Delft Road Safety Course for Latin America (abbridged version)

Organised by Delft Road Safety Courses, the Netherlands in collaboration with the Universidade Federal do Ceará, Brazil and the CAF Development Bank

Fortaleza, Brazil, 22-27 April 2018

Prepared by Prof. Fred Wegman (course leader) and Prof. Flavio Cunto (local organiser)
1. INTRODUCTION

Low and middle income countries face enormous road safety problems and the number of road traffic fatalities and injuries in many LMICs increases rapidly resulting in huge economic costs for these countries and substantial pain and grief for individuals, families and communities.

Road traffic injuries places a major burden on the human population of Latin American countries as well, as has been illustrated in a recent ITF/OECD-study “Benchmarking de la seguridad vial en América Latina” (2016). This study analyses road safety performances in ten Latin American countries and identifies the weaker and stronger points in their road safety performances as a basis for recommendations to further improve. If we compare the mortality rates in the European Union (mean value of 6 fatalities per 100 000 inhabitants per year, with best scoring countries at 3) with mortality rates in Latin America between 12 and 20. Other countries in Latin America have similar mortality rates. Little progress has been made in reducing the number of people killed and injured in road crashes in Latin America. But, some examples were found of effective interventions. The available data and trends suggest that the United Nations Sustainable Development Goals for road safety (halving number of deaths and injuries in ten years) will not be reached in Latin America. The analyses clearly indicate that the nature of road safety problems in Latin America are different than in other parts of the world and require tailor-made solutions.

Because each country faces its own road safety issues and because each country has to develop its own strategies and implement its own action plans, local expertise is needed to tackle road safety. Capacity building is seen as a key activity to build local road safety capacity. For that reason, (international) programmes are urgent to educate transport and road safety professionals and academics in order to help to alleviate road safety problems effectively.

Capacity building is considered as a central element in road safety strategies and international organizations can be of help and support. Capacity building should focus on the development of a sound knowledge base in Latin America for a strong road safety organization and the development of an educational structure that supports this organization. Delft Road Safety Courses (DRSC) is one of the few organizations in the world dealing with capacity building on road safety for post-graduates in low- and middle income countries. DRSC has a successful track record since 2012.

Some efforts have been made by CAF Development Bank regarding training programmes, a guide for accreditation, training, certification and recognition of Road Safety Auditors was developed in 2015. As well, a first version of a Road Safety Auditor’s course was developed in Cuba in 2016 and a second version jointly with the PUCE in Ecuador.

CAF has identified as well the importance of develop road safety courses based on evidence and data, taking as a basis the Safe System approach, analyzing road safety problems and how to come to effective and efficient solutions. The content of training programmes must take into account the specific problems and situations of Latin America, understanding how projects are developed in the region.
2. COURSE BACKGROUND

Delft Road Safety Courses (DRSC) is a joined initiative of the Delft University of Technology (TU Delft), the Foundation of Postgraduate Education (PAO) at TU Delft, SWOV Institute for Road Safety Research, Road Safety for All and the FIA Foundation (www.delftroadsafetycourses.org). DRSC started in 2012 with training courses for road safety professionals in low- and middle income countries.

DRSC focuses on postgraduate participants working in the field of road safety in LMIC. Our participants work for governments, research institutions, the private sector, non-governmental organizations, international organizations, etc. Our goal is to develop a set of core competences for road safety professionals:

- Understand the nature of road safety
- Understand causes of crashes from the interactions between human being – road – vehicle
- Understand origins, characteristics and use of crash data and other road safety data
- Obtain knowledge of the most important theories and methods used in road safety (research) and to read/understand research reports
- Design road safety management strategies and effective countermeasure in these strategies based on validated knowledge
- Design and implement road safety action plans

DRSC is specifically interested in a ‘train-the-trainer approach’ and supports participants when they returned back home using an internet based ‘alumni-network’.

Delft Road Safety Courses uses top level lecturers from the Netherlands, from other HIC and experts from LMIC. The lecturers cover a very wide range of topics and they have ample experience in working in and with LMIC. The courses in recent years were rated very highly by the participants.

In 2014, Delft Road Safety Courses decided to organize also regional courses, that is to say to bring lecturers to regions and keep participants in the region. This allows also to tailor-make a course for a specific region.

The objective of the Road Safety Course for Latin America is to train local professionals working in Latin America in such a way that they will be able to deal effectively to reduce the number of people killed and injured in road crashes in the region.

Admission for the course was opened in December 2017 and closed in April 2017. In order to make the course admission process efficient we introduced and online registration systems through the course website www.delftroadsafetylatinamerica.org.

