

# **ANNUAL REPORT**



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The Global Road Safety Facility (GRSF) was in 2018 supported by the following donors and funders:

The UK aid's Department for International Development (DFID) leads the UK's work to end extreme poverty, building a safer, healthier, more prosperous world for all of us which is firmly in the UK's national interest. The UK government recognizes the public health crisis and development burden that road crashes present on a global scale. To support the global effort on road safety, UK Government through DFID allocates resources to the GRSF to achieve significant, measurable, and sustainable results in developing countries.

Bloomberg Philanthropies works to ensure better, longer lives for the greatest number of people. They focus on five key areas for creating lasting change; the arts, education, the environment, public health, and government innovation. These areas encompass the issues former New York City Mayor Michael Bloomberg and his team are most passionate about and where they can achieve the greatest good. In this light, Bloomberg became the largest single road safety donor in the world. GRSF has worked with Bloomberg on designing effective road safety programs across countries and cities, while leveraging hundreds of millions of dollars in new road safety investment.

The International Motor Vehicle Inspection Committee (CITA), is a worldwide non-profit association involved in whole-life road vehicle compliance as one of the instruments to improve road safety and to reduce the environmental impact of road transport. Members of CITA are both public and private organizations from around the world, taking care of vehicle roadworthiness. CITA is recognized by the UNECE and the European Commission for the development of vehicle safety and environmental protection standards.

**The World Bank Transport Global Practice** plays a key role in connecting people, goods and services using efficient, affordable and safer solutions. While modern transport helps reduce poverty and boost prosperity, the World Bank also recognizes its challenges. Road traffic fatalities and injuries are among the most pressing issues faced by the transport sector which has led the Bank to make road safety a key priority through the co-creation and constant funding support of the GRSF from its road safety Global Engagement Budget.

The Government of Japan and the World Bank have established the Quality Infrastructure Investment Partnership (QII) with the objective of promoting and scaling up knowledge exchange and implementation support of solutions to complex development challenges such as road safety through financial support and knowledge dissemination. GRSF staff secured a USD 400,000 grant to improve an Open Source Road Safety Platform during the next two fiscal years aimed at supporting efforts to design and implement better road crash prevention infrastructure.



## **OUR PARTNERS**

The GRSF partners with the multilateral development banks (MDBs), international and nongovernmental organizations (NGOs) and academia to leverage technical expertise, advocacy and learning platforms, as well as financing to ensure a maximum impact on improving road safety for all users. Our partners include: The Africa Transport Policy Program (SSATP), AXA Insurance, CITA, Clinton Global Initiative, European Commission, FIA Foundation, FIA High Level Panel, Global Alliance of NGOs for Road Safety, Global Road Safety Partnership (GRSP), Harvard School of Public Health, Institute for Health Metrics and Evaluation (IHME), International Association of Chiefs of Police, International Road Assessment Programme (iRAP), International Road Federation (IRF), International Transport Forum (ITF), John Hopkins Bloomberg School of Public Health, Monash University, NAC-TO, Road Traffic Injuries Research Network, TOTAL, UN Road Safety Trust Fund (UN RSTF), UNECE, United Nations (UN), World Health Organization (WHO), and the World Resources Institute (WRI).



MDBs: African Development Bank, Asian Development Bank, the Development Bank of Latin America (CAF), European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, Islamic Development Bank and the World Bank Group.



## FOREWORD



We are most pleased to present the 2018 Annual Report of the Global Road Safety Facility (GRSF). 2017/18 has been a powerfully positive year, in which the GRSF not only accomplished much for road safety during the year but also set portents for an exciting longer-term future. In particular, the decision of DFID to re-sign to support GRSF for another 3 years and the introduction of DHSC as a new donor to GRSF provide critical secure sources of financing for the work of the Facility, in partnership with Bloomberg Philanthropies, CITA, the World Bank, and other funders of the road safety work of Facility staff.

The GRSF plays an essential global role in providing funding, guidance, leadership, and technical support for road safety to low and middle- income countries, partner organizations, academia and NGOs, as well as partnering with the private sector on specific initiatives. This year, the GRSF has continued to play this fundamental role, creating and promoting multi-sectoral projects, influencing the road safety generated through many projects, conducting applied research and creating knowledge transfers to our client governments and within the World Bank Group.

The global leadership and influencing role of GRSF continues through key publications and addresses (an impressive list of these is includ-

ed in the report), influence in key meetings and events, in 2018 including the UN Road Safety Collaboration, the FIA High Level Panel on road safety, the Transportation Research Board, and various global and regional events. At the International Transport Forum (ITF) meeting in Leipzig in May 2018, a memorandum of Understanding was signed on behalf of the Bank/GRSF with the OECD/ ITF and the FIA (Federation Inter-

nationale de l'Automobile) for the promotion of a regional road safety data collection observatory for Africa. This project is proceeding effectively with additional partners including the SSATP and the UN. Other partnerships include Delft University, the Global Network for Road Safety Legislators, KOTI, GRSP, the Sustainable Mobility Initiative, and the Multi-Lateral Development Banks.

Our program in partnership with the Bloomberg Initiative for Global Road Safety (BIGRS) has achieved a major milestone towards addressing road safety in urban areas. The grants have not only helped in improving designs for urban streets and mobility needs for the vulnerable users, but also our support to improve crash data-systems and speed management activities have continued the momentum on this work. As this initiative completes four years, we are most pleased to note the technical assistance provided through iRAP surveys and the sustainable local capacity being built to carry this work forward. We are also excited to see the impact of work on economic analysis funded under the Bloomberg initiative. This has been also a great example of joining hands with the health colleagues to produce analytical evidence to support and advocate for investing in road safety. The GRSF team also leads the Bank's Road Safety Global Solutions Group, which in 2018 developed a new tool (RSSAT: Road Safety Screening and Appraisal Tool) which provides an assessment of road safety and is feasibly applied early in the World Bank project cycle, allowing road safety to be appreciated and more effectively addressed from the beginning of the project.

We are grateful to the donors and funders of the work of GRSF for partnering with us to ensure a strong future for the critical road safety work which the Facility delivers. As outgoing and incoming Senior Directors, we have been and will continue to carry forward the World Bank's strong commitment to the GRSF, and will work for its continued excellent position of secure long-term funding, powerful global credibility, practical influence, deep expertise, and impressive record of delivery and leveraging of funding for road safety.

Sincerely,

#### José Luis Irigoyen

Senior Director, Transport (up to November 2018) World Bank

#### **Guangzhe Chen**

Senior Director, Transport (from November 2018) World Bank

## LETTER FROM THE CHAIR



As outgoing and incoming Chairs of the Global Road Safety Facility (GRSF) Board, we are very pleased to present the 2018 Annual Report. With the timeline on the UN Decade of Action on Road Safety coming to an end in 2020 and targets far from being realized, a great deal remains to be done. Road crashes continues to represent one of the most pressing public health challenges of our times, and the World Bank's GRSF has been at the forefront of this fight. GRSF has consistently played a key role in improving road safety through effective road safety interventions, including technical assistance-delivery, capacity development, improvements in infrastructure and policy-making advice.

Funding and collaborating with global players such as the World Health Organization, iRAP (International Road Assessment Program), Multilateral Development Banks (MDBs), the NGO Global Alliance on Road Safety and other UN-RSC (United Nations Road Safety Collaboration) partners, the GRSF has contributed to the scale up of the road safety agenda. The year has been significant for the Facility with the addition of new donors including the UK Department of Health and Social Care (DHSC), through the National Institute for Health Research (NIHR), CITA and renewal of existing contributions from the UK Department for International Development (DFID) and Bloomberg Philanthropies. We are delighted to note the critical role played by the GRSF as a global road safety knowledge hub and partner of choice in delivering research and advisory services. Combined value of all grants funded through the Multi-Donor Trust Fund managed by GRSF exceeded \$31 million and we are happy to note that the UK Government (via DFID and DHSC) pledged an additional \$14 million in support of GRSF research and capacity building activities up to 2022. It

is estimated that each dollar invested in road safety research and advisory services via GRSF so far has brought \$40 million in investment in road safety with the potential to save 2,100 lives during 2017.

