



Nepalese Engineers Association, Japan (NEAJ)

A report on the second cluster program on
Architectural Planning and Design

Organized by:
5th Executive Committee of NEAJ

July 31, 2021

A WEBINAR ON ARCHITECTURAL PLANNING AND DESIGN

The webinar on Architectural Planning and Design organized by the 5th executive committee of NEAJ was held on 31 July, 2021 via Zoom. This webinar is the second of its type of the cluster program initiated by the 4th executive committee of Nepalese Engineers Association, Japan (NEAJ), where the first webinar on Structural Planning and Design was successfully accomplished on 17 January, 2021. In this webinar on Architectural Planning and Design, there were five presentations, where three from students based on their academic research and two from experience of professionals. The schedule and the invitation information of the webinar is shown below:



**NEAJ Webinar on
Architectural Planning and Design:
Sharing Professional Experience and Academic Research Work
13:30-16:00 JST/ 10:15-12:45 NPT, 31 July (Sat), 2021**

Zoom Link:
Meeting ID:
Passcode:
Registration link for participation:

PROGRAM

13:30 Opening Remarks
Dr. Kabir Shakya, NEAJ President
13:35 Brief Explanation of this Program
Dr. Lata Shakya, Program Coordinator

13:40 Part One: Academic Research Works (Each 10mins Presentation, 10mins Discussion)

1. Research on Urban Heritage Conservation and Community Role: Case on Traditional Kathmandu Valley
Ar. Ram Shrestha, PhD Scholar at Southwest Jiaotong University of China, Shwet Bhairab Architect & Associates
2. Physical Vulnerability of Courtyards as Open Space in Post-Earthquake Disaster: A case of Patan Old City Area
Ar. Reema Joshi, (Presentation based on M.Sc. in engineering in Disaster Risk Management, Pulchowk Campus), East-West Engineering Service Pvt. Ltd.
3. International Community in Shared Housing
Ar. Pragati Baniya, (Presentation based on Master in Department of Environment Science and Engineering, Saitama University), Furniture Hub Pvt. Ltd.

14:40 Part Two: Professional Experience (Each 15mins Presentation, 10mins Discussion)

4. Designing Architecture and Shaping Cities
Dr. Suraj Pradhan, Pelli Clarke Pelli Architects Japan/ Jun Mitsui & Associates Inc. Architects /Chiba University
5. Disaster Risk Management of Cultural Heritage: The Concept and Case Study of Nepal
Dr. Lata Shakya, Ritsumeikan University

15:30 ~ Virtual Nomikai (Virtual Party)

Presentation of Academic Research:

The abstracts of the presentations of academic research are shown below.

Presentation 1:

Title: Research on Urban Heritage Conservation and Community Role: Case on Traditional Kathmandu Valley

Presenter: *Ar. Ram Shrestha, PhD Scholar at Southwest Jiaotong University of China, Shwet Bhairab Architect & Associates*

Abstract: Urban conservation deals with heritage within urban areas and in particular historic urban centers. It is process of managing change in historic urban areas in which urban conservation works within the greater context of the urban system. The Kathmandu valley is uniqueness of the valley's towns' architecture and settlement patterns can be observed through the formation of individual dwellings, organization of the neighborhood and urban squares as well as the community spaces and buildings. Community is as a group of people but can also mean a sense of belonging. Observing the way members of a group interact can help to determine whether this sense of belonging exists in the group. Using case study method and qualitative method, a data is captured from community members and technical personnel involved in reconstruction, interview and observation. Ranipokhare, Pu-bhahal, Balkumari square, kutu Phalcha, Wammune Phalcha case shows community role is vital role for Urban heritage conservation. Base on heritage site community power is different. Like National heritage organization has more role where as local level heritage local community take vital role. Community people must know procurement of urban heritage conservation.

