our district "MIKURA" in KOBE

In the Great Hanshin-Awaji Earthquake, Our district in Kobe City Nagata Ward was severely damaged, and 128 people were killed by building destruction and fires. The community and everyday life that people had built for generations was destroyed with tremendous power.

On the other hand, while it was a tragic disaster experience, it was also an opportunity to feel the importance of things not being noticed normally, such as living carefully and living together with nature. In our district, 80% of the households moved out due to the disaster, and the survivors who have left their homes have been aiming to return to the district where they lived.

Opportunities (field visits and exchanges) to interact with people around the world have increased as the survivors and volunteers from outside collaborated to create communities for recovery from the disaster, which lead to a lot of growing awareness and learning. We have learned about the importance of conveying experiences and have been carrying out exchange activities for 25 years.

Our team Activity about "MACHI-COMMUNICATON"

To provide an opportunity for residents who had evacuated to temporary housing complexes in other areas to return to the community and meet again even for a short time, Machi-Commi, hand in hand with the Association, facilitated and coordinated various events such as Bon Dance Festivals, rice cake pounding and memorial services in Mikura. Through helping out with these events and working hard with the residents, Machi-Commi gradually built close relations and trust with the residents. So Machi-Commi support community building with residents.

Documents in English (inc 5 language)

MOVIE in English

AKIRA MIYASADA (Dr. Eng)
Director of Machi-Communication Researcher, Graduate School of Disaster Resilience and Governance, Governance, University oh Hyogo
Email : m-comi@bj.wakwak.com

How to telling

① Earthquake disaster experience learning

"I(Student) thought to prepare for disaster prevention by listening to the experiences of the victims."
243 schools accepted 20373 elementary and junior high school students. We also accept adult training. The contents of the disaster experience learning are explanations of the disaster situation using photo slides, talking about the story, walking around the disaster area, cooking experience, etc.

② Misuga Karuta

In December 2003, 133 residents and friends of the Community of Misuga in Kobe Japan created their own Karuta (a traditional Japanese card game). A Karuta consists of two sets of cards: Yomi fuda (reading cards) and E fuda (picture cards). The Yomi fuda are typically poems, proverbs, haiku, stories, or messages written on the cards and the E fuda are drawings that represent the writing on the Yomi fuda. For Misuga Karuta, 65 cards were created for each set of reading and picture cards.

Creating Karuta cards by individuals for their own reasons is not new in Japan. However, having 133 participants involved in the creation of a Karuta game is probably one of the highest numbers ever recorded for this type of activity. Misuga community members participated by either writing a Yomi fuda (reading card) or drawing an E fuda (picture card). The reading cards were written by people whose ages ranged from 10 to 88 years old and, the picture cards were created by people ranging in age from 6 to 70 years old.

Misuga was severely damaged by the Great Hanshin-Awaji Earthquake in January 1995. The Misuga community members who created the Misuga Karuta created the Karuta cards to help them remember the impact of the Earthquake on their lives. The cards were used to record memories about life before the Great Hanshin-Awaji Earthquake as well as memories of how Misuga and its community members were affected during and after the earthquake.

The Construction and its Process of Digital Archives for The Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake
阪神間における災害デジタルアーカイブの構築とそのプロセス～1938阪神大水害と1995阪神・淡路大震災を例に～

折橋祐希 / 喜田悠太郎
Yuki Orihashi / Yutaro Kida

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Yuki Orihashi　Yutaro Kida　Go Urakawa　Hayao Morinaga　(Mail:yuki.orihashi@gmail.com)

