



# ADRC Highlights

Asian Disaster Reduction Center Monthly News

Vol. 327  
June  
2020

## TOPICS

### Promoting Cooperation with Affiliated Institutions

Mobipack for supporting COVID-19 responses with mobile big data

### Letter from a Former Visiting Researcher

Mr. Nima Tshering from Bhutan

### Announcement

Challenges in Preventing the Spread of COVID-19 in Asia

## Asian Disaster Reduction Center

Higashikan 5F, 1-5-2  
Wakinohamakaigan-dori,  
Chuo-ku, Kobe  
651-0073 Japan

Tel: 078-262-5540  
Fax: 078-262-5546  
editor@adrc.asia  
http://www.adrc.asia

© ADRC 2020

## Promoting Cooperation with Affiliated Institutions

### Mobipack for supporting COVID-19 responses with mobile big data

COVID-19 is the worldwide disaster which threatens human health and life, damages economies and cultures, and, in the end, impedes sustainable development and prosperity. To effective management of COVID-19, it is critical to monitor the behavior, especially movement and stay or congestion of the people, while keeping privacy. With the track record, we can make the effective measures to identify the clusters and control further infection.

More than 95% of the global population use mobile phones, and the Mobile Network Operators collect and store the Call Digital Record (CDR) data of the mobile phone subscribers, which consist of time and location of all calls, SMS and data communications. Mobipack, which is developed by University of Tokyo (UoT), is the COVID-19 decision making support tool by tracking and mapping the behavior of the people via analyzing CDR data. Mobipack is an open source software and supposed to be used directly on the premise of Mobile Network Operators (MNOs) and/or telecommunication regulators of the countries to strictly preserve the privacy of subscribers, while it outputs indicators/statistics and maps on people distribution, movement etc. for broader applications by the other stakeholders. The outputs are made on semi-realtime basis like every day. It is not necessary at all for people to download SmartphoneApps or whatever.