Keywords: *Urban heritage, Community, Conservation*

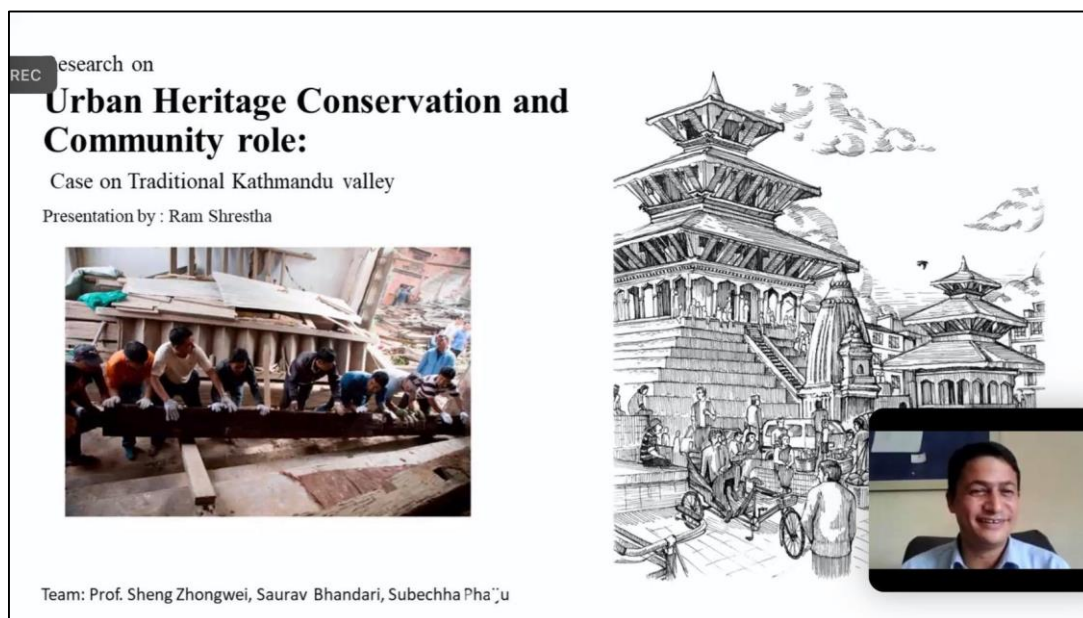


Fig. 1. A picture of the presentation made by Ar. Ram Shrestha related to his academic research.

Presentation 2:

Title: Physical Vulnerability of Courtyards as Open Space in Post-Earthquake Disaster:
A Case of Patan Old City Area

Presenter: Ar. Reema Joshi, East-West Engineering Service Pvt. Ltd.

Abstract: The traditional towns of Kathmandu valley consist of a large number of courtyards of varying sizes. These courtyards can play an important part in the post-earthquake disaster as a place to evacuate to or as a temporary shelter area but it can also become a place of risk because of the probability of the collapse of the buildings due to their increasing vulnerability. So, the research aims to identify such courtyards, estimate its physical vulnerability and develop a physical vulnerability index which encourages the mitigation actions to reduce the risk in these courtyard settlements. The courtyards of ward no.16 of Patan, which is one of the three districts of Kathmandu valley, were inventoried and studied for its role as evacuation sites or temporary shelter areas during Gorkha–Earthquake, 2015. Among the studied courtyards, Bubahal was taken as a case-study area. The physical vulnerability of buildings of Bubahal were assessed through rapid visual screening based on 14 parameters adapted from various literature. These parameters were categorized as contextual and physical parameters. The weightage system was developed for contextual parameters taking count on people’s preference of risk regarding their house whereas the weights for physical parameters were obtained from the literature. Finally, the vulnerabilities of the houses were mapped taking the average weights from these two parameters. The study finds that the courtyard space is vulnerable and possesses significant risk due to the vulnerabilities of the existing buildings around it in terms of building height, building story, building typology, load-path, redundancy, adjacency, opening sizes or positions, and accessibility. The research concludes that the concept for the physical vulnerability index developed in the research could be used to assess the vulnerability of similar courtyards of the valley.