Abstract

It is very important to pay attention to past disasters and events that we have experienced, draw lessons from them, and preserve and inherit them as social memories. However, most of the remaining materials are analog media owned and stored privately. The number of people experiencing disasters in the past has been decreasing year by year. In this paper, we focused on the Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake that occurred in Hyogo Prefecture and constructed digital archives of these two disasters using information on paper media such as photographs related to them and memories of the victims. In addition, local junior high school, high school, and university students participated in the disaster prevention education process through oral communication and fieldwork with experienced persons and lore of the disasters. In case of the Great Hanshin Flood, the Rokko Sabo Office of the Ministry of Land, Infrastructure, Transport and Tourism gathered information from the victims using flyers, posters and newspapers. In addition, information on disaster itself, information from experts, and information obtained from fieldwork for junior and senior high school students were used to construct the archive. In the case of the Great Hanshin-Awaji Earthquake, we focused mainly on activities during the reconstruction period. We collected information on damages from research institutions, information on evacuation shelters and episodes and photos provided by activists in reconstruction process. Based on this information, a digital map application was created. For photos that can be located, we used Cloud GIS to give absolute position information. An area information is assigned for photographs where the location is ambiguous. These digital archives not only provide a bird's-eye view of the entire disaster, but also visualize a story about a lot of information, including photos of individuals.

The Great Hanshin Flood in 1938

What is The Great Hanshin Flood in 1938

From July 3rd to 5th in 1938(Showa 13), the rainy season front stimulated by the typhoon stagnated in western Japan, and torrential rains occurred mainly in Kobe City. The rain that began on the evening of the 3rd recorded a precipitation of 461.8mm before it stopped at 1:20 pm on the 5th. Due to this total rainfall, landslides occurred at various places on Mt. Rokko, and rivers in the city area overflowed. At the same time, debris flows mixed with megaliths, driftwood, and earth and sand flowed into the city of Kobe. In Kobe City, 616 people were killed and 89,715 houses were damaged. This is called "Hanshin Great Flood", including damage in the neighborhood caused by this torrential rain.

Near Sogo department store, where the muddy stream has gathered (Sannomiya, Chuo-ku, Kobe City)

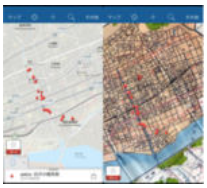
The road in front of Sannomiya station, where the muddy stream flows (Chuo-ku, Kobe City)

Purpose

Despite the disaster that caused such a great deal of damage, only analog records remain today, 81 years after the flood. Therefore, it is indispensable to collect information about this disaster and extract lessons from it. In this effort, we constructed a digital archive to pass on the memories and records of disaster victims to the next generation through verbal communication and field work based on it with junior high and high school students.

Efforts to share records and memories

Based on the knowledge gained from workshops and town walk (Machi-aruki) conducted in collaboration with the Rokko Sabo office and information from verbal communication (interviews) with people who have experienced floods, are shown for each river basin.



GIS smartphone application

Digital archiving and lore process

Shin-Ikutagawa・Ujikawa River Basin ● (Chuo-ku, Kobe city)

Date: August 1, 2018
Target: Kobe City Nagisa Junior High School
Disaster prevention junior leader students
In advance, the Rokko Sabo Office interviewed those who were elementary school students at that time. The interview contents were the situation of the flood and the scene of evacuating home from school. In a town walk, junior high school students walked the same route from school to her home where a experienced person had walked at that time. In addition, we visited the "Kobe Great Flood Picture Scroll", drawn for each river basin from the Senmori River in Suma-ku to the Ishiya River in Nada-ku at the Kobe City Central Library.

Togagawa River Basins (Nada-ku, Kobe city)

Date: August 8, 2018
Target: Kobe City Nagisa Junior High School
Disaster prevention junior leader students
The students were divided into two teams, each in charge of the north or south region of the basin, and conducted a town walk to identify the location information of past photographs. In the north, they received cooperation from the "Kobe Archives Photo Gallery", and in the south, from the "Nada-ku Shinzaike Community Development Council". The students took photographs from the same location as those days and recorded the interview details. Also, using a GIS application on a smartphone, the episode was entered on the electronic map along with the photos.

