

障害者の暮らしと災害のセミナー

フィリピン・セブにおける障害者の暮らしと災害課題

報告書

<公開セミナー> zoom ウェビナー

日時: 2022年9月26日(月曜) 15:00~16:30 (日本時間)

主催: 神奈川工科大学 地域連携災害ケア研究センター
地域連携・貢献センター

協力: 神奈川工科大学 研究推進機構
国際センター

Disaster Prevention Seminar for People with Disabilities

< Case Study: Cebu, Philippines >

■Organizer:

Research Center for Regional Cooperation and Disaster Care, KAIT
Center for Regional Cooperation and Contribution, KAIT

■Cooperation:

Promoting Organization of Research, KAIT
International Center, KAIT

■Date and Time:

September 26, 2022 (Mon.) 15:00~16:30 (Japan time, UTC+9)



地域連携災害ケア研究センター



地域連携・貢献センター



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KAIT volunteer activities after the Great East Japan Earthquake

〈 セミナー・プログラム 〉

基調報告 アデラ・コウノ 氏 (Ms. Adela Kono)

・Advocate of Accessible Environments through Universal Design

意見交換 アデラ・コウノ 氏

上田 麻理 准教授 (音響工学)

三枝 亮 准教授 (ロボット工学、ヒューマンサイエンス)

オブザーバー: 上野 悦子 氏 日本障害者リハビリテーション協会 元参与

鷹野 孝典 教授 神奈川工科大学国際センター長

進行 小川 喜道 地域連携・貢献センター長

Program

■ Keynote report “DISABILITY and DISASTER”

Ms. Adela Kono

Advocate of Accessible Environments through Universal Design

- ・ Organization of Rehabilitative Advocates for Inclusion (ORAI)
- ・ Regional Committee on Disability Affairs (RCDA)
- ・ Regional Development Council (RDC)
- ・ Cebu Council on Independent Living (CCIL)
- ・ Disability-inclusive Disaster Risk Reduction (DiDRR) Network

Contents of the report:

- (1) Life of persons with disabilities in Cebu, Philippines
- (2) Examples of typhoon damage in the Philippines and problems faced by persons with disabilities
- (3) How To Make A Disabled-Friendly Evacuation Center

■ Discussion **Ms. Adela Kono**

Associate Prof. Mari Ueda (Acoustic Engineering)

Associate Prof. Ryo Saegusa (Robotics · Human Science)

Observer/Commentator: **Ms. Etsuko Ueno** (Former Management Counselor of Japanese Society for Rehabilitation of Persons with Disabilities)

Prof. Kosuke Takano (Director of International Center, KAIT)

Moderator: **Mr. Yoshimichi Ogawa** (Honorary Prof. / Director of Center for Regional Cooperation and Contribution)

障害者の暮らしと災害のセミナー

フィリピン・セブにおける障害者の暮らしと災害課題

プログラム

<公開セミナー>

主催: 神奈川工科大学 地域連携災害ケア研究センター
地域連携・貢献センター

協力: 神奈川工科大学 研究推進機構・国際センター

日時: 2022年9月26日(月曜) 15:00~16:30 zoom ウェビナー

内容: 報告とディスカッション

使用言語: 英語 / 対象: 国際協力や多様性に関心のある学生等、どなたでも

基調報告 Ms. Adela Kono

- ・Advocate of Accessible Environments through Universal Design
- ・Cebu Council on Independent Living (CCIL)
- ・Disability-inclusive Disaster Risk Reduction (DiDRR) Network

意見交換 Ms. Adela Kono

上田 麻理 准教授 (音響工学)

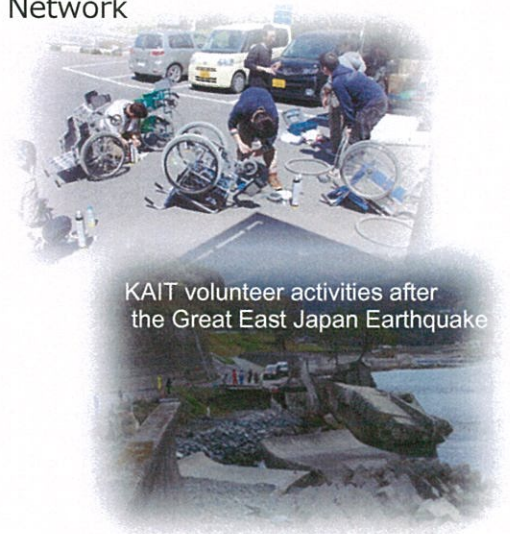
三枝 亮 准教授 (ロボット工学、ヒューマンサイエンス)

オブザーバー

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chiiki-koken@cco.kanagawa-it.ac.jp



(QRコードからも申込可)

Disaster Prevention Seminar for People with Disabilities <Part 1: Case Study: Cebu, Philippines>

■ Organizer:

Research Center for Regional Cooperation and Disaster Care, KAIT
Center for Regional Cooperation and Contribution, KAIT

■ Cooperation:

Promoting Organization of Research, KAIT
International Center, KAIT

■ Date and Time:

September 26, 2022 (Mon.) 15:00~16:30 (Japan time, UTC+9)

★ Purpose

Understanding of impact of disasters toward the lives of people with disabilities in Asian countries

■ Program

■ Keynote report "DISABILITY and DISASTER"

Ms. Adela Kono Advocate of Accessible Environments through Universal Design

- Organization of Rehabilitative Advocates for Inclusion (ORAI)
- Regional Committee on Disability Affairs (RCDA)
- Regional Development Council (RDC)
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Moderator:

Mr. Yoshimichi Ogawa (Honorary Prof. / Director of Center for
Regional Cooperation and Contribution)



★ Expected Audience: Students and anyone interested in international cooperation and diversity

■ Register (URL or QR code): <https://forms.office.com/r/kwqySYrcJW>

■ Fee free

■ Contact Information:

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本セミナーの主旨

今世紀に入ってから自然災害の増加は、異常ともいえるほどです。アジア防災センターの報告によれば、アジア地域における 2020 年の自然災害の発生数は 398 件でした。そして、2020 年の 1 年間と過去 30 年間の平均発生件数を比較して示しています。例えば、洪水は、過去 30 年(1990-2019)では年間平均 138 件でしたが、2020 年は年間 201 件でした。また、暴風雨は、年間平均 99 件であったものが、2020 年には 128 件に上っています。さらに、自然災害発生状況について、アジアと世界の他の地域と比較してみると、全体の 41 パーセントがアジアで起こっています¹⁾。したがって、アジアでは災害による死亡者や被災者数も多い状況にあります。

私たちは、そのようなアジアに生活しているので、災害に対処する日々の準備、心構えが必要と言えます。また、災害の犠牲になる弱者、すなわち障害者や高齢者についての配慮が重要な取り組みとなります。国連の第 3 回防災世界会議が 2015 年に仙台で開催され、防災の仙台枠組み(2015-2030)がまとめられました。そこには、災害に対する人間中心(human-centered)とした防災アプローチが必要で、その実践が効率的、効果的なものにするには、インクルーシブでアクセシブルである必要があると示されています²⁾。

ここでは、アジアの障害ある人たちと共に、現状を理解することとこれからどのように対処していくべきかを検討したいと思います。

- 1) Asian Disaster Reduction Center: Natural Disaster Data Book 2020 – An Analytical Overview, 2021
- 2) United Nations Office for Disaster Risk Reduction: Sendai Framework for Disaster Risk Reduction 2015-2030, 2015

東日本大震災における津波被害を、沿岸地域における一般人口の死亡率と、障害者の死亡率を比較した結果、前者が 1.03%に対して、後者は 2.06%でした。つまり、障害者の死亡率が 2 倍となっていました。災害時に最も回避することが困難な障害者について考えていくことは、いわゆる災害弱者と言われている人たちを守る対策の構築につながることであります。

いうまでもなく、国連の SDGs(Sustainable Development Goals)は、「誰一人取り残さない」(leave no one behind)ために各国の施策を進めることになっており、災害時もその対応を求めています。また、国連の障害者権利条約(2006)の成立に向けてのキャンペーンに「私たち抜きで私たちのことを決めないで」(Nothing about Us without Us)とうたっています。その条約の第 11 条において、各国は自然災害などリスク状況において障害者の安全を保障する方策をとることを求めています。今回のセミナーは、障害のあるアデラさんのフィリピン、セブ市での経験をお聞きするとともに、SDGs や障害者権利条約に沿った考え方で進めます。

Purpose of this seminar

The increase in natural disasters in this century is extraordinary. According to a report by the Asian Disaster Reduction Center, there were 398 natural disasters in the Asian region in 2020. It also shows a comparison of the average number of incidents for the year 2020 and the past 30 years. For example, floods averaged 138 per year over the past 30 years (1990-2019), compared to 201 in 2020. The number of storms has increased from an average of 99 per year to 128 in 2020. Furthermore, when comparing the incidence of natural disasters in Asia and other regions of the world, 41% of all disasters occur in Asia¹⁾. Therefore, in Asia, the number of deaths and victims of disasters is high.

We live in Asia, so it can be said that daily preparations and attitudes to deal with disasters are necessary. It is also important to consider the vulnerable people who become victims of disasters, namely people with disabilities and elderly people. The 3rd United Nations World Conference on Disaster Risk Reduction was held in Sendai in 2015, and the Sendai Framework for Disaster Risk Reduction (2015-2030) was adopted. It shows the need for a human-centered approach to disaster preparedness, and for its implementation to be efficient and effective, it needs to be inclusive and accessible²⁾.

Together with people with disabilities in Asia, we would like to understand the current situation and consider how to deal with it in the future.