GRSF also extensively supported the Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS 2015-2019) – a program focused on reducing crash deaths and injuries in ten selected cities and five low- and middle-income countries. Since 2015, in partnership with iRAP, GRSF has assessed and recommended improvements to more than 8,500 km of urban and rural roads, and supported training of more than 3,000 professionals. In 2017 GRSF recruited three region-based staff providing road safety technical assistance which has led to influencing at least 20 World Bank-financed projects and implementation of DRIVER crash data system in two cities.

GRSF published a landmark report "The High Toll of Traffic Injuries - Unacceptable and Preventable" which assesses the economic impact from road traffic injuries as funded by the Bloomberg Philanthropies. The key message from the report resonates well among all stakeholders that economic burden from road crash deaths and serious injuries provides the needed evidence for advocacy with decision-makers and budget-holders. Such knowledge products are important tools to convince governments and together with other MDBS support them towards realizing the UN Sustainable Development Goal targets on road safety.

GRSF donors are pleased to see the progress of the GRSF portfolio which prioritizes evidence-based interventions in infrastructure safety management and capacity building. With developments within the World Bank including new safeguards and corporate mandates, current efforts by the GRSF will go long ways to improve road safety in the developing world.

#### **Elizabeth Jones**

GRSF Board Chair (up to June 2018) Senior Transport Adviser UK Department for International Development

#### Kelly Larson

GRSF Board Chair (from July 2018) Director Bloomberg Philanthropies

## **NOTE FROM THE GRSF MANAGEMENT**

The Global Road Safety Facility (GRSF) is a donor-funded global partnership program hosted by the World Bank, with a mission to help address the crisis of road traffic deaths and injuries in low and middle-income countries (LMICs). GRSF provides funding, research, knowledge, capacity building, communications, advocacy and technical assistance designed to scale-up the efforts of LMICs to build their commitment, scientific, technological and managerial capacities to deliver road safety. Since its inception, the GRSF has undertaken in-house projects and operated as a hybrid grant-making global program, allowing it to distribute funding externally for global, regional and country activities, and internally through World Bank-executed grants, which enhance the work of the World Bank's transport global practice and leverage road safety investments in transport operations in client countries.

GRSF also works in close effective partnerships with other key road safety organizations, especially the World Bank itself, through the Bloomberg Philanthropies road safety program, the MDB road safety community, and our partners in the development of the Road Safety Observatory for Africa including the ITF, the FIA, and SSATP. Through these processes over the last several years, GRSF has established itself as one of the highly influential leaders of the global road safety agenda.

GRSF is committed to addressing road safety as effectively as possible, to maximize the safety gains from each donated dollar. We operate in diverse environments across many cultures and continents, and we work with a diverse range of partners. Our own diversity is also an important strength, with diversity know to bring better decision making. We are improving our gender balance, and the GRSF team come from a wide range of nationalities (the United States, Somalia, Romania, Poland, Japan, Jamaica, India, Colombia, and Australia).

We are indebted to our donors and funders including Bloomberg Philanthropies, DFID, CITA, Government of Japan, and the World Bank. We are also excited and enthused by the commitment of another new donor coming in the next financial year: the UK Department for Health and Social Care, adding to the re-commitment for another three years from DFID and doubling the UK Aid support over the next three years.

GRSF has also benefited greatly from input and guidance from World Bank staff. I would like to thank especially Maria Marcela Silva (Practice Manager) and Jose Luis Irigoyen (Senior Director) for their guidance. Finally, huge thanks are due to Liz Jones for a wonderful and focused job of chairing the GRSF Board over the last three years, and to Kelly Larson for taking on this important role for the Facility.

R.F. Socall

**Dr. Soames Job** Global Lead Road Safety and Head of the Global Road Safety Facility



**Soames Job**, Global Lead Road Safety, World Bank and Head of GRSF



**Marc Shotten**, Program Manager, GRSF



**Dipan Bose**, Program Manager for the Bloomberg Initiative, GRSF



**Radoslaw Czapski**, Program Manager, GRSF



### FY 18 GRSF BOARD MEMBERS

Liz Jones (Chair to June 2018), Senior Transport Adviser (UK aid/DFID) Kelly Larson (Chair from July 2018), Director (BIGRS) Jose Luis Irigoyen, Senior Director for Transport (World Bank) Hilda Gomez, Road Safety Specialist (Chair of the MDBs Road Safety Working Group) Eduard Fernandez, Executive Director (CITA).

### PAST AND PRESENT DONORS TO THE GRSF

The GRSF acknowledges the support of: The Government of Australia (DFAT); The Government of the Netherlands; The Government of Sweden (SIDA); The Government of the UK (UK aid/DFID); Bloomberg Philanthropies; the FIA Foundation; CITA; the World Bank (Development Grant Facility and the Transport Global Practice's Global Engagement Fund), and the Quality Infrastructure Investment Partnership (QII).

## **GRSF STRATEGIC OBJECTIVES**

### DEVELOPING CAPACITY FOR ROAD SAFETY SUSTAINABILITY

Strengthened global, regional and **country capacity** to support sustainable reductions in road deaths and injuries in LMICs

#### PROMOTING A GLOBAL ROAD SAFETY NETWORK

**Scaled up** global road safety **funding**, coordination, and advocacy mechanisms to advance global road safety

### LEVERAGING WORLD BANK-FINANCED ROAD AND URBAN PROJECTS

**Mainstreamed** road safety components in all Bank funded road infrastructure and urban projects

## **FOCUS AREAS**



## SAFE INFRASTRUCTURE

Through road safety audits, star-rating risk surveys, safety inspections, crash data analysis and international good practice for roadway design



## ROAD SAFETY RESEARCH AND DEVELOPMENT

Funding and using applied research for low and middle income country road safety management



## GLOBAL ROAD SAFETY LEADERSHIP AND MANAGEMENT

Partnerships for results in road safety strategy, in particular with members of the UN Road Safety Collaboration



## **CAPACITY BUILDING**

Focused around the GRSF Road Safety Management Capacity Review



## **VEHICLE SAFETY**

Promoting stronger regulations in vehicle design for protection and safety inspections on new and used vehicles through country partnerships with CITA



## POLICE ENFORCEMENT

Facilitating and supporting professional and effective enforcement capacity in developing countries



## **EMERGENCY MEDICAL SERVICES AND POST-CRASH CARE**

Partnering and funding with the World Bank's Health team and organizations like WHO to scale up needed first aid, ambulatory services, trauma care and health sector crash data

## **BY THE NUMBERS**

The GRSF has worked to improve road safety outcomes in **64 countries** around the world with US **\$44.6 million** disbursed, of which over 40% has gone to support external partners such as World Health Organization (WHO), EBRD, Global Road Safety Partnership (GRSP), UN Regional Commissions, International Road Assessment Programme (iRAP), Global Alliance of NGOs for Road Safety, UN Economic Commission for Europe, CAF, and others.

## **ACTION & IMPACT**



Kilometers of roads surveyed under the GRSF-Bloomberg Program



Road Safety Management Capacity Reviews delivered

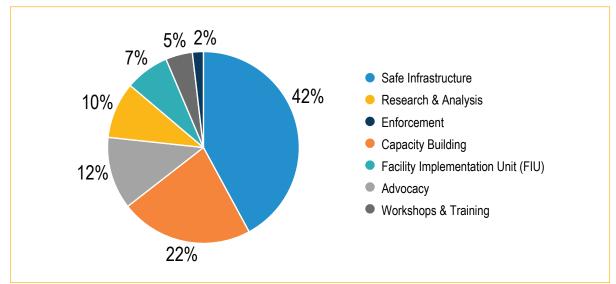
3,289

Number of professionals trained under GRSF-Bloomberg Program



Amount of additional funding for road safety leveraged and informed by each \$1 spent by GRSF

### **DISBURSEMENTS BY ACTIVITY SINCE INCEPTION (US\$44.6M)**



## **HIGHLIGHTS OF OUR WORK IN FY 18**

In FY 18, GRSF continued its strategic **global leadership and influencing role** through advocacy for increased focus on speed management, and influential participation in key activities and events including the SuM4All Initiative, the FIA High Level Panel, the ITF Summit in Leipzig, the Africa Road Safety Leadership Program, and the first Workshop to develop the African Road Safety Observatory. GRSF also provided key guiding reports and publications to sustain its influence and guidance (see Annexes).

