



NEWSLETTER

Society of Transport Engineers Nepal

MESSAGE FROM PRESIDENT



I am pleased to announce the publication of the second issue of the SOTEN newsletter, an initiative by the fifth executive committee of the Society of Transport Engineers of Nepal (SOTEN). As many of you know, SOTEN was established in 2009 as a professional society to support and advance the field of transport engineering in Nepal. Since then, our membership has steadily grown to include approximately 376 dedicated members who continue to contribute actively to our community and its mission.

In line with this vision, the Fifth Executive Committee decided to publish a newsletter with the objective of creating a platform to showcase key developments within Nepal's transportation community.

The positive response and encouragement we received from our members and wider readership for the first issue of the newsletter inspired us greatly. This feedback motivated us to put even more effort into enhancing the quality and content of our second issue.

Looking ahead, we cordially welcome and encourage each of you to continue sharing your achievement, your knowledge and experiences within transportation community. Together, we can drive progress and make significant strides toward a more efficient, sustainable, and interconnected transportation system.

I would like to extend my heartfelt thanks to newsletter committee members for their hard work under the guidance of our General Secretary in bringing this issue. The input received from all the Fifth Executive Committee members is also highly appreciated.

We appreciate and look forward for your feedback and suggestion for further enhancement of the newsletter. Hope you will find this newsletter useful.

Warm Regards

Rajendra Raj Sharma
President
Society of Transport Engineers Nepal



About SOTEN

SOTEN is a professional society dedicated to professional development by generating and disseminating knowledge, and sharing professional experiences in the transportation sector. SOTEN is also a professional society member of Eastern Asia Society of Transport Studies (EASTS) and International Road Federation (IRF). Since its establishment in 2009, SOTEN is continuously involved in various capacity building activities and promoting research and innovation in transportation sector.

Past President



Er Tulasi Sitaula
First Executive Committee
2009-14



Er. Lal Krishna KC
Second Executive Committee
2014-19



Er. Padam Badhadur Shahi, Ph.D
Third and Fourth Executive Committee
2019-21; 2021-23

SOTEN Executive Members

Fifth Executive Committee (2024-26)



Er. Rajendra Raj Sharma
President



Er. Hare Ram Shrestha, Ph.D
Vice-President



Er. Hemant Tiwari
General Secretary



Er. Shrawan Kumar Thapa
Secretary



Er. Bindu Adhikari
Treasurer



Er. Anga Lal Rokaya
Member



Er. Binayak Bhattarai
Member



Er. Binod Bhattarai
Member



Er. Pradeep K. Shrestha, Ph.D
Member



Er. Ram K. Shrestha
Member



Er. Saujanya Nepal
Member



Er. Shiva Ram KC
Member



Er. Top Bahadur Baniya
Member



SOTEN Activities

TECHNICAL SESSION ON 15th SOTEN DAY

Technical session on TRANSPORT INFRASTRUCTURE DEVELOPMENT: ISSUES AND WAY FORWARD was conducted during 15th SOTEN DAY, July 6, 2024. The technical session was moderated by Er. Tulasi Prasad Sitaula, Former Secretary, Government of Nepal and Founding President of SOTEN. Technical session started with the key note presentation on the overall transport infrastructure development by Er. Sushil Babu Dhakal, Joint Secretary, Ministry of Physical Infrastructure and Transport. Speaker provided the overview of current transport infrastructure development in Nepal highlighting the various issues and challenges in different tier of government followed by major recommendation and way forward. The key note presentation was followed by panel discussion. Er, Ram Hari Pokharel, Director General, Department of Roads (DoR) highlight the current role of DoR in overall strategic connectivity and DoR future plan to work on mobility. Er. Ajay Kumar Mul, Director General, Department of Railways (DoRW) focused on the need of connectivity through proper rail network with DoRW ongoing activities. Er. Pradeep Adhikari, Director General, Civil Aviation Authority of

Nepal (CAAN) focused on the role of the aviation in enhancing connectivity as well as tourism and requested to look in holistic approach of overall transport network planning. Er. Thakur Prasad Sharma, President, Society of Consulting Architectural



and Engineering Firms Nepal highlighted the importance of need of enhancing and capacity building of the national experts and consulting firms for the independency towards international experts and firms. Similarly, Er. Ang Dorji Lama, Senior Vice President, Federation of Contractor's Association of Nepal focused on need of engaging Nepalese contractor in large scale infrastructure projects and preparing a good environment to the contractor rather than blaming them for the delay of the project. Er. Lal Krishna KC, Past President, SOTEN highlighted the role of professional societies in advocacy for betterment on policies, strategies and implementation.