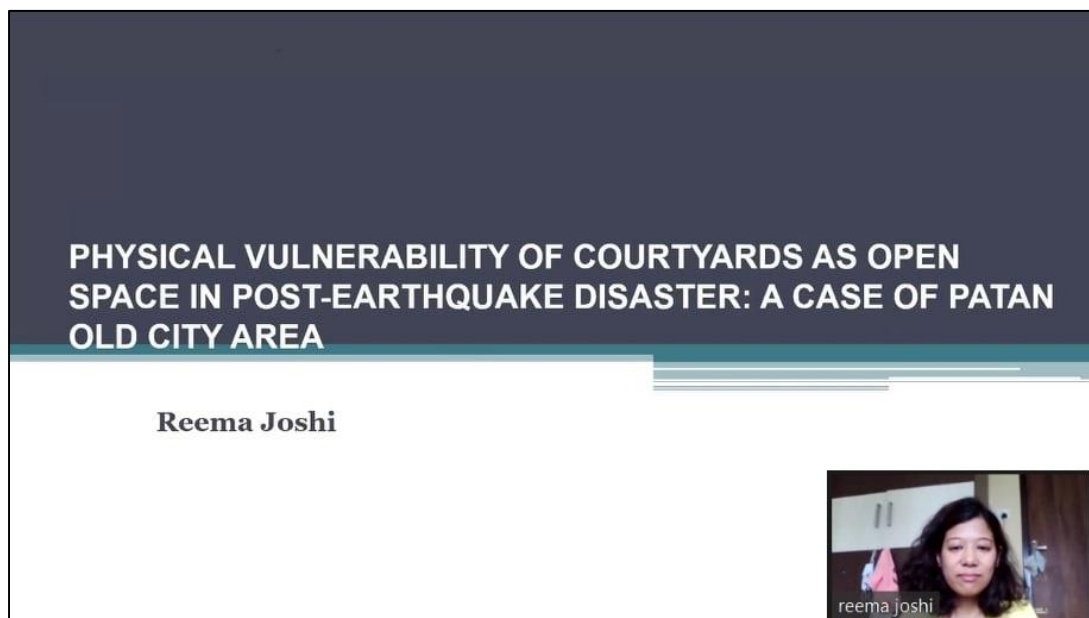


Fig. 2. A picture of the presentation made by Ar. Reema Joshi related to her academic research.

Presentation 3:

Title: 'UNITY IN DIVERSITY- Building Stronger Bonds among Foreign Students through Better Interaction Possibilities.'

Presenter: *Ar. Pragati Baniya, Furniture Hub Pvt. Ltd.*

Abstract: Common spaces are connectors, offering chances for everyday encounter. Exciting opportunity to live in multi-cultural, coed dormitory with other foreign students can be challenging at times as residents don't mix readily because of their cultural differences. In lack of social bonding and cohesion one may suffer from social stress. This research is carried out in existing dormitory buildings for foreign students at Saitama University, commonly known as International house (I-house) to make more interaction possibilities at interior common spaces that will fulfill cultural and psychological requirements of residents. Online and paper-based questionnaire survey carried out on the first phase revealed some drawbacks and thus a design workshop on the second phase was conducted which recreated the values of the lobby space that the residents perceived. Physical characteristics and cultural characteristics like friendship pattern, social relation, sense of belonging are factors influencing social relation, hence influencing lobby usage. To provide physical space that will render balance between psychological and cultural requirements, design thinking process was used by participants of workshop. Psychological characteristics that were found most influencing were privacy, comfort of imaginary territory for each unit and as a whole. The findings will also help to generate better ideas to design common spaces for multi-cultural community in future.



Fig. 3. A picture of the presentation made by Ar. Pragati Baniya related to her academic research.

Presentation of Professionals:

The abstracts of the presentations of professionals are shown below.

Presentation 1:

Title: Designing Architecture and Shaping Cities

Presenter: *Dr. Suraj Pradhan, Pelli Clarke Pelli Architects Japan, Inc./ Jun Mitsui & Associates Inc. Architects /Chiba University*

Abstract: In this presentation entitled *Designing Architecture and Shaping Cities*, several projects that have accomplished or planned in or outside Japan will be discussed with the design concepts, architecture importance, harmonization with the surrounding environment, and rules and regulation for the construction projects. Difficulties and the obstacles on implementing the designed or proposed projects will also be shared. First, a 24-story high grade residence *Nathan Suites* in Singapore accomplished in 2014 will be discussed with the design concept, process from basic planning to final plan of this project. Second, a 48-story high grade condominium *Park Tower Harumi* in Japan that completed in 2019 will be discussed focusing on harmony and its design, color and material sampling and designing the open public park for the city using its surrounding land. Then, a 41-story redevelopment project (condominium, retails, local community facilities) *Park City Musashikoyama- The Tower* completed in 2020 will be discussed including its design, circulation and connection to the city, positioning of open public space and process from basic planning to final design. Finally, a 64-story commercial office and residence building in Toranomon/Azabudai Tokyo that is planned to be completed in 2023 will be discussed emphasizing on importance of new city skyline, mockup confirmations of building elements and its performance tests under disasters like typhoon, earthquake, heavy rainfall etc. The similarity and the differences on these projects and the experience sharing could provide a greater insight on the architecture necessity for the current world and the environmental considerations among the academics and practitioners.