Sumiyoshigawa River Basin (Higashinada-ku, Kobe city)

Date: July 31, 2018
Target: Kobe City Sumiyoshi Junior High School
Students of the student council
A group study on flood damage at the Great Hanshin flood was held at Sumiyoshi Junior High School located in the Sumiyoshi River basin. The lecturer was a specialist dispatched by the Rokko Sabo Office. The students learned the outline of the flood and the situation of the damage at that time, and thought about the interview contents to a priest of Sumiyoshi Shrine. Based on them, they asked the priest about the situation of the damage, what he experienced and felt at that time. They wrote important things on a paper.

Shin-Minatogawa River Basin (Nagata-ku, Kobe city)

Date: July 31, 2018
Target: Tokiwa Girls High School
Students of the student council
Tokiwa Girls High School students, with the guidance of a priest of Nagata Shrine, identified the locations of the past damage and wrote them on a paper map along with the episode at the time of the disaster.

Significance

Long-term storage of information
・Documents remaining on paper, images of damage, and stories of disaster victims
・To store experiences of disaster victims as a digital archive

Creation of a place for communication
・To create a place to share memories and records using Communication with disaster victims through workshops through the Internet

What location information tells us
What could be clarified by visualizing information
-Pinpoint location and related information
-Overview information of region and area

A sense of responsibility for information
Through the work of providing and creating information
Responsibility by becoming the sending side instead of the receiving side is born

Digital Archive of The Great Hanshin Flood in 1938

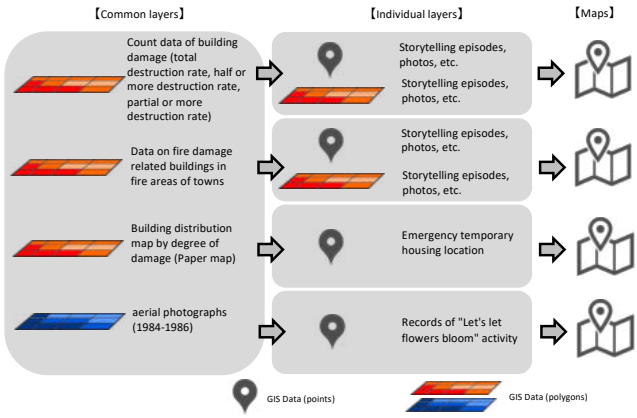
Information of these efforts and information received from the public, such as photos and testimonials, are saved as ' Digital Archive of the Great Hanshin Flood ' so that anyone can freely browse from the Internet, and will be open to the public on November 24, 2018.

The Great Hanshin-Awaji Earthquake

Constitution of Digital Archive

①Earthquake information registration workshop
This workshop included verbal communication to listeners who are not experienced from the narrator who is experiencing the Great Hanshin-Awaji Earthquake, and the process by which the listener creates the information as digital data in real time using GIS.
②Web maps
The above information is overlaid as a layer with point data and information on damage from the Great Hanshin-Awaji Earthquake.

Relationship between layers and digital maps



Development of the date entry tool

In order to visualize "what happened at that point / region" using ESRI's ArcGIS Online, it was possible to input it with points (points) and faces (polygons). Also, attribute items of free descriptions such as time zones and episodes were added.