15th SOTEN Day Celebration

The 15th SOTEN Day Celebration was held on July 6, 2024 at Hotel Himalaya in Kupodole, Lalitpur. The event was honored to have presence of Hon. Raghubir Mahaseth, Former Deputy Prime Minister and Minister for Ministry of Physical Infrastructure and Transport (MoPIT). The event brought together engineers, policymakers and professionals in transportation engineering to celebrate the accomplishments of SOTEN.





Several professional societies delivered congratulations message to SOTEN for the the milestone and shared best of wishes for the future. Online Congratulation message was also provided by Asian Transport Outlook (ATO) and Sri Lanka Society of Transport and Logistics (SLSTL). A Memorandum of Understanding (MOU) was also signed between SOTEN and Society of Consulting Architectural and Engineering Firms (SCAEF) to strengthen the collaboration for knowledge sharing, advocacy and capacity building of transportation professional. The event also facilitated the contribution of immediate past president of the organization Prof. Er. Padma Bahadur Shahi, PHD. During the remarks Prof. Shahi presented the obstacles and challenges faced by SOTEN in initial days and also expressed his happiness to bring SOTEN at the current status. Er. Keshab Kumar Sharma, Secretary, Government of Nepal and Er. Gopal Prasad Sigdel, Secretary, Ministry of Physical Infrastructure and Transport (MOPIT) expressed their happiness towards the effort of SOTEN towards transport sector of Nepal and wishes all the best to SOTEN for its future activities. Hon. Minister Raghubir Mahaseth provided his remarks as chief guest of the event praising the works done by SOTEN and also asked the organization to be more proactive and promised to provide support from the ministry whenever required. The felicitation ceremony also honored the Chief Guest and Special Guests of the event.



Finally, a vote of thanks and concluding remarks was made from Er. Rajendra Raj Sharma, President, SOTEN.



Memorandum of Understanding

MOU with Society of Consulting Architectural and Engineering Firms (SCAEF) Nepal

A Memorandum of Understanding (MOU) was signed between SOTEN and SCAEF-Nepal at the 15th SOTEN Day Celebration on July 6, 2024. The objective of this noteworthy agreement is to enhance collaboration, exchange knowledge, and foster creativity in Nepal's transportation industry as well as the architectural and engineering consulting fields. Both organizations promised to raise industry standards and advance professional development by coordinating their objectives and available resources.





MOU with Nepal Engineering College (NEC)

A Memorandum of Understanding (MoU) was signed between SOTEN and Nepal Engineering College (NEC) on July 23, 2024. The primary objectives of this MoU are to promote collaborative research, enhance capacity in the transportation engineering sector, and encourage academic and professional exchanges between the two institutions. This partnership aimed to leverage the expertise of both parties to address challenges and innovate solutions in transportation engineering, benefiting students, researchers, and industry professionals alike.



Knowledge Sharing Series

Understanding Air Quality, Transport, and Climate Change Funding

As a part of SOTEN Knowledge Sharing Series, the sixth episode titled "Understanding Air Quality, Transport, and Climate Change Funding" concluded on July 14, 2024 in collaboration with Asian Transport Outlook (ATO) and International Road Federation (IRF). Mr. Parthaa Bosh,



Principal at Domain and Functional Advisory Group, LLP, presented on the episode highlighting the significance and relationship between air quality, transport and climate change funding.

Enhancing Traffic Safety around School Zones with Star Rating for Schools

Another episode, seventh, of Knowledge Sharing Series was on the topic "Enhancing Traffic Safety around School Zones with Star Rating for Schools" delivered on August 11, 2024 by Ms. Minh Vo, Coordinator at International Road Assessment Programme (iRAP)'s SR4S. The programme focused on measuring and mitigating risks that children face on their daily school journeys. Tools and methodologies along with implications of risk factors in school areas were also discussed in the episode.