We received a total of about 50 applications from Latin American countries. The Organizational Committee agreed to accept not more than 25 applicants for the course. Applicants were selected based on their educational background, statement of motivation, their work experience in road safety and their perspectives to make a contribution to improve
road safety in the future. We selected 13 applicants from Brazil, 5 from Colombia, 3 from Argentina, one from Uruguay and from Bolivia/Germany.

The programme of the Delft Road Safety Course for Latin America was inspired by the annual courses in Delft. However, the course in Delft is a two-weeks course and it was decided to run a one week course in Latin America. Moreover, the course in Latin America has been adapted to local conditions and circumstances.

The selection of lecturers was based on the draft programme of the course, the experiences in giving education/training, the knowledge on road safety and the experiences in road safety in Latin America specific. All invited lecturers have substantial experience of working on road safety in Latin America.

Dr. Hilda Gomez (Colombia) and Claudia Adiazola (Peru) have a long experience in road safety in Latin America. Fred Wegman has made a very long career in road safety (research). He was managing director of SWOV, the national Institute for Road Safety Research in the Netherlands and he is Emeritus Full-Professor Traffic Safety at the Delft University of Technology. He is one of the authors of the report “Benchmarking Road Safety in Latin America” published by the International Transport Forum at OECD in 2017. One of the other authors is dr. Sandra Vieira. She works for the Transport Division of the Laboratório Nacional de Engenharia Civil in Portugal. Our lecturers from Brazil were Prof. Flavio Cunto (Fortaleza) and Prof. Ana Paula Larocca (Sao Paulo). Both work in traffic safety, carry our research in this field and have road safety classes. Both attended the Delft Road Safety Course (in 2015 and 2016).

Finally, we had several lecturers coming from the city of Fortaleza and working in urban development, transport, planning and road safety (Luiz Sabóia, Arcelino Lima and Dante Rosado).
3. COURSE DEVELOPMENT

Delft Road Safety Courses developed the course in Fortaleza in close cooperation with the local organiser, Prof. Flavio Cunto from the Federal University of Ceará/Brazil and with CAF-representative Hilda Gomez. All key-ingredients (design of the final programme, selection of the lecturers and selection of participants) were decided upon by the Organizing Committee.

The course was organized in Fortaleza, 22-27 April 2018. The work plan of the Course was derived from the following time frame:

- 2017: preparations of course settings, a draft programme of the Course (see Appendix 2 for the final programme), launching a website (www.delftroadsafetycourselatinamerica.org) + preparing a brochure
- Early December 2017: announcement of Course (publicity, social media, mailings) and website online
- January 31st 2018: closure of applications
- February-April 2018: selection of candidates and awarding of scholarships
- April: 22nd -27st: DRSC for Latin America in Fortaleza
- April 27th: Closing the course and filling in a evaluation forms by participants
- May 2018: invitation of participants to participate in the DRSC alumni network
- May 2018: Drafting evaluation-report

The following persons were included in the Organizing Committee: Delft Road Safety Courses (Fred Wegman and Hans Godthelp), three local partners in Brazil (the key partner is Flavio Cunto from the Federal University of Ceará, Fortaleza. The other Brazilian partners are Ana Paula Larocca from the Engineering School of the University of Sao Paulo and Elaine Matsuda (architect and road safety specialist). All three participated in a course in Delft earlier (2015 and 2016). And Hilda Gomez from CAF participated in the decision making on all three key-ingredients.

DRSC was responsible for designing a course programme and inviting (international and local) lecturers and guiding them to arrive at a comprehensive course in which all presentations are in line with each other. DRSC took also responsibility for financial issues.

Flavio Cunto, the local organiser in Fortaleza, was responsible for selecting a course venue, for hotel arrangements for participants and lecturers, for catering, for local transport, for contacts with (potential) participants and for organising simultaneous translation (English, Portuguese and Spanish). His final responsibility has to do with the website (www.delftroadsafetycourselatinamerica.org).

International and local organisers communicated together almost on a weekly basis in the last few months, and just prior to the course on a daily basis.
4. PICTURES OF ACTIVITIES

Official Opening Session, Monday 23 April

One of the lectures by Prof. Fred Wegman

Participants work in working groups to assigned tasks

Participants visited the Prefeitura of Fortaleza being introduced to the cities road safety strategies and actions, before carrying a road safety inspection

Road safety inspection at a roundabout

Course certificate for all participants: (from left to right): mrs. Annette Reeves de Castro (Dutch Honorary Consul), Luiza Dusi and Prof. Fred Wegman
5. SUMMARY OF POST COURSE ASSESSMENT

All participants were invited to fill in an evaluation form just before closing the course. This evaluation form was made available through an internet application. The evaluation form was made available in English, Portuguese and in Spanish. All 23 participants filled in the form (100% response). One did that in English, 13 in Portuguese and 9 in Spanish.