1) Asian Disaster Reduction Center: Natural Disaster Data Book 2020 – An Analytical Overview, 2021

2) United Nations Office for Disaster Risk Reduction: Sendai Framework for Disaster Risk Reduction 2015-2030, 2015

When comparing the tsunami damage caused by the Great East Japan Earthquake, the mortality rate of the general population in coastal areas and the mortality rate of persons with disabilities was 1.03% for the former and 2.06% for the latter. In other words, the death rate of people with disabilities had doubled. Thinking about people with disabilities who are most difficult to avoid in the event of a disaster will lead to the establishment of measures to protect those who are said to be “vulnerable” to disasters.

Needless to say, the United Nations SDGs (Sustainable Development Goals) are supposed to promote measures in each country to "leave no one behind", and they are required to respond in the event of a disaster. It also campaigned for the United Nations Convention on the Rights of Persons with Disabilities (2006) to "Nothing about us without us". Article 11 of the Convention requires states to take measures to ensure the safety of persons with disabilities in risk situations such as natural disasters. In this seminar, we will hear about Adela's experience in Cebu City, Philippines, and proceed with the idea of the SDGs and the Convention on the Rights of Persons with Disabilities.

セミナーの概要

I 基調講演 「障害と災害」

基調講演「障害と災害」をアデラ・コウノ氏が行いました。アデラ氏は、フィリピンのセブ市を中心に、ユニバーサルデザインを通じたアクセシブルな環境づくりに貢献しています。アデラ氏は、ポリオにより肢体不自由となり、下肢装具、両クラッチを使用していますが、主として車椅子の使用により移動しています。

1989年にJICAの障害者グループ・リーダーシップトレーニングコース(テーマ:アクセシビリティ)に参加した経験があります。

第一に、フィリピン・セブ市の障害者の置かれた状況について、アクセシビリティ、就労、教育、観光に分けて説明をしてくださいました。現実には、階段、段差、路面の凹凸の存在、歩道上の駐車などの問題があります。たとえスロープが作られていても、その前に柱や木があったり、急斜面に作られていたりすることを写真で示していただきました。車椅子にしても、高価、重い製品、破損した部品の調達が不十分などを指摘していました。また、女性障害者にとって困難な問題や車椅子の普及していない諸種の課題、福祉制度、公共交通などの不十分な状況も示されました。

二番目にセブ市における自然災害について例示してくださいました。2021年12月の台風オデッサによる被害状況を写真で詳しく説明し、アデラさんのご自宅の損傷写真も提示していただき、ショッピングモールが避難場所になったこともお話してくださいました。この災害は、障害者にとって健常者より困難な状態となっていました。電力や水の供給の遮断、携帯電話の充電ができずに情報収集、情報交換を困難にしていました。きれいな水がなく料理を困難にし、また、食料の提供も行き渡らない状況がありました。その他の課題もあり、障害者にとっては被災による生活のダメージは大きいものがあったことが理解できました。

これらを踏まえた上で、三番目に移動困難者にとってバリアフリーな避難所の最低基準を提案しています。洗面、入浴、トイレ、着替え、歯磨きなどについて、何がバリアとなるかを整理して示しています。そして、避難所内に入るスロープの角度、テーブル下の空間、適切なベッド、ドア幅、ドア操作、トイレ空間、共有空間などの最低基準について示しています。基本的に、機能性、有用性、安全性、簡便性を満たすことが求められます。こうした提案は、障害者を考慮したインクルーシブな防災対策が、ひいてはすべての人にとって有益であることを述べていました。

II ディスカッション

初めに、上田麻理准教授から、ご自身の研究テーマの一端の紹介していただきました。防災行政無線放送について、その聞き取りの課題、例えば、風雨、環境、建物などが放送の音声に影響を受けていること、災害時には多様な状況の違いが聞こえに影響することなどが説明されました。また例示として、夕方5時のメロディの音響測定を通して、それぞれ条件によって聞こえに影響することが示されました。災害時には、信頼のおける情報源から正確な情報を得ることがとても重要であること。したがって、積極的なICTの活用、聴覚に障害がある人や高齢者へのサポート、聞こえの改善などに向けて研究を進めたい旨、話がありました。

日本では、地域に多数の防災行政無線放送が設置されていますが、屋外で聞き取る必要があります。また聞こえにくい人にとっては聞き取りがむずかしいこともあり、そのために広く音響測定を行い、さまざまな環境の違いからくる聞こえの改善を目指した研究を進めています。

一方、フィリピンでは、そのような対策は遅れているようで、国の防災に関する委員会で、電話の手段やアラームに関する検討がなされている段階であり、今後、緊急情報を得るための手立てを検討していく必要があると思われました。

今後は、音情報などもアクセシビリティ改善として、当大学と共同できるかどうか、アデラさんから質問、提案がありました。上田先生としては必要時、協力していきたいと述べられました。

次に、三枝亮准教授より人間機械共生研究室の研究活動を動画で示しながら、紹介してもらいました。具体的には、ケアに貢献するロボット、医療に貢献するロボット、障害ある子供たちに貢献するロボットなどが動画で紹介され、これらを通して、ロボットの多様な可能性を示していました。

また、三枝先生からは、災害時の電動車いすにおける電源の供給や、生活の継続のためにデバイスの提供、また、コミュニケーション手段の開発などの必要性なども述べられました。

さらに、それぞれの地域、個人においての経験が違うことを知ること、すなわち、同じ台風の規模であっても、環境の違い、身体的な状況の違いなどさまざまな個別的な側面から、異なる影響を受けることを前提としていることが語られています。

アデラさんからは、日本はテクノロジーが発展した状況となっており、一方、フィリピンの状況はロボット活用にほど遠いけれども、これからはテクノロジーが必要となることが語られました。そして、身近なものの例を挙げれば、立位がとれる車椅子などはニーズがあるけれども、手に入れることはなかなか困難であることが語られました。また、日本の斉藤工房のフィリピンへの協力の話も出ました。

障害者にとって情報は重要であり、また、コミュニケーションをテーマにディスカッションをすることが必要であることも話されました。

コメンテーターとしてご参加いただいた、上野悦子・日本障害者リハビリテーション協会元参事から次のようなコメントをいただきました。

それぞれのレポートを聞いていて、いかに障害者の置かれた環境とテクノロジーをつなげて考えるかということが重要であるけれども、そのためには障害者、高齢者、あるいは孤立している人たちのことについての理解を深めることが必要であること。つまり、「アウェアネス」がキーワードではないか、ということです。まずはお互いに知り合いということが出発点であり、テクノロジーとの関係もさらに論議が必要ということです。

今後、ロボットをめぐるアイデアを出し合い、その有用性を検討することがまずは必要であること。

なお、アデラさんから視聴している各国の学生の皆さんに、それぞれの専攻で学んでいただき、協働していきたいこと、そして、お互いにリスペクトし、コラボレーション・アプローチをしていきたいと、メッセージを送っていただきました。

最後に、鷹野国際センター長より閉会の挨拶をいただきました。アジア各国の学生の皆さんが聞いてくださったことへのお礼とこれからもこのセミナーが継続され、皆さんともつながりを継続できることへの願いが述べられました。

本セミナーの全体を通して、登壇者の共通のキーポイントは「アウェアネス」あるいは教育ということであったと思います。これから、このキーポイントを基に、継続してセミナーを行っていくつもりです。

(文責：小川喜道)

Seminar overview

I Keynote Speech "Disability and Disaster"

Ms. Adela Kono delivered the keynote speech "Disability and Disaster". Adela has contributed to the creation of an accessible environment through universal design, mainly in Cebu City, Philippines. Adela uses a leg brace, both clutches, but is primarily mobile using a wheelchair. In 1989, she participated in JICA's group training course of leadership for persons with disabilities (theme: accessibility) in Japan.

First, she explained the situation of persons with disabilities in Cebu City, Philippines, divided into accessibility, employment, education, and tourism. In reality, there are problems such as the presence of stairs, bumps, uneven road surfaces, and parking on sidewalks. Even if there is a slope, there are pillars and trees in front of it, and photos show that it is built on a steep slope. Even with wheelchairs, she points out that they are expensive, heavy products, and poorly sourced broken parts. It also showed the difficulties faced by women with disabilities, the lack of widespread use of wheelchairs, and the inadequacy of welfare systems and public transportation.

Secondly, she gave an example of a natural disaster in Cebu City. she explained in detail the damage caused by Typhoon Odessa in December 2021 with photos, and also showed us pictures of the damage to her own home, and told us that the shopping mall had become an evacuation site. The disaster made the situation more difficult for people with disabilities than for non-disabled people. The lack of power and water supplies and the inability to charge mobile phones made it difficult to collect and exchange information. The lack of clean water made cooking difficult, and the provision of food was inadequate. There are other issues as well, and we were able to understand that for people with disabilities, the damage to their livelihoods caused by the disaster was great.

Based on these, the third is proposing minimum standards for barrier-free shelters for people with mobility difficulties. It organizes and shows barriers such as washing face, bathing, toilet, changing clothes, etc.. It also shows the minimum standards such as the angle of the slope to enter the shelter, the space under the table, the appropriate bed, the width of the door, the door operation, the toilet space, and the common space. Basically, it is required to satisfy functionality, usefulness, safety and convenience. These proposals stated that inclusive disaster prevention measures that consider persons with disabilities would ultimately benefit everyone.

II Discussion

First of all, Associate Professor Mari Ueda introduced her research theme. Regarding disaster prevention administrative radio broadcasting, the issues in listening were explained, such as wind and rain, the environment, buildings, etc. affecting the sound of broadcasting, and the differences in various situations during disasters affecting hearing. In addition, through the acoustic measurement of the melody at 5 o'clock in the evening, it was shown that hearing is affected by each condition. During a disaster, it is very important to get accurate information from reliable sources. Therefore, she mentioned that she would like to proceed with research on the active use of ICT, support for people with hearing difficulties and elderly people, and improvement of hearing.

In Japan, disaster prevention administrative radio broadcasts are installed in each small areas, but it is necessary to listen outdoors, and it is sometimes difficult for people with hearing difficulties to hear. She is conducting research aimed at improving hearing problems due to environmental differences.

