HELP-GWP PAN ASIA CONSULTATION ON DRAFT PRINCIPLES ON ADDRESSING WATER-RELATED DISASTER RISK REDUCTION (DRR) DURING COVID-19 PANDEMIC

30 July 2020
Important Information

1. Every participant must choose their **language channel** (English or Russian)
2. Once you have chosen, please also **mute other audio** to have 100% dedicated language channel (otherwise you will hear 80% of your language channel and 20% for the other language channel)
3. For Polling application, we will use **Menti Meter**. Please kindly prepare your handphone to join the poll. Please go to your browser and type: [www.menti.com](http://www.menti.com) and insert the code: **77 65 20** or you can use your browser in your laptop (handphone is recommended)
Welcome Remarks
House Keeping Rules

1. This online workshop will be recorded.
2. Please mute your audio when moderator and resource persons are speaking/presenting. You can unmute your audio or will be invited to unmute your audio by the moderator or host when requested to speak.
3. Please change your Zoom ID to this format: Name - Country
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As climate variability and change have increased the occurrence of disasters such as cyclones, floods and droughts in Asia region, governments in the region have begun to increase their priority on the disaster risk reduction efforts. Many efforts are being made to build capacity, influence policies and develop strategies to better equip member states to prevent and address disaster. Given the need and importance of paying attention to water-related disasters, the High-level Experts and Leaders Panel on Water and Disasters (HELP), drafted ‘principles on investment and financing for water related disaster risk reduction’, which was launched during the 8th World Water Forum in Brazil. Building on a cooperation between the Global Water Partnership (GWP), the HELP and MLI, Japan, several sessions on DRR were organized in late 2018 and early 2019 in several regions with the main objective to consult on investment and financing for water related-disaster risk reduction principles. The principles were widely accepted.

In early 2020, World Health Organization (WHO) announced global pandemic of Coronavirus disease known as Covid-19, making all countries in the whole world to focus their attention to combat the disease. Not a single country is prepared to face the challenges brought by Covid-19. On one hand, countries with poor public health and emergency response system, and water governance are impacted the most by the pandemic. On the other hand, disasters are not waiting for the pandemic to stop, making the risk becoming significantly higher. The risk from pandemic and the natural disaster, particularly water-related disaster, has created a term called “Twin Risks”.

Rising to the occasion, HELP is currently developing draft principle to address water-related DRR during COVID-19. HELP would like to conduct an online ground-truthing consultation, connecting several regions of GWP within Asia, particularly with a focus to gain practical insights to how such principle can be implemented on the ground. DRR actions with special attention to the current pandemic situation will protect disaster-affected areas from becoming epicenter of pandemic explosion and swiftly recover from disasters. The Principles are a set of practical advice urgently given to leaders and both managers of DRR and those of COVID-19 to better address water-related disasters that may occur even tomorrow under the pandemics. The Principles are made to address water-related disasters but most of the items are applicable to the other types of disasters. This regional online consultation on draft principles on addressing water-related disaster risk reduction during Covid-19 pandemic is co-organized by High Level Experts and Leaders Panel on Water and Disasters (HELP), Global Water Partnership, and will be supported by National Graduate Institute for Policy Studies (GRIPS).
<table>
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<tr>
<th>Objectives</th>
<th>The purpose of this consultation is to discuss and gain insights on <strong>how to practically implement key suggestions proposed in the HELP Principle to Address Water-related Disaster Risk Reduction under Covid-19 Pandemic</strong>. Asia region now faces monsoon season. The consultation also aims exchanges among decision-makers, experts and practitioners in Asia region on how they can be better prepared for co-occurring disasters on water and health. Suggestions coming through this discussion engaging practitioners, will also provide inputs to the draft principles, allowing these principles to serve as the practical guidance for decision-makers and practitioners in their effort to reduce risk from water-related disaster during covid-19 pandemic.</th>
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<td>Targeted Participants</td>
<td>The targeted participants are GWP partners, as well as key representatives from institutions that plan, make decisions and practice actions on water-related disaster under the pandemic. Water-related line ministries (Health, Public Works, Agriculture, Environment, Industry), National Disaster Management agency, Ministry of Finance, Ministry of Trade and Ministry of Planning are among the key representatives that have direct influence on the water-related disaster risk reduction and pandemic in each country. It is important for these related ministries to be fully informed about the Principles to ensure effective future follow up in each respective country. Other key participants are the representatives of GWP Southeast Asia, South Asia, China and CACENA Country Water Partnerships. Note: Estimated number of participants: 50-80 people from Asian region</td>
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Dr. Zelina binti Zaiton Ibrahim has over 35 years’ experience as an academician at Universiti Putra Malaysia, with expertise in water quality, estuarine and coastal processes.

She has been Alternate Steering Committee member for Malaysia Country Water Partnership to the Global Water Partnership South East Asia over the past 6 years.

She is currently a Coordinating Lead Author for Chapter 16: Key risks across sectors and regions of the Working Group II Contribution to the IPCC Sixth Assessment Report, since February 2018.
Opening Remarks:
Chairman GWPSEA
Dr. Inthavy Akkharath
Dr. Inthavy Akkharath

• Director General, Department of Water Resources, Ministry of Natural Resources and Environment, Lao-PDR
• Chairman of Global Water Partnership for Southeast Asia
• Chair of ASEAN Water Resources Management Working Group
Keynote Speech:
Minister of Public Works and HousingRepublic of Indonesia
Vice Chairman of High-level Experts and Leaders Panel
His Excellency Mr. Basuki Hadimuljono
Minister of Public Works and Housing, Republic of Indonesia
Vice Chairman of High-level Experts and Leaders Panel
Keynote Speech:
The Draft Principles and Its Urgency
Professor Kenzo Hiroki
Coordinator of High-level Experts and Leaders Panel (HELP) on Water-related DDR
Professor Kenzo Hiroki

- Professor of National Graduate Institute of Policy Studies (GRIPS) and Coordinator of High-level Experts and Leaders Panel on Water and Disasters (HELP)
- Member, Executive Board of International Lake Environment Committee (ILEC), Bureau Member of OECD High-level Risk Forum
- Member of International Advisory Committee, Sichuan University, China.
- Former Member and Vice Chair of GWP Steering Committee, and Chair of GWP Selection Committee.
- Prof. Hiroki has been engaged, globally and nationally for over 39 years, in field engineering and designing, research and development, budgeting and financing, and policy formulation and legislation in the sectors of water and sanitation, integrated water resources management, and particularly water and disasters.
- The positions he held include:
  - Vice Secretary-General of the 3rd World Water Forum
  - Head of Secretariat, Secretary-General’s Advisory Board on Water and Sanitation (UNSGAB) of the United Nations, New York
  - Director for Innovation, Science and Technology, Cabinet Office
  - Director of Water Resources Management, MLIT
  - Vice President of College of Land, Infrastructure, Transport and Tourism (CLIT).
Principles to Address Water-related Disaster Risk Reduction under the COVID-19 Pandemic

Kenzo Hiroki, Professor, GRIPS and HELP Coordinator
In the current COVID-19 environment, immediate attention has been placed on mitigating COVID-19 infections and treating those who become ill.

However, the threats of water-related disasters remain as imminent now as before COVID-19.

Implementation of DRR strategies and pre-emptive actions that factor in the current pandemic are needed to protect areas impacted by water-related disasters from also becoming new epicenters of the pandemic.
Floods in Fubei, China in June

Floods in Assam, India in June

Tornados in New Zealand in June

Floods in Nigeria in June

Cyclones in Southern Brazil in June

Storm in New England, U.S.A.