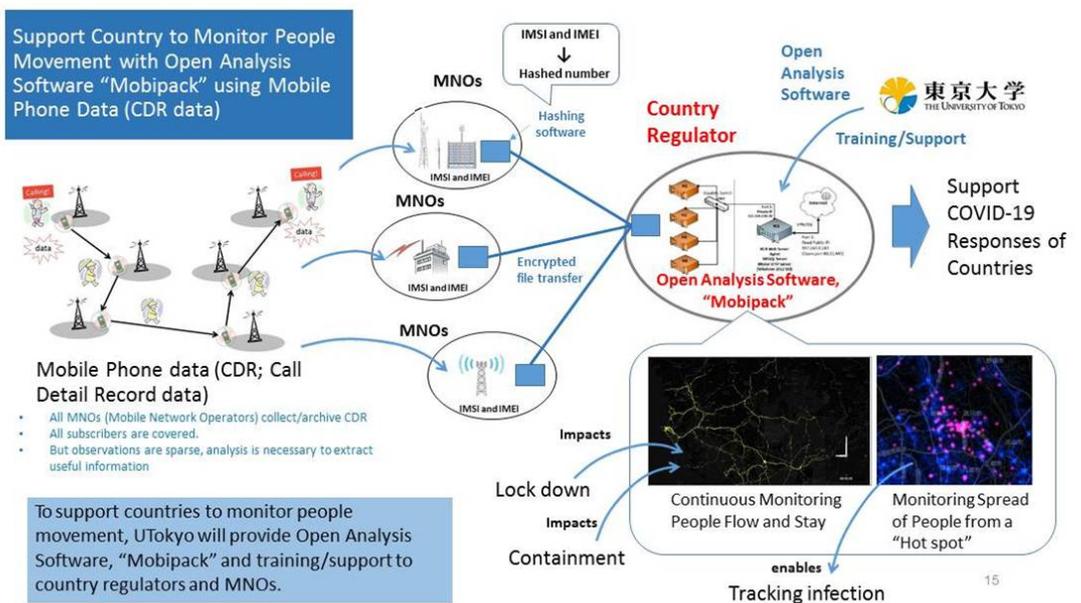


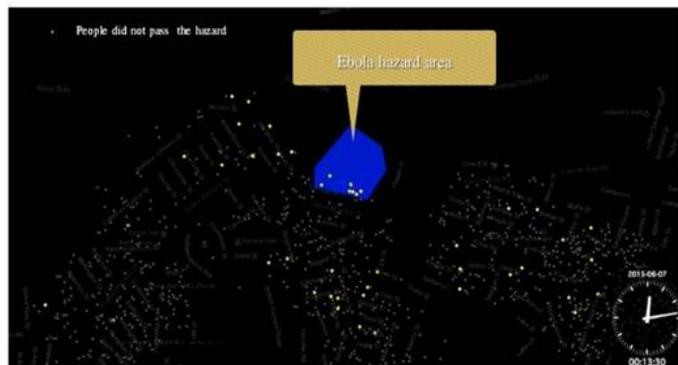
Fig. 1 : Image of Mobipack

Mobipack is under MIT license and maintained on GitHub by Spatial Data Commons - a joint effort by UoT and LocationMind Inc. Its development was initiated by UoT, and enhanced by the support of UN ITU and MIC, Japan in 2015 to demonstrate the use of telecom data for the epidemic control. Several African countries have already started using this system for COVID-19 responses. ADRC is the partner of UoT for Mobipack and ready for jointly making

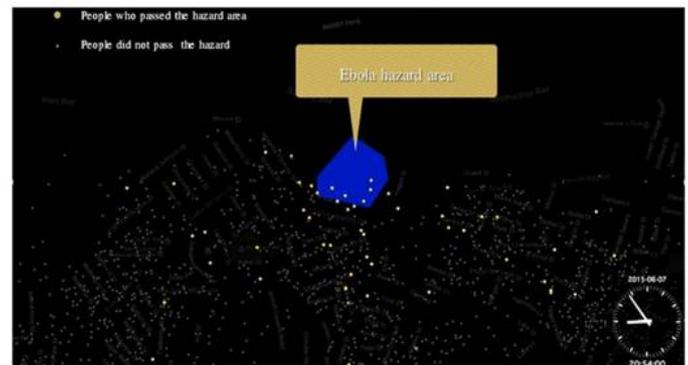
**Continued**

presentation on this application upon the request of the ADRC member countries. Entire support and training can be provided remotely. The data pipeline could further help use telecom data to support decision making and planning for the public good, typically, disaster risk management and responses.

We are willing to support ADRC member countries in using Mobipack and exploring broader applications.



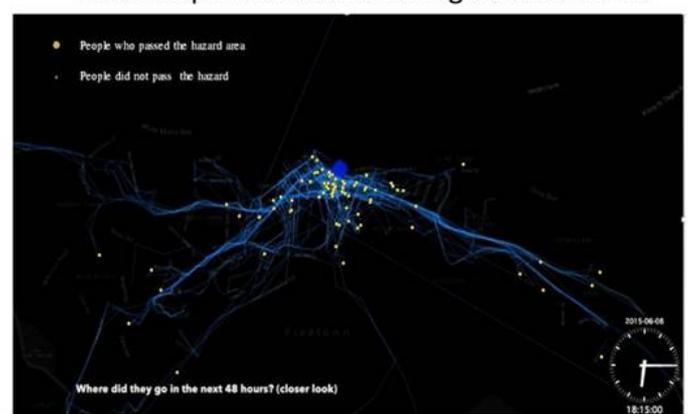
Distribution of People who are/are not in a Hazard Area



Trace People who Passed through a Hazard Area



Where did They Go in next 48 hours? (After 12 hrs.)



Where did They Go in next 48 hours? (After 47.5 hrs.)