GRSF also managed a portfolio of 22 grants awarded and under implementation in partnership with the World Bank lending operations or analytical projects. These grants reached a value of over \$4 million, spanned over 30 countries either through bilateral or regional engagements and all included research and development (R&D) activities. In addition, following the 2018 call for proposals, GRSF decided, with the support of an Experts Panel, on financing an additional 17 grants which will begin implementation in FY 2019.

The GRSF-Bloomberg Initiative for Global Road Safety (BIGRS) continued to see strong outputs in city-level road safety interventions, training and analysis. More detailed highlights are presented below.

## **MULTI-DONOR TRUST FUND ACTIVITIES**

## FUNDING AND COLLABORATION WITH GLOBAL PARTNERS

#### African Development Bank

GRSF agreed in FY 18 to support the African Development Bank (AfDB) in research related to motorcycle safety in a group of African countries (to commence in FY 19) with the objective of identifying main challenges and develop sustainable motorcycle safety improvement measures to be rolled-out across Africa.

#### CAF

GRSF continued cooperation with, and funding support for, CAF, the Latin-American Development Bank, for work in Bolivia and advance preparation of national and city-level road safety plans to create more effective interventions in line with the SDG targets on road safety. Work will be finalized in FY 19.

#### CITA

GRSF and CITA finished its first ever AVIS, the Assessment of Vehicle Inspection Status, pilot program in Togo focusing on how the government inspects vehicles for safety and emissions. Cooperation is to continue in FY 19 on AVIS in Cameroon.

#### EBRD

GRSF and EBRD commenced in FY18 an analysis and preparation of a toolkit on occupational safety practices for vehicle fleets. Upon completion planned in FY19 the toolkit will be shared among the Multi-lateral Development Banks (MDBs).

#### iRAP

In anticipation of increased traffic along China's Belt and Road Initiative, the GRSF continued supporting iRAP assessments on the strategic Center-South Highway in Kazakhstan and a major corridor in Vietnam connecting Cambodia and a port on the South China Sea. In addition, iRAP with the support of the GRSF developed a road safety screening tool for design stage of road projects preparation and piloted it in Kazakhstan. As required as a condition of the GRSF funding, this tool is now in a testing stage and will be available for all to use free of charge on the iRAP website.

#### Norwegian Institute of Public Health

GRSF has supported the Norwegian Institute of Public Health and a Scientific Fellowship in Malawi in collaboration with the Public Health Institute of Malawi in Lilongwe in training and other capacity building activities, including through collecting data to improve road safety in the country.

#### WHO

In coordination with the World Bank, GRSF supported WHO in the preparation and dissemination of the Save Lives package of manuals and guidelines for African countries focusing on post-crash care, training and legislation (to be continued in FY 19).

## WORLD BANK PARTNERSHIP

Under the **GRSF Multi-Donor Trust Fund**, the GRSF held a Call for Proposals focused on transport, health, and urban road safety. A sample of projects that have advanced significantly or that were accomplished in FY 2018 is described below.

#### Enhancing Road Safety through Research and Development

Nigeria, Mozambique, Liberia, Vietnam

R&D activities supported by the GRSF included extensive use of iRAP surveys and development of innovative<sup>1</sup>, easy to use and low-cost tools needed to make proper road safety assessments more affordable to low and middle-income countries (LMICs), particularly in relation to rural roads. Simplified methodology for iRAP surveys on over 500 km was prepared and preliminary tested by iRAP with local counterparts in Mozambique, thus, also stimulating professional road safety cooperation

<sup>1</sup> The World Bank loan project Integrated Feeder Road Development Project (IFRDP) was among six projects that received the 2018 World Bank Group President's Award for Innovation in recognition of scaling-up disruptive technologies in rural roads in Mozambique

among these two African countries. These efforts led to the development of simplified methodologies using web-based tools and applications, which is currently tested on additional 500 km of rural roads in Liberia before making it available to all other interested African countries.

In Vietnam, iRAP studied the design of an inter-urban highway leading to the development of a road safety corridor along National Highway No. 19 (140 km) in line with Vietnam's Traffic Safety Strategy, which requires a minimum iRAP 3-star rating for such corridors. Additional research was related to motorcycle lane safety based on studying several highways with and without motorcycle lanes to identify key infrastructure-related safety problems and develop good practice solutions for Vietnamese partners. The head of GRSF also reviewed the highway. The sustainable solution should be: the standardization of Motorcycle Lane Design by preparation of the optimized motorcycle lane design specifications for rural settings to be applied nationwide (and ideally beyond). All these activities were undertaken in close cooperation with related local institutions: Ministry of Transport - Department of Road Safety, National Road Safety Committee, Directorate for Roads of Vietnam and provincial road authorities to reinforce the capacity of the client country related to road safety activities.

#### Safe Urban Mobility

#### Tanzania, Nigeria, Tonga

Road safety in urban areas is an issue of growing importance in low-income and other developing countries given that an increasing share of the global population lives in cities. Thus, projects financed by the GRSF improved safety in mega-cities and large agglomerations such as Lagos or Dar es Salaam but also Arusha, Kigoma and Zanzibar. Studies undertaken analyzed existing road safety conditions especially in relation to vulnerable roads users, examined public/social space usage, assessed the relationship between public space and road safety, and proposed holistic recommendations using comparable international case studies and best practices. Among innovative solutions is the Road Safety Diary initiative, in which cities, schools and students can gather data and facts regarding road safety situations in their neighborhoods to identify spots where improvements need to be implemented promptly.

Furthermore, the case of Lagos is noteworthy as it focused on ensuring the safety of the new Bus Rapid Transport (BRT) extension of Lagos Ikorodu by developing speed management and other measures to reduce the risks and consequences of crashes between BRT and other vehicles and pedestrians, while also permitting the BRT to meet its service objectives under the operational and service plan. Out of 28 discrete measures recommended from the Road Safety Audit, nine have already been officially approved by the Lagos State Government for implementation, nine are in the process of seeking approval, five are being deferred for later action or delegated to other agencies. Lagos Metropolitan Area Transit Authority (LAMATA) obtained extensive training in road safety to support them in their ambitious goal of becoming the center of urban road safety best practice in Sub-Saharan Africa. The results of GRSF activities were shared with the French Development Agency, which is willing to consider co-financing of study recommendations.

#### **Development of Modern Road Safety Support Tools**

*Benin, Kenya, Morocco, Nigeria, Senegal, South Africa and Tanzania, , Philippines, Vietnam, Laos, Kazakhstan* 

Regional road safety data observatories can be powerful tools supporting sustainable improvements in road safety and stimulating collaboration and exchange of experiences as corroborated by the Latin American Road Safety Observatory (OISEVI), established with extensive World Bank support. Moreover, such regional approach encourages stronger development of road safety data systems and tools at the national level and provides an opportunity for benchmarking. So, the representatives of the World Bank and GRSF supported in FY 2018 the development of the concept for the African Road Safety Observatory and were actively involved in the discussions between eight countries, which initially confirmed their interest in establishing the Observatory, including: Benin, Kenya, Morocco, Nigeria, Senegal, South Africa and Tanzania. So far, the minimum set of road safety indicators to be collected and a minimum set of standardised data elements was identified based on the analysis of the currently available national crash data collection systems in Europe. The proposed set of road safety indicators was circulated among 30 African countries. Indicators are then expected to be implemented on a voluntary basis in the respective national crash collection systems of the African countries to allow, progressively, for more and more common road crash data from the various countries to be available in a uniform format. The Observatory is a strong example of international cooperation as it is an important component of the Africa Transport Policy Program (SSATP) and involves also: UNECA, WHO, Islamic Development Bank, France's Observatoire National Interministériel de Sécurité Routière (ONISR), Sweden's Swedish Transport Administration (STA), and Safer Africa. All participating countries and partner organizations agreed and committed to ensure that the Observatory is up and running before the end of 2019.