Floods in Poland in June

Heavy rain in Southern Japan in July
Cyclone Amphan, 16th-21st May 2020

https://healthpolicy-watch.org/cyclone-amphan-relief-efforts-ramp-up/


https://www.cnn.co.jp/world/35153997.html
Epidemic of COVID-19 and Cyclone Amphan in West Bengal, India
What actions should we take to avoid the Twin Catastrophe?
Principles to Address Water-related Disaster Risk Reduction (DRR) under the COVID-19 Pandemic
- Launched on May 29th, 2020 -

The Principles are action-oriented guidelines:
✓ created with participation of experts from member states, the UN agencies, International organizations, IFIs, Civil Society, and Research Institutions;
✓ to support leaders, DRR officials & stakeholders, and citizens to better prepare and cope with water-related disasters under the COVID-19 pandemic;
✓ in the format of practical and on-target bullet points which are ready for immediate use in countries and fields, and applicable to all types of disasters including water-related ones
PRINCIPLE 1: ENHANCE LEADERS’ AWARENESS ON DISASTER RISK REDUCTION (DRR) IN THE PANDEMIC

Leaders should:

- Be aware that water-related disasters are imminent in countries and cities while they are under COVID-19 pandemic. Although situations in areas affected by both disasters and pandemics can be complicated and confusing, step by step decision making and actions will help. Although tasks may look too immense and complicated, avoid giving up.
- Ensure integrating disaster and pandemic risk management strategies and actions. Bring together joint teams of DRR and COVID-19 experts to provide advice based on their ongoing dialogue and integrated advice. Make critical decisions by consulting them.
- If a water-related disaster happens, maintain or recover as quickly as possible basic services such as power, transport, water and hygiene to prevent spread of disease and cumulative effects of co-occurring disasters, including protecting essential medical and DRR personnel.

PRINCIPLE 2: INTEGRATE ACTIONS ON RISK MANAGEMENT OF DISASTERS AND PANDEMICS

- Fully include the health sector into the integrated risk management system.
- Quickly share and learn from the recent cases of heavy rains, floods, hurricanes and tornados that have occurred under COVID-19 situations.
- Provide hazard maps and DRR advice to hospitals and health facilities before disasters strike. Create overlapping maps of disaster/COVID-19 affected areas and facilities.
- Review and improve existing early-warning and evacuation systems so that they meet requirement for both safe evacuation and prevention of infection by COVID-19. Conduct joint risk awareness campaigns of DRR and COVID-19.
- Activate existing youth groups for DRR to call for solidarity and collaboration to contain spread of COVID-19 as behavior of young people are decisive element in controlling the decease.
PRINCIPLE 3: PROVIDE CLEAN WATER, SANITATION, AND HYGIENE SUSTAINABLY BEFORE, DURING AND AFTER DISASTERS

- Be aware that natural hazards often lead to disruptions in water availability which could affect COVID-19 mitigation efforts.
- In regions with acute water scarcity, disasters may affect the implementation of hand washing, waste management and other practices meant to prevent human-to-human transmission of the COVID-19 virus. Specific attention must be paid to risks caused by droughts since water scarcity may hinder efforts to contain sanitary crises.
- Consider using non-contaminated alternative sources including water harvesting, and the reuse of wastewater to prevent collateral hazards of disaster and pandemic. The DRR plans of water service providers should include the effects of not only natural hazards but also pandemics.

PRINCIPLE 4: PROTECT DISASTER MANAGEMENT STAKEHOLDERS FROM THREAT OF COVID-19

- Educate and build strategically the capacity of DRR stakeholders about COVID-19. For example, use advice leaflets, provision of webinar, and more. Include social distancing instructions in DRR activities in manuals and daily check list.
- Make sure that DRR stakeholders including volunteers are equipped with standard COVID-19 protections such as masks, when engaged in disaster preparedness/prevention/recovery activities. If possible, stockpile those as well as COVID-19 personal protection equipment (PPE) for use at highly infectious cases.
- Balance the need for swift disaster prevention/recovery and for avoiding disease transmission between COVID-19 affected areas and less affected ones through travel of DRR stakeholders, including volunteers.
**PRINCIPLE 4: PROTECT DISASTER MANAGEMENT STAKEHOLDERS FROM THREAT OF COVID-19**

**Actions of US Army Coops of Engineers and on DRR and COVID-19**

Continue to **DELIVER** the mission under COVID-19
- Essential staff are at posts
- Health safety precautions are taken
- Consistent w/ **HELP Principle 2, 4**

Respond to **MITIGATE** COVID-19 impacts
- Identification and construction of ACF
- COVID-19 modeling for response planning
- Overall U.S. military support to FEMA and others (3-S)
- Consistent w/ **HELP Principle 1, 4, 5**

**PLAN and PREPARE** for DRR scenarios under COVID-19
- Task Forces incorporate COVID-19 in preparation
- Development of Table-Top DRR exercise
- Consistent with **HELP Principles 1, 2, 3, 8**

1,000-bed makeshift field hospital erected to treat coronavirus patients at the Javits Convention Center in New York City.

Example of a modelling airflow dispersion from a supercomputer.
PRINCIPLE 5: PROTECT SCARCE MEDICAL RESOURCES FROM DISASTER IMPACT

- Avoid designating hospitals and medical facilities as places for evacuation. Remove those buildings and facilities from designated evacuation places in hazard maps and DRR plans.
- Prioritize protection of medical staff, facilities, and equipment from disaster impact by:
  - Moving essential power generation equipment to safe areas from water-related disasters (flooding, etc.) and provision of auxiliary power supply equipment to hospitals, health posts and medical facilities. Moving essential medical equipment and materials to upper floors at early stage.
  - Early dispatching of disaster management personnel to hospitals, health posts and medical facilities to ensure communication of appropriate DRR advice.
  - Creating evacuation plans for patients and medical staff, taking infectious zones into consideration.
  - Prioritizing provision of water, sanitation and hygiene to hospitals, health posts and medical facilities if water supply and sanitation services are disrupted due to disasters.

PRINCIPLE 6: PROTECT DISASTER EVACUEES FROM THREAT OF COVID-19

- Immediately create or revise evacuation plans that include adapted shelters to assure social distancing, hygiene facilitation, and good sheltering procedures.
- Ensure proper ventilation of evacuation buildings/facilities to prevent cluster infection. Identify additional buildings and spaces for shelters that may be needed to meet specific needs for protection of evacuees from COVID-19 such as social distancing and separate spaces for self-quarantine patients.
- Promote vertical evacuation as the priority methods of evacuation whenever and wherever possible. Discuss with local community on earlier evacuation to increased number of higher buildings, shelters, and spaces to avoid congestion of evacuees.
- Identify and plan early evacuation and care for the most vulnerable, with social inclusion approach, from the compound hazards, e.g., seniors, handicapped, pregnant women, and patients with chronic deceases.
- Provide ample clean water, soap, sanitary goods, and sanitary pads for evacuees.
- Prevent any COVID-19 related discrimination to and among evacuees.
- Advise citizens to include masks, wipes, soaps, towels, and thermometers in evacuation kits prior to disasters.
An evacuation center in Shibecha Town, Eastern Hokkaido, where an evacuation order was issued due to heavy rain. (March 11th, 2020)

(From: https://www.youtube.com/watch?v=ix3MUdwmluo)

Creating a safer evacuation space under COVID-19 with a cardboard bed and partitions.

(In Higashine City, Yamagata at an evacuation drill on June 23rd, 2020)
(From: https://digital.asahi.com/articles/photo/AS20200623004395.html)

**PRINCIPLE 6: PROTECT DISASTER EVACUEES FROM THREAT OF COVID-19**

Disaster evacuation with social distancing under COVID-19
PRINCIPLE 7: PROTECT COVID-19 PATIENTS FROM THREAT OF DISASTERS

- Ensure that DRR and COVID-19 are given integrated top priority: avoid risks that directly endanger human life.
- Understand and take concerted actions for COVID-19 mitigations based on medical control principles of infectious diseases. These medical principles include: 1) Eliminate the source of infection; 2) Cut off the transmission route; 3) Protect the vulnerable groups.
- Create protection plans for COVID-19 patients in self-quarantine or designated facilities that include: means of communication and messages; evacuation plans to disaster-safe quarantine facilities, and medical support after evacuation.

PRINCIPLE 8: DEVELOP SPECIALIZED EVACUATION GUIDANCE FOR CITIES AND AREAS UNDER COVID-19 LOCK-DOWN

- Give special early warning to the locked down areas to ensure effective evacuation and safety assurance against disasters and prevent panic actions.
- Create contingency emergency evacuation plans for lock-down situations to prevent panics and enhanced spread of the infection. Disaster response plans based on a time-line format that includes lifting specific restrictions in specific areas need to be considered.
PRINCIPLE 9: FINANCE DRR ACTIONS UNDER COVID-19 EFFECTIVELY TO AVOID ECONOMIC CATASTROPHE

- Fully fund the pandemic finance appeal while at the same time having a contingency budget and funds to address disaster and climate-related risks, keeping in mind that compound hazards may cause irreparable economic catastrophe.
- Ensure flexible funding and disbursement that enable DRR players to plan and respond to rapidly emerging and changing multiple risks under COVID-19 situation.
- Encourage digital payment mechanism in DRR transactions through telephone-based digital currency payment and digital currencies to prevent spread of COVID-19 through contact infection.