Our participants work for different type of employers

<table>
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<th>Employer</th>
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<td>International organisation</td>
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<td>National Government</td>
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<tr>
<td>Regional/Local Government</td>
<td>3</td>
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<td>Research</td>
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<td>NGO</td>
<td>2</td>
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<td>Private sector</td>
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</table>

Table 1. Background of participants

We asked to rate the different components on the course using a scale from 1-10. Furthermore, participants were invited in open questions to give their views on different topics, such as subjects missed in the course, or that deserve more/less attention. A wealth of information on that was collected, to be used if a similar course will be organised again in the future.

About half of the participants have a Master’s degree, one-third a Bachelor’s degree, one-fifth another higher education certificate and one completed a PhD research.

Generally, the length of the course was seen as good (two thirds). The other one-third believes that the course length is too short.

We can conclude that the participants rated our course very high. All three perspectives received a rating higher than 9 (on a scale from one to ten):

<table>
<thead>
<tr>
<th>Component</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Content</td>
<td>9.6</td>
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<tr>
<td>Presentations</td>
<td>9.5</td>
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<tr>
<td>Organisation</td>
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</table>

Table 2. Assessment of the Course as a whole

Questions on several details of the course give a very positive result, as shown in Table 3. The programme was heavily packed, reason to stop discussions sometimes in order to give all lecturers enough time for their foreseen lecture. We used breaks between lecturers for informal discussions and we organized a discussion with all available lectures at the last day.

<table>
<thead>
<tr>
<th>Component</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Design of the course</td>
<td>9.2</td>
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<tr>
<td>Each subject enough covered</td>
<td>8.1</td>
</tr>
<tr>
<td>Good coherence between subjects</td>
<td>9.3</td>
</tr>
<tr>
<td>Involvement course leader</td>
<td>10.0</td>
</tr>
<tr>
<td>Enough time for discussions</td>
<td>8.3</td>
</tr>
<tr>
<td>Practical value of the course</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Table 3. Assessment of the course content
6. CONCLUSIONS

The Fortaleza course was a very successful course. A full programme was organized for about six days, all planned lectures and other activities took place (as planned), all invited lecturers were available and spent quite some time interacting with the participants. The participants were of high quality, all attended all classes and events, and they were really interested, which became clear from the many questions raised by the participants.

The Municipality of Fortaleza was of great support to this week. The course was opened on behalf of the Fortaleza mayor, dr. Roberto Claudio. We were welcomed at the Department of Transport of the city to get a detailed overview of road safety strategies and action plans, embedded in a wider perspective of urban development, sustainable developments and promotion of public transport and active transport modes. This fitted really well in the Course-approach promoting Safe System thinking. The participants were also introduced in the activities of the Global Road Safety Initiative of Bloomberg Philanthropies in Fortaleza (one of the ten selected cities in the world).

In the design of the course it was foreseen to have four small working groups analysing road safety problems and presenting the results of their work at the end of the Course. All participants were invited to do a part of the group presentation. All four presentations were of good quality and it became evident that participants learned a lot during the week. Not only on ‘what to do’ to improve road safety, but also how to get how to get their proposals being implemented. Based on these presentations it was decided that all participants were qualified to receive a Course certificate. The Dutch Embassy in Brazil, represented by the Honorary Consul in Fortaleza, Mrs. Annette Reeves de Castro, attended the ceremony event.

The length of the course was considered as good, however a substantial number considered the length as somewhat too short.

All lecturers were rated by the participants. In general the rating of lecturers was high, meaning that their lectures were really appreciated. Also the other events were well received by the participants.