Holistic approach to improving road safety in Nepal

The eighth episode of Knowledge Sharing Series was concluded on the topic, "Holistic approach to improving road safety in Nepal" on August 25, 2024. Er. Prem Sharma Lamsal, Senior Highways Engineer at AtkinsRéalis delivered the program focusing on the





issues of road safety, congestion, pollution and costs of mishaps in transportation system in Nepal. He also delivered remarks on Safe System Approach for road safety management.

Experience sharing of Road maintenance practice in Australia

The ninth episode of the Knowledge Sharing Series was delivered on the topic "Experience sharing of Road Maintenance Practice in Australia" by Er. Dasarath Neupane, Pavement Specialist at Department of Transport Victoria in Australia on September 22, 2024. Important insights into the current road maintenance practices in Australia were discussed in the program, along with differences and issues in Nepal were also highlighted.



Training and Seminars

Defensive Driving Training to Two-Wheelers and Three-Wheelers

Invitation to all individuals passionate about road safety

Join us for:

"Training on Defensive Driving to Two-Wheelers and Three-Wheelers"

Dheerandra Samineni
International Defensive Driving Trainer

Date: 5th August, 2024, Monday
Time: 10:15 AM-1:00 PM, Nepal Standard Time
(Meeting Link to be provided to registered participants)

Organized by:

In collaboration with:

In collaboration with National Road Safety Council (NRSC) and Safe Drive India, SOTEN

organized Defensive Driving Training to Two Wheelers and Three Wheelers on August 5, 2024. Mr. Dheerandra Samineni, an international defensive driving trainer voluntarily supported our cause to enhance safety in Nepal by providing the training.

Road Safety Awareness as a part of low value Grant from UNDP

SOTEN was provided with low value grant from United Nation Development Program (UNDP) to implement a focused project titled "Road Safety Education and Training to Road Users (School Teachers, Students, and Public Vehicle Drivers) and Road Safety and Crash Response Training to First Responders and Rescue Workers." targeting in Damauli (Gandaki Province), Butwal (Lumbini Province) and Attariya (Sudurpashchim Province). This project was designed to address critical gaps in road safety awareness and post-crash response capacity through comprehensive training programs aimed at multiple stakeholders,



including teachers, students, public transport drivers, first responders, and rescue personnel. Among three location, the first or pilot activity was organized in Damauli, Tanahau district, Gandaki province from 14th September 2024 to 18th September 2024. The program was coordinated by Ms. Ashmita Pokhrel, Program coordinator and well supported by Samridi Singh.



The formal opening of the event was done in presence by Mr. Baikuntha Neupane, Mayor of Byas Municipality on 14 September 2024. He highlighted the importance of road safety with showing cases of increased road crashes in upgrading of Mugling-Pokhara road. He requested all the participant to gain as much as knowledge from the training. He emphasized road safety being the shared responsibility and collectively we can work for betterment of road safety. As teacher can change the student's mindset from childhood, this kind of training is very fruitful. He also thanked UNDP, NRSC and SOTEN for selecting Damauli as a location within Gandaki province for this kind of awareness activities. During the opening session Niraj Dhaubadel from UNDP Road Safety Program provided the overview of the program.



Road Safety Education/Training was provided to teacher on 14 September, 2024, where Forty teachers from different schools of Vyas municipality, Damauli attended. Among the attendees, thirty-one were male and nine were female,

reflecting a diverse representation of educators committed to enhancing road safety awareness. The program aimed to



equip teachers with essential knowledge and practical strategies to effectively teach road safety to their students. Second day (15 Sep, 2024), Road Safety Education/Training was provided to drivers where Thirty Seven Drivers representing



Third day (16 Sep, 2024) road safety awareness/education was provided to the students of Shree Siddha Beni Secondary School, Belbas, Byas ward no.13, Tanahu and Shree Chandi Devi Rastriya Secondary School Kumaltari, Byas ward number 10, Tahahu. Around One hundred ten students were benefited from the program, among which sixty one were females. Additionally, informative flyers and banners featuring various traffic signs were distributed,





serving as valuable resources for ongoing learning and awareness. Hemant Tiwari and Vibek Gupta lead the awareness activities with support from Sanjay Luitel and Shitan Shrestha. Addition to road safety awareness and training to road users, crash response training to first responder and crash rescue worker were also conducted on 18-19 September 2024. Seventy-Nine participant (Eleven female participants) representing Armed Police Force (APF), Nepal Police, Byas Municipality, Pokhara Metropolitan City, School Teachers, and local clubs attended a comprehensive training program titled "Road Safety Education and Training for First Responders".