PRINCIPLE 10: STRENGTHEN GLOBAL SOLIDARITY AND INTERNATIONAL COOPERATION TO COPE WITH THESE CO-OCCURRING CHALLENGES TOWARDS BUILDING OUR WORLD BACK BETTER

- When a mega-disaster occurs, share accurate and timely information on the disaster and its impact with the international community in transparent and accountable manners on a regular basis, to provide global trust to governance and the economy of the affected country.
- If necessary, prepare to facilitate international DRR and humanitarian assistance personnel and equipment. Countries should pre-consider and plan facilitation arrangements such as visa issuance, quarantine clearance and customs clearance and protocols for safe assistance during the pandemic. Dispatched teams should be equipped with protection kits.
- Map risks from many perspectives and work in a collaborative, trans-boundary way since hazards do not respect borders or politics.
- Extend international support to low- and middle-income countries that are struggling to cope with the outbreak recognizing that all need to attend first and foremost to the safety and well-being of their own country’s citizens.
- Start recovery planning now to build our world back better. National and local governments must factor in biological hazards and risks in their national and local disaster risk reduction strategies (Sendai Framework Target (e)).
Heavy Rain Disaster in Kumamoto, Japan on July 4\textsuperscript{th}-, 2020
Heavy Rain Disaster in Kumamoto, Japan on July 4th

- 340mm-415mm of rainfall in 12 hours
- Up-to 9 meter-deep inundation in Hitoyoshi City
- 62 dead or missing as of July 7th
Disaster Response under COVID-19 in Hitoyoshi City, Kumamoto, Japan (July 5th, 2020)

- Allotment of evacuation space taking social-distance into consideration
- Health check before entry into a shelter
- Ex-ante DRR drills by a hospital worked
- Setting-up evacuation cubicles for families
- Calling for donation of masks, goggles, towels, disposable gloves, alcohol disinfectants, and plastic sheets
- Free provision of food by a delivery company
International Online Conference to Address Water-related DRR under COVID-19, Thursday, 20 August 2020

Central Europe 8:30 am-10:45 am (CEST, UTC+2), Seoul/Tokyo 3:30 pm-5:45 pm, (KST/JST, UTC+9)

Opening
• Opening remarks by Dr. Han Seung-soo, HELP Chair and Former Prime Minister of the Republic of Korea
• Welcome remarks by Mr. Masatsugu Asakawa, President of ADB, and other Co-organizers

Keynote Speeches
• H.E. Mr. Angel Gurría, Secretary-General of the Organization of Economic Cooperation and Development
• H.E. Dr. Danilo Türk, Former President of the Republic of Slovenia, Chair of the Global High-Level Panel on Water and Peace and Lead Political Advisor of the Geneva Water Hub

Scientific Omnibus Presentation

• Mr. Basuki Hadimuljono, Minister of Public Works and Housing, Republic of Indonesia
• Ms. Cora van Nieuwenhuizen, Minister of Infrastructure and Water Management, Kingdom of the Netherlands (tbc)
• Mr. Ilkka Salmi, Director for Disaster Preparedness and Prevention, DG ECHO, European Commission
• Dr. Shinichi Kitaoka, President, Japan International Cooperation Agency (JICA)
• Mr. Bambang Susantono, Vice President for Knowledge Management and Sustainable Development, Asian Development Bank
• Ms. Catarina de Albuquerque, Chief Executive Officer, Sanitation and Water for All
• Other high-level representative from UN/International Organization/Civil Society

- Sharing lessons and good practices to better address water-related disasters under COVID-19 -
Thank you

https://www.wateranddisaster.org/
Check-in: Understanding the knowledge in the room
Please use your handphone or **click the link in the chat box** to go to menti meter.

1. On your browser, type: **www.menti.com**
2. Put in the code: **77 65 20**
3. Direct link: **https://www.menti.com/v2pb1vyc7i**
4. Please answer the survey
In your opinion, how severe is the impact of Covid-19 pandemic to the water-related disaster risk reduction efforts and management?

- Not severe at all: 1
- Somewhat severe: 13
- Quite severe: 40
- We need to rethink almost everything: 14
Please vote on the existing questions

1st: How to make high preparedness in water-related disaster risk reduction and emergency response to be set as one of the main development foundations?

2nd: What are the initial steps at country level for these principles to be adopted and implemented?

3rd: If we want to build back better, what would be the basic things that the government must do or have in place first in term of Disaster Risk Reduction?

4th: Who should adopt the principles (the government, community, and private sector)? How to ensure the adoption are inclusive?
Perspectives on the draft principles
Basja Jantowski

• Has over 15 years’ experience working in water stewardship, integrated water resources management, soil and water conservation and WASH as consultant, trainer and manager in European, African and Asian countries.

• She holds a Master’s Degree in Physical Geography, specialized in Hydrology, Soil and Water and Land Degradation, from the University of Utrecht, The Netherlands and brings in years of working in international development and water. From leading implementation of WASH projects in remote areas in Ethiopia and Nepal to providing strategic advice to major companies on water within their operations and supply chains in Indonesia.

• Since 2016, she has been working in Indonesia and currently works as Program Director for Yayasan Aliansi Wali Sumber Daya Air Indonesia (AWS Indonesia) managing the organisation and driving good water stewardship and the International Alliance for Water Stewardship (www.a4ws.org) Standard uptake in Indonesia.
AHEAD OF THE CURVE

BUILDING COMPANY RESILIENCE ON WATER UNDER COVID-19

Basja Jantowski
Program Director AWS Indonesia (Yayasan Aliansi Wali Sumber Daya Air Indonesia)
basja@a4ws.org
DRR & IMPACT ON BUSINESSES

• Extent of structural damage to the economy and impacts on businesses
• Growing political pressure for new regulations and legislation, often to protect domestic economy
• Effects on government policies, supply chains, investment decisions and consumer behaviour
• Companies (we all) need to re-imagine and re-design
• This requires investment and most importantly: ability to adapt
DEFINITION OF WATER STEWARDSHIP

The use of water that is:

- socially & culturally equitable,
- environmentally sustainable and
- economically beneficial

Achieved through a stakeholder-inclusive process that involves site and catchment-based actions.
WASH & BUSINESS RESILIENCE

- WASH as preventive power and long-term impact
- Adaptive management and business resilience
HELP GUIDELINES & BUSINESSES

Integrate

Principle 2: Integrate actions on risk management of disasters and pandemic

Provide

Principle 3: Provide clean water, sanitation, and hygiene sustainably during and after disasters

Finance

Principle 9: Finance DRR actions under COVID-19 effectively to avoid economic disaster
AHEAD OF THE CURVE

BUILDING COMPANY RESILIENCE ON WATER UNDER COVID-19

Basja Jantowski
Program Director AWS Indonesia (Yayasan Aliansi Wali Sumber Daya Air Indonesia)
basja@a4ws.org
Dr. Alexander Mindorashvili

• Georgian Focal point for “Water & Health Protocol
• Academician of the Academy of prophylaxes medicine of Georgia
• Working for the Ministry of environment protection and agriculture of Georgia
• Member of Global Water Partnership of CACENA
• Former Chief of Sanitary & Epidemiology Service of Georgia
First experience in fighting against COVID-19 pandemic in Georgia

Dr. Alexander Mindorashvili
PhD. Professor.
Academician of the Academy of prophylaxes medicine of Georgia

The Ministry of environment protection and agriculture of Georgia
30 July 2020
Subject of the presentation:

1. The status of equal provision of access to water resources and sanitation in Georgia

2. Georgia’s experience in fighting against new coronavirus COVID-19
Georgia is abundant with water resources which cover 10.9% of the country’s area.

However, due to uneven distribution of water resources in East Georgia, the issue of water supply remains acute.

Some 450-500 mln. m3 of water is consumed annually for house-keeping and drinking purposes, 90% of which is used by urban and 10% - by rural population.

Despite abundance of water resources, overall water consumption level does not exceed 35-40%.

Over 95% of population have access to improved water sources.