The workshop

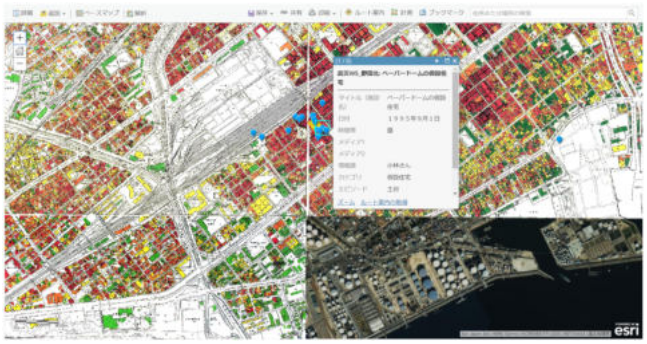
Opportunity of sharing records

Three groups (Groups A to C) were created. Group A researched the damage situation and reconstruction process in the northern part of Noda, Nagata-ku, Kobe, Hyogo Prefecture, and Group B surveyed the damage situation around Nagata-ku, Kobe, Hyogo Prefecture. Group C consisted of graduate students and performed identification work on the location information of the temporary housing in Hyogo Prefecture.
Group A and Group B were designed to include people who talk and listen (about 3 people). Among the listeners, the roles of listeners, information registrants, and writers were included. The listener proceeded while listening to the talker's story and asking the information that the registrant wanted. The information registrant input the interview contents into the media according to the classification method set in advance. The writer used Google Drive to leave the story of the speaker in the form of a minutes of the proceedings. The total number of registered information was 206, including those created in advance.

Registered information

班名	事前準備	当日作業	合計
A班：野田北部(ポイント)		19	19
A班：野田北部(ポリゴン)		1	1
B班：長田区周辺(ポイント)		4	4
B班：長田区周辺(ポリゴン)		18	18
C班：応急仮設住宅(ポイント)	142	6	148
ガレキに花を(ポイント)	16		16
総計	158	48	206

Digital maps



Digital map created

Summary

Linking location data to information and representing it as a digital map aims to visualize information of damage and episodes related to the disaster, and to provide a more comprehensive overview of the disaster. These efforts are also expected to have the effect of disaster prevention education, creating opportunities to think about the relationship between disasters and the formation of towns and between people and nature. In addition, it is assumed that such information storage is utilized not for the purpose of storage itself. It is hoped that various information will be released in the form of so-called open data, and that many people will develop it as applications and various contents based on various ideas.

Sharing of Local Disaster Experiences: Publication of a Digital Archive Map Showing Disaster Monuments

Hinako Suzuki, Wataru Tanikawa, Shoichiro Uchiyama, Goichiro Uramoto

鈴木比奈子
Hinako Suzuki

Digital Archive Map Showing Disaster Monuments

■ What are disaster monuments?

◇ They are monuments with information about natural disasters carved on their surface.

- They have various names: stone monuments, disaster monuments, traditional natural disaster monuments, tsunami monuments, etc.
- They are made of a variety of materials, such as stone and wood.

◇ Contents: Disaster monuments usually include one or more of the following items of information.

(1) Past disaster experiences and the extent of the damage to the region
(2) Commemoration of victims
(3) Lessons from the past and warnings of future disasters

◇ Installation situation: usually outdoors

- Monuments can tell us how far inland a tsunami or a flood penetrated, or report that their own location was flooded.

◇ Problems: Stone monuments may be lost, and their significance is not always understood.

- Carved letters are often weathered, and cursive script can be difficult to read.
- Stone monuments may be moved or lost due to natural disasters or road

A digital archive of tsunami monuments introduced by realistic 3D models.
(Tanikawa, et al. 2016)

◇the Digital Archive Site of Earthquake Tsunami Monuments

http://www.jamstec.go.jp/res/ress/tanikawa/index.html

- Publication of 3D software models
- Browsing of letters carved on the stone monuments and the information they convey

Earthquake monument of Kishimoto Asuka shrine (Kochi pref.)

Hagitani Amida Budda Stone (Kochi pref.)

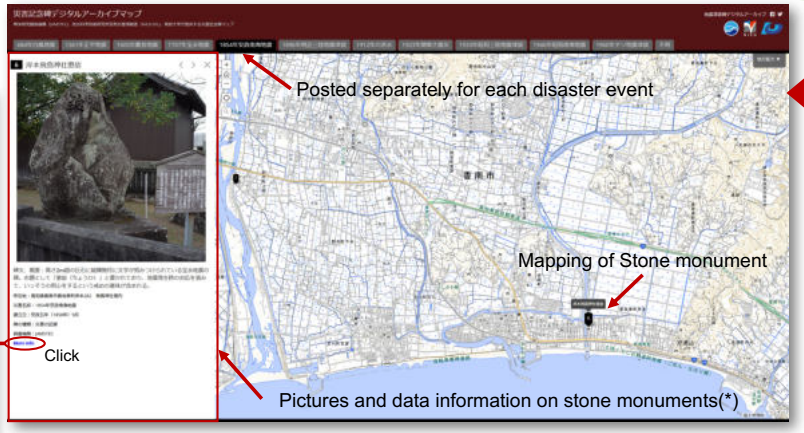
■ Digital Archive Map of Disaster Monuments