Participants engaged in various sessions covering topics such as assessing accident scenes, providing immediate medical assistance, and understanding traffic regulations. Similarly, Forty-five participants who had attended training for first responders attended the training for rescue workers. The participation represents Armed Police Force (APF), Nepal Police, Nepal Army, Representative from Byas municipality and Pokhara metropolitan City attended a comprehensive training program.



A formal closing ceremony was organized in 18 September 2024 in presence of Mr. Baikuntha Neupane (Mayor of Byas Municipality), Janardan Gautam (Chief Administration Officer of Tanahu District), Mr. Birendra Bahadur Shahi (Chief of the Nepal Police Office in Tanahu), and the Mr. Krishna Raj Adhikari (Chief of the Armed Police Force in Tanahu). The guest expressed their happiness to see this kind of training being organized on Damauli. All of them committed to coordinating with relevant authorities to ensure road safety measures are in place. He urged the organizers to expand training programs to cover potential first responder and rescue workers and expressed his gratitude to the organizer.

Research and Publications

Issue Inaugural: International Journal of Engineering Technology and Infrastructure Development

The first issue of International Journal of Engineering Technology and Infrastructure Development by Lalitpur Engineering College was inaugurated on 30th August, 2024. SOTEN and Safe and Sustainable Travel Nepal (SSTN) has initiated the publication of the first issue with our General Secretary Er. Hemant Tiwari leading the journal tasks as the Editorial Manager.





First Issue of SOTEN Newsletter Published

The 5th Executive Committee of SOTEN initiated the quarterly publication of SOTEN Newsletter with the release of the first issue on July 31, 2024 with support of the Newsletter committee team members. Last but not Least fifth executive committee coardily thank you all for your motivation to realese newsletter issues.

Engagement on Research

Research paper titled "Evaluating Multiple Linear Regression for Travel Time Prediction in Mixed Traffic on a Two-Lane Undivided Highway" was published on Proceeding of 14th IOE Graduate Conference. The paper was authored by Sanjay Luitel, Pradeep Sigdel and Hemant Tiwari (representing SOTEN). Similarly Hemant Tiwari co-authored research article "Capacity Reduction for Urban Road Due to Curbside Bus Stop: A Case Study of Srijana Chowk, Nepal" representing as General Secretary, SOTEN. Additionally, SOTEN facilitated the data collection of the research by Krishna Bhattarai entitled, "People's Perception of Crowdfunding as an Alternative Source of Funding for the Development of Transportation Infrastructure in Nepal" via its online platforms.

SOTEN Newsletter member



Er. Krishna Bhattarai



Er. Niraj Bohara



Er. Samridhi Singh



Er. Sandesh Poudel



Er. Deepak Bdr. Kunwar



Er. Reshu Poudel

Collaboration for risk mitigation

Collaboration with Nepal Engineers' Association

Er. Shrawan Kumar Thapa, representing the Society of Transport Engineers Nepal (SOTEN), recently participated in an important meeting convened by the Nepal Engineers' Association (NEA). The focus of the meeting was to address the tragic loss of life and widespread infrastructure damage caused by the relentless rains and severe flooding impacting various regions of Nepal. The gathering provided a crucial platform for key stakeholders, including representatives from the Institute of Engineering (IOE), prominent professional societies such as the Society of Consulting Architectural and Engineering Firms (SCAEF) Nepal, the Society of Public Health Engineers Nepal (SOPHEN), Nepal Hydropower Association (NHA), the Road and Urban Planning Society of Nepal (RUPSON), the Nepal Geological Society (NGS), the Society of Earthquake and Engineering Nepal (SEANEP), and other independent experts.



This collaborative exercise by NEA demonstrated the value of synergy between academic institutions and field practitioners, providing a platform to collectively address national challenges.