In the Philippines, it seems that such measures are lagging behind, and the country's disaster prevention committee is currently at the stage of examining means of telephone calls and alarms.

Adela asked questions and suggested whether we could collaborate with our university to improve the accessibility of sound information. Ueda replied that she would like to cooperate with her when necessary.

Next, Associate Professor Ryo Saegusa introduced the research activities of his human-machine symbiosis laboratory with a video. Through it, we were able to know some possibilities of robots. The videos introduced robots that contribute to care, robots that contribute to medical care, and robots that contribute to children with disabilities.

Saegusa also mentioned the need to supply power to electric wheelchairs in the event of a disaster, provide devices to continue living, and develop means of communication.

Furthermore, it is necessary to know that the experiences of each region and individual are different. In other words, even if the scale of the typhoon is the same, it will have different impacts due to various individual aspects such as differences in the environment and a person's physical conditions.

Ms. Adela said that Japan is in a situation where technology has developed, while the situation in the Philippines is far from the use of robots, but technology will be necessary in the future. As an example of familiar items, she said that although there is a need for wheelchairs that allow people to stand upright, they are difficult to obtain. There was also talk

of Japan's Saito Kobo's cooperation with the Philippines.

It was also said that information is important for people with disabilities, and that it is necessary to have discussions on the theme of communication.

Etsuko Ueno, a former councilor of the Japanese Association for Rehabilitation of Persons with Disabilities, who participated as a commentator, made the following comments.

Listening to each report, it is important to think about how to connect the environment in which people with disabilities are placed and technology. It is necessary to deepen the understanding, so "awareness" is the keyword. The starting point is mutual acquaintance, and the relationship with technology needs further discussion. In the future, it is necessary to exchange ideas about robots and examine their usefulness.

In addition, Adela gave a message to the students of each country who are watching, that they would like to study in their respective majors and work together, and that they would respect each other and take a collaborative approach.

Finally, Director Takano of the International Center gave a closing address. He expressed his gratitude to the students from various Asian countries for listening, and expressed his hope that this seminar would continue and that connections with all of participants would be able to continue.

I, Yoshimichi Ogawa, believe that the common key point of the speakers throughout the seminar was "awareness" or education. From now on, I plan to continue to hold seminars based on this key point.

(Written by Yoshimichi Ogawa)

ウェビナー参加者の状況

ウェビナー登録者

国内 11名

海外 58名

神奈川工科大学との協定校学生の参加

Bangkok University

Electronic Engineering Polytechnic Institute of Surabaya (EEPIS)

Universitas Islam Sultan Agung

Educatry Academy

Chulalongkorn University

University Muslim Indonesia

ウェビナー実参加者

42名

アンケート回答

回答者数 18名

1. セミナーに参加してよかったですか。

はい 18名

いいえ 0名

2. 新たな知識やアイデアを得ましたか。

はい 18名

いいえ 0名

3. コメント等がありましたら、自由にお書きください。

・プレゼンの資料をいただけるとありがたい。

・アデラさんのお話は考えさせられました thought provoking。フィリピンの状況は、40年前の日本の状況に近いと思いました。日本でのバリアフリーの展開は参考になると思います。

・さまざまな技術が障害者を支援できるということで、セミナーはとても印象深いものでした。

・新しい知識の提供、ありがとうございました。

- ・セミナーに参加できて大変よかったです。
- ・セミナーを開催していただき、ありがとうございました。
- ・活動や機器の事例を添えてきちんと伝えていただきました。
- ・新たな知識をいただき、ありがとうございました。
- ・二人の先生のトピックスは興味深いと思いました。
- ・フィリピンの現状と先生たちのプレゼンに少しギャップがあったと思います。ロボットなど、確かにこれから有効活用されると思いますが、社会保障制度が脆弱なフィリピンでは富裕層はつかえますが、貧困層はむずかしいです。もちろん、このような取り組みは重要と思います。

以上

ニュース

シェアする

ツイート

2022.10.05

災害時における障害者支援についての国際セミナーの開催

9月26日に、神奈川工科大学地域連携・貢献センターおよび地域連携災害ケア研究センター主催による、「障害者の暮らしと災害のセミナー」をオンラインで開催いたしました。

障害者のためのユニバーサルデザインの専門家であるAdela Kono氏を講師として迎え、フィリピン・セブ島における障害者の暮らしと災害について、障害者のための災害時避難所の提案などを交えて、ご講演いただきました。

本学からは、上田 麻理 准教授（情報メディア学科）が避難情報の伝達手段としての防災行政無線の活用について、三枝 亮 准教授（ロボット・メカトロニクス学科）が誘導補助などによる障害者への支援実現のためのロボットの導入について、それぞれご専門分野の見地から研究事例をお話いただきました。

海外協定校である、タイ・チュラロンコーン大学、バンコク大学、インドネシア・PENS（Politeknik Elektronika Negeri Surabaya）、バタム国際大学（UIB）、UNISSULA（Sultan Agung Islamic University）などからも多くの学生に参加いただき、大変な盛況な国際セミナーとなりました。

「障害者の暮らしと災害」について、一つの国の一つの地域としてだけではなく、アジアの国々でグローバルに考えることで解決していくために、今後もこのような国際セミナーの継続が期待されます。

企画・進行: 小川 喜道 地域連携・貢献センター長

オブザーバ: 上野 悦子様（日本障害者リハビリテーション協会 元参与）、鷹野 孝典 国際センター長



<添付資料>

登壇者の発表内容(パワーポイント)

アデラ・コウノ 氏

上田 麻理 准教授

三枝 亮 准教授

小川 喜道 地域連携統括コーディネータ

<PowerPoint slides of the speakers>

Adela Kono

Mari Ueda

Ryo Saegusa

Yoshimichi Ogawa

DISABILITY & DISASTER

ADELA A. KONO

Advocate of Accessible Environments through Universal Design

- Organization of Rehabilitative Advocates for Inclusion (ORAI)
- Regional Committee on Disability Affairs (RCDA) - 7
- Cebu Council on Independent Living (CCIL)
- Disability-inclusive Disaster Risk Reduction (DiDRR) Network

E-mail: adela.setagaya@gmail.com

About the speaker, Adela Kono:

- First of all, I am a Filipino, born and raised and lives in Cebu City, Philippines.
- I had polio when I was 2 ½ years old, and so I use a leg brace, a pair of crutches and mostly a wheelchair.
- I graduated from the University of the Philippines, majored in Business Management.
- I work for our family corporation that deals in real estate.
- In 1989 I was sent to Japan for the Group Leadership Training Course for Persons with Disabilities under Japan International Cooperation Agency (JICA) and specialized in Accessibility.
- I am married to a non-disabled Japanese and lived in Tokyo for almost 6 years.
- Living in Japan and visiting often after we moved to Cebu made me very familiar with barrier-free environments, which is my advocacy since 1987.

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Life of Persons with Disabilities (PWDs) in Cebu & the Philippines

ACCESSIBILITY

- Mostly inaccessible places & public transportation
- Sidewalks are uneven & narrow with barriers
- Steep ramps
- Most don't have private cars
- Some taxi drivers not willing to give PWDs a ride
- No disabled-friendly toilets
- No Braille / tactile / Tenji blocks for the blind

EMPLOYMENT

- Difficulty finding employment due to low educational achievement
- Difficulty in commuting
- Little or no accessibility in the workplace
- Low wages

EDUCATION

- Difficulty with transportation
- No ramps
- No PWD-friendly toilets
- No money for school

TOURISM

- Not accessible in most places
- False / inaccurate information on hotel accessibility
- 39 year-old Accessibility Law needs amendments to promote Barrier-Free Tourism
- Little money for vacations

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Persons with disabilities in the Philippines suffer from the lack of accessibility



A person with disability struggles to climb the stairs of the Light Rail Transit Line 2's Recto station while security personnel carry his wheelchair last week. Image courtesy of Kevin Bola.

STAR / File



alamy
1,300 x 956

Image ID: 2847643
www.alamy.com

Alamy

Dangerous uneven city sidewalk in Manila, Philippines.

Visit



alamy
Dangerous uneven city sidewalk in Manila, Philippines.

Citation:
Kono, Adela Avila (2022).
Disability & Disaster
[Powerpoint slides].

Many barriers on sidewalks



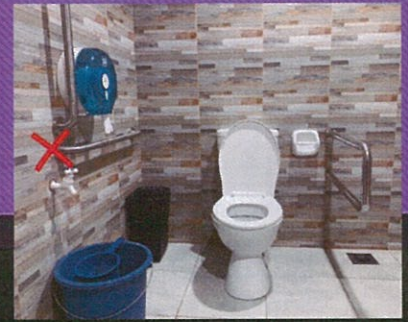
Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

More barriers



Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Women with disabilities have a difficult life



Left & right bars are too far apart



Door cannot close for privacy



Wheelchair cannot enter due to obstruction and door cannot close



Grab bar in the wrong place

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Wheelchair Issues

- Wheelchairs are expensive for many
- Spare parts usually unavailable
- Wheelchairs sold are hospital-type and heavy
- Wheelchairs for children are rarely available
- Broken wheelchairs not quickly fixed
- Wheelchairs are given to PWDs without consideration for a good and comfortable fit
- Bad road conditions add to faster deterioration of wheelchairs



Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

PWD & Senior Citizens' ID: Same Benefits & Privileges

Free and valid for 5 years



- Allowance of ₱1,000/month or ¥2,500 yen
- Given by local government units (LGU), though not all
- Grocery discounts of ₱65/week or ₱260/month for basic commodities
- 20% discount on the following based on net of VAT:

- ✓ Restaurants
- ✓ Health care (hospitals, diagnostics, pharmacies)
- ✓ Hotels
- ✓ Regular airfare and sea fare
- ✓ Public transportation

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Few initiatives for accessible transportation