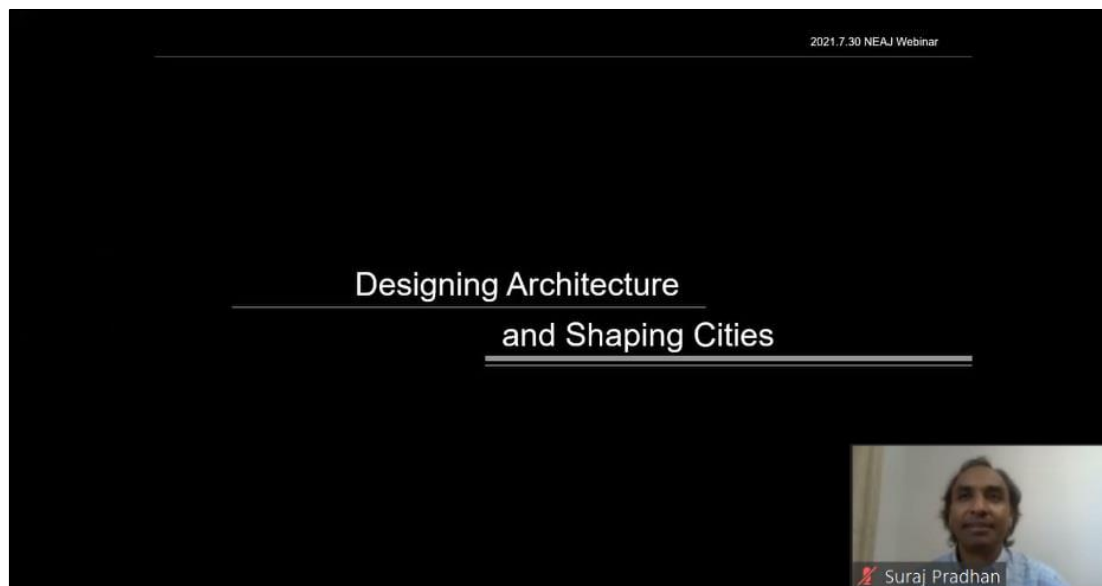


Fig. 4. A picture of the presentation made by Dr. Suraj Pradhan related to his professional experiences.

Presentation 2:

Title: Disaster Risk Management of Cultural Heritage: The Concept and Case Study of Nepal

Presenter: *Dr. Lata Shakya, DMUCH Ritsumeikan University*

Abstract:

In this presentation the concept of Disaster Risk Management (DRM) of cultural heritage and experience of research works in the historic city Patan of Nepal will be presented. DRM is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses (UNDRR, <https://www.preventionweb.net/english/>). It is also a cyclical process with three basic stages, 1) Before the disaster (Risk assessment, Prevention and Mitigation Methods), 2) During the disaster (Emergency Preparedness and Response Procedures) and 3) After the disaster (Damage Assessment, Treatment of Damaged Components of the Heritage Property through Interventions such as Repairs, Restoration and Retrofitting and Recovery or Rehabilitation activities). The “UNESCO Chair International Training Course on Disaster Risk Management of Cultural Heritage” (ITC) is being conducted by the Institute of Disaster Mitigation for Urban Cultural Heritage at Ritsumeikan University (R-DMUCH) from 2006. This year it will be conducted on online platform. Firstly, a brief course contents will be introduced in this presentation. Then, research work experience on disaster risk management in Patan will be presented. In 2013, to figure out “disaster history and disaster response in Nepal”, field survey was conducted based on oral history methodology in courtyard style settlement area of historic city Patan. In 2014, Disaster mitigation map of Nagbahal & Ilanani tole was developed based on town watching and workshop with community. After 2015 Gorkha earthquake, group workshops and individual interviews with the residents were conducted to figure out the individual and community disaster response, its potentiality. The documenting materials collected from these continuous participatory research or action research are compiled on a book “The memory of 2015 Nepal Earthquake” which was published in 2020. Research works are not only about researchers’ achievement but also it should be somehow connected with the study site’s benefit. This presentation will provide the information on the survey work, its process and efforts of working with the study site’s community.