A GRSF-funded Road Design Stage Safety Audit study, implemented with the support of iRAP has also been accomplished in Kazakhstan, which has resulted in the development of a methodology and free-of-charge IT supporting tools for design stage audits of road infrastructure projects. This newly developed web-based application for star-rating of road designs using proven iRAP methodology has been tested in Kazakhstan by carrying out audits of some specific road designs with support of this tool but is expected to be used by other LMICs. Project deliverables included: complete iRAP Star Rating for Designs including: Web Application Specification, User Guide & Reporting Specification Report and Communication Plan. The application has been made available by GRSF and iRAP for use by all interested road agencies, academic institutions and road safety professionals. The project demonstrated importance of high-quality design stage road safety audits. It will contribute to better the capacity of road agencies worldwide to check safety features of new road designs early in the investment project cycle and to assure safe infrastructure incorporating modern solutions.

Furthermore, when we examined LMICs' road crash data, the official numbers often do not match up with the reality of their roads. Many road crashes go un-reported and in a vast number of records, the data are incomplete (lacking even the location of the crash). Being able to efficiently and accurately collect, analyze, and report road crash data, is the first step to tackle this problem, and this is where DRIVER (Data for Road Incident Visualization Evaluation & Reporting), the open-source web-based system for crash data collection and management delivers strong value. Thanks to the GRSF grant, the World Bank has been able to play a major contributing role in the scaling up of the DRIVER platform nationwide in the Philippines, as well as for making it possible to scale the platform's use in new countries such Vietnam and Laos, for which local-language instances have been set up. In addition to supporting the establishment of instances and nationwide roll-out of the system, the project resulted in a legacy work that will contribute to a better user-experience (for both local developers and data management teams) in the future – anywhere DRIVER is deployed.

#### Safety of Inter-Urban and Rural Roads

#### India-Bihar, Vietnam, Uganda, Paraguay

In FY 2018, the GRSF grant supporting implementation of the Strategy and Road Safety Action Plan to improve the safety management of rural roads in Bihar state took a major step forward. The Action Plan for Bihar rural roads is developed based on the safe system approach and appropriately customized to rural roads in Bihar. The Rural Road agency's capacity to introduce safe engineering solutions and to retrofit road safety into the existing rural road network has been improved through training and introduction of a practical field guide for road safety inspections on rural roads. The Rural Roads Department of Bihar has advanced the implementation of the Action Plan through a systematic safety assessment of all rural roads, incorporating prescribed road safety measures in the rural roads maintenance and modernization projects, and creating a road safety fund for rural roads and a specialized road safety unit within the Rural Roads Department. Recommended road safety engineering measures are implemented in the new roads constructed or modernized under the ongoing Bank financed Rural Roads Project. Bihar solutions set the new standard for a road safety approach to rural roads, which is confirmed by the clear broader influence of the work: under the recently approved additional financing for World Bank Rural Roads Project in India (US \$500 Million), each of the participating states is required to prepare Road Safety Action Plans similar to Bihar. About 7,000 km of Bank-funded rural roads in India will therefore include road safety engineering measures developed as part of the GRSF. The approach developed as part of this project is expected to be adopted by other Indian states implementing various rural roads programs in India.

In Uganda, road safety baseline survey and comprehensive road safety audit and recommendations for the Tororo-Mbale-Soroti-Lira-Kamdini road corridor were undertaken as part of preparations for an investment project considered for Bank financing.

All new road infrastructure safety loan projects improving rural and inter-urban roads, agreed with Bank beneficiary countries in FY 2018, have been consulted by the GRSF team to assure that road safety aspects are addressed and relevant road safety indicators are used to monitor outcomes and impact of the projects.

#### Health and Post-Crash Response

#### Tanzania, Malawi

The joint Tanzania/Malawi project aimed at the development of the Pan-African Options for scaling up post-crash response by preparing and piloting scalable and sustainable post-crash response and post-trauma care plans, including financial and economic justification. The project enhanced the capacity of Tanzania and Malawi to introduce the Emergency Medical System (EMS), and prepared proposals for a broader introduction of post-crash response services across Sub-Saharan Africa, including the identification of opportunities for regional collaboration. Specific activities comprised the review of post-crash emergency services standards and regulations in Sub-Saharan Africa, including communication, review of EMS financing options, financial analysis and modelling of potential economic impacts of EMS scale-up in Tanzania and Malawi, preparation of plans for roll-out and sustainable operations of EMS in both countries. Country focused plans were augmented by the proposals for broader introduction of post-crash response services across other Sub-Saharan African African countries.

### Road Safety Management and Capacity Building

#### Togo, Uganda, Moldova, Liberia, Paraguay, Bangladesh, Mali, Tanzania, Nigeria

Several analytical projects comprised broad or focused management capacity reviews resulting in practical recommendations for improvements, and in most cases also in Road Safety Strategies or Action Plans, identifying key actions with timelines and resources needed along with capacity building for their implementation.

In Uganda, for example, support was provided in the development of the National Road Safety Policy and Strategic Plan which was complemented by building understanding and improving skills of journalists regarding road safety data, reporting on safety issues and promoting a modern approach to roads safety. The project also strengthened enforcement practices of already existing road safety laws and regulations, which was one of the key challenges identified.

Similar scopes of research and analytical activities in Liberia, Paraguay, Bangladesh, Mali and Tanzania led to different actions and reforms in those countries. These, in most cases, resulted in the: adoption of strategies and implementation plans translating goals of the UN Decade of Action into specific country or state conditions and focusing attention on the safety result, well targeted priority actions, data collection initiatives, development of legislation, institutional frameworks for proper road safety management and coordination, and building capacity through training, workshops, seminars and conferences that focus on practical knowledge exchange. Additional significant outcomes of such projects, which should not be underestimated, include the large groups of policy makers, legislators and government officials in these countries who came to appreciate road safety issues, acknowledged road crash victims and the underreporting of deaths and injuries and understood the urgent need to take action. In most countries where capacity reviews were undertaken numerous recommended improvements were implemented as part of ongoing Bank lending projects or with the support of other international donors or MDBs. Important elements of these and many other projects covered capacity building and training for public sector institutions, NGOs and road safety professionals in governmental institutions, but also in many secondary cities or rural areas. Strong examples include Tanzania - were particular emphasis was put on capacity building and education programs, targeted at both the government and communities to enhance sustainability of road safety initiatives - and Liberia where local education institutions where identified and trained in rural road safety assessment.

Safety of vehicles plays a key role in the modern safe system approach to road safety. Thanks to CITA a new type of applied research project has been introduced by GRSF. With CITA technical support the first comprehensive Assessment of Vehicles Inspections System (AVIS) was initiated and successfully delivered in Togo<sup>2</sup>. AVIS in Togo was implemented in the context of larger package of WB activities related to trade facilitation in Sub-Saharan Africa and focused on two aspects: in-use vehicle inspections and certification of vehicles entering the registered vehicle fleet for the first time. The latter also included inspections of imported vehicles. It found a number of shortages in Togo in-use vehicle inspection system and developed a series of recommendations for improvements such as: introducing regular controls of the inspection system by authorities, revision of inspection criteria to make them realistic and evolving over time, expand inspection network to match the size of fleet, define service standards and quality management system requirements, establish system of licensing requirements for inspection station operators and supervision arrangements regarding

<sup>2</sup> Final report available at: pubdocs.worldbank.org/en/490021530247456981/Togo-Report-Final-EN-Final.pdf

key components of the system. In relation to imported vehicles, the systems of control of movement of vehicles and technical status need to be established and border authorities need to be empowered to undertake such controls. Authorities in Togo have already decided to implement key recommendations preferably with the support of the World Bank and other international institutions. Due to the significant problems of LMICs with vehicle inspections, additional AVIS projects are planned by GRSF in coordination with World Bank lending projects.