3 units of Wheelmobile (Manila)
Partnered with UBER

Wheelchair Accessible Vehicles...wheninmanila.com



OffCrowd

Mobilizing PWDs with the First PWD-friendly Tricycle - OffCrowd



Marikina City Trike Project/Rappler.com

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

SM (Super Malls) MyBus



<https://sugbo.ph/2019/cebu-mybus-guide/>

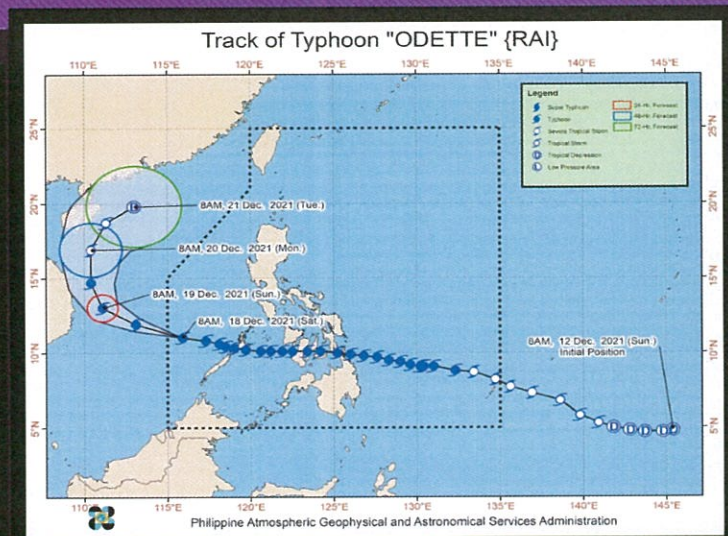


https://www.google.com/search?q=s+cebu+mybus&ibm=isch&ved=2ahUKEwjH-d_q-Kn6AhVBUvUHHv8AuwQ2-

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

DISASTER

Central Visayas, Philippines
Cat 5 Typhoon Rai / Odette
December 16, 2021

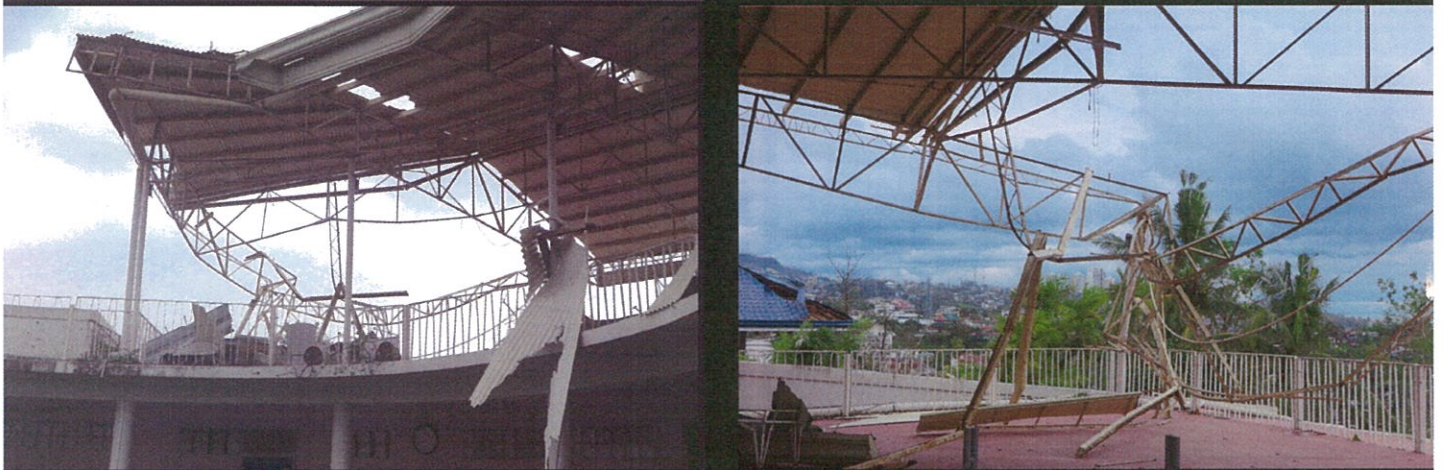


Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

<https://www.rappler.com/nation/weather/typhoon-odette-exits-philippine-area-responsibility-december-18-2021/>

Disaster by Typhoon Odette

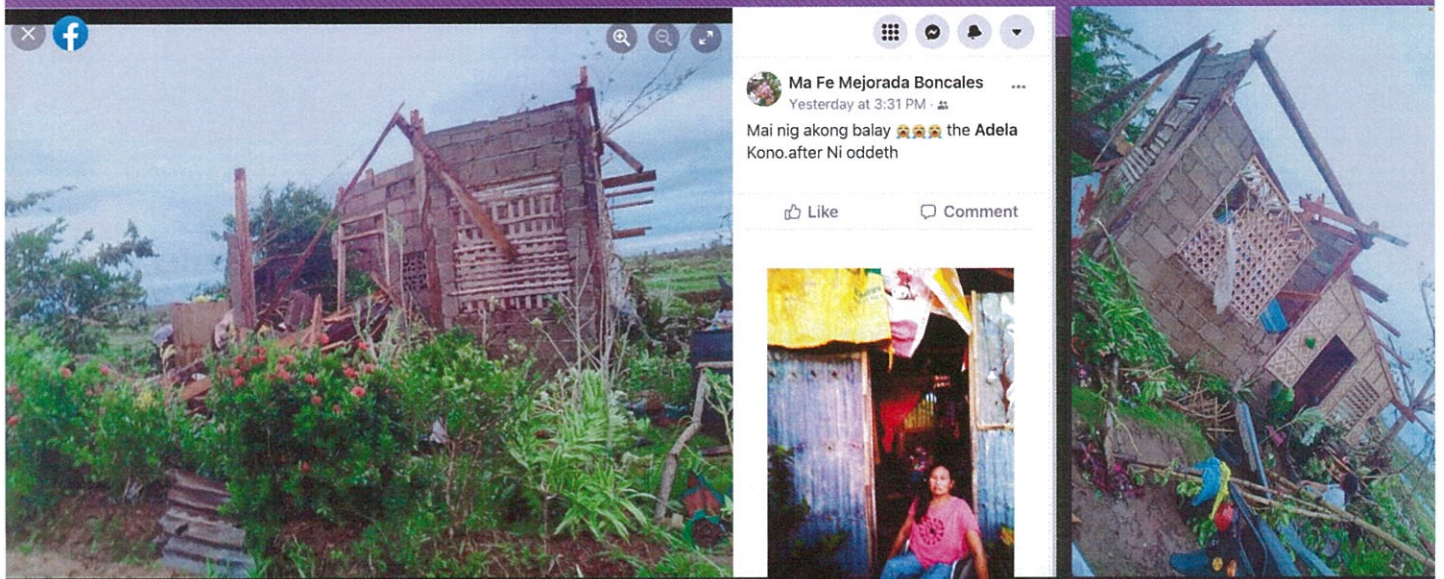
Our residential area in Cebu had power disruption from December 16, 2021 until January 12, 2022



Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Disaster by Typhoon Odette

My friend's house in Bohol, next island southeast of Cebu



Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Disaster by Typhoon Odette



<https://mycebuphotoblog.com/2022/06/08/in-photos-typhoon-odette-hits-cebu-city/>



<https://news.abs-cbn.com/news/12/17/21/1-dead-thousands-flee-in-ph-due-to-typhoon-odette>

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Disaster by Typhoon Odette

Many electric companies from other regions came to help restore power



Sunstar-Fallen-electricity-posts-in-Talisay-City



Inquirer.net

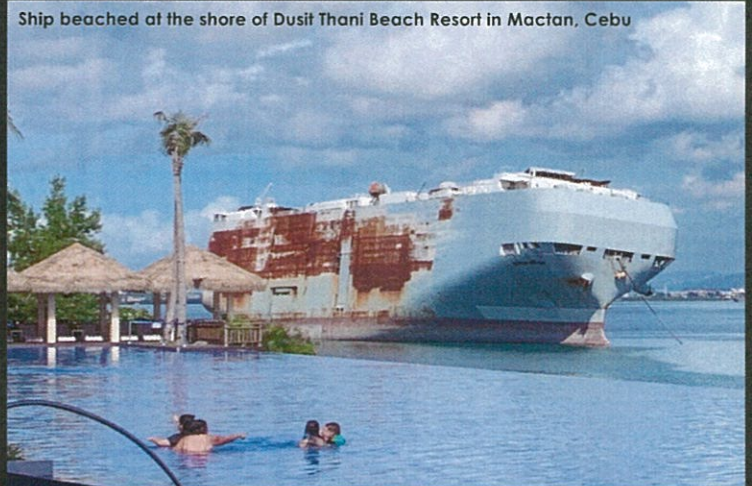
Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Disaster by Typhoon Odette

4 ships ran aground



AFTERMATH. The passenger vessel MV Kho Ferry 1 and the tugboat MT Super MJ run aground at the coast of the South Road Properties in Cebu City, after Typhoon Odette struck Cebu province on Thursday evening (Dec. 16, 2021). Local government units in Cebu are now assessing the vast expanse of the damage left by "Odette." (PNA photo by John Rey Saavedra)



Ship beached at the shore of Dusit Thani Beach Resort in Mactan, Cebu

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Disaster by Typhoon Odette

Malls became shelters

LOOK: Evacuees in Cebu City are safe and sound following the onslaught of Typhoon Odette. Robinsons Cybergate - 75, Robinsons Fuente - 8, SM City Cebu Trade Hall - 1,100, SM Seaside - 33. Councilor Joel Garganera thanked the Malls. [#OdettePH](#) | Courtesy of: [@cebudailynews](#)



2:07 AM · Dec 17, 2021



Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Impact of the disaster made life more difficult for PWDs

- Power and water supply was cut off
- Charging of cellphones (& laptops) was difficult affecting communication
- Mobility was difficult & risky due to debris and wires
- Risk of fire from burning candles
- Cooking was difficult due to lack of clean water
- Food supply chains became limited
- Homes destroyed / roofs gone / repairs slow
- Unavailability of workers to do repair work as they had to repair their homes first
- Prolonged state of difficulties up to 4 months due to slow power restoration

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Disability-inclusive Disaster Risk Reduction Measures

MINIMUM STANDARDS FOR BARRIER-FREE SHELTERS FOR THE MOBILITY IMPAIRED

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Disability-inclusive Disaster Risk Reduction

Before any disaster strikes, it is important for the government and aid agencies to designate or build accessible and barrier-free shelters or evacuation centers so that in the event of a disaster, the most vulnerable—the elderly and the mobility impaired, particularly those using canes, crutches and wheelchairs, and including heavily pregnant women—may find in these places a minimum level of accessibility that would give them a good measure of independence, mobility, safety, convenience and dignity for several days and months before they can move on to more permanent dwellings.