Fig. 5. A picture of the presentation made by Dr. Lata Shakya related to her professional experiences.

Participants:

On average 24 participants fully attended the webinar and participated actively during the questions and answers session. Equal numbers of participants from Nepal and Japan attended and showed much interest on the information and knowledge shared in this webinar. Several feedbacks, comments and suggestions for such future program was obtained from the participants.

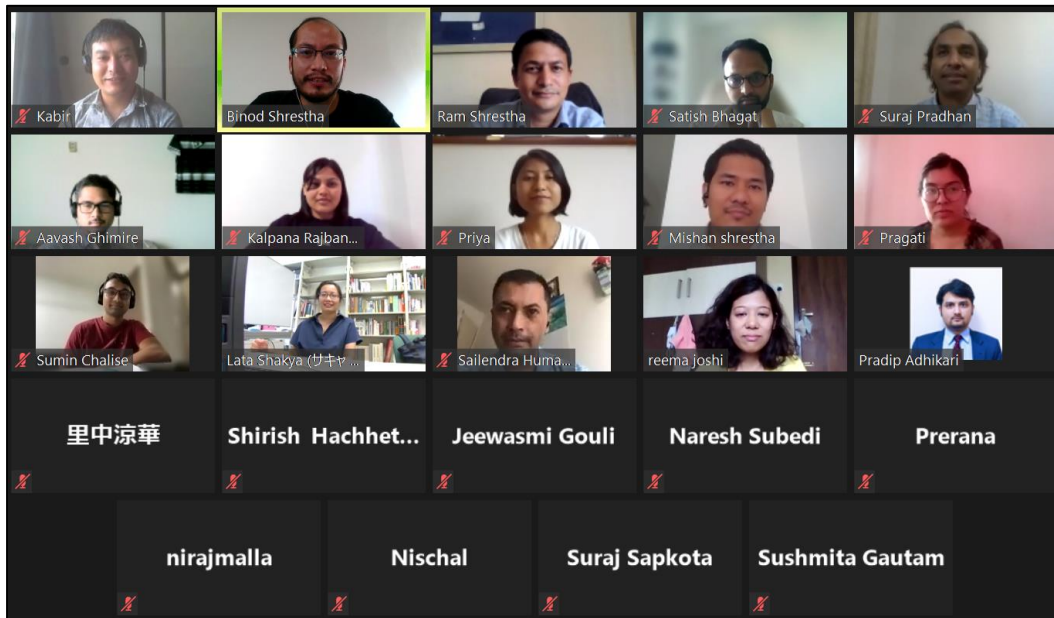


Fig. 6. Group photo at the beginning of the program.