Following recommendations of the first phase of Moldova Road Safety Capacity Review, the Government has decided to establish a Lead Road Safety Unit directly under the responsibility of the Prime Minister. The second phase of this review is a specialized analysis targeted at particularly challenging road safety areas identified during general capacity review. It has focused on the analysis of crash and other road safety data systems and improving access to road safety data for public sector stakeholders and general public. Detailed recommendations provided by the study should result in expansion and modernization of the data system using the European Common Accidents Data Set (CADaS) in coordination with other countries of the region and with financial assistance from international partners.



## **BLOOMBERG INITIATIVE FOR GLOBAL ROAD SAFETY ACTIVITIES**

The GRSF is one of the key partners of the BIGRS (2015-2019). In FY 18, the full scope of GRSF activities was expanded to the ten cities involved in the initiative (Accra, Addis Ababa, Bandung, Bangkok, Bogota, Ho Chi Minh City, Fortaleza, Mumbai, Sao Paulo, and Shanghai) and five countries (China, India, Philippines, Tanzania, and Thailand) to build road safety management capacity, deliver training, support the implementation of infrastructure safety interventions, provide policy level support, and conduct analysis of the socio-economic cost of injuries in the five countries. In addition, the GRSF worked to position speed as a key factor affecting the safety of roads by engaging in policy support and leveraging the Facility's partnership with iRAP, to underscore the crucial relationship between speed and safety, to demonstrate the need to go beyond enforcement and education, and to manage speed through infrastructure with special emphasis on vulnerable road users. Finally, the GRSF started fielding requests to support capacity building, adaptation, and operationalization of the Bank's open-source, web-based road crash data management platform DRIVER in six of the cities and two of the countries.

Three and a half years into the initiative, the team built on the strong relationships with local municipal-and national-level partners, NGOs, and academia to scale up activities. By mid-2018, iRAP evaluations completed totaled 11,276 km of high-risk roads across the ten cities and five countries. The project continues to submit design recommendations to leverage government investments and the potential for the reduction of fatalities and serious injuries compared to prioritized road sections.

#### **City Level**

Accra, Addis Ababa, Bandung, Bangkok, Bogota, Fortaleza, Ho Chi Minh City, Mumbai, Sao Paulo, and Shanghai

Since 2015, the Facility conducted iRAP baseline assessments of more than 1,500 km of roads in all ten Bloomberg cities, with network lengths ranging from 100 km in Fortaleza to more than 500 km in Addis Ababa. Road designs have been star rated in Bangkok, Mumbai, Ho Chi Minh City, and Sao Paulo and post-improvement evaluations were performed in Accra (urgent repairs to streetlighting), Bangkok (pedestrian and median facilities), Bogota (improvement of bicycling and pedestrian facilities), and Shanghai (bicycle and pedestrian improvements). Scenario testing, such as the likely impact on speed limit changes, were performed in half of the cities. In total, design, post-improve-

ment evaluations and scenario testing were performed for more than 600 km of roads. In addition, The Star Rating for Schools (SR4S) platform, developed by iRAP, was introduced to Ho Chi Minh City where key locations at 37 schools were assessed, and to Bogota which has expressed strong interest in using the app and has tested its use in one school zone. In the second half of 2018, active network assessments are expected to be completed in Addis Ababa, Accra, Fortaleza, Ho Chi Minh City, Bangkok, Shanghai, and Bandung.



Avenida Leste-Oeste (8.5km), bicycle lane and 50Km/h speed limit, Fortaleza, Brazil. Source: NACTO

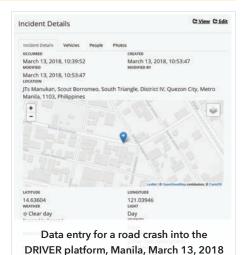
#### **Country Level**

#### China, India, Philippines, Tanzania, and Thailand

At the country level, iRAP baseline assessments of almost 7,000 km of existing roads have been, or were in the process of being, conducted in the countries, with network lengths ranging from 44 km in the Philippines to more than 5,500 km in India. Road designs were star rated in China, India, the Philippines and Tanzania and post-improvement evaluations were performed in China (a demonstration corridor in Zhejiang province), India (safe demonstration corridors in Karnataka and Gujarat), the Philippines (including the Agoo-Baguio safe demonstration corridor). In terms of sustaining the program, two local organizations are capable of undertaking iRAP assessments and providing training support: the ChinaRAP team is supporting China; and Chulalongkorn University is supporting Thailand. It is worthy of recognition that due to the scaling up of the program in 2017, mainly the addition of three new staff, has led to better integration of BIGRS-funded technical assistance with pipeline projects financed through developmental organizations.

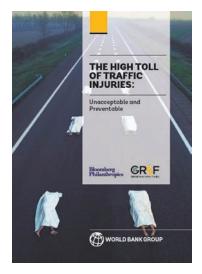
## Engagement with DRIVER – Data for Road Incident Visualization, Evaluation and Reporting

Starting in 2017, GRSF along with other BIGRS partners have been supporting the management of crash data through the introduction or use of the DRIVER platform, as requested in six of the ten cities. Introductory workshops have been held in those six cities, and some of them have taken further steps to improve their crash databases. Mumbai has already started using DRIVER for their crash data management and analysis, and São Paulo is well underway to use DRIVER as a tool to share data with the public. Fortaleza is currently customizing the platform to completely overhaul their existing system.



#### **Analytical Work**

Finally, the GRSF completed and launched a flagship study on the evaluation of the economic impact of road traffic injuries (RTIs), which highlights the long-term effects of sustained reduction of RTIs on national income growth as well as welfare benefits. The report, The High Toll of Traffic Injuries<sup>3</sup>, was successfully launched at an event (January, 9, 2018) jointly organized by Bloomberg and GRSF, chaired by the Senior Directors of Trade & Digital Development and Health Nutrition & Population, and attracting over 100 international participants, media, journalists and academics. The results have been widely quoted by famous scientific journals (e.g., Lancet), leading newspapers (e.g., Voice of America, Forbes, Financial Times) and local dailies (e.g., Times of India) and tweeted through the social media channels of Michael Bloomberg. Internally the dissemination has been quite successful with the news story appearing on the front page of the WBG external site, findings tweeted by the President, and story picked by two blogs: HNP and WBG Data. GRSF also produced a summary note of the findings, for ease of



communication.<sup>4</sup> As a subsequent step the findings of the study has already been disseminated in national-level workshops in Tanzania, China, Thailand and Philippines, and to many African countries as part of the Africa Road Safety Observatory development.

#### Influencing World Bank Projects

As part of the partnership, the Facility is leveraging road safety commitments for Bank-financed projects, by capturing synergies from the Bloomberg-funded technical assistance and training activities. This support includes network level evaluations of the safety of existing road infrastructure and providing guidance on investment options for safer designs as well as enhanced road safety management capacity to relevant institutions. Twenty World Bank projects are benefiting from Bloomberg financed activities and are improving road safety, with an impact on more than 10,000 km of roads. As a result of this strong engagement, fur-



Pedestrian walkway improvement program in Addis Ababa, Ethiopia

ther road safety technical advisory services and assistance were requested by government institutions in the Philippines, Thailand, and Colombia.

<sup>3</sup> World Bank. 2017. The High Toll of Traffic Injuries: Unacceptable and Preventable. © World Bank

<sup>4</sup> Bose D, Marquez P, Job RFS. (2018). The Economic Growth and Welfare Impacts of Reducing Road Crash Deaths and Injuries. Connections Note. Washington, DC: World Bank.