https://dil-db.bosai.go.jp/saigai_sekihi/ （Japanese only）

- Publishing information on stone monuments, etc., on the Web map.
- Sharing information on stone monuments (their content and location) on the Web.

Sharing the information on stone monuments on the Web map

Linking to Web pages describing the stone monument in 3D



The screen layout of the digital archive map of disaster monuments

***Pictures and data information on stone monuments**

- Stone monument information
- Epigraph or its summary
- The disaster it records
- Construction date
- The type of monument
- Investigation agency

Stone monuments classified by prefecture published on the map
(as of November 2019).

Disaster	Stone Monuments	Iwate pref.	Miyagi pref.	Tokushima pref.	Kochi pref.
684 Hakuhou earthquake (M8.4)	1				1
1361 Shohei earthquake (M8.5)	2			1	
1605 Keicho earthquake (M7.9)	2			2	
1707 Houei earthquake (M8.6)	14			3	11
1854 Ansei Nankai earthquake (M8.4)	42			18	21
1896 Meiji Sanriku earthquake (M8.2)	9	9			
1912 flood	1			1	
1920 flood	6				6
1923 Greate Kanto earthquake (M7.9)	1				1
1933 Showa Sanriku earthquake (M8.1)	9	7	2		
1946 Showa Nankai earthquake (M8.0)	27			8	14
1960 Great Chilean Earthquake (Valdivia Earthquake) (Mw9.5)	2	1			1
2001 heavy rain disaster on west-southern area of Kochi prefecture	4				4
Other	6	6			

[Web-GIS specifications]

◇ Data used

- The digital archive of earthquake tsunami monuments
- The monument to the Sanriku Coast Tsunami, the investigational data

◇ The engine used

- System: ArcGIS ONLINE Story Map Shortlist
- Background map: GSI Maps

[Future developments]

- Superimposition on past flood records or flood prediction maps, browsing
- Cooperation with other organizations

[reference] Tanikawa, et al. (2016) 3D modelling for digital archive of monuments that records historical Nankai earthquakes at Kochi Prefecture, JpGU G02-P01.

[Contact] Hinako Suzuki, hinasuzuki@bosai.go.jp
Multi-hazard Risk Assessment Division, National Research Institute for Earth Science and Disaster Resilience

荒井勲
Isao Arai

「あなたにも出来る被災者支援」・ 25 年の手法を語り継ぐ

“ YOU CAN SUPPORT DISASTER VICTIMS ”

