

Application Form of EASTS IRG**Date of Submission: 2020/08/06**

1. Name of IRG: International Research Group on good practices design guidelines for Traffic calming devices adopted in Eastern Asian countries

2. List of research members

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4. Keywords (Maximum: 5 words)
 Traffic Calming, Effectiveness, Humps, challenges

5. Purpose and Mission of IRG:

Context

The volume and severity of roadside crashes are increasing regularly. In order to minimize the through traffic volume while increasing the road user safety several traffic calming measures in have been introduced in European countries and some parts of USA as well as in some Asian countries.

Different types of traffic calming measures are adopted all around the world to create a safer environment for road users. Most of such devices reduce the speed of traffic at the expense of vehicle speed and a discomfort to passengers such as through vibration. There is a necessity to determine the effectiveness of adopting such measures as well as the discomfort faced by the drivers and any harm to the vehicles. In other words, there may be an optimum point to balance the need of safety or the disturbance to the traffic. This balance may vary with the type of device, geometric and material design as well as the location and road user characteristics.

Introduction of traffic calming devices should be done by giving proper consideration to the above factors.

Learning from present gaps

Some countries like Japan are adopting the traffic calming measures such as humps based on expert opinion or local empirical studies. Even the adoption by other countries may have both success and failure practices which may be useful for other countries to learn.

This research group initially intends to share the good practices and lessons learned from adopting traffic calming measures. Afterwards the research intends to conduct some empirical studies to cover the knowledge gaps that may be essential in decision making related to the adoption of traffic calming

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measures. Thirdly a set of design guidelines especially applicable to Asian context will be developed for the benefits of participant IRG members.

In this context following research objectives are intended to be achieved.

Share the existing practices and develop new research knowledge for the below

- Objective A: Comprehensive review on existing traffic calming measures (types, profile and other details, costs, warrants and process of introducing devices) of Eastern Asia, barriers and supporters for this
- Objective B: Evaluate the effectiveness of existing types for calming devices based on empirical observations from different countries
- Objective C: Develop guidelines design lines for effective traffic calming devices based on systematic empirical studies (profiles, material, location, external factors)

6. Target year for completion (Research period is suitable within four years.):

September, 2024

7. Research plan:

| Time | Activity and participants |
|-----------------------|--|
| Oct 2020 | <p>Group Meeting 1</p> <p>Initial group meeting via online among existing and new (invitation will be sent) members to create basic terms of reference including below</p> <ul style="list-style-type: none"> ● Group’s governance structure ● Research Scope ● Activity plan including research work and networking and dissemination ● Potential funding opportunities |
| Nov 2020 – March 2021 | <p>Two or three “One day” online workshops among group members and stakeholders in individual countries</p> <p>Discuss and finalize project aims and objectives</p> <ul style="list-style-type: none"> ● Identification of problems related to traffic calming devices in EAST Asian region among IRG members ● Identification of problems related to traffic calming devices in EAST Asian region by way of stakeholder (transport officials such as local government officers, Road Development Authority (RDA), Urban Development Authority (UDA), researchers, residents) ● Comprehensive literature review ● Finalizing objectives (A, B and C) along with applicable methodologies after the IRG meeting |

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| April 2021 | <p>Group meeting 2- finalize the work plan</p> <ul style="list-style-type: none"> ● Web site development ● Second group call for interested new applicants |
| May 2021- September 2021 | <p>Work for Objective 1</p> <p>Seeking funding with ADB under STRD project (Sri Lanka) competitive research grants representing through University of Sri Jayewardenepura</p> <ul style="list-style-type: none"> ● Group meeting 3 and group progress presentation in 14th EASTS conference in Hiroshima 2021; common research activities with Japanese counterparts |
| Oct 2021- September 2022 | <p>Objective B activities - Empirical research work on effectiveness of different types of traffic calming devices</p> <ul style="list-style-type: none"> ● Pre and post occupancy surveys and accident studies in selected sites of member countries where traffic calming devices have been adopted ● Conducting field survey and site visit of some cities in member countries followed by the workshops and joint seminars. ● Empirical studies on speed reduction effectiveness of different traffic calming measures on selected countries including Sri Lanka |
| Oct 2022- September 2023 | <p>Objective C activities:</p> <ul style="list-style-type: none"> ● Evaluate the effectiveness of traffic calming devices based on systematic empirical studies (profiles, material, location, external factors) ● Develop guidelines for design of effective traffic calming devices applicable to member countries. ● Develop production guidelines for manufacture of effective traffic calming measures ● Implementation of design guidelines for respective countries. |
| Oct 2023- September 2024 | <p>Finalize the outcomes and dissemination</p> |

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8. Research funds:

| Source of research funds (*) | Approximate amount (US\$) |
|--|---------------------------|
| ICRA Grants | 1,000 |
| STRDHP Project (Competitive research grants under ADB open for academics of Faculty of Engineering, University of Sri Jayewardenepura) | 10,000 |

*: (ex.) ICRA (Research grant of EASTS), Grants-in-aid for Scientific Research of Ministry of Education, Culture, Sports, Science and Technology (Japan), and etc..

All applications are to be delivered to:
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