## FY 2018 AWARDS

### **GRSF WINS INTERNATIONAL ROAD SAFETY AWARD**

#### LONDON, DEC 12, 2017

In the presence of 400 road safety delegates and industry leaders, HRH Prince Michael of Kent awarded the GRSF with his prestigious International Road Safety Award. The Award recognizes GRSF's impressive track record of implementing interventions in LMICs that effectively integrate the various aspects of road safety management, including road and vehicle safety standards, crash data analysis, agency development, and police enforcement. The UK International Development Secretary Penny Mordaunt noted:

"I'm delighted and proud that DFID has funded pioneering research on



road safety which has been acknowledged through the award of this prize. Road crashes are the biggest killer of young adults globally and 90% of these deaths are in low and middle income countries even though these countries have less than half the world's vehicles. Road deaths impact on some of the poorest communities the hardest. As part of our leave no one behind agenda it is therefore all the more important that DFID continues to pave the way on important issues like road safety."

## GRSF WINS ROAD SAFETY AWARD AT THE WORLD BANK TRANSPORT LEARNING FORUM

#### WASHINGTON, DC, MAY 2, 2018

During the World Bank's Transport Learning Forum, the GRSF team received an award for "the concrete results towards the re energization of the Road Safety Agenda" in the presence of more than 300 World Bank Transport colleagues. The recognition is another example of the Bank's commitment to the road safety agenda and its appreciation of the GRSF's work towards addressing the road safety challenge in LMICs.



## **FY 2018 TRAINING HIGHLIGHTS**

## FUNDAMENTALS OF ROAD SAFETY PLANNING, DESIGN, AND ENGINEERING WORKSHOP

#### BANDUNG, AUG 21-25, 2017

The GRSF and NACTO Global Designing Cities Initiative (GDCI) prepared a four-and-a-half-day long workshop designed to transfer international good practices on road safety planning, design and engineering to decision makers, road safety champions, and practitioners in Bandung and West Java Province.

## ROAD SAFETY WEEK TRAININGS

#### **BOGOTA, OCT 2-8, 2017**

GRSF participated, along with iRAP and BIGRS partners, in a series of road safety week functions including forming part of an international expert panel on speed management, site visits to several sites in the city to see interventions resulting from the collaboration with BIGRS partners, mass media campaigns supported by BIGRS, and a road safety hackathon.

## SPEED MANAGEMENT WORKSHOP

#### BANGKOK, NOV 27-28, 2017

With the aim of reducing the number of road fatalities in Thailand (second highest in the world), the GRSF participated in a workshop organized by the country's Traffic Police Division and the World Resources Institute (WRI). The aim of this workshop was to increase the capacity of the Royal Thai Police, Bangkok Metropolitan Police, and other national stakeholders on speed management.







### **ROAD SAFETY KNOWLEDGE & LEARNING FORUM**

#### WASHINGTON, DC, APRIL 30-MAY 4, 2018

The World Bank and the GRSF road safety team conducted several trainings during the one-week Transport Learning Forum:

A New World Bank Road Safety Screening and Appraisal Tool Workshop: The World Bank and GRSF team introduced a newly developed tool that will enable World Bank team leaders to know before a project is approved the extent to which the project is contributing to halving the number of road traffic fatalities and injuries. The team went over the basics of the tools and ran a test to showcase the results. Although in early stages, the tool already allows teams to run cost-benefit analysis and ex-ante tests to ensure that World Bank projects are complying with the Bank's road safety safeguards. Over 45 staff participated in this event.



**Road Safety Global Solutions Group (RS GSG):** During this meeting, the GRSF team and participants brainstormed about the potential applicability and scale up of the new road safety screening and appraisal tool for reducing the number of road fatalities and injuries by 50% in World Bank projects. GRSF also shared progress regarding the safeguard guidance note and regional observatories in Latin America and the Caribbean and soon-to-be in Africa.

Addressing Road Safety During Project Preparation and Appraisal Workshop: During this half-day road safety training, more than 55 World Bank Transport specialists came together to share and gain expertise on the Bank's road safety Environment & Social Framework (E&S) framework, safe system approach, speed and traffic management, and safe design. The lively discussion was further fueled by Ignite presentations on road safety flag-ship projects and good practice examples by GRSF and World Bank Transport experts.



## IMPROVING SAFETY FOR VULNERABLE ROAD USERS: IRAP HCMC RESULTS WORKSHOP

#### HO CHI MINH CITY, MAY 17, 2018



The World Bank GRSF team and its partners conducted a half-day workshop on how to use the iRAP results to prioritize cost-effective road safety countermeasures across the city, especially for pedestrians, bicyclists and motorcyclists. The workshop also introduced the first-ever, evidence-based Start Rating for Schools App, an application that harness the power of the iRAP star ratings to measure the risk children take on their journey to school.

### AFRICA ROAD SAFETY LEADERSHIP PROGRAM

#### DAKAR, MAY 28 - JUNE 1, 2018

Many countries attended this training, a partnership between SSATP and GRSF with the UN. GRSF provided training along with SSATP, the UN and Delft University aiming to improve the management and leadership of road safety in Africa.





## **FY 2018 EVENTS HIGHLIGHTS**

### **GRSF NEWSLETTERS**

In Spring 2017, the GRSF team began issuing newsletters in a monthly or bi-monthly basis to keep donors, road safety advocates and interested parties up to date with the Facility's projects and activities, including events, latest developments, trainings and workshops. They can be found in the GRSF website under the "Resources" tab (www.worldbank.org/grsf).



### PHILIPPINES ROAD SAFETY ACTION PLAN (PRSAP) 2017-2022

#### MANILA, NOV 19, 2017

A Memorandum of Understanding (MOU) was signed by the main stakeholders responsible for road crash data - the Department of Transport (DOTr), Department of Interior and Local Government, and the Department of Public Works and Highways - to make the World Bank's open-source application, DRIVER, the official platform for crash data management. In the announcement, Tim Orbos, DOTr Undersecretary for Roads thanked the World Bank for their continued support.

### **GRSF ANNUAL BOARD MEETING**

#### WASHINGTON, DC, JAN 9, 2018

The GRSF management team met with its Board members to discuss GRSF's FY 17 Annual Report, investments and achievements, as well as future activities. During this meeting the Board also welcomed CITA as a new donor and Board member.



### LAUNCH OF THE BLOOMBERG-FUNDED REPORT ON ROAD SAFETY

#### WASHINGTON, DC, JAN 9, 2018

The World Bank, Bloomberg Philanthropies and the GRSF launched "The High Toll of Road Traffic Injuries: Unacceptable and Preventable." The report highlights the significant economic and welfare benefits that developing countries could realize if they reduce the number of road traffic injuries and deaths by 50 percent. About 100 representatives from leading international transport and mobility organizations participated in this event, led by Senior World Bank Directors Jose Luis Irigoyen and Timothy Evans from the Transport and Health Global Practices, and Kelly Larson from Bloomberg, along with the GRSF report co-author Dipan Bose.



## **TRANSFORMING TRANSPORTATION**

#### WASHINGTON, DC, JAN 11-12, 2018

Road Safety was at the core of the 2018's Transforming Transportation two-days high level event, and the GRSF played active roles in the following events:

**Road Safety: Moving Towards Vision Zero:** In the main atrium of the World Bank Group headquarters, road safety advocates from leading international organizations gathered as Soames Job, Head



of GRSF and Ben Welle, WRI Global Health & Road Safety Manager, presented the joint WRI-GRSF "Sustainable & Safe – A Vision and Guidance for Zero Road Deaths" report highlighting the importance of the Safe System approach for improved road safety. The approach starts with the premise that human error is inevitable, but road traffic injuries and fatalities are not.

**Road Safety Financing and Implementation Challenges:** In one of the high level plenary sessions, Jean Todt, UN Special Envoy for Road Safety and FIA President, made it clear that little can be achieved in the way of poverty reduction and economic development without safer mobility. He stressed the need for the establishment of the UN Road Safety Fund to ensure the implementation of the SDG road safety targets and urged cooperation with the World Bank/GRSF.

### LAUNCH OF THE UN ROAD SAFETY TRUST FUND

#### NEW YORK, APRIL 12-13, 2018

Following the adoption of the UN General Assembly resolution A/72/L.48, titled "Improving global road safety," Jose Luis Irigoyen, World Bank Senior Director for the Transport Global Practice delivered remarks at the launch ceremony of the much-anticipated UN Road Safety Trust Fund. Prince Michael and other road safety champions called on the UN and the GRSF to work together towards achieving the road safety-related Sustainable Development Goal 3.6.