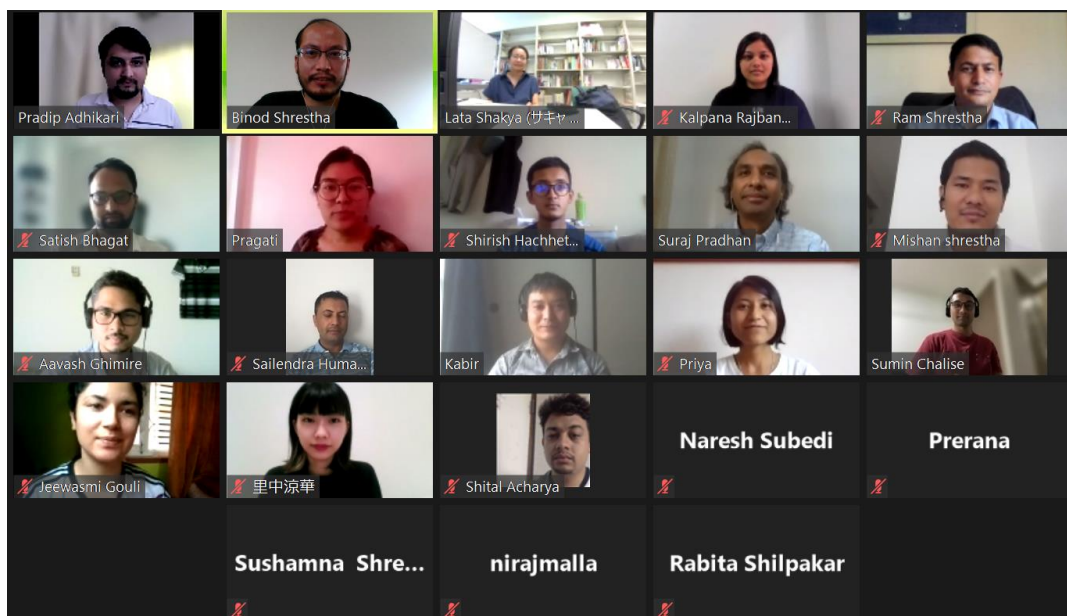


Fig. 7. Group photo near to the end of the program.

Virtual Nomikai:

A virtual *Nomikai* (Japanese culture of drinking after some event or occasion) was done with the active discussion regarding the questions and comments on the presentations made on this webinar. Professional also shared their interesting experiences to the participants. Students who have queries regarding their research were also discussed openly. Virtual Nomikai and the program was ended with thanks message to all the participants and supporting hands for the successful accomplishment of Architecture Cluster program by the President of 5th executive committee of NEAJ.

Additional Photos of the Webinar:

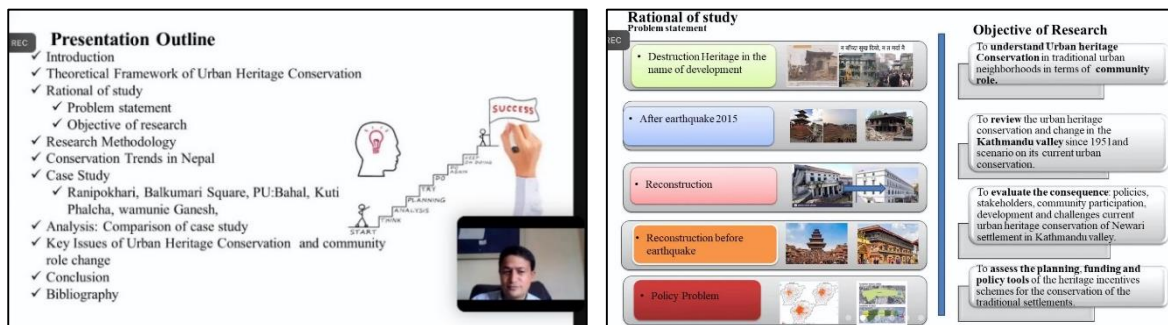


Fig. 8. Additional pictures of the presentation made by Ar. Ram Shrestha.

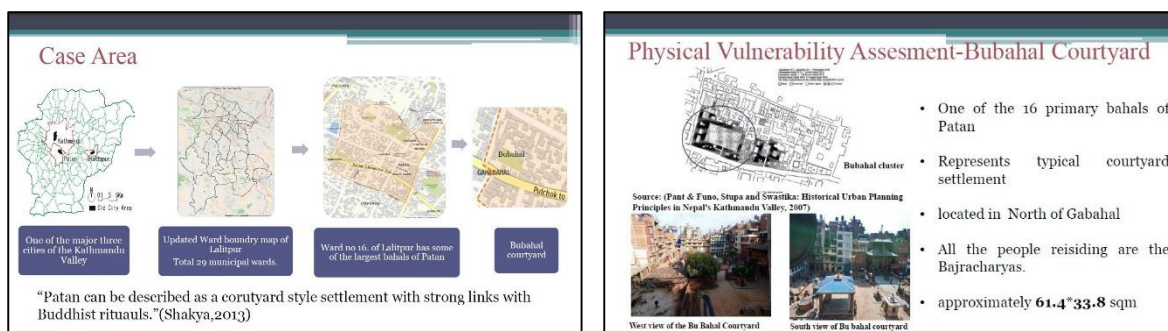


Fig. 9. Additional pictures of the presentation made by Ar. Reema Joshi.