However, in rural area only 30% is connected to centralized water sources through gravity water supply.
The status of provision of equal access to water and sanitation in Georgia

- Improving the status of equal access to water and sanitation is one of the acute problems nowadays.
- On that basis, the country set clear goals in water supply, sanitation and hygiene. Policies are implemented to support these efforts.

A number of strategies and programs were developed to this end, including:

- Social and economic development strategy for Georgia – “Georgia -2020”.
- Social and economic development of each region for 2014-2021.
- Agricultural development strategy in Georgia for the period 2015-2020.
- Action plan of the strategy of agricultural development in Georgia 2018-2020.
- and others.
these documents cover the following issues:

➢ Not only necessary efforts to address sustainable use of natural resources including water, but also measures to develop water supply and sanitation;

➢ Reduction of number of people with no access to water supply an appropriate sanitation;

➢ Necessary funding to carry out appropriate efforts etc.

• It should be noted that some construction and recovery works, scheduled in 2020 per Social and Economic Development Strategy Georgia-2020, were paused due to pandemic. However, these were resumed now, and over 30 projects are being implemented.

• Noteworthy is that, if existing pace of construction and remediation works remains, the country’s population will be provided with full access to high quality water and the government program will be accomplished.
Taking into account the importance of environment legislation in Georgia’s social and economic development, Georgia intends to prepare a platform for designing a set of policies to achieve such objectives as:

➢ further development of water management legislation and carrying out institutional reforms in this sphere;
➢ sustainable use of water resources with climate changes taken into account;
➢ provision with water of the quality complying with safety requirements and adequate sanitation; and introduction of basin management principles;
➢ “water and health” protocol ratification, setting up national target indicators and their fulfillment;
➢ strengthening of cross-boarder cooperation with neighboring countries and other.

• As mentioned above and taking into account the requirements of the agreement of association between European Union and Georgia, a new law “On Water Management” was drafted and whose introduction is expected in 2020.

• A number of complementatory laws were also drafted.
It is worth mentioning that the following documents were developed and approved:

➢ “Third National Program on Nature Preservation for 2017- 2021"


➢ With these documents the country committed to introduce policies and perform practical actions for creating safe environment for health of population, including sanitation. Long term priorities are set, which take into account principles and provisions of Water and Health Problems Protocol – an instrument for development of integrated strategies on water management, sanitation and health.
2. Georgia’s experience in combating new coronavirus COVID-19
Statistics on coronavirus as of 22.07.2020 in Georgia

Georgia claims to have the smallest number of infected on SARS-CoV-2 and those deceased from pneumonia COVID-19 in Caucasus.

As of 22 July the country shows:
- Total infected – **1073**
- Fatalities – **16** - 1,5% with population of 3.7 mln.
- Recovered – **907** - 85%
- Undergoing treatment - **150** -14%
- Including serious and critical cases - 5

The actions taken by the government are portrayed by experts as:
- A good role model
- In how proactiveness can cope with spreading of the virus.
How did the events unfold?

- The first Covid-19 case was reported at the end of February
- **Government reaction followed immediately**
- Scientists on the National Health Centre took the lead to work up recommendations
- The end of February saw flights cancelled and boarders closed
- Schools, universities, cultural institutions and ski resorts were closed in the beginning of March, with all public events being postponed
- The majority of hotels and restaurants did not work by the middle of March
- All public transport and personal vehicles were halted

- Emergency state was introduced on 21 March, public events and intercity commuting were prohibited.
➢ The emergency state was supposed to last for 20 days until Easter holiday.

➢ Curfew was enacted during night time; no gatherings with more than three people involved were allowed.

➢ Police patrols watched compliance with the regulations.

**Why did the actions work out well?**

➢ Community strictly complied with the instructions.

➢ Significant penalties for non-compliance were also conducive to the success.

➢ All bus stops were equipped with electronic screens with “Stay Home” warning signs.

➢ Readiness to cooperate on part of the people of Georgia, their remarkable socially responsible behavior in fulfilling all recommendations were critical in evening out the incidence curve.

➢ **Among the overall turmoil it was the trust put in medics by both authorities as well as people that played a key part curbing the virus.**
Lifting the ban

- Majority of enterprises, shops, and restaurants already resumes their work in Georgia.
- Wearing masks indoors and maintaining the safe distance – in public organizations, offices, shops - is compulsory.
- Strict restrictions on social distancing and gatherings are in place.
- No boarding is allowed in public transport without masks.
- Sport and other events are prohibited.

- Despite all measures taken, we must remain prepared for any eventualities.
Проведенные мероприятия до выявленного первого подтвержденного случая нового короновируса (COVID-19) Январь-Февраль 2020

Передача информации в министерство здравоохранения об эпидвспышке пневмонии необычной формы

Первое заседание межведомственного координационного совета

Приостановлены воздушные рейсы из Китая

В лаборатории Лугара созданы необходимые возможности тестирования COVID-19

Разработаны разные методические рекомендации и протоколы

Первый подтвержденный случай COVID – 19

Освоение операционного центра реагирования опасностей на общественное здоровье

Распоряжение Правительства Грузии № 164 “О мероприятиях предотвращения возможного распространения заболеваний вызванных новым короновирусом и утверждение плана оперативного реагирования на случаях заболевания

Утверждена определение случая инфекции короновируса (COVID – 19) и страна перешла на активную фазу эпиднадзора

Активация коммуникации и риска

Проведены настольные тренинги для членов координационного совета и других участвующих ведомств

Создание и тиражирования видео лекции и образовательных материалов

Начался процесс скрининга в аэропортах страны
Проведенные мероприятия после выявленного первого подтвержденного случая нового коронавируса (COVID-19) Март -2020

Усиление коммуникации риска

Промоция социальной кампании

Закрыты все горно-лыжные курорты страны

Подтверждено 1 случай заражения в лаборатории г. Кутаиси

Приостановлены работы магазинов кроме продовольственных и аптек

Начался процесс децентрализации лабораторной диагностики

Открыты все горно-лыжные курорты страны

Выведены гражданы Грузии из Италии

Подготовлены выделенные Государством карантинные зоны

Приостановлены воздушные рейсы из Италии

Подтверждено 1 случай заражения в лаборатории г. Батуми

Запрещены междугородние передвижения

Подтверждено 1 случай заражения в лаборатории г. Кутаиси

Приостановлено функционирование кафе-баров, ресторанов, фитнес клубов и плавательных бассейнов

Начался процесс внутренней передачи инфекции

Приостановлен процесс во всех образовательных учреждениях

Начался процесс децентрализации лабораторной диагностики

Выведены гражданы Грузии из Италии

Выполнены 2 рейса и из Италии и вывезены гражданы Грузии

Доведены до минимума движение на границах

Объявлено Чрезвычайное положение в Марнеули и Болниси

Приостановлено функционирование кафе-баров, ресторанов, фитнес клубов и плавательных бассейнов

Запрещены междугородние передвижения

Объявлен в всеобщий карантин

Объявлен местный карантин

В муниципалитетах Марнеули и Болниси объявлен местный карантин

4 марта 2020

10 марта 2020

15 марта 2020

16 марта 2020

18 марта 2020

20 марта 2020

21 марта 2020

22 марта 2020

23 марта 2020

25 марта 2020

31 марта 2020
Все проведенные мероприятия после выявленного первого подтвержденного случая нового коронавируса (COVID-19) Апрель -2020

Усиление социальной кампании на сайтах Twitter и Instagram

В рамках чрезвычайной ситуации установлены дополнительные ограничения ➢ 21:00 до 06:00 час установлен комендатский час

Создание видео роликов для целевых популяций Образовательный материал распространен среди этнических меньшинств

Организация выставки ко дню в семейного дня здоровья “Врачи против COVID-19”

Установлен жесткий карантинный режим в село хидискури муниципалитета г.Хашури

Установлен жесткий карантинный режим в муниципалитете г. Лентехи

Запрещен вход и выход в Тбилиси, Кутаиси, Рустави и Батуми

Расширение лабораторной молекулярной диагностики. ➢ В системе дополнительно подключена 7 новых лаборатории. ➢ Всего 12 лаборатории которые покрывают всю страну

Установлен жесткий карантинный режим в муниципалитете г. Кобулети

Установлен жесткий карантинный режим в муниципалитете г. Хашури

Установлен жесткий карантинный режим в муниципалитете г. Лентехи

Представление 6 этапного антикитикозного экономического плана

Представлен этапный антикитикозного экономического плана ➢ Разрешение функционирования всех видов автотранспорта ➢ Онлайн торговля ➢ Деливер сервис ➢ Рынков открытого типа

В общественных местах запрещено скопление физических лиц и социальные мероприятия с участием более 3 человек ➢ Запрещены межгородские и внутри муниципалитетах перевоз пассажиров авто и железнодорожным транспортом

Массовая кампания “Оставайся дома” или “Сиди дома”

Продлен срок действия чрезвычайной ситуации до 22 мая 2020 г.