# 25TH MEETING OF THE UNITED NATIONS ROAD SAFETY COLLABORATION (UNRSC)

#### **NEW YORK, APRIL 12-13, 2018**

The GRSF and representatives from UN agencies, NGOs, academia and the private sector were convened to discuss the implementation of the UNGA resolution, the launch of the UN Road Safety Fund, UNRSC activities and membership requests. Noteworthy decisions include the membership acceptance of one of GRSF donors, CITA, to UNRSC, as well as the Government of Sweden's acceptance to host the Third High-Level Global Conference on Road Safety in



2020, and WHO and the UN regional commissions' invitation to facilitate the organization of the Fifth UN Global Road Safety Week in 2019.

### **INTERNATIONAL TRANSPORT FORUM (ITF) 2018 SUMMIT**

#### LEIPZIG, MAY 23-25, 2018

In the 2018's ITF's 3-day Summit, the world's largest gathering of transport ministers, heads of international organizations, and policy-makers, the Summit focused specifically on transport "Safety and Security" and the World Bank and GRSF played a key role in the following events:

**First Road Safety Observatory in Africa:** During the first day of the Summit, the World Bank, the Fédération Internationale de l'Automobile (FIA), and the ITF signed a Memorandum of Understanding (MoU) towards establishing the first regional Road Safety Observatory in Africa. The Observatory will support African countries' efforts to reduce road traffic fatalities by coalescing their activities to systematically collect, analyze, and share reliable road crash data.

**The Next Decade for Road Safety: Adopting Lessons Learned from the Decade of Action (2011-2020):** In an event organized by the GRSF, the WRI and the Towards Zero Foundation, road safety experts from various international organizations convened to discuss the challenges and lessons learned from the UN Decade of Action for Road Safety (2011-2020). The need for a new road safety target after 2020 to scale up progress worldwide was encouraged by all panelists.

**GRSF and the MDBs' Road Safety Working Group Shared Booth:** In a joint effort to highlight their work and provide a place to host multi-lateral meetings, the GRSF and the MDBs Road Safety Working Group co-hosted an interactive booth and shared their latest publications.



## **GRSF AND WORLD BANK COLLABORATION IN FY 2018**

The GRSF and the World Bank's Road Safety Global Solutions Group (RS GSG) continued close cooperation to scale up the transfer of leading road safety knowledge within the Bank's regional project teams as well as reciprocal information to the GRSF in terms of lessons learned. Some of our most noteworthy collaborations include the following:

The Sustainable Mobility for All (SuM4All) Initiative, coordinated by the World Bank, included transport safety among priority areas identified for cooperation. Road safety as the statistically dominant challenge in transport safety with the largest global number of fatalities and injuries, should find prominent place in collaboration among partners active in all priority areas of the SuM4AII. The World Bank and GRSF worked continuously to increase importance of road safety related topics in the SuM4AII cooperation.

The newly developed Road Safety Screening and Appraisal tool is designed to undertake a quick road safety screening during the concept and preparation stages of any for World Bank road sector project or infrastructure component and can be applied to any infrastructure modernization or upgrade investment on existing road. It allows the project manager to input basic characteristics of the "with" and "without" project scenarios and to estimate the change in



road fatalities and injuries expressed in a project safety impact (PSI) indicator. The tool also estimates the safety benefit to cost ratio of the project during 20-years after modernization.

The study "The High Toll of Traffic Injuries: Unacceptable and Preventable" funded by the Bloomberg Philanthropies and supported by the GRSF and the RS GSG was finished and published in FY 2018. It was the first systematic effort towards understanding the economic impact from reducing road crash deaths and injuries. The study, which was inspired by health studies on the impacts of other diseases, confirms that, over time, sharply reducing the number of road traffic injuries would enable developing countries to attain substantial increases in economic growth and national income, while leading simultaneously to welfare gains. It estimated the macroeconomic growth impact of road injuries in five countries. Results indicate that halving road crash deaths and injuries would produce a substantial additional flow of income, with increases in GDP per capita over 24 years as large as 7.1% in Tanzania, 7.2% in the Philippines, 14% in India, 15% in China, and 22.2% percent in Thailand. So, for some countries economic growth would be increased by almost 1% per year if crash deaths and injuries were just halved, not removed. Every step towards this goal will help the economy, as well as reducing human

grief, suffering, pain, and loss which road crash deaths and disability bring to victims and their families.

The GRSF in cooperation with RS GSG continued assistance to World Bank transport teams to improve road safety delivery in Bank co-financed road transport and infrastructure projects. To this end, GRSF and RS GSG are preparing the Good Practice Note that will provide practical implementation measures for road safety components in all of the Bank road projects. The Note will be a basic resource supporting Bank project managers in assuring that all future World Bank road projects have a clear focus to address road safety challenges using the safe system approach.

In addition, the Bank funded several other activities in partnership with GRSF and RS GSG to support road safety:

Based on a Memorandum of Understanding, the SSATP, the World Bank (through the GRSF), FIA and IRTAD are working together towards the establishment of an African Road Safety Observatory encouraging stronger development of data systems at the national level and providing an opportunity for benchmarking among African countries. A minimum set of standardized data elements and indicators has been developed which will allow for comparable road accident data to be available nationally, regionally and internationally. The set of proposed road safety indicators can be implemented by any country on a voluntary basis in the national crash collection systems of the African countries to allow, progressively, for more and more common road crash data from the various countries to be available in a uniform format, allowing for more reliable analyses and comparisons. More than 20 African countries expressed interest in the Observatory.



Young Tae Kim (ITF Secretary-General), Jean Todt (FIA President and UN SG's Special Envoy for Road Safety), Mohamed Boulif (Morocco's Vice-Minister of Transport) and Jose Luis Irigoyen (World Bank Senior Director of Transport) after signing the MOU in Leipzig, May 23, 2018

- The report "Sustainable & Safe. A Vision and Guidance for Zero Road Deaths" has been prepared by the World Bank - GRSF and the WRI in collaboration with Bloomberg Philanthropies and FIA Foundation. The report provides guidance for all stakeholders involved in transport decisions, from government officials planning transport systems, to community groups concerned about safety, and businesses building new developments. It explains how to develop a context-specific Safe System-based road safety strategy, focusing on the urgent need and significant opportunity to apply such an approach in LMICs.
- A seminar on the requirements of the new road safety safeguards - which are part of the Bank's new E&S Framework and applicable to all road projects developed after October 2018 - was delivered to the Bank transport staff during the Transport Learning Forum;
- Two workshops on the practical use of the newly developed Road Safety Appraisal Tool were conducted by the GRSF for Bank transport staff.



## **GRSF GLOBAL ROLE**

## **EC - EASTERN PARTNERSHIP TRANSPORT PANEL**

The World Bank and the GRSF road safety experts contributed significantly to the work of the Secretariat of Eastern Partnership Transport Panel in exchanging global good practices and cooperating in the implementation of the Declaration on Road Safety agreed between the European Union and Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) by contributing to a series of workshops and meetings (Tbilisi, Brussels, Kyiv).

### **FIA HIGH-LEVEL PANEL**

As part of the ongoing collaboration, the GRSF participated in the meeting of the FIA High Level Panel (chaired by Jean Todt, the UN Special Envoy for Road Safety) in Leipzig in May 2018.

## **GLOBAL ROAD SAFETY PARTNERSHIP**

Coordination continued through participation of the Global Road Safety Partnership (GRSP) Executive Board meetings and meetings on specific developments in the partnership between GRSF and GRSP.

### **UNITED NATIONS ROAD SAFETY TRUST FUND (UN RSTF)**

The World Bank and GRSF were involved in the creation of the UN RSTF in April 2018 at the UN General Assembly meeting and the process of establishing this trust fund by advising on structural and operational aspects through active involvement in the UN RSTF Advisory Board as well as meetings to discussed governance issues with Jean Todt, the UN Special Envoy for Road Safety, Yuwei Li, the Director of Transport in UNECE, and others.