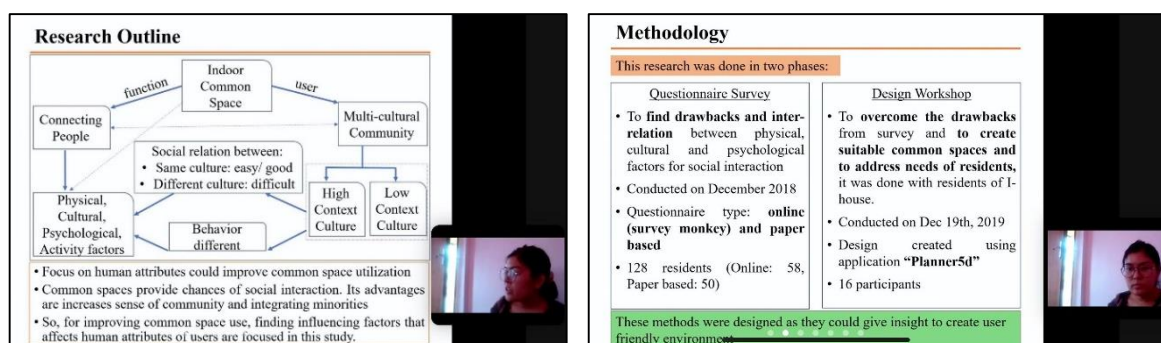


Fig. 10. Additional pictures of the presentation made by Ar. Pragati Baniya.



Fig. 11. Additional pictures of the presentation made by Dr. Suraj Pradhan.

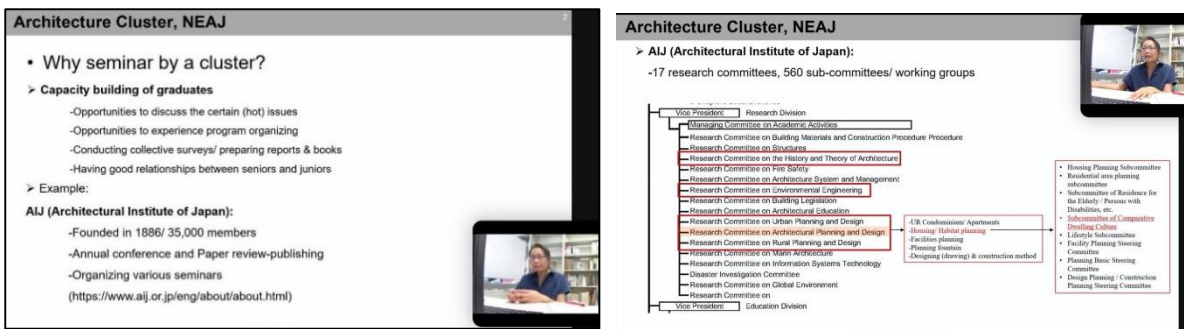


Fig. 12. Additional pictures from Brief Explanation of Program by Dr. Lata Shaky.

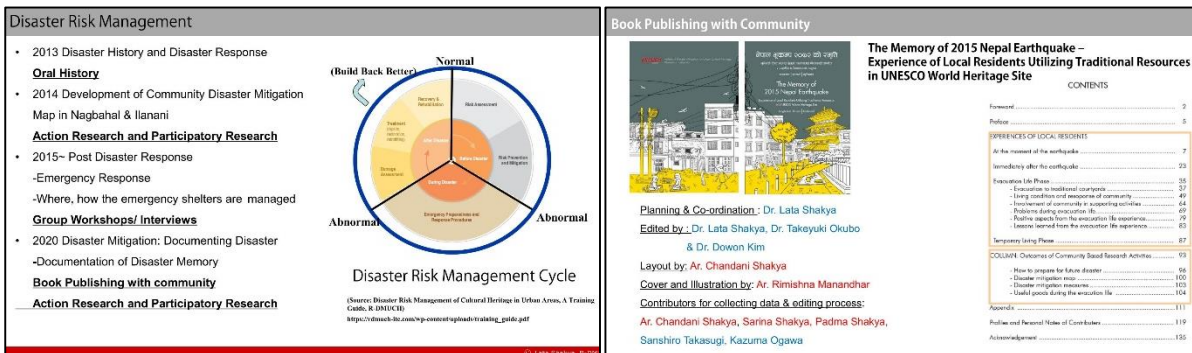


Fig. 13. Additional pictures of the presentation made by Dr. Lata Shaky.