ITU: Final Report for Call Detail Record (CDR) ANALYSIS: SIERRA LEONE

Fig. 2: Utilization of Mobipack at the time of Ebola epidemic in Sierra Leone, analyzed by ITU (People's mobility is quite high even only for 48 hours, which potentially threaten very large areas at the risk of epidemics.)

## ● Letter from a Former Visiting Researcher

### Mr. Nima Tshering from Bhutan

#### **My Journey towards heavenly earth, my motherland, Bhutan from Nippon**

#### COVID-19!

It's breaks my heart to pieces even today, remembering the time when the news began pouring in about cases of COVID-19 across the world, with rising numbers of infections and deaths. Many countries have taken measures to control the spread of the virus by implementing lockdowns, restricting flights, and imposing restrictions on travel documents, mainly to control and impede this deadly disease. No vaccine has been produced as of yet. In the midst of this situation, my journey begins from Kobe, Japan, and I would like to share it with you all.

The story begins on a day I was on a field trip to Yamaguchi and Hiroshima, on 26 March 2020. I learnt from Ministry of Foreign Affairs of Bhutan that Thai government has extended consideration of travel restriction on documents like medical certificates and others till 31 March for all the Bhutanese travelers. I

**Continued**

immediately shared this information with my coordinators Ikeda-san and Kodama-san, and they were able to book flights for me right away. I was so glad to have received this support and felt optimistic when I went back to the ADRC office for a medical check-up and to pay my gratitude to the ADRC Executive Director and my colleagues.

My flight was scheduled for 30 March 2020. That day, I woke up at 5:00 am, took a shower, and started chanting my morning prayers, especially Sangay Menlha (Buddha Medicine) mantra which I chanted 108 times for protection and for all sentient beings to be free from such diseases. Next, I had a quick breakfast, completed my final packing, and waited for my departure. I was seen off by my colleagues, Ikeda-san, and the hotel manager. I was sad to leave them but eager to head to my motherland, Bhutan, given the increasing seriousness of the COVID-19 situation. I took a taxi to Sannomiya wearing a mask with full protection and then on a shuttle bus to Itami Airport.



I went straight to the ticket counter and submitted my documents. It took almost two hours for verification, due to travel restrictions imposed in Bangkok. My flight departure time was 2:10 pm. While waiting, I was told that I couldn't board the flight due to COVID-19 travel restrictions, and that I would need to stay more than 14 hours in transit, which requires a visa. I had no choice but to follow the rules, but I was sad not to be able to board the flight. I called my coordinator, who told me to take the shuttle bus back to Sannomiya. I went back with eyes full of tears, but was soon informed that they had arranged for me to be on another flight, an hour later on the same day.

I was thrilled! I went by taxi back to the airport with Ikeda-san. This time I was lucky to board from Itami to Haneda (Tokyo) leaving my luggage behind and saying good bye to Ikeda-san. I boarded the flight and found mostly empty seats, as distance was maintained due to precautions against the deadly COVID-19. After arriving at Haneda Airport, I transferred to Terminal-3 by bus and waited there for almost three hours to board my next flight.

I heard from the staff working there that distance should be maintained and no crowds should be formed to avoid getting infected. Precautions were frequently communicated to passengers. I waited and could see airport attendants repeatedly sanitizing the airport waiting areas. Everyone was wearing masks, which was a great safety precaution for everyone in Japan. Later, I boarded the flight to Bangkok. Most seats were almost empty, as good distancing measures were taken, and I was on my way to my destination. I arrived at the Bangkok airport around 4:30 am. I found the airport mostly empty and there were no crowds of passengers that can usually be seen at Bangkok Airport. I headed to a hotel in the airport which was booked for me by ADRC.

I waited to board a Drukair flight to my final destination, which departed on 31 March 2020. I finally boarded the flight to my motherland, Bhutan, with all the other Bhutanese passengers. As I boarded, I saw a flight full of Bhutanese attendants wearing full protective dress with masks. All passengers were seated far away from one another. Great protection measures were implemented, and all passengers were reminded to maintain distance, and to wash and sanitize their hands from time to time. Thanks to almighty god, His Majesty the King, His Holiness the Jekhenpo and the caring Government of the day, I entered Bhutan safely. And here I am today proudly sharing my journey from NIPPON TO MY MOTHERLAND, Bhutan.