Начало реализации первого этапа антикитикозного плана

Неделья иммунизации

Тотальная пропаганда с применением информационных видео клипов во всех средствах массовой информации

Изменился формат общения с масмедей на лайф формат брифинг спикеров на Facebooc

Уerule не проведено ➢ 21:00 до 06:00 час установлен комендатский час ➢ В общественных местах запрещено скопление физических лиц и социальные мероприятия с участием более 3 человек ➢ Запрещены межгородские и внутри муниципалитетах перевоз пассажиров авто и железнодорожным транспортом

Продлен срок действия чрезвычайной ситуации до 22 мая 2020 г.
Проведенные мероприятия после выявленного первого подтверждённого случая нового коронавируса (COVID-19) Май2020

<table>
<thead>
<tr>
<th>Дата</th>
<th>Мероприятия</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 мая</td>
<td>Открыто автотранспортное движение в муниципалитетах Кутаиси и Батуми</td>
</tr>
<tr>
<td>7, 8, 11</td>
<td>В административном единице Кобулетского муниципалитета сняты жесткие карантинные ограничения</td>
</tr>
<tr>
<td>12</td>
<td>В социальных сетях (Facebook, Twitter, Instagram) усиление кампании против коронавируса</td>
</tr>
<tr>
<td>13</td>
<td>Открыли муниципалитет г. Рустави</td>
</tr>
<tr>
<td>14</td>
<td>Разрешено функционирование салонов красоты и центров эстетики</td>
</tr>
<tr>
<td>17, 18</td>
<td>Подготовлен видео и фото материал в отношении серопровалентивности</td>
</tr>
<tr>
<td>23 мая</td>
<td>Проведены исследования в Болничемском и Телавском муниципалитетах на серопровалентивность</td>
</tr>
<tr>
<td>27 апр</td>
<td>Закончилась чрезвычайная ситуация и Комендаатский час</td>
</tr>
<tr>
<td></td>
<td>Сняты ограничения передвижения автотранспортом более 3-х человек, кроме такси</td>
</tr>
</tbody>
</table>

- Открыто автотранспортное движение в муниципалитетах Кутаиси и Батуми.
- В административном единице Кобулетского муниципалитета сняты жесткие карантинные ограничения.
- В социальных сетях (Facebook, Twitter, Instagram) усиление кампании против коронавируса.
- Открыли муниципалитет г. Рустави.
- Разрешено функционирование салонов красоты и центров эстетики.
- Подготовлен видео и фото материал в отношении серопровалентивности.
- Проведены исследования в Болничемском и Телавском муниципалитетах на серопровалентивность.
- Закончилась чрезвычайная ситуация и Комендаатский час.
- Сняты ограничения передвижения автотранспортом более 3-х человек, кроме такси.
The above said implies that pandemic created a number of problems which closely intertwine with each other.

It is deemed necessary to identify these problems and address them comprehensively on both national as well as international levels.

Apparently in order to achieve the final outcomes, technical dialogues are to be improved, concrete mechanisms of deploying of institutional resources should be developed. This will enable decision to be made on appropriate actions.

These strategic visions usher in a way for new programs and projects in health care and environment protection. This will enable new action plans that will contribute to solving of global problems.

It is commonly known that quick achievement of the results depends on: national policies, regional plans on social and economic development and impact upon environment from activities, climate conditions etc.

Consequently, a comprehensive evaluation of future consumption of water, environment system services, scale of energy and land usage, health care resources etc. is required.
Consequently:

➢ It is necessary to identify clear indicators, perform multifactor correlation analysis in order to forecast social and economic trends and effects.

➢ Develop a roadmap for decision makers in order to implement nature protection and health care initiatives.

➢ Carry out regional seminars, trainings, etc.

We believe that such approaches will create a new platform for cooperation, which in turn will yield more tangible results.
THANKS FOR YOUR ATTENTION!
Professor Santosh Kumar

• Professor and Head of the Governance, Public Policy and Inclusive Development Department of the National Institute of Disaster Management, Ministry of Home Affairs, Govt of India.

• Director of NIDM and SAARC Disaster Management Centre

• He was working as Disaster Management Specialist in the World Bank

• More than 25 years successful experience providing strategic, institution building, public policy and strategic operations leadership in challenging situations both in multi-cultural and national environment at national and international levels for poverty & risk reduction leading to sustainable development.

• He has PhD in economics, studied Gender and Development at IDS Sussex, UK and Disaster Management in Israel.

• Specialized in Disaster and development and Hydro-meteorological disasters.

• He has been contributing in most of the international conferences of strategic importance organized by The United Nations, The World Bank and other agencies both international and national levels.

• He has also contributed in drafting and adoption of International frameworks for disaster management- Hygo Framework of Action 2010-2015, Sendai Framework for disaster risk reduction 2015-2030 and other Global platforms as part of the Government of India delegation.
Prof Santosh Kumar
National Institute of Disaster Management
Formerly,
DIRECTOR, SAARC DM CENTRE
Water Related Disasters

- **Flood & drought deaths**: 1660000
- **AFFECTED BY FLOODS & DROUGHT**: 3 billion people
- **ECONOMIC LOSS**: US $ 100 billion
- **FLOODS**: 116-171 per year

- **Death In 20 years**: Flood & drought deaths are increasing every year
- **Affected by floods & drought**: No of affected people are increasing every year
- **Economic loss**: Economic loss is huge due to
- **Floods**: The number of floods are increasing every year
Percentage of people impacted by Flood:
- South Asia: 64%
- East Asia & Pacific: 26%
- Middle East & North Africa: 1%
- Europe & Central Asia: 2%
- Latin America & Caribbean: 2%
- Sub-Saharan Africa: 2%
- OECD Countries: 3%

Floods as a percentage of SAR events:
- Wind: 29%
- Landslide: 9%
- Flood: 50%
- Earthquake: 9%
- Drought: 3%

Source: Emergency Events Database (EM-DAT: The OFDA/CRED International Disaster Database)
Water Integrated Issues
Too Much And Too Little Water

CCA Paris Agreement. 2015

Sustainable Development Goals Agenda 2015-2030

Innovation
Sendai Framework 2015 for Disaster Risk Reduction
Investment in physical resilience...

... reduces the immediate effect of a catastrophe,

... longer term impact, ...

... and allows a faster recovery.

Building Financial Resilience

- **Sovereign Risk Transfer**
  - Insurance (including through risk pools)
  - Derivatives
  - Cat bonds

- **Contingent Credits**
  Financial instruments that provide access to liquidity immediately after an exogenous shock

- **Budget Reserves/ Budget Reallocations**

Not all instruments serve the same purpose, and governments can take a layered approach to finance protection by combining instruments with different characteristics.

Such risk layering ensures that cheaper sources of money are used with the most expensive instruments used in exceptional circumstances.
Thank you
Professor Sheng Jifang

- **Professor, Chief Physician, Doctoral Supervisor, Director of the Department of Infectious Diseases, The First Affiliated Hospital of Zhejiang University School of Medicine, Deputy Director of the State Key Laboratory of Infectious Disease Prevention and Control.**

- Professor Shen has engaged in the field of infectious diseases for more than 30 years and has accumulated rich experience in the diagnosis and treatment of infectious diseases, especially in the treatment of intracranial infections, FUO, and severe hepatitis.

- She is a member of expert team for COVID-19 prevention and control of Zhejiang Province.

- She has successfully led or participated in special projects of the People’s Republic of China’s 863 Program (or State High-Tech Development Plan), the People’s Republic of China’s 973 Program (or National Basic Research Program) and the National Natural Science Foundation of China.