＊We introduce our method how to support suffers　　神戸 NPO・ひまわりの夢企画

１、被災後の避難所支援 （ REFUGE SUPPORT ）


給水支援・1995 年 1 月


露天風呂・1995 年 1 月


温水シャワー2011 年 3 月


洗濯機設置 2011 年 4 月

２、仮設住宅の生活支援 （ SUPPORTING TEMPORARY HOUSES FOR VICTIMS ）


お茶碗運搬 2004 年 11 月


食器市 2004 年 12 月


食器市 2009 年 10 月


食器の収集 2011 年 6 月


無料食器市 2011 年 8 月


食器市 2011 年 10 月


食器市・2016 年 5 月


食器市・2016 年 10 月

３、心の復興を支援する活動 （ SUPPORTING MENTAL CARE SUPPORT ）


復興イベント 2001 年 7 月


鯉ネット 2004 年 7 月


鯛ネット 208 年 5 月


歓鯨ネット 2013 年 6 月


カツオネット 20013 年 3 月


完成設置したカツオ


くまモン・2018 年 3 月


ひまわり植え 2005 年 6 月


山古志村①　2005 年 5 月


山古志村②震災 3 年後


山古志村③震災 5 年後

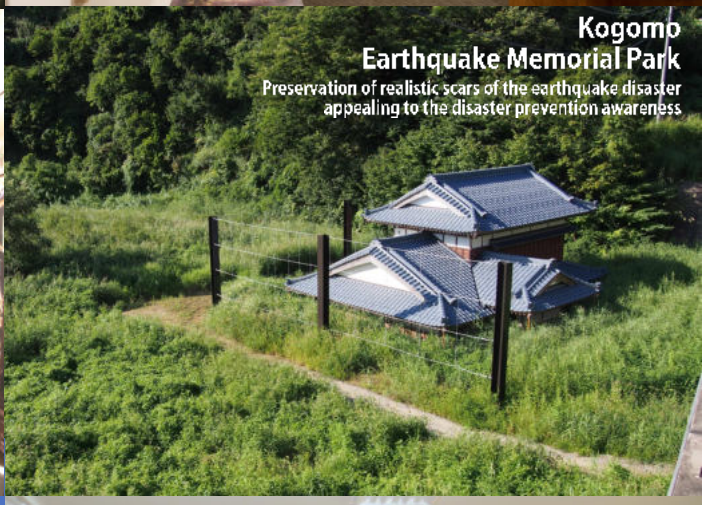

防災楽習迷路 2017 年 1 月


中越メモリアル回廊
The CHU-ETSU Earthquake Memorial Corridor
稲垣文彦
Fumihiro Inagaki
Nagaoka Earthquake Disaster Archive Center KiokuMirai
Learn the lessons and findings left by the Chuetsu Earthquake
Niigata Prefecture Chuetsu Earthquake
October 23, 2004, around 17:56
1. An earthquake that hit hilly and mountainous areas where the depopulation and aging of society was advancing.
2. A sharp decline in the population of hilly and mountainous areas that were damaged severely.
3. Sustainability of hilly and mountainous areas become a big challenge for the recovery from the disaster.(Existing challenges in the communities were actualized.)
Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor
Fumihiko Inagaki
Director of the Earthquake Disaster Archives and Memorial Center
Chuetsu Organization for Safe and Secure Society


Myoken
Earthquake Memorial Park
Memorial Park to morn for the victims of disasters
Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor
1. Chuetsu Marugoto (comprehensive) Archive
2. Unique facilities
3. Memorial facilities that support sustainable community development on residents own initiatives


Yamakoshi Recovery Exhibit Hall
Orataru
Review the life in the mountains damaged by the disaster


Ojiya Earthquake Disaster Museum
Sonae-kan
Experience the situations of disasters


Kogomo
Earthquake Memorial Park
Preservation of realistic scars of the earthquake disaster appealing to the disaster prevention awareness


The Epicenter of the CHU-ETSU Earthquake Memorial Park
Memories of the recovery from the disaster and dissemination of appreciation
はるかなるふるさと


Kawaguchi Kizuna-kan
Strengthen the bonds between people
Memorial facilities that support sustainable community development (activities aimed at resolving regional challenges) by residents own initiatives
1. Entrust the management of memorial facilities to the NPOs in the communities
2. Independent and proactive involvement of residents
3. Ensuring the sustainability by diversified management and personnel for community coordination

高田知紀
Tomoki Takada

The International Forum on Telling Live Lessons from Disasters 2020

An Education Framework for Disaster Risk Reduction by Utilizing "*Yokai*(妖怪)" as Intellectual Resources

Kobe City College of Technology
Tomoki TAKADA

What is Yokai(妖怪)?

*Yokai(*妖怪) is made up of two Kanji. Both "妖" and "怪" denote strangeness, mystery, or suspicion. Kazuhiko Komatsu, who is the leading academic authority on the supernatural in Japan, said that the concept of yokai has three domains. The first one is yokai as event(*dekigoto*, 出来事). The second is yokai as presence(*sonzai*, 存在). And the third one is yokai as object(*zoukei*, 造形). Such yokai which is drawn in Japanese anime is yokai as object. However, the Japanese people before Edo period thought that a mysterious and unfavorable phenomena is caused by work of yokai.