Upon arrival at Paro Airport, I was grateful to be among my fellow Bhutanese travelers. We were well received by the first responder security group and health officials at the airport, who provided hand sanitizer, masks, and distance checking for exit. After this, I was taken to the Thimphu quarantine site on a designated bus. It was a well coordinated program initiated for the benefit of all arriving Bhutanese to protect them against COVID-19.

**Quarantine:**

Upon arrival at the designated quarantine site, I was placed in Amaas Suite Hotel, Babesa, Thimphu. The

**Continued**

Guardians of Peace-DeSuups (volunteers) dressed in orange dress, Royal Bhutan Police (RBP), and health officials welcomed us, coordinated our movements, and helped assign rooms, all while wearing full protection. DeSuups serve on the front lines and go beyond borders to respond to this critical national call to combat COVID-19. All the citizens of the Thunder Dragon should thank HM the King-Supreme Commander for his wise and farsighted leadership.

**Life in Quarantine:**

We were very fortunate to be guests in quarantine. We received daily service of breakfast, tea, lunch and dinner-with varied menus and on time. The rooms were spacious and fully furnished with amenities including a sofa, TV, and refrigerator. For this, I would like to thank HM the King, PM of the Day for caring for the safety of the Bhutanese citizens. I had nothing to offer other than to stay safe in the room and offer daily prayers for the longevity of our king, the sovereignty of our country, the safety of my fellow citizens, and opportunities to serve the Nations. Finally, my Journey ended when I successfully completed 21 days of quarantine, tested negative for COVID-19, and returned back to my work station.

Thank you, director and staff of ADRC, for giving me an opportunity to visit as well as for supporting me, as well as my VR colleagues from Thailand, Sri Lanka, and Nepal, during such a difficult time. Be safe, and I hope we can work together to fight against COVID-19.

\*This report was written in May 2020.

**● Announcement****Challenges in Preventing the Spread of COVID-19 in Asia**

As noted in the last issue of ADRC Highlights, ADRC has been collecting information on the prevention of and response to COVID-19 in the ADRC member countries through our network of more than 100 former Visiting Researchers (VRs). The information collected to date is available on the ADRC website:

[https://www.adrc.asia/publications/disaster\\_report/covid19.php](https://www.adrc.asia/publications/disaster_report/covid19.php)

As of late June 2020, the collection includes situation reports from the member countries of Armenia, Nepal, the Philippines, and Sri Lanka, as well as from France, an advisor country. It also contains a report on COVID-19 Countermeasures in ADRC Member Countries, compiled by ADRC from online resources.

## Challenges in Preventing the Spread of COVID-19 in Asia

**Countermeasures in ADRC Member Countries**

Outline of New Practices/Guidelines Introduced by DRM Agencies of ADRC Member Countries Post-Covid-19 Shutdowns (Desk Survey Based Online Resources, as of 11 June 2020)

- Consideration in introducing new practices and guidelines that integrate covid-19 countermeasures as DRM agencies and the listing of new practices/guidelines introduced by DRM Agencies of ADRC Member Countries  
🇬🇧 English

Brief Outline of COVID-19 Countermeasures in ADRC Member Countries (Desk Survey Based Online Resources, as of 20 May 2020)

- Summary of the Types of Countermeasure (containment, mitigation, economic support), Information Sites of Health Sector, Role of DRM Agencies and Mobile Application Information  
🇬🇧 English 🇯🇵 Japanese

**Reports of the ADRC Member Countries**

ADRC homepage on the prevention of and response to COVID-19 in the ADRC member countries

**For Inquiries & Subscription Information**

For more information or details regarding email subscriptions to this newsletter, please email [editor@adrc.asia](mailto:editor@adrc.asia).