This presentation contains guidelines on how these basic minimum standards for such facilities must be built following Universal Design principles not only for their benefit, but for everyone.

IMPORTANT:

Design specs and measurements must be followed closely to ensure functionality, usability, safety & convenience.

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Concerns of Persons With Disabilities during a Disaster

People with a mobility disability are concerned about how they will escape from a dangerous environment, situation, or structure during an emergency or disaster. Many people with mobility disabilities cannot stand independently and are able to walk only a short distance to an evacuation center during an emergency situation. Many people who use crutches, canes, braces, etc. and people with limited movement frequently cannot move quickly.

- People who use wheelchairs are often concerned about being left behind, not being able to access shelter facilities or not being assisted. Many people who use wheelchairs cannot independently get in and out of their wheelchairs.
- They may worry that their wheelchair or wheeled mobility aid will be left behind or damaged.
- Most people, during an emergency, are more concerned with their life safety than they are with injuries, but they worry about being dropped during an evacuation.



Source: DiDRR Guideline Document FINAL 2014 05 22.pdf

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Needs of the Mobility Impaired / Wheelchair Users during a Disaster

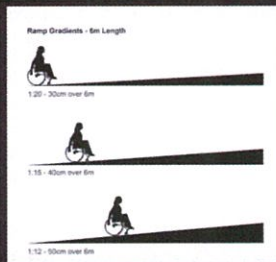
Activities	What's needed	Overcoming Barriers
Washing up	Water, soap, small towel/tissues	<ul style="list-style-type: none"> Wide doors & no steps to lavatory Knee space (access to lavatory) Reachable faucets
Toileting	<ul style="list-style-type: none"> Clean water Toiletry (toilet paper, soap, etc.) Privacy 	<ul style="list-style-type: none"> Wheelchair turning space of 150 cm Door opening out Accessible toilet with grab bars in the right places. Reachable toilet paper
Changing of clothes	Privacy, laundry soap, clean water	Knee space (access to lavatory)
Eating meals	Food, clean water	Regular table with knee space
Brushing teeth	Toothbrush, toothpaste, cup, clean water	Knee space (access to lavatory)
Bathing	Clean water, soap, towel	<ul style="list-style-type: none"> Accessible shower area Plastic bathing chair Reachable faucet Reachable place for bathing articles Grab bar support
Bedding	Blanket, pillow	Stable bedding for transfers from wheelchair
Charging of devices	Chargers	Reachable outlets
Disposal of adult diapers & underpads	Big trash bins	Proper place for trash bins inside and outside the building.

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Ramps to Shelters

DESIGN SPECIFICATIONS

1. Must be installed from the road until the shelter entrance
2. Slope of 1:12 - 1:15
3. Non-skid surface even when wet
4. Hand rails on both sides
5. Clear width: 1.2 m
6. Curbs: 10 cm
7. Signage (International Symbol of Access) to indicate accessibility



www.udel.edu/udaily/2012/aug/disaster-research-japan-083111.html



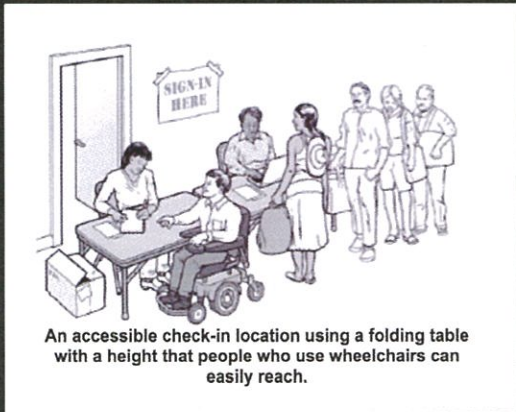
Source: ADA Checklist for Emergency Centers

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Accessible Shelters / Emergency Centers

DESIGN SPECIFICATIONS

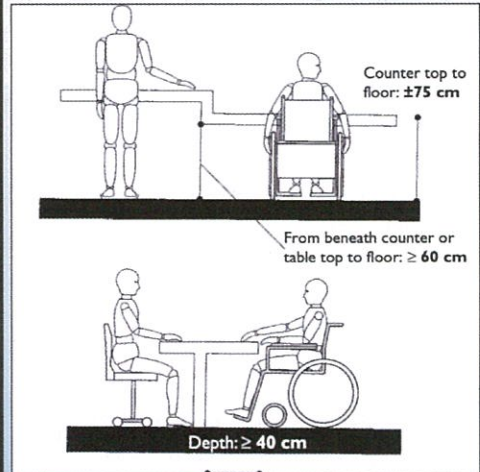
Tables with knee space



Source: ADA Checklist for Emergency Centers

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Table/Counter Height Specs



Source: Building an Inclusive Development Community

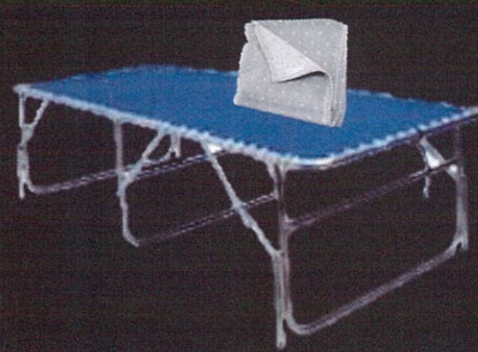
Bedding Provisions

PWDs and their assistants have great difficulty with bedding on the floor. Thus the following must be provided:

1. Stable cot or bamboo bed: Must not tilt over and must be placed near the entrance/exit of evacuation center.
2. Blanket: Not just for warmth but important for privacy as when changing clothes or adult diapers.



Source: <https://decoratorist.com/bamboo-themed-furniture-ideas>



Source: www.safetystore.com/bariatric-patient_core-medical-cot

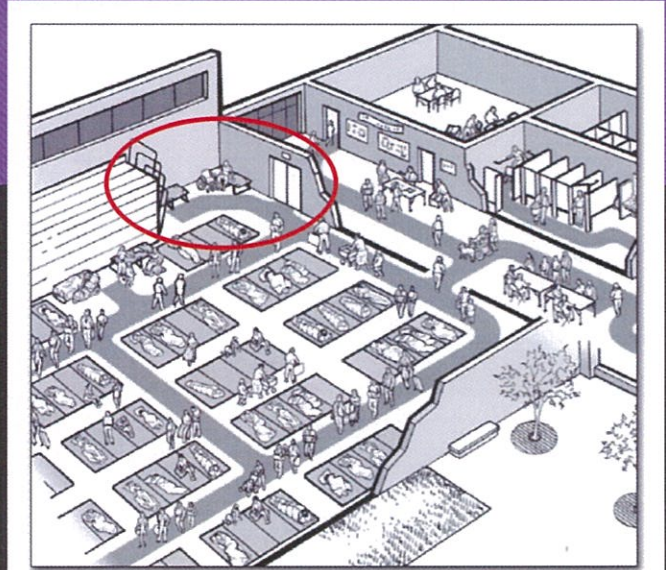
Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Pathways inside the Shelter

- Beds for PWDs must be placed near the entrance/exit of the evacuation center. (An option would be near the comfort room provided it is well ventilated and if it is convenient for the user.)
- There must be clear and accessible routes or pathways between cots or modular tents to toilet & washroom & other activity areas.



Source: Rappler.com



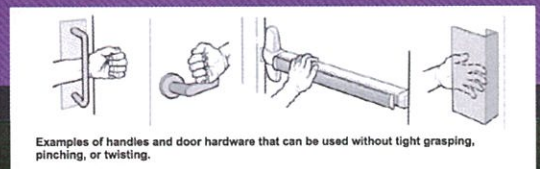
Interior of one section of a shelter's sleeping area. The shaded pathway indicates the accessible route, which provides access to accessible beds, cots, and other activity areas in the space plus the toilet rooms and other activity areas in the shelter.

Source: ADA Checklist for Emergency Centers

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

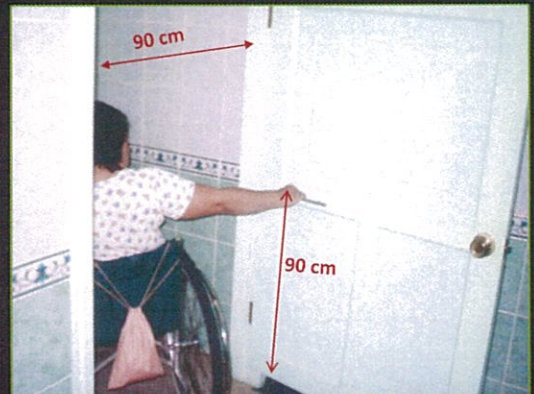
Wide interior doors (esp. toilets) that open OUTWARD

DESIGN SPECIFICATIONS



Source: ADA Checklist for Emergency Centers

1. If no sliding doors, doors **must open outward** so as not to block closure once wheelchair is inside.
2. Door width: **90 cm clear**
3. Preferably no door closers. Instead install a small cabinet handle or thin bar that acts as a **door-pulling handle** to be placed on the hinge side at a height of **90 cm from the floor**.



Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Low/split-level lavatories for children, little people & wheelchair-users



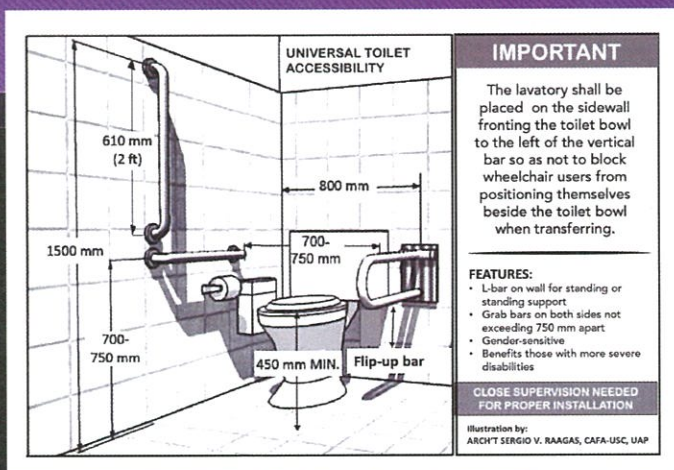
DESIGN SPECIFICATIONS

- Max height: 80 cm from floor
- For children or wheelchair users: 70-75 cm from floor
- Knee space with no obstructions
- Must have reachable lever faucets that do not require hand-twisting
- Tilted or lowered mirrors



Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Accessible Unisex Toilet & Washroom in Universal Design (for all)



IMPORTANT: Design specs and measurements must be followed closely to ensure users' usability, safety & convenience.

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Universal Toilet Design Specifications

IMPORTANT! Please carefully observe the measurements in order to preserve the functionality of the design for the safety & convenience of intended users.

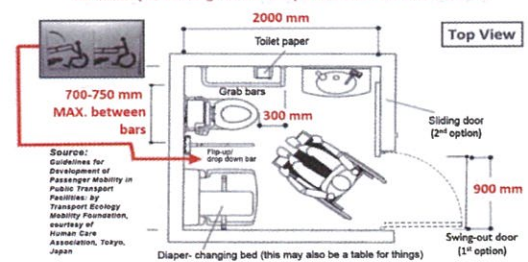
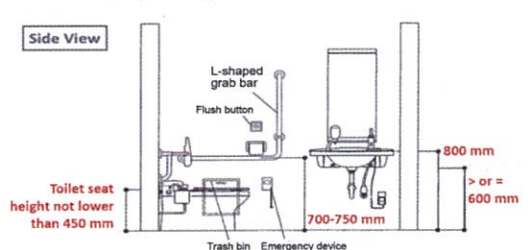


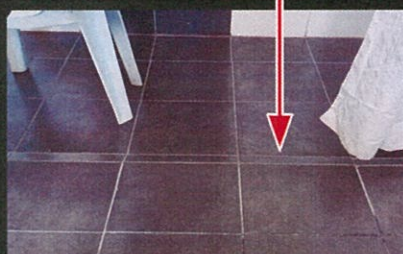
Illustration by: ARCH'T NOEL R. AVILA, UAP

Universal Toilet Design Specifications

IMPORTANT! Please carefully observe the measurements in order to preserve the functionality of the design for the safety & convenience of intended users.

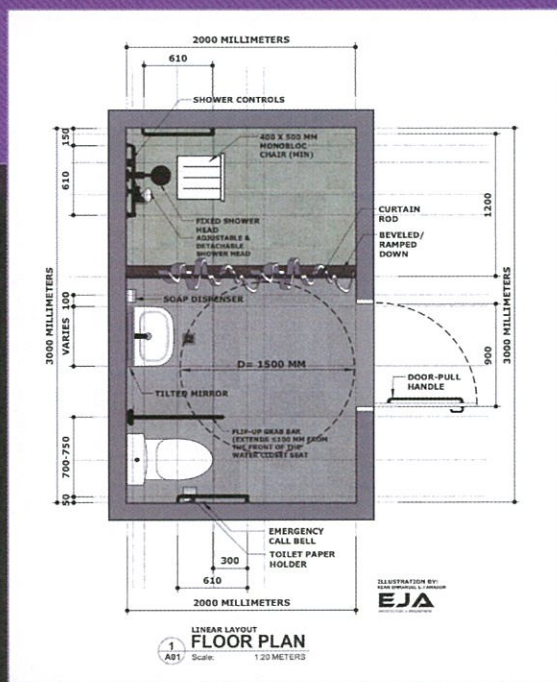


Roll-in Showers



DESIGN SPECIFICATIONS

1. Non-skid flooring when wet
2. Bathroom floor should be 12.7 mm lower than the rest of the floor to hold back water and the threshold shall be beveled or sloped.
3. Must have a vertical grab bar either to the left or right wall facing the shower fixtures
4. Turning space: 1500 mm - 2000 mm
5. Reachable/adjustable showers
6. Have a reachable place for holding shampoo, soap, etc. at 1m max from the floor
7. Provide a shower curtain
8. Provide a sturdy plastic chair



Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Special areas in an evacuation center

- Refuge area
- Privacy Room
- Child-friendly space
 - Breast-feeding station
 - Play / activity area
- Multi-faith Prayer Room
- Psychosocial space to:
 - relax
 - exchange information
 - exercise
 - engage in social encounters
 - where sound levels are below that of nature
 - Control & maintain personal comfort



<https://www.officialgazette.gov.ph/2013/11/22/couple-conducts-storytelling-for-kids-in-evacuation-centers/>

Source: Cebu DiDRRN

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Emergency Preparedness in Hotels or Buildings



- Stay in rooms on the 1st to 4th floor for easier rescue of PWDs & elderly
- Read about your hotel's or building's emergency protocol
- Check fire extinguisher
- Know your emergency exits
- Know your hotel's or building's refuge area
- Note the direction of higher ground
- Note where is the evacuation area
- Note emergency numbers
- Report unusual heavy cracks, leaks and sounds to the building administrator and move out
- Avoid checking in at hotels near big rivers prone to flooding
- And more...

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

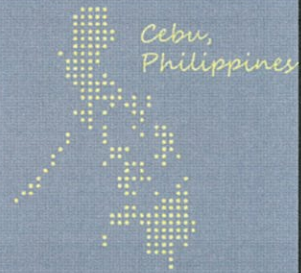
I hope the Philippine government will be sensitive enough to build accessible shelters, take our needs into consideration, and use these recommendations.



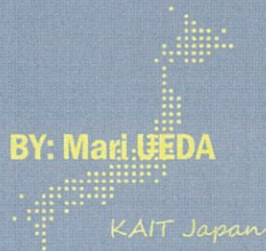
Thank you and keep safe!

Citation: Kono, Adela Avila (2022). Disability & Disaster [Powerpoint slides].

Disaster Prevention Seminar for People with Disabilities



Emergency radio system



2022



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Do you know?

-Disaster Prevention Administration Radio

before

Introduce me

Mari UEDA (Associate professor), Ph.D (Eng.)

Kanagawa Institute of Technology

Department of Information Medea

My specialty: Acoustics engineering.

Today's my topic



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😊 Today's my topic

About

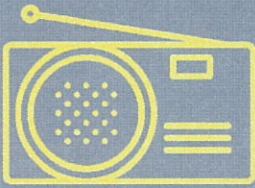
-Disaster Prevention Administration Radio

What is the

-Disaster Prevention Administration Radio?

Like an

"Emergency radio system"

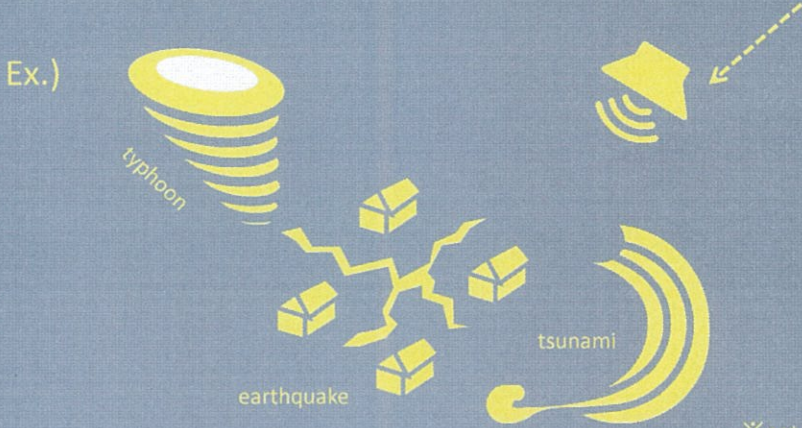


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-Disaster Prevention Administration Radio

In the event of a disaster, the inhabitants uses speakers installed outdoors. This is a device that transmits information by voice.

Ex.)



typhoon

earthquake

tsunami

※not inside

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Our research

“Emergency radio”

⇒ The content may be difficult to hear depending on the local situation.

Ex.)



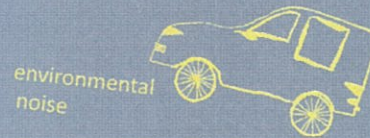
rain noise



wind noise



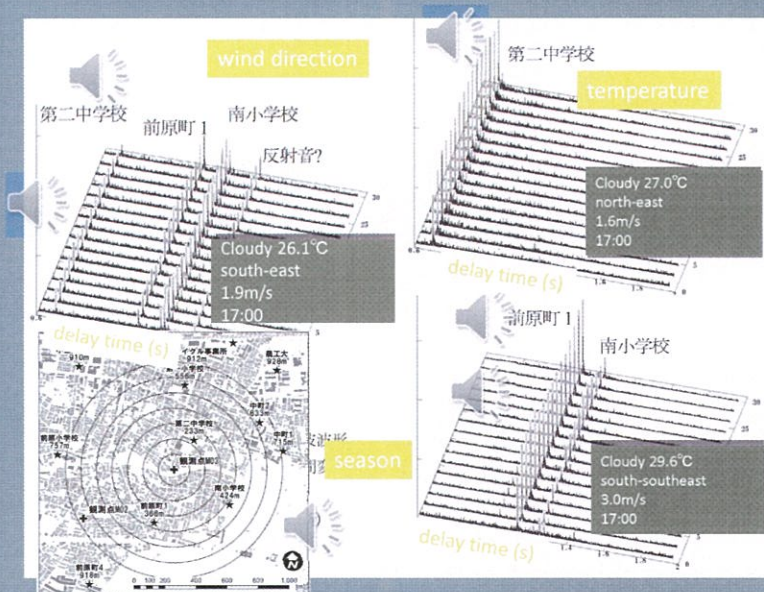
reflected sound etc...



environmental noise

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Differences in weather conditions



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Aim for

In the event of a disaster, it is very important to obtain accurate information from reliable information sources.