Diversity of Yokai

There are many kind of yokai. In addition, the environment in which yokai appears is also diverse. For example, yokai that appears in the mountain is *tengu* (Fig.1), *yamauba* and *konaki-jiji* and so on. Representative of yokai appearing on the waterfront is *kappa* (Fig.2) or *umibouzu*. Furthermore, there are yokai that appears in the house such as *akaname* (Fig.3) and *zashikiwarashi*.

What is important is that many kind of yokai have been told set with types of environment. In other words, yokai lore is told with a placeness.

Figure 1
Tengu(天狗)

Figure 2
Kappa(河童)

Figure 3
Akaname(垢嘗め)

Role of Yokai for Disaster Risk Reduction

Yokai lore often tell us the importance of preparing for a disaster. Yokai lore of *yaroka-mizu* is the content that people heard a strange voice from the upstream of the river before the flood occurs. And, yokai of *konaki-jiji* cry in the mountain before the earthquake occurs. Work of yokai relating natural disaster can be classified in occurrence factor, omen, situation description, prevention scheme, and disaster history transduction.

"Yokai Safety Workshop(妖怪安全ワークショップ)"

I conducted "Yokai Safety Workshop" as a social experiment, based on a role of yokai lore as a social device to transmit disaster risks. In this workshop, first of all, the children search for the dangerous places of their region (Fig.4, 5). Next, they consider the original yokai that appears in the dangerous places (Fig.6). At that time, the children propose how to avoid the damage caused by the yokai. Finally, in order to make "Yokai safety map", the original yokai is plotted on the map (Fig.7).

Through the work to create new yokai, the children who participated in the workshops were able to recognize the risks in the region and suggest how to avoid disaster risks.

Figure 4

Figure 5

Figure 6

Figure 7

東山陽次
Yoji Higashiyama

Passing Down the History of the Damages Caused by Mt.Unzen Volcano and the Issues at Hand

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Mt.Unzen Disaster Memorial Hall (Gamadasu Dome)

1. Introduction

- In Nov 17, 1990, the Mt.Unzen Volcano erupted once again ever since its last eruption 198 years ago. On June 3 of 1991, a pyroclastic flow of the biggest scale in the region occurred, taking away lives of 43 victims. This year would be the 28th year after the happening of Mt.Unzen eruption disaster(Fig.1).
- Mt.Unzen Disaster Memorial Hall, the core facility dedicated for the education of volcanic disasters founded in July of 2002, has undergone renovations and reopened in April 2018 in order to improve and make enhancement in its facilities.
- Our mission is to educate the lessons learned from the history of volcanic disasters to the public. However, as the population of the younger generations who has never experienced the disaster increase in the area stricken by disaster in Shimabara, continuing the education of the experience of a disaster becomes a tacky issue at hand. In order to continue our mission of passing down the lessons of volcanic disasters, it is necessary for the younger audiences to visit and know about the disaster area, and we try to hold many more programs to achieve such goal.

Figure1: (A)Pyroclastic flow occurred in Senbongi district in June, 1993. (B)This image shows Shimabara city now after recovery.

2. Background

Figure2: The incorporate projection mapping has newly renovated in this museum.

- Much time has passed since the happening of the disaster in the area, and the restoration of the disaster area is gradually transforming away from the sightseeing spot with attraction from its unique traces from natural disaster like it has been right after the disaster. From the decrease in the number of visitors to Mt.Unzen Disaster Memorial Hall as well as the narration guides (field tours where the guides explain verbally) every year, we predict that there will be a change in the willingness of visitors to visit the disaster areas.
- In order to attract more visitors to Mt.Unzen Disaster Memorial Hall, the museum has renovated to incorporate much more interactive exhibitions such as projection mapping(Fig.2). Other new facilities include the Geo Park Playground for children and Wonder Labo for experiment and workshop.