CALL FOR PAPER FOR INAGURAL ISSUE OF JOURNAL ON TRANSPORTATION SYSTEM AND ENGINEERING

On behalf of the SOTEN 5th Executive Committee, we aim to publish our inaugural issue of Journal on Transportation System and Engineering (peer reviewed and indexed in NepJol) to promote research in the transportation sector. In this regard, we would like to request support for this initiative by providing quality paper or spreading messages within your national and international friends circle. We will have a double blind review process with support of national and international experts as reviewers.

Journal on Transportation System and Engineering (JoTSE)



CALL FOR PAPERS



Society of Transport Engineers Nepal (SOTEN) invites submission of original research papers in different aspects of transportation sector for the first edition of the journal, which will be peer reviewed and open access journal indexes in NepJOL with DOI number.

The journal aims to provide a platform for disseminating cutting-edge research in various aspects of transportation system and engineering by fostering collaboration between academia, industry, and government agencies.

Deadline Extended

Scope of the Journal

- Transportation Policy, Planning and Economics
- Transportation System Design and Management
- Aviation, Railway, Freight and Logistics
- Transportation Technology and Innovation
- Multimodal Transportation System.
- Traffic Engineering and Road Safety
- Intelligent Transportation System
- Public Transportation and Urban Transport
- Sustainable & Climate Resilience Transport

Scan and submit paper



Submission deadline :
10 November, 2024
Journal Publication:
February ,2025

Please visit SOTEN website soten.org.np for more information.
Please contact us at journal@soten.org.np for any queries.



Transportation Sector- Current National Affairs

Transportation Infrastructure

Need for a Resilient and Safe Transportation System

In the 3rd quarter of this year (July to September), Nepal experienced its worst. Frequent crashes, landslides, and road washouts were reported all over the country. Nepal witnessed two aircraft crashes, resulting in 18 and 5 fatalities on 24th July 2024 and 7th August 2024, respectively. The air crash at Tribhuvan International Airport involved a Saurya Airlines aircraft, which tragically claimed 18 lives, with only the pilot surviving. Initial investigation pointed to faults from the Civil Aviation Authority of Nepal (CAAN) and the airline operators. It was found that the airspeed and takeoff weight were mismatched, causing an aerodynamic stall. Additionally, the operator's speed card for a takeoff weight of 18,500 kgs indicated an incorrect takeoff speed (The Kathmandu Post, 6th September 2024). In another incident, a helicopter belonging to Air Dynasty crashed in August in Shivapuri National Park, resulting in the deaths of 5 people, including 4 Chinese nationals. These incidents highlight the urgent need for interventions in Nepal's aviation sector, including policy improvements, enhanced monitoring, and effective implementation.



Fig. Plane Crash inside Tribhuvan International Airport claiming 18 lives (Source: The Kathmandu Post)

On July 12, 2024, two buses carrying a total of 65 passengers were swept away in Trishuli River. The search and rescue operation went on for a month, with bodies still being recovered from various locations. Only 3 individuals were fortunate enough to survive. A report attributed the landslide to the haphazard construction of local roads in the hills by local bodies. This underscores the critical safety issue associated with the condition of highways and their vulnerability during this time of the year, demanding significant attention from relevant departments and engineers.



Fig. Incident at Jhyaple khola claiming many lives in the mud slide (Source: The Kathmandu Post)

The capital city came to a standstill due to heavy rain from 26th to 28th September 2024. During this time, numerous unprecedented events across the country claimed at least 112 lives. People were stranded along the highways due to disruptions and blockages, cutting off links to the Kathmandu Valley from all directions. Two buses at Jhyaple Khola were buried in a landslide, resulting in several deaths. Likewise, the swollen Sunkoshi river caused a section of the BP highway to collapse, while a bailey bridge connecting Nepal to China at Bhotekoshi,



Tatopani trade route was washed away, causing substantial economic losses. Furthermore, flooding in various rivers inundated settlements in the valley, affecting residents of the Kathmandu Valley. These unexpected climatic events, such as floods, heavy rains, and landslides, have significantly impacted the entire nation. Given that many bridges experienced flow above their design high flood level (HFL), there is an urgent need for climate change adaptive structures to ensure safe and resilient transportation in the country.