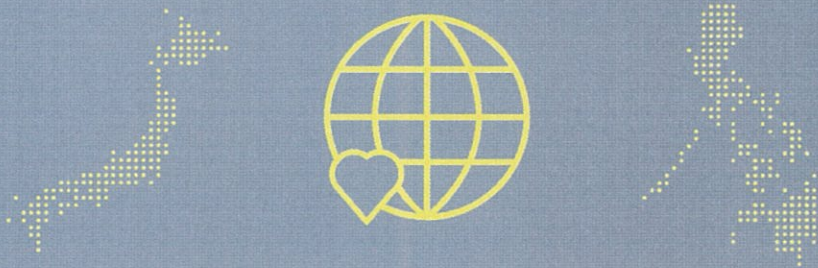
- Active use of ICT
- Support for the hearing impaired and elderly people
- Improvement of hearing

Etc...



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Salamat!



What can we do about disaster prevention administration radio and hearing support?

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Disaster Prevention Seminar for People with Disabilities

Human Robot Interaction for Health Care and Beyond

Ryo Saegusa, Kanagawa Institute of Technology



Contact: ryo.saegusa@syblab.org

<https://www.syblab.org/>

Brief Self Introduction

□ Ryo Saegusa (Call me “Ryo” 😊)

- SybLab: Human-Machine **Symbiosis Laboratory**
- KAIT: **Kanagawa Institute of Technology**, Japan



Japan



KAIT

KAIT: About 200 faculty staffs and 5000 students studying in 13 depts of u.g. schools and 6 depts of graduate schools.



SybLab

SybLab: 4 faculties and 22 students

Introduction

Motivation and What's up on Robots?



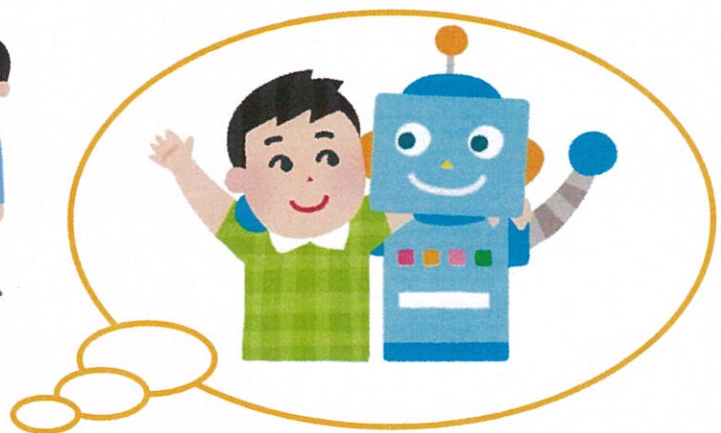
[1] Saegusa, R., Gemma, M., Ogawa, K., Gait Measurement System for Health Care Mobile Robots, 27th International Symposium on Artificial Life and Robotics (AROB2022), pp.161-166, Online, January 25-27, 2022.

Motivation

- We need supports for living, but we have very few people to request a help... (We are all busy for own life!)
 - Why don't we ask robots to help our life?



Elderly and handicapped people, caregiving parents and the babies...

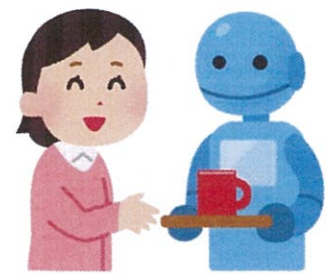


Health care robots are our hope!

Motivation

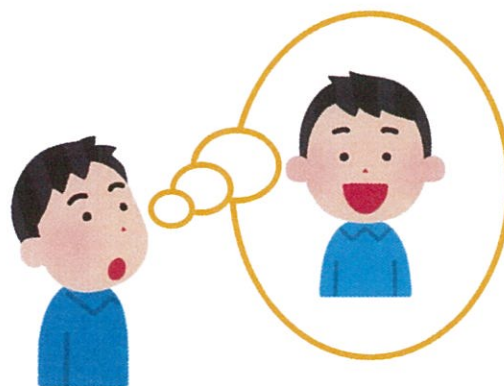
- ❑ Human and robots are different in their field of expertise.
 - Let's try to request a help to a robot (no hesitation)!
- ❑ Robots are good at...
 - Works simple and repeatable (cleaning,...)
 - Works that embarrass people (toileting,...)
 - Works that may give you a risk (decontaminating,...)

- ❑ Ask, ask, ask all our works...



Motivation

- ❑ Then, what remains after you asked all?
 - You will see what you really like to be and do!
- ❑ Asking robots is a good thing!

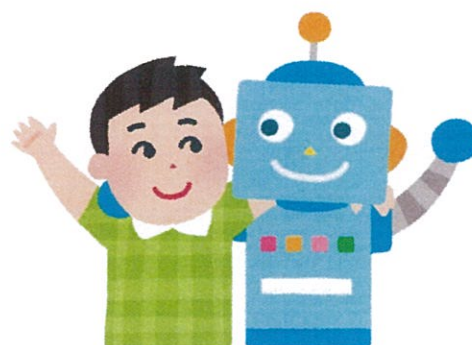


I'm unreplaceable!

Motivation

▣ Also, robot elements enrich your sensing and actions.

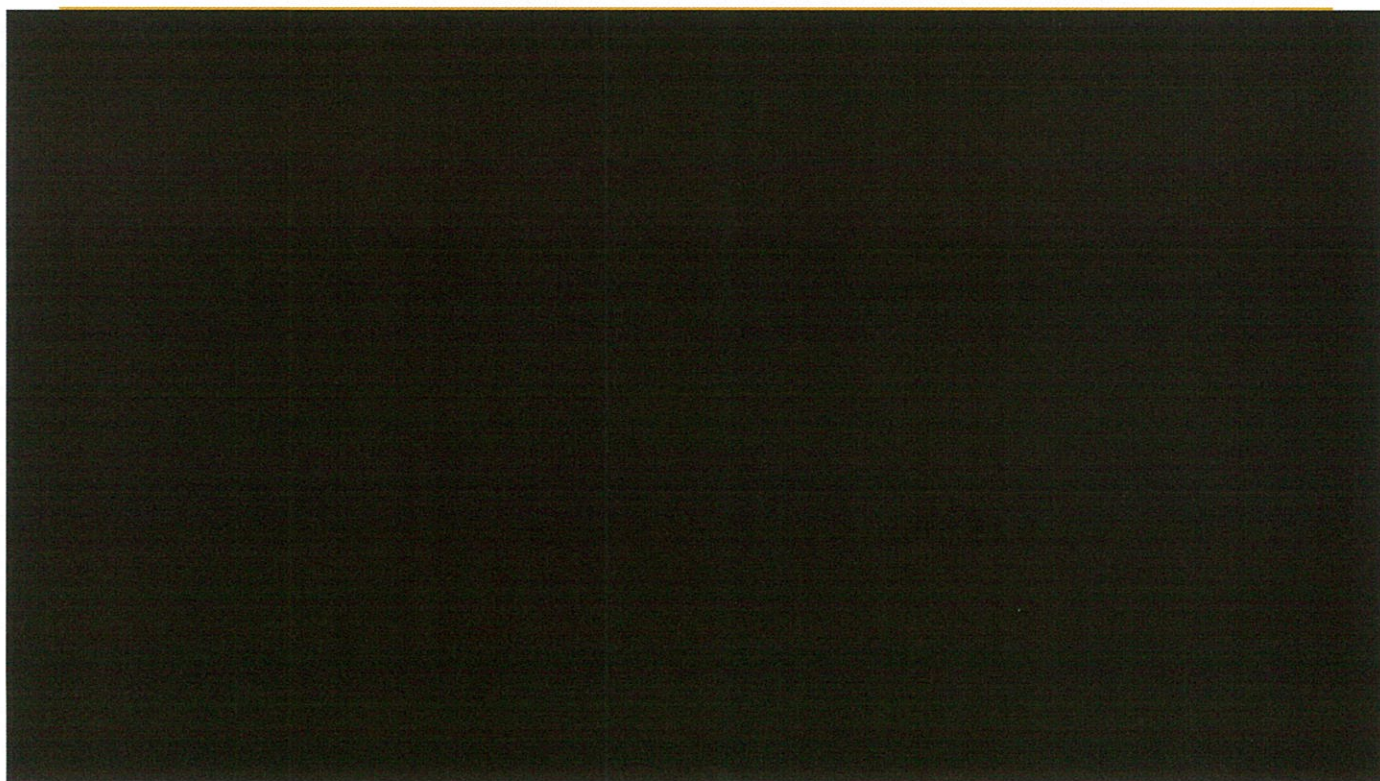
- Watching with smart glasses
- Hearing with aid devices
- Eating with manipulators
- Moving with powered suits
- Talking with AI speakers
- Thinking with partner robots