3. The Current Situations and Issues

- Starting from last year, we began a different approach in presenting to students visiting for field trips by allowing the students to have a comprehensive understanding of the disaster through explanations for the exhibitions, performance of experiences in Wonder Lab, and seminars held by narration guides, provided in a shared effort by the professional staffs and narration guides of various departments.

Figure3: The memorial ceremony for the victims is held in Gamadasu Dome on June 3 every year and people pray for them to rest in peace.

- Also, we founded a praying ceremony that will be held every year on June 3rd, the day of the disaster, in memory of the victims from the disaster, in order to educate the younger generations who has never experienced the disasters(Fig.3 & 4).
- Right now around 20 volunteers have been volunteering at our facility for over 10 years, and of those, 10 of them are working on the education of disasters as narrating guides. The narrating guides regularly holds seminars for permanent exhibitions, in disaster areas, and in elementary schools.
- However, as these narrating guides age, it becomes harder for them to visit places afar or attend activities requiring longer time spam, and the number of guide decreases every year. The other side of this problem is that the narrating events rely too much on certain guides.
- Amongst the staff, many are from the generation that has never truly experienced the disaster, and it is necessary for them to deepen their understanding for the disaster in order to educate other people about it. Although we do hold volunteer recruitment, but we lack a proper system for recruiting and training the volunteers.

Figure4: The narrating guides regularly hold the seminars in some elementary schools.

4. The New Efforts

Figure5: (A)This image shows the class of volcano junior master school. (B)These students asked guides about volcanic disaster happened in this place.

- We have started a project called "volcano junior master school" that will begin this year, targeting elementary upperclassmen to middle school students(Fig.5). These students will be educated to become the person responsible for disaster prevention in each area. Our aim is that these young students may become capable of making the right judgement and take actions during the actual happening of a disaster. We are hearing feedbacks from the lecturer saying that they are learning to coexist with volcano well.
- Starting last year, we launched new seminars regarding the prevention of volcanic and natural disasters, learning from experts who has been on the grounds of disasters of 2016 Kumamoto Earthquake, 2014 Mt. Ontake eruption, and heavy rainfall in Northern Kyushu District in July 2012.

5. Summary

- As time passed and memories of the disasters faded, and the narrating events are receiving less and less recognition, our future is interconnected with how the people of every generation, especially the younger generations, understand and learn from the past disasters, and use those knowledge to prevent disasters in the coming future.
- Our efforts taken so far have received some positive feedbacks. It is important that we continue efforts such as Volcano Junior master school or Disaster Prevention seminars that endeavors in the education of disaster prevention with new approaches. It is especially important that we educate young students who will become responsible for disaster prevention in each area, and we will discuss further regarding projects to achieve such goal.
- Also, instead of relying heavily on the guides, we hope that each staff could deepen their understanding regarding volcanic disaster, and for there to be new opportunities to learn for our staffs and volunteers so that all staffs and volunteers could be on the same line when working towards the goal of continuing the education on the prevention of disasters.

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深澤良信 / Yoshinobu Fukasawa

西日本鉄道株式会社海外展開室長、人と防災未来センター特別研究調査員、アジア防災センター評議員。1957 年生、1980 年東京大学卒（土木工学）、1982 年東京工業大学大学院修士課程修了（社会工学）。1982 年国土庁入庁、国土計画、地域開発、防災、国際協力などに従事。国連人道問題局救援調整官、総理府阪神・淡路地域復興本部事務局上席局員、人と防災未来センター副センター長、国土交通省国土計画局計画官、総務省消防庁参事官などを経て 2013 年から 2017 年まで国連ハビタットアジア・太平洋地域本部（福岡本部）本部長。世界災害語り継ぎネットワーク／TeLL-Net 事務局長、世界災害語り継ぎフォーラム（2010）及び 2020 世界災害語り継ぎフォーラム（2020）企画運営に従事。

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