Fig. Damaged BP Highway (Source: RSS)

Home Ministry Direct Public Transport Service Providers

On August 15, according to BBC News, the Home Ministry instructed transport service providers to implement safety regulations due to the increasing number of road crashes along the highways of Nepal. It has been made compulsory to issue tickets and equip vehicles with GPS. The Home Ministry circular mandates the presence of two drivers for long-distance travel, in accordance with the Motor Vehicle and Transport Management Act of Nepal. Additionally, the provision of CCTV cameras and transponders, made compulsion as per the circular, inside the

vehicles will also ultimately enhance vehicle safety. The Home Ministry also emphasizes the need for regular maintenance, monitoring of vehicles, and regular training for conductors and drivers on safe driving behaviors and traffic rules. Measures such as punishing drink and drive offenders, providing ID cards for drivers and conductors, and implementing uniforms for workers will further enhance discipline in the profession which will in turn enhance safety. This is a positive step towards improving safety in road transport. However, it will require intensive resources for monitoring and effective implementation.

Incentives for International Airlines for Using International Airports

To attract more international airlines to our newly constructed international airports in Bhairhawa and Pokhara, the government has exempted VAT and service tax. Additionally, the fees previously charged by the Tourism Board and Civil Aviation Authority have been reduced, leading to an increase in the number of flights and a decrease in flight costs. There are also discussions about potentially lowering the cost of aviation fuel for international flights to further attract airlines.



Fig. A night view of Guatam Buddha International Airport (Source: <https://gbia.caanepal.gov.np/>)

This policy is expected to remain in effect until September 2026 (Bhadra 2083). With the upcoming closure of Tribhuvan International Airport in November, flights



are scheduled to be redirected to these international airports. Furthermore, new service centers will be established in Pokhara and Bhairahawa to provide assistance to foreign workers and those traveling abroad, reducing the need for travel to the central hub, Kathmandu.

Development in Railways

Nepal is set to connect Ayodhya through a railway which would boost the relationship between Nepal and India. This train would reach Ayodhya once a week (August 4, 2024, The Kathmandu Post). An act, on 14 July, where Bharatpur netizens set ablaze a survey vehicle, is proof of the dissatisfaction against the new proposed alignment of the East-West Highway. The alignment fixation is the major challenge of any transportation project. The alignment route has been changed from Chitwan National Park, after being criticized by many environment advocates around the country, to the alignment that passes through the city of Bharatpur. This has brought a huge concern to the residents of Bharatpur which is already a densely populated city. A rigorous study and proper planning is sought for effective planning of alignment. On 12 July, the then prime minister, Mr. Dahal, has approved agreement to connect Nepal to China by rail under the Belt and Road Initiative which is aimed to increase the connectivity and enhance trade. This will indeed trigger for Kerung Kathmandu railway and border infrastructure developing.

Other Activities

A project named, Provincial and Local Roads Improvement Program (PLRIP) – Phase 1 has been launched after the financing agreement of a US\$ 100 million as a concessional loan from World Bank. The program is set to build and maintain 3000 kms of all-weathered, resilient and

safe provincial and local roads and bridges for benefitting 1 million people of Sudurpaschim, Karnali and Madhesh Provinces. The project is also set to increase the institutional capacity of the province and local governments to plan, construct and maintain road and bridge infrastructures. (World Bank Group, Press Release, August 5).

To make travel hassle free during Dashain, a major festival, the Department of Transport Management (DoTM) has announced the opening of tickets online and counters. This measure has been taken to serve 2 million travelers outbound from Kathmandu. The department has also issued 20 points directive which includes checks for alcohol consumption at major entry and exit points, two drivers on long-distance routes and age limit for assistant drivers. Additionally, help desks for citizens at various stations and inspection team arrangement are set to improve the travel for Dashain. (25 September, The Kathmandu Post).

With the revised DPR, the updated length of the fast track project, one of the biggest ongoing project of Nepal, undertaken by Nepal Army, is 70.97 kms. The length has been reduced from 72.5 km. However, this decreased in length has been devalued by the addition of 3 new tunnels at Debichaur, Sisautar and Chandram Bhir and addition of 2 more bridges. The cost of the project is estimated to be NPR 211 Billion at present. (The Annapurna Express, September 16, 2023). This sets a negative example. One of the biggest projects of the country, in the middle of the construction, undergoing DPR revisions will have consequences in the future.

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