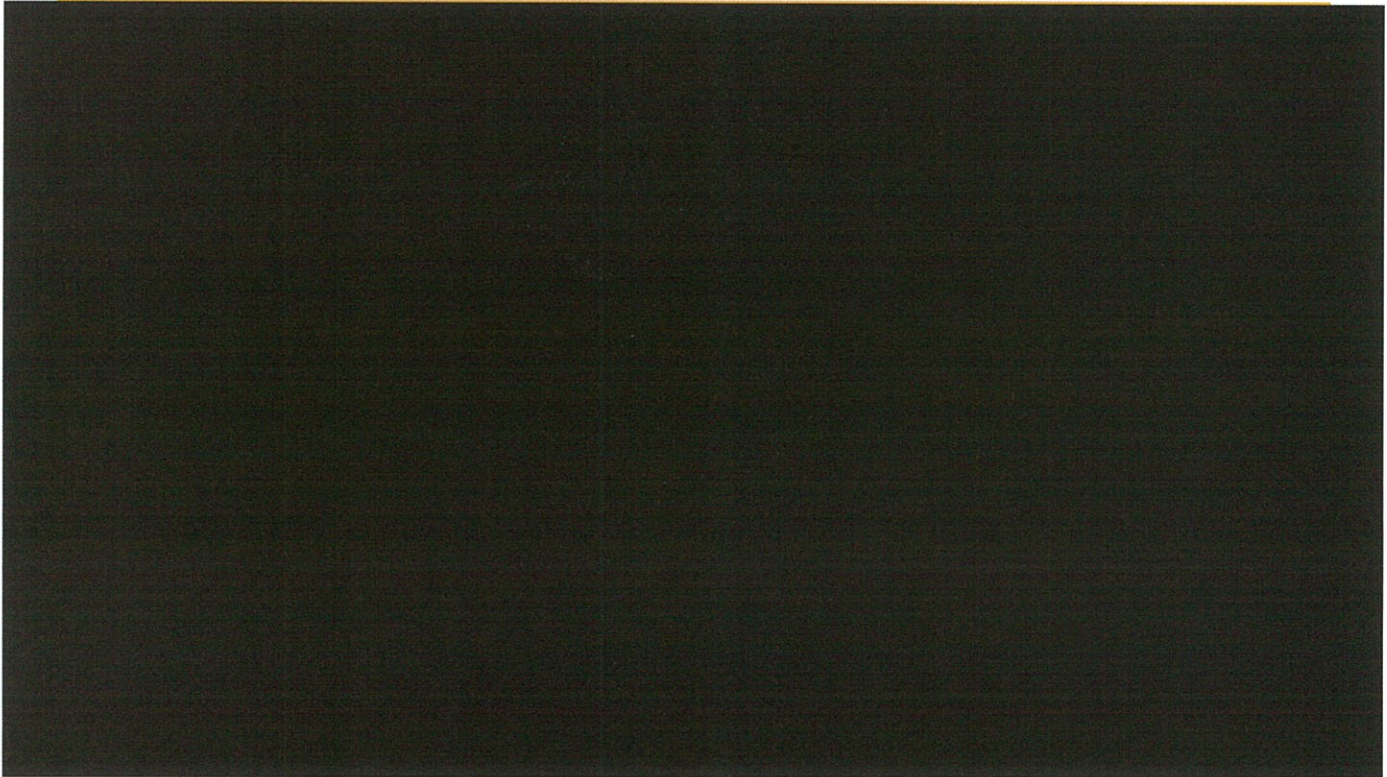
▣ Robots enrich your life!

Next slides
Three examples

What's up on Robots for Cares?



What's up on Robots for Medicals?

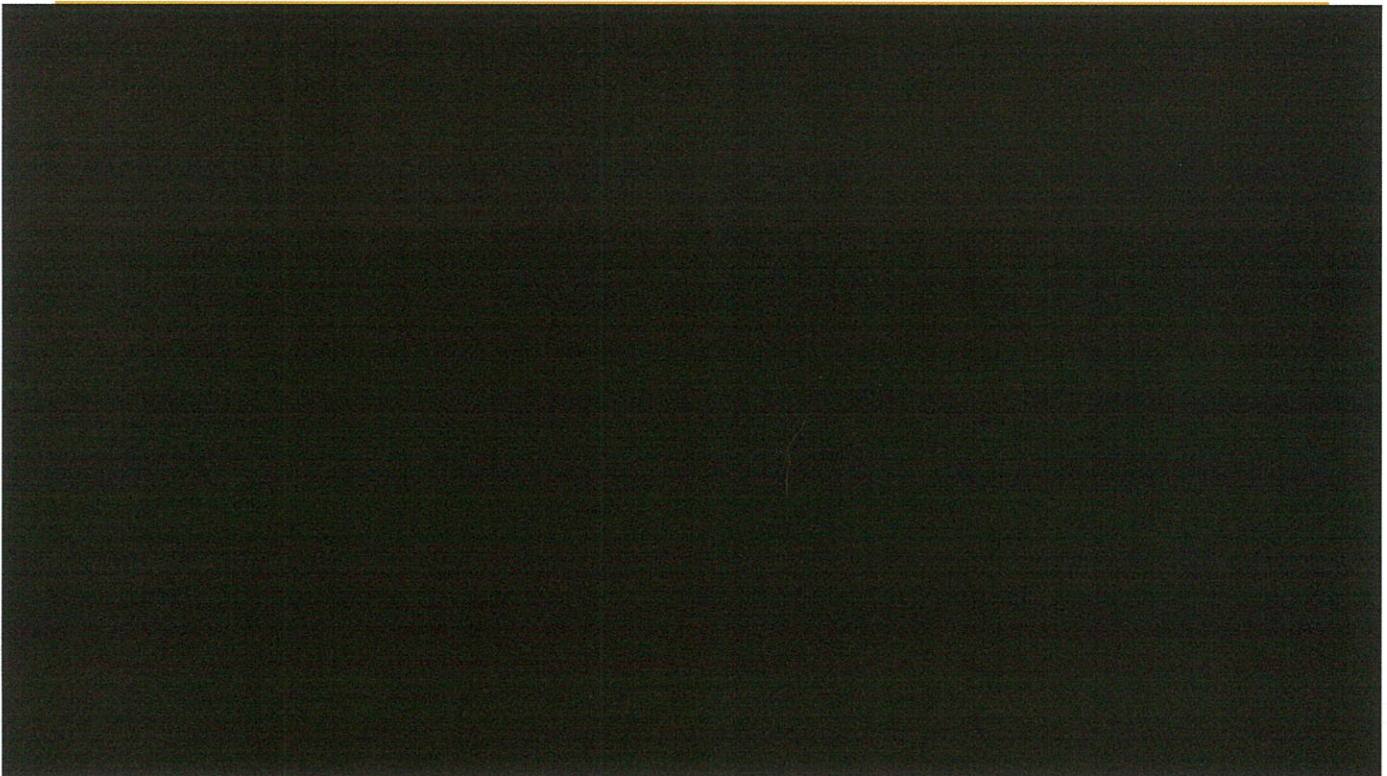


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<https://www.syblab.org/>

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What's up on Robots for Welfare?



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<https://www.syblab.org/>

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Acknowledgements

- ❑ I thank to the lab members having elaborated the studies presented in this talk...

SybLab members, 2021



- ❑ Thanks for your kind attention!

Would you like to try?



Disaster Prevention Seminar for People with Disabilities

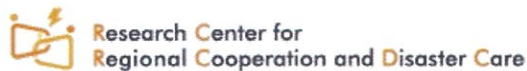
<Part 1: Case Study: Cebu, Philippines>

Understanding of impact of disasters toward the lives of people with disabilities in Asian countries

September 26, 2022 (Mon.)

Moderator: Yoshimichi Ogawa

Center for Regional Cooperation and Contribution



Mortality rate of persons with disabilities in the Great East Japan Earthquake (survey of 27 coastal municipalities, 2011)

Mortality rate against total population **1.03%**

Mortality rate against population of people with disabilities

2.06%

High mortality rate for people with disabilities!

KAIT Students' activities for elderly persons in East disaster area 2011



leave no one behind

SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD



Nothing about Us without Us

**CONVENTION ON THE RIGHTS OF
PERSONS WITH DISABILITIES 2006**

Article 11

Situations of risk and humanitarian emergencies

States Parties shall take all necessary measures to ensure the protection and safety of persons with disabilities in situations of risk, including situations of armed conflict, humanitarian emergencies and the occurrence of natural disasters.

Seminar Program (15:00~16:30 Japan time)

■ Keynote report “DISABILITY and DISASTER”

Ms. Adela Kono Advocate of Accessible Environments through Universal Design

■ Discussion

- Ms. Adela Kono
- Associate Prof. Mari Ueda (Acoustic Engineering)
- Associate Prof. Ryo Saegusa (Robotics · Human Science)

Observer/commentator:

- Ms. Etsuko Ueno (Former Management Counselor of Japanese Society for Rehabilitation of Persons with Disabilities)
- Prof. Kosuke Takano (Director of International Center)

Moderator:

- Mr. Yoshimichi Ogawa (Honorary Prof. / Director of Center for Regional Cooperation and Contribution)

Keynote speech “DISABILITY and DISASTER”

Ms. Adela Kono

- Advocate of Accessible Environments through Universal Design
- Organization of Rehabilitative Advocates for Inclusion (ORAI)
- Regional Committee on Disability Affairs (RCDA)
- Regional Development Council (RDC)
- Cebu Council on Independent Living (CCIL)
- Disability-inclusive Disaster Risk Reduction (DiDRR) Network

Contents:

- (1) Life of persons with disabilities in Cebu, Philippines
- (2) Examples of typhoon damage in the Philippines and problems faced by persons with disabilities
- (3) How To Make A Disabled-Friendly Evacuation Center

Discussion

- Ms. Adela Kono
- Associate Prof. Mari Ueda (Acoustic Engineering)
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Future Plan of the Seminars, 2022~2023

- Theme: Ensuring safety and living for people with disabilities at the time of a disaster in Asia
- November 2022, February and March 2023
- 2:00 pm ~ 4:30 pm
- Guest' report / Panel discussion
- Philippines, Vietnam, Thailand, Indonesia, Japan and other countries

連絡先

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