- She also participated in the 11th, 12th and 13th Five-Year Science and Technology Major Projects.
Lessons from China: Hospital strategies for managing COVID-19

Jifang Sheng M.D Ph.D
Junwei Su M.D
The First Affiliated Hospital of Zhejiang University, School of Medicine
Optimization of admission and screening process

- Fever Clinic:
  - 1. Layout
    - independent area
    - standardized procedure
    - three zones and three passages
  - 2. Zone arrangement
    - preview triage
    - patients classification
    - independent functional sections (e.g. exam/ lab/ observation etc)
  - 3. Patient management
    - patients to wear masks
    - no companion
    - minimize staying time

- Transportation of patients:
  - Negative-pressure ambulances and PPE for ambulance attendants
  - Ambulances would be disinfected after transportation by local CDC.
Optimization of admission and screening process

- Procedure for patients’ admission:

  - All attendances
  - Fever outpatient service
    - Yes
      - Fever
        - With exposure history?
          - And Fever and/or respiratory symptoms
          - suspected patients
            - Hospitalized in suspected isolation wards
            - Detection of SARS-CoV-2 in sputum
              - negative
                - Hospitalized in confirmed isolation wards
              - positive
                - Hospitalized in suspected isolation wards
        - no
      - Fever
        - Hospitalized in suspected isolation wards
    - no
      - Outpatient service
        - Recheck SARS-CoV-2 24 hours latter
          - positive
            - Hospitalized in confirmed isolation wards
          - negative
            - Without GGOs or consolidations in the chest CT scan
            - Released from isolation wards
          - negative
            - With GGOs or consolidations in chest CT scan, without evidence of other infections
          - Recheck SARS-CoV-2 24 hours latter

*: contact with confirmed COVID-19 patients, travel to or be resident in Wuhan or surroundings within 14 days, or clustering occurrence.
**Procedure for patients' admission:**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Address:</th>
<th>Phone number:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of companion:</th>
<th>Phone number of companion:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact with mild animals</th>
<th>Yes ( ) No ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact with fever patient</td>
<td></td>
</tr>
</tbody>
</table>

**Potential exposure history**

<table>
<thead>
<tr>
<th>Travel or residence history in the epidemic areas of COVID-19 within 14 days:</th>
<th>Yes ( ) No ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact with COVID-19 patients within 14 days:</td>
<td>Yes ( ) No ( )</td>
</tr>
<tr>
<td>Contact with fever patients who had been to epidemic areas;</td>
<td>Yes ( ) No ( )</td>
</tr>
<tr>
<td>Clustering occurrence (2 or more cases with fever and/or respiratory symptoms occur at such places as homes, offices, classrooms, etc. within 2 weeks)</td>
<td>Yes ( ) No ( )</td>
</tr>
</tbody>
</table>

**Symptoms investigation**

(Please mark "√" for your choice)

<table>
<thead>
<tr>
<th>Duration of fever</th>
<th>days</th>
<th>Highest body temperature °C</th>
<th>Unknown ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Yes ( ) No ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscular stiffness</td>
<td></td>
</tr>
<tr>
<td>Pharyngalgia</td>
<td></td>
</tr>
<tr>
<td>Dizziness</td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td></td>
</tr>
<tr>
<td>Cough</td>
<td></td>
</tr>
<tr>
<td>Expectoration</td>
<td></td>
</tr>
<tr>
<td>Running nose</td>
<td></td>
</tr>
<tr>
<td>Abdomen pain</td>
<td></td>
</tr>
<tr>
<td>Diarrhoe</td>
<td></td>
</tr>
<tr>
<td>Vomits</td>
<td></td>
</tr>
<tr>
<td>Chest pain</td>
<td></td>
</tr>
<tr>
<td>Chest distress</td>
<td></td>
</tr>
<tr>
<td>Shortness of breath</td>
<td></td>
</tr>
<tr>
<td>Urinary irritation</td>
<td></td>
</tr>
<tr>
<td>Allergic history</td>
<td></td>
</tr>
</tbody>
</table>
Strategies evolved based on stages of epidemiologic curve

<table>
<thead>
<tr>
<th>Early Stage</th>
<th>Ascent Stage</th>
<th>Outbreak Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Centralized management in one independent building</td>
<td>- Centralized management in one independent district</td>
<td>- Mobile cabin hospitals for mild and moderate patients</td>
</tr>
<tr>
<td>- One relative Department</td>
<td>- Medical works from Department of infectious disease, respiratory medicine, ICU and other departments.</td>
<td>- Reconstructed regular wards for severe patients with sufficient supply of electric power and oxygen</td>
</tr>
<tr>
<td>- Limitation: out-patient in fever clinic ≤ 300/d; Confirmed patients ≤ 5/d; Suspect cases ≤ 10/d; Total patients ≤ 40</td>
<td>- Limitation</td>
<td></td>
</tr>
</tbody>
</table>

- Outbreak Stage: The strategies during the outbreak stage involve mobile cabin hospitals for mild and moderate patients and reconstructed regular wards for severe patients with sufficient supply of electric power and oxygen.
Reconstruction of COVID-19 center

Building #3
3-4 Floor on-demand 88 beds
5-6 Floor Isolation wards for suspect cases 30 rooms
7-9 Floor Isolation wards for confirmed cases 132 beds

Building #2
3-7 Floor rest areas for medical workers

Building #5
3-4 Floor Isolated ICU 58 beds

Building #6
Administration building

Fever Clinic
Reconstruction of isolation wards

- Isolation wards:
  Zhijiang Hospital Area: Modification and Procedures for the Infected and Isolated Wards on the 7-9th Floors of Building 3

**Staff entry:** From Elevator No. ① - Clean zone (Wear surgical cap, surgical mask, protective face shields, inner gloves, protective clothing, outer gloves) – semi-contaminated zone – potentially contaminated area – buffer zone – contaminated zone (infected zone)

**Staff exit:** From the contaminated zone (change outer gloves) – buffer zone (remove outer gloves, protective clothing, protective face shield) – potentially contaminated zone (remove surgical mask, surgical cap and inner gloves, wash hands) – semi-contaminated zone – shower and put on clean clothes – clean area
Strategies evolved based on stages of epidemiologic curve

<table>
<thead>
<tr>
<th>Early Stage</th>
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<td>- Limitation</td>
<td></td>
</tr>
</tbody>
</table>
Control for non-COVID-19 patients

- Transferred to local hospitals
  One room-one patient

- Delay non-urgent surgeries

- Minimize public panic

- On-line clinic medications delivery
Arrangement and backup of medical workers

- Backup of medical workers in batches
- Temperature monitoring
- Isolation of 14 days before exiting
- Team management
  - Fixed members
  - 4-6 hours/shift
- Training of standardized procedures
- Assessment for qualification
Staff workflow management and training

- Before working in a fever clinic and isolation ward, staff must undergo strict training and examinations to ensure that they know how to put on and remove PPE. They must pass such examinations before being allowed to work in these wards.

- The staff should be divided into different teams. Each team should be limited to a maximum of 4 hours of working in an isolation ward. The teams shall work in the isolation wards (contaminated zones) at different times.

- Arrange treatment, examination and disinfection for each team as a group to reduce the frequency of staff moving in and out of the isolation wards.

- Before going off duty, staff must wash themselves and conduct necessary personal hygiene regimens to prevent possible infection of their respiratory tracts and mucosa.
Staff health management

• Front-line staff in the isolation areas shall live in isolation accommodation and shall not go out without permission.

• Nutritious diet shall be provided to improve the immunity of medical personnel

• Monitor and record health status of staff, conduct health monitoring for front-line staff, including body temperature and respiratory symptoms; help address any psychological and physiological problems.

• Staff with any relevant symptoms such as fever should be isolated immediately and screened with an NAT.