Message from the 5th Executive Committee of NEAJ:

We would like to thank all presenters and participants who participated actively and helped this program to achieve its objectives. We truly appreciate the cooperation of the former President of NEAJ committee Dr. Lata Shakya. The enthusiasm of Ar. Ram Shrestha on supporting future activities of NEAJ that can bind and create a platform on sharing information and technology to Nepal is highly appreciated. We also would like to thank Dr. Suraj Pradhan for giving his time and sharing his experiences that could be a motivation to our architects. Last but not the least, we would like to extend our sincere thanks to Dr. Lata Shakya for her enormous contribution and vision for the prosperity of NEAJ.

In future, several such programs will be conducted. A webinar on Geotechnical Cluster program will be scheduled in near future. We will send the information through email soon. Please share the information to your friends and people that can help them get benefit of the shared knowledge and information through our regular webinars. More information could also be obtained from our homepage: <http://www.neajc.org/> and facebook page: <https://www.facebook.com/neajapan>. If you have any suggestions and proposal for conducting future programs, please let us know. The 5th executive committee will be very happy to facilitate every activity within its scope.

Thank you.



Nepalese Engineers Association, Japan (NEAJ)

THE FIFTH EXECUTIVE COMMITTEE (April, 2021 ~)



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Member
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Brief biographies of presenters:

Academic research work presentation:

Ar. Ram Shrestha:

Ar. Ram Shrestha, an Architect, urban Planner and currently PhD Scholar student of Southwest Jiaotong University of China. He did bachelor in Architecture and Master in urban planning from Nepal. He is former President of Madhyapur Engineering Society. He was part time lecture in Nepal Engineering College and Kantipur international college. He is currently part time lecture in Thapathali Engineering Campus. He is principal Architect of Shwet Bhairab Architect & Associates. He has involved various research work related to architecture, planning and heritage conservation as a team member of different institutions. He is practicing various Architectural and urban planning Project.

Ar. Reema Joshi:

Ar. Reema Joshi had completed her bachelor degree in Architecture from Khowpa Engineering College, Libali, Bhaktapur, Nepal. She has completed her M.Sc. in Disaster Risk Management from Tribhuvan University, Institute of Engineering, Pulchowk Campus, Lalitpur, Nepal. She is now currently working as an architect in East-West Engineering Services Pvt. Ltd., Bansbari, Kathmandu, Nepal.

Ar. Pragati Baniya:

Ar. Pragati Baniya had completed her bachelor degree in Architecture from Nepal Engineering College, Bhaktapur, Nepal. She has completed her Master degree in Environment Science and Engineering from Saitama University, Japan. She has past working experiences as an architect on RRNE project (JICA), Northwest Civil Aviation Airport Construction Group, Machhapuchhre Consultancy Pvt. Ltd. etc. She is now currently working as an architect in Furniture Hub Pvt. Ltd., Kathmandu, Nepal.

Professional experience presentation:

Dr. Suraj Pradhan:

Dr. Suraj Pradhan completed his Diploma in Architecture from Institute of Engineering, Pulchowk Campus in 1992. In 1997, he came to Japan and completed his bachelor degree in Civil Engineering from Gunma University, Japan in 2001. He completed his Master degree in Architecture in 2003 from Chiba University, Japan in 2003. He continued his study in Chiba University and completed his Ph.D. degree in Architecture in 2006. Since 2002 he has been working as a Senior Associate for Jun Mitsui & Associates Inc., and Pelli Clarke Pelli Architects Japan, Inc. He is also involved as a part time lecturer in Chiba University since 2012.

Dr. Lata Shakya:

Dr. Lata Shakya is an associate professor of the Institute of Disaster Mitigation for Urban Cultural Heritage (DMUCH), Ritsumeikan University. She received her doctoral degree in Urban and Environmental Engineering from Kyoto University and a master's degree in Human Environmental Science from Kyoto Prefectural University. Her research focuses on community resilience to disasters and the sustainability of historic cities. Understanding the historic city's dwelling culture, historic disasters & its responses, social system, traditional spatial management system (the stakeholders & decision-making process) and its transformation to present are the key steps of her research to extract adaptable spatial management system for disasters of present era. She has conducted research works in various urban and rural areas of Nepal and Japan. Her main field area is historic city Patan of Nepal, a courtyard style settlement that originated from Buddhist monasteries and is currently involved on disaster mitigation planning of different communities in Patan through workshops with the local community.

Note: Unauthorized use of the contents and pictures are strictly prohibited. Pictures of the presentation could be provided upon reasonable request.