As was expressed during the final evening, a group individuals at the start, became a motivated group of (young) people at the end, empowered to work on road safety in Latin America in the future.
Appendix

Programme Delft Road Safety Course for Latin America Final programme (21/04/2018)

A cooperation between Delft Road Safety Courses (the Netherlands), CAF Development Bank of Latin America, Universidade Federal do Ceará (Brazil)

FINAL PROGRAMME

Sunday - April 22nd
18:00 Informal get together + dinner @ hotel

Monday - April 23rd: First day INTRODUCTION
09:00 - 10:00 Welcome address by Head International Affairs Municipality of Fortaleza on behalf of Dr. Roberto Claudio the Mayor of Fortaleza
Course Introduction (Prof. Fred Wegman, Delft University of Technology, the Netherlands) FW
10:00 - 11:00 Introduction to road safety problems and worldwide policies FW
11:00 - 13:00 Introductions by participants
13:00 - 14:00 LUNCH
14:00 - 15:00 Causes of road crashes FW
15:00 - 16:00 Potential risks on Latin American roads Hilda Gomez, CAF Development Bank
16:00 - 16:30 Coffee Break
16:30 - 17:30 Introduction of basic risk factors and risk increasing factors FW
17:30 - 18:30 Road safety policies in Fortaleza Luiz Alberto Sabóia, SCSP-Fortaleza/CE

Tuesday – April 24th: Second day ROAD SAFETY MANAGEMENT, DATA AND ANALYSIS
09:00 - 10:00 Theoretical and practical introduction FW
10:00 - 11:00 Global status report and road safety management system FW
11:00 - 12:00 Examples of road safety management in Latin America HG
12:00 - 13:00 Road safety advocacy: political and public support FW
13:00 - 14:00 LUNCH
14:00 - 15:00 Data for road safety management FW
15:00 - 16:00  Benchmarking study on road safety in Latin America FW
16:00 - 16:30  Coffee Break
16:30 - 17:30  Road safety indicators and setting targets FW
17:30 - 18:30  Exercise: road safety data analysis Flavio Cunto, UFC, Fortaleza, Brazil

Wednesday – April 25th: Third day KNOWLEDGE ON ROAD SAFETY EFFORTS
09:00 - 10:00  Safe System approach FW
10:00 - 11:00  Speed management Sandra Vieira, LNEC Portugal
11:00 - 12:00  Powered two wheelers HG
12:00 - 13:00  Vulnerable road users: pedestrians and cyclists SV
13:00 - 14:00  Lunch
14:00 - 15:00  Drinking and driving SV
15:00 - 16:00  Road safety audits FC
16:00 - 16:30  Coffee Break
16:30 - 18:00  Group assignment: problem statement and analysis FW

Thursday – April 26th: Fourth day + TECHNICAL VISITS
09:00 - 10:00  Human behaviour and traffic safety Ana Larocca, USP, Sao Paulo, Brazil
10:00 - 11:00  Changing human behaviour to improve traffic safety AL
11:00 - 12:00  Road safety policies in Latin America Claudia Adriaazola, WRI, Washington DC
12:00 – 13:00  Road safety in sustainable cities in Latin America CA
13:00 - 14:00  Lunch
14:00 - 16:00  Visit of Municipal Office Fortaleza with several presentations (a.o. Arcelino Lima, Municipality of Fortaleza, Dante Rosado, Bloomberg Fortaleza and FC)
16:00 - 18:00  Inspection of a road site for a road safety inspection + feedback

Friday – April 27th: Final day DEVELOPING INTERVENTIONS FOR SPECIFIC ROAD SAFETY PROBLEMS
09:00 - 10:00  General discussion (AL, CA, FC, FW, SV)
10:00 - 12:00  Group assignment: main lines of a strategy + action plan (participants)
12:00 - 13:00  Preparation final results (solutions and based on third day work) (participants)
13:00 - 14:00  Lunch
14:00 - 16:00  Final Presentations: Group 1, Group 2, Group 3 and Group 4 (participants)
16:00 - 16:30  Coffee Break
16:30 - 17:30  Wrapping up FW
17:30 - 18:00  Course evaluation FW
19.00  Dinner + festivities + farewell

Saturday April 28 (Voluntary)
09.00  Visit to Fortaleza: round tour, tourists sites
### DELFT ROAD SAFETY COURSE FOR LATIN AMERICA, FORTALEZA BRAZIL 22-27APRIL 2018 FINAL LIST OF LECTURERS

<table>
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<th>Given Name</th>
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<th>Organization</th>
<th>Country</th>
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<tr>
<td>Ana Paula</td>
<td>Larocca</td>
<td>Universidade de São Paulo</td>
<td>Brazil</td>
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<tr>
<td>Arcelino</td>
<td>Lima</td>
<td>Fortaleza City Hall</td>
<td>Brazil</td>
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<td>Claudia</td>
<td>Adriazola</td>
<td>World Resources Institute</td>
<td>Peru/USA</td>
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<tr>
<td>Dante</td>
<td>Rosado</td>
<td>Bloomberg Global Road Safety Initiative</td>
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<tr>
<td>Hilda</td>
<td>Gomez</td>
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<tr>
<td>Fred</td>
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