• After front-line staff finish their work in the isolation area and before they return to normal life, they shall first be NAT tested for SARS-CoV-2. If negative, they shall be isolated collectively at a specified area for 14 days before being discharged from medical observation.
Please feel free to contact us:

Email: zdyy6616@126.com, zyinternational@163.com

Website: http://www.zy91.com/ywsy.jhtml
Dr. Kalithasan Kailasam

- Over 20 years of river ecosystem management experience
- Currently the River Care Programme Manager where he coordinates GEC’s work on lake and river management, pollution control and environmental education programme.
- A pioneer in Civic Science and Community-based River Management in Malaysia, he has developed various river, water and solid waste management projects.
- He also developed River auditing, RIVER Ranger, SMART Ranger, FLOOD Ranger and DRH2O programme.
- Since 2002, he has consistently been appointed as advisor, trainer or panel in a variety of initiatives, committees and activities by various government departments, local authorities, private sectors and civil society.
HELP-GWP Consultation on HELP Principles in Addressing Water-related DRR during COVID-19

Community perspective: Prevention at source

Dr Kalithasan Kailasam
(kalithasan@gec.org.my)
Manager
River Care Programme
Global Environment Centre (GEC)
GLOBAL ENVIRONMENT CENTRE (GEC)

BUILDING PARTNERSHIP FOR THE ENVIRONMENT

- Established in 1998
- Malaysian Non-profit Organisation (Reg. no. 473058-T)
- Supports information exchange & capacity building as well as undertaking strategic projects particularly in developing countries

MISSION

- To support the protection of the environment and sustainable use of natural resources to meet local, regional and global needs, through strategic partnerships with communities and like-minded organisations.

PROGRAMMES

- River Care
- Forest & Coastal
- Peatland
- Outreach & Partnership

www.gec.org.my
A. Key challenges faced in dealing with Water-related DRR/COVID-19 : Community Perspective

1. Access to latest/relevant information (rainfall/water level..)
2. Effective communication esp with rural/indigenous communities
3. Immediate clean water and food supply
4. Sanitation esp in rural/indigenous communities : water-borne disease; cleaning..
5. Community-based preparedness measures (still curative and not proactive role)
6. Legislation & Enforcement
7. Lack of financial resources; poverty
8. Proper understanding on mitigation or adaptation
9. Localised mechanism (bottom-up vs top down)
10. Limited access to indigenous community sites for support during pandemic
11. Others:
   - Unable to carried out their duty due to lockdown/movement control orders:
     - waterways monitoring; community gardens and compost piles
   - New pollutant : face mask, plastic food packaging
### B. Some of the key water-related Disasters & GEC programme/action

<table>
<thead>
<tr>
<th>Problem</th>
<th>Programme</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution &amp; Water supply shortage</td>
<td>RIVER Ranger</td>
<td><a href="http://www.riverranger.my/riverranger/index.cfm">http://www.riverranger.my/riverranger/index.cfm</a></td>
</tr>
<tr>
<td>Flood</td>
<td>FLOOD Ranger</td>
<td><a href="http://www.riverranger.my/FloodRanger/">http://www.riverranger.my/FloodRanger/</a></td>
</tr>
<tr>
<td>Drought</td>
<td>Dr H2O</td>
<td><a href="http://www.riverranger.my/drh2o/index.cfm">http://www.riverranger.my/drh2o/index.cfm</a></td>
</tr>
<tr>
<td>Food Security</td>
<td>Community garden</td>
<td><a href="http://www.krriver.org/index.cfm?&amp;parentid=34">http://www.krriver.org/index.cfm?&amp;parentid=34</a></td>
</tr>
</tbody>
</table>
B1. Flood

(1) FLOOD RANGER

- Preparedness: grabbag, 72H Kit, alternative water supply
- Community based flood hazard map
- Add on COVID-19 protection gear (mask, wipes, soaps, towels, thermometers, gloves, sanitisers)
Town-Watching
Community based hazard map & Monitoring
B2: Pollution & Water supply shortage

- Urban river pollution is a form of water-related disaster due to its significant and sometimes irreversible effect to drinking water supply
- Urban channelized rivers are mostly affected due to proximity to anthropogenic effects exarcebated by the lack of natural elements

**River Ranger 2.0:**
- River monitoring - Physical, Chemical and Biological
- Community-based solutions
- River Ranger Index (RRI) data entry on riverranger.my website for long term trend observation
B3: Food Security

- Due to the pandemic, food supply anxiety was evident due anticipated uncertainty and potential shutdown of borders.
- Community Gardening promoted under the GEF5 project, through the Friends of Klang River Basin (FoKRB) network, provided alternative food supply to low-income communities during the Movement Control Order (MCO) period.
C. HELP Principles: Key Barriers for implementation

A. Key barriers for implementing the principles (selected)

1. Principle 1: Human and financial resources may be limited
2. Principle 4: Outdoor requirement aspect in river monitoring was inhibited due to the lockdown orders
3. Principle 10: Recovery planning measures are costly due to the nature of the virus being highly infectious and not with a vaccine in sight
D. HELP Principles:
Advantages

B. Advantages for implementing the principles at ground level

1. **Principle 1**: Items in the Principles of the document would be beneficial once included in national, regional and local as well community DRR plans

2. **Principle 2**:
   
   i. Situation-specific webinars on keeping safe during the pandemic and practicing environmental mindfulness have received a positive reception among community members
   
   ii. Concise and clear ‘early warning’ communication messages regarding COVID-19 via text message have been immensely beneficial to the public in keeping informed

3. **Principle 8**: ‘Town watching’ concept in FLOOD RANGER aids in effective evacuation when the additional safety and social distancing measures are considered

4. **Principle 9**: Digital payment mechanism through the 'Touch N Go' app, from the government aids lower income communities and also promotes contact-less payment
Thank you

‘Water is Life, River is Lifeline’

kalithasan@gec.org.my
www.gec.org.my
Dr. Miho Ohara

- Senior Researcher for International Centre for Water Hazard and Risk Management (ICHARM), and Public Works Research Institute, Japan
MANAGING WATER RELATED DRR IN TIME OF COVID-19
-EXPERIENCE FROM JAPAN-

Miho OHARA
Senior Researcher
International Centre for Water Hazard and Risk Management (ICHARM),
Public Works Research Institute, Japan,
Recent flood disasters in Japan

During 10 years from 2009 to 2018,
- Approximately 97% of the municipalities experienced one or more floods.
- More than half (56.6%) of the municipalities have been flooded more than 10 times.
- Only 2.8% of the municipalities have never suffered floods.

(by flood damage statistics in Japan)

Water-related disaster risk reduction considering the prevention of COVID-19 infection is the key issue for all the municipalities in Japan.
Collection of Critical Situations during Flood Emergency Response

**Critical Situations during flood emergency response**

The situation in which local government officers panic, don’t know what to do, cannot make a decision, are confused or in dilemma, etc., during an emergency response effort.

**Main Content: local government response**

**Appendix: local government response under COVID-19**
Collection of Critical Situations during Flood Emergency Response

8 Chapters

1 Initial Response
2 Headquarters Management
3 Structure in Government Office
4 Collecting Information
5 Collaborating with Stakeholders
6 Issuing Evacuation Advisory (Alert Level 4), etc.
7 Transmitting Information
8 Shelters

Public Works Research Institute (PWRI)
International Centre for Water Hazard and Risk Management (ICHARM)

June 2020
Example 1

Example of a critical situation in “Chapter 6: Issuing Evacuation Advisory etc.”

<table>
<thead>
<tr>
<th>Outline</th>
<th>Target</th>
<th>Process and Cause</th>
<th>Result</th>
<th>Necessary Measures</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Critical Situation</th>
<th>Example of a critical situation in “Chapter 6: Issuing Evacuation Advisory etc.”</th>
<th>Residents are hesitating to start evacuating because their worried about COVID-19!</th>
<th>Residents worried about COVID-19 are hesitating to evacuate</th>
<th>Necessary Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Consider evacuation destinations other than conventional designated evacuation spaces/shelters</td>
<td>- Consideration must be given to finding alternative evacuation destinations, such as public facilities and homes, because emergency designated evacuation spaces/shelters have been converted to create interior spaces that ensure to prevent virus spread.</td>
<td>Evacuation cautions within insufficient</td>
<td>Necessary Measures</td>
</tr>
<tr>
<td>Management</td>
<td>Consider areas where vertical evacuation can be encouraged</td>
<td>- Use evacuation/extraction and to reference extraction area where flooding depth and time is minimal, and consider where evacuation areas where vertical evacuation can be encouraged</td>
<td>Necessary Measures</td>
<td>Necessary Measures</td>
</tr>
<tr>
<td>Public Announcements</td>
<td>Make the public aware of vertical evacuation and evacuation to shelters other than designated evacuation spaces/shelters, etc</td>
<td>- Make the public aware prior to the three seasons that there should ensure an evacuation destination other than a conventional designated evacuation spaces/shelters, such as a friend’s or neighbor’s home. As part of that awareness, make the public that they need to ensure an evacuation destination that is not near of area-for flooding (check inundation flooding possibility map, etc.). Also, in advance, make the public aware of area where vertical evacuation is encouraged</td>
<td>Necessary Measures</td>
<td>Necessary Measures</td>
</tr>
<tr>
<td>Public Announcements</td>
<td>Call on evacuees to bring their own infection prevention shelter goods</td>
<td>- Make residents of areas where evacuation might be necessary aware that they should prepare and take care of infection prevention goods when evacuating.</td>
<td>Necessary Measures</td>
<td>Necessary Measures</td>
</tr>
<tr>
<td>Emergency Response</td>
<td>Provide guidance on evacuation using space division at designated evacuation spaces/shelters</td>
<td>- If space division is implemented at evacuation shelters, set areas as evacuation areas at the shelter emergency, calmly and orderly ensure that each people and family unit is identified a space, enabling space-oriented evacuation. Also, before entry into the shelter carry identification orders and health checks.</td>
<td>Necessary Measures</td>
<td>Necessary Measures</td>
</tr>
</tbody>
</table>
Example of a critical situation in “Chapter 6: Issuing Evacuation Advisor etc.”

**Outline**

**Process and Cause**

Residents are hesitating to start evacuating because they are worried about COVID-19!

~ Residents worried about COVID-19 are hesitating to evacuate ~

**Critical Situation**

With official announcements of alert level 4 evacuation advisories, residents are hesitating to start evacuation because of worries about 3Cs (closed spaces, crowded places, close-contact settings) at designated evacuation spaces/shelters.

**Result**

There is possibility that human damage is increasing due to flooding and mudslides because residents are not evacuating.

**Target**

• Managers of designated evacuation spaces/shelters and evacuees
Example of a critical situation in “Chapter 6: Issuing Evacuation Advisor etc.”

Example 1

Necessary Measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Consider evacuation destinations other than conventional designated evacuation spaces/shelters.</td>
</tr>
<tr>
<td></td>
<td>- Evacuation is about avoiding calamity. Thus, consideration must be given to finding alternative evacuation destinations, such as public facilities and hotels, because once conventional designated emergency evacuation spaces/shelters have been converted to create two-meter spaces between evacuees to prevent virus spread, evacuation capacity will be insufficient.</td>
</tr>
<tr>
<td>Management</td>
<td>Consider areas where vertical evacuation can be encouraged</td>
</tr>
<tr>
<td></td>
<td>- Use inundation/flooding probability material as reference to extract out areas where flooding death and time is minimal, and consider which could become areas where vertical evacuation can be encouraged.</td>
</tr>
<tr>
<td>Public</td>
<td>Make the public aware of vertical evacuation and evacuation to shelters other than the designated evacuation spaces/shelters, etc.</td>
</tr>
<tr>
<td>Announcement</td>
<td>Make the public aware prior to the flood season that they should envisage an evacuation destination other than a conventional designated evacuation spaces/shelter, such as a friend’s or relative’s home. As part of that awareness, instruct the public that they need to envisage an evacuation destination that is not at risk of above-floor flooding (check inundation/flooding probability map, etc.). Also, in advance, make the public aware of areas where vertical evacuation is encouraged.</td>
</tr>
<tr>
<td>Management</td>
<td>Consider space division at designated evacuation spaces/shelters</td>
</tr>
<tr>
<td></td>
<td>- Consider accommodating suspected infection cases, the elderly, the pregnant and people with underlying conditions in separate medical facilities, etc. Also, consider with managers of facilities (shelters) the feasibility of using spaces separated from the big main shelter area, including changing rooms and classrooms that exist in the shelter facility. If utilization is possible, consider specific usage methods.</td>
</tr>
<tr>
<td>Public</td>
<td>Call on evacuees to bring their own infection prevention shelter goods</td>
</tr>
<tr>
<td>Announcement</td>
<td>- Make residents of areas where evacuation might be necessary aware that they should bring their own infection prevention goods when evacuating.</td>
</tr>
<tr>
<td>Emergency</td>
<td>Provide guidance on evacuation using space division at designated evacuation spaces/shelters</td>
</tr>
<tr>
<td>Response</td>
<td>- If space division is implemented at designated shelters, as soon as evacuees arrive at the shelter entrance, calmly and securely ensure that each person/family unit is allotted a space, enabling space-divided evacuation. Also, before entry to the shelter, carry out temperature and health checks.</td>
</tr>
</tbody>
</table>
Example of a critical situation in “Chapter 8: Shelters”

It seems there was an infected person among the evacuees, but we don’t know who the high-risk contacts are!

- Difficulty in grasping who are high-risk contacts -

Target

- Managers of designated evacuation space and shelters, etc.

Critical Situation

The public health center informed us that a person who had temporarily evacuated at our shelter later went on to test positive for COVID-19 at the health center. However, we have no record of an evacuee by the name given to us, so we do not know the space allocated to that person.

Result: The high-risk contacts of the infected person are unknown, so evacuees become worried. Also, as the used shelter space is also unclear, the entire shelter has to be disinfected.
Example of a critical situation in “Chapter 8: Shelters”

Necessary Measures

**Management**
Prepare a reception sheet for listing names of evacuees
- Prepare a reception sheet for recording names of evacuees in readiness for tracing people if it emerges that an evacuee tests positive at a later date, making sure that evacuees write down their names and contact details, and that you record their state of health at time of evacuation, in order to make tracing easier.

**Emergency Response**
Distinguish people suspected of being infected at receptions of designated emergency evacuation sites/shelters
- In disaster response, if a suspected COVID-19 case enters the designated emergency evacuation site/shelter to evacuate regardless of advance guidance, get that person to make a self-declaration about his/her condition at the entrance reception.
- If implementing space division, record the space to be used by that evacuee and his/her state of health in the reception sheet so that any people coming into close contact with that evacuee can be traced if necessary.

**Facilities**
Stockpile clinical thermometers
- If evacuation at designated emergency evacuation site/shelters becomes prolonged, the health of evacuees may change. Therefore, stock up on clinical thermometers in order to distinguish changes in the health of evacuees. As contact from a clinical thermometer may spread the infection, it is best to use a non-contact thermometer.

**Emergency Response**
Make evacuees aware of the need to record their health changes
- Make evacuees aware that they should notify the shelter reception at anytime if their health changes, such as running a high temperature.
Conclusions

We assumed 28 cases of critical situations in which local government officers panic, don’t know what to do, cannot make a decision, are confused or in dilemma, etc., during flood emergency response under the risk of COVID-19.

The collection describes possible critical situations and necessary countermeasures under the plague in terms of “Facilities,” “Management,” “Public announcement” and “Emergency response.”

We hope that this publication could provide some hints for local government officers to plan necessary countermeasures considering their needs and situations, including the prevalence of the disease among the residents.
Thank you
Q & A Session
Please use your handphone or **click the link in the chat box** to go to mentimeter.

1. On your browser, type: **www.menti.com**

2. Put in the code: **77 65 20**

3. Direct link: **https://www.menti.com/v2pb1vyc7i**

4. Please submit your questions
Key Messages & Summary
Summary (draft):

1. Country (government, community, private sector, etc.) Readiness to address water-related DRR during pandemic must be built. Now is the perfect time to learn and build better preparedness.

2. Preparedness for DRR and Emergency response is crucial and should be set as one of the main development foundation.

3. We must revisit again and rethink our strategy on no-regret investment

4. Adoption of the principles is crucial, but we need to carefully design the adoption and the implementation of the principles at all level (community, local government, government, non government group, etc.)
Please use your handphone or click the link in the chat box to go to menti meter.

1. On your browser, type: www.menti.com

2. Put in the code: 77 65 20

3. Direct link: https://www.menti.com/v2pb1vyc7i

4. Please submit your answers
How confident are you in implementing the principles?
Way Forward & Closing
Ways forward

Today: Consultation Workshop in Asia (Summary to be distributed ASAP)

From tomorrow
- Translation of the Principles in local languages (upon YOUR REQUEST)
- Use of the Principles in countries and fields (by YOU)

August 20th
- International Online Conference to Address Water-related DRR under COVID-19 (All participants today can register)

Autumn:
- Workshops in the other Regions (upon agreement by regions)
- Consultation to HELP Members/the UN/International Organizations on possible revision

November: HELP16
- To report usage of the Principles in countries and fields
- To discuss the Principles ver. 2
Thank you
One day or day one, it is your call.
The problem is, you think you have time...