## **UN ROAD SAFETY COLLABORATION**

GRSF supported cooperation within UNRSC by participating in regular meetings and contributing to the work of five "Project Groups" established to support collaboration among key global stakeholders to achieve the UN Decade of Action goals.

## INFLUENTIAL CONTRIBUTIONS TO INTERNATIONAL CONFERENCES AND CONGRESSES

GRSF played active role in many important global events, advocating for and guiding road safety action. A full list of presentations is provided in the Annex, and selected highlights are noted below:

- The World Bank/GRSF in partnership with WHO, WRI, Towards Zero Foundation, UNECE, and the EBRD organized and moderated an Official Side Event of the International Transport Forum 2018 Summit, in Leipzig, Germany, in May 2018, entitled: The Next Decade for Road Safety: Adopting lessons learned from the Decade of Action 2011-2020.
- Launch of the joint WRI and GRSF Report: "Sustainable & Safe A Vision and Guidance for Zero Road Deaths" at the Transforming Transportation event at the World Bank, Washington, DC, January 2018.
- Invited address to the Global Sustainable Development Goals on Road Safety, EBRD Headquarters, London, December 2017: The World Bank and Road Safety.
- Presentations to the Speed Management Workshop, Bangkok, November 2017.
- Guest presentation to Transportation Research Board Annual Meeting 2018, Global Road Safety Subcommittee ANB 10(8), Washington, DC, January 2018.
- Guest presentations to the Workshop Towards the Establishment of a Road Safety Observatory in Africa, Dakar, Senegal, February 2018.



# ANNEXES

## **ACRONYMS**

ADB	Asian Development Bank
AfDB	African Development Bank
AVIS	Assessment of Vehicles Inspections System
BIGRS	Bloomberg Initiative for Global Road Safe¬ty
BRT	Bus Rapid Transport
CADaS	Common Accidents Data Set
CAF	Development Bank of Latin America
CITA	The International Motor Vehicle Inspection Committee
DFAT	The Government of Australia
DFID	Department for International Development
DHSC	Department of Health & Social Care
DOTr	Department of Transport
DRIVER	Data for Road Incident Visualization Evaluation & Reporting
E&S	Environment and Social Framework
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
EMS	Emergency Medical System
FIA	Fédération Internationale de l'Automobile
GDCI	Global Designing Cities Initiative
GRSF	Global Road Safety Facility
GRSP	Global Road Safety Partnership
HCMC	Ho Chi Minh City
IHME	Institute for Health Metrics and Evaluation
irap	International Road Assessment Programme
IRF	International Road Federation
IRTAD	International Traffic Safety Data and Analysis Group
IsDB	Islamic Development Bank
ITF	International Transport Forum
KOTI	The Korea Transport Institute
LAMATA	Lagos Metropolitan Area Transit Authority
LMICs	Low and Middle-Income Countries
MDBs	Multilateral Development Banks

MOU	Memorandum of Understanding
NACTO	National Association of City Transportation Officials
NGOs	International and Nongovernmental Organizations
NIHR	National Institute for Health Research
OECD	Organisation for Economic Co-operation and Development
OISEVI	Latin American Road Safety Observatory
ONISR	Observatoire National Interministeriel de Sécurité
PRSAP	Philippines Road Safety Action Plan
PSI	Project Safety Impact
QII	Quality Infrastructure Investment Partnership
R&D	Research and Development
RS GSG	Road Safety Global Solutions Group
RSSAT	Road Safety Screening and Appraisal Tool
RTIs	Road Traffic Injuries
SDG	Sustainable Development Goal
SIDA	The Government of Sweden
SR4S	Star Rating for Schools
SSATP	Sub-Saharan Africa Transport Policy Program
STA	Swedish Transport Administration
SuM4All	Sustainable Mobility for All
Tⅅ	The World Bank Transport and Digital Development Global Practice
UN RSTF	UN Road Safety Trust Fund
UNECE	United Nations Economic Commission for Europe
UNGA	United Nations General Assembly
UNRSC	United Nations Road Safety Collaboration
WBG	World Bank Group
WHO	World Health Organization
WRI	World Resources Institute

## PAPERS AND TALKS 2017-18

#### JOURNAL PAPERS, PEER-REVIEWED CONFERENCE PROCEEDINGS & REPORTS

Welle B, Sharpin AB, Adriazola-Steil C, Job RFS, Shotten S, Bose D, Bhatt A, Alveano S, Obelheiro M, & Imamoglu T. (2018). *Safe and Sustainable: A Vision and Guidance for Zero Road Deaths*. Washington, DC: WRI & GRSF.

World Bank. 2017. The High Toll of Traffic Injuries: Unacceptable and Preventable. © World Bank

Burlacu A., Burlacu F.A., Racanel C. (2018). *Road Safety Management in Romania*, 5th International Conference on Road and Rail Infrastructure, Zadar, Croatia, 17-19 May 2018.

Portabales I, Velasquez JM (2018) *Implementation Completion and Results Report Argentina Road Safety Project*. World Bank, Washington, DC, April 2018.

#### NON PEER-REVIEWED PUBLICATIONS, PAPERS AND REPORTS

Bose D, Marquez P, Job RFS. (2018). *The Economic Growth and Welfare Impacts of Reducing Road Crash Deaths and Injuries*. Connections Note. Washington, DC: World Bank.

Burlacu, F.A. (2018). Security of passengers and goods: Romanian Transport at European level. In Documentary notebook on Transport and Infrastructure - Operational Concepts and Instruments. Bucharest: Club Romania Publishing House, Romania, May 2018.

Gomez, HM, Job RFS, Adriazola-Steil, C, Wegman F, Bezabeh G, Bradford J, et al. (2017). Chapter 4: Safety, in Global Mobility Report 2017. Washington, DC: Sustainable Mobility for All.

Job RFS & Gomez HM. (2017). *Why safety matters for Sustainable Mobility*. Connections Note. Washington, DC: World Bank.

Marquez P. & Bose D. (2018). Preventable traffic injuries and deaths hold back the development of countries. Investing in Health: News and Views in Healthy Development. https://blogs.worldbank. org/health/preventable-traffic-injuries-and-deaths-hold-back-development-countries.

Portabales I, Guerrero S, Sanchez I, Velasquez JM (2018). Getting to zero traffic fatalities: What will it take? http://blogs.worldbank.org/transport/node/820

Portabales I, Guerrero S, Sanchez I, Velasquez JM (2018). Road safety: Beyond automobiles http://blogs.worldbank.org/latinamerica/es/node/1196

#### **EVENTS SUPPORTED BY GRSF**

Road Safety: Moving Towards Vision Zero. WRI and GRSF Report Launch Event at Transforming Transportation, World Bank, Washington, DC, January 2018.

GRSF & Bloomberg Philanthropies Partnership Meeting and Report Launch

"The High Toll of Traffic Injuries: Unacceptable and Preventable". World Bank, Washington, DC, January 2018.

Workshop Towards the Establishment of a Road Safety Observatory in Africa, Dakar, Senegal, February 2018.

Using the new World Bank Road Safety Appraisal Tool: Training session in the T&DD Learning Forum, May 2018.

Addressing Road Safety during Project Preparation and Appraisal: The new Road Safety Safeguard: Training session in the T&DD Learning Forum, May 2018.

The next decade for road safety: Adopting lessons learned from the Decade of Action 2011-2020. Official Side Event of the International Transport Forum 2018 Summit, Leipzig Germany, May 2018. Organized by the World Bank/GRSF in partnership with WHO, WRI, Towards Zero Foundation, UN-ECE, and the EBRD.

World Bank BBL on Road Safety Opportunities, Dakar, Senegal, May 2018.

African Road Safety Leadership Programme, Dakar, Senegal, May-June 2018. Supported by SSATP and GRSF.

World Bank BBL on the Bloomberg Initiative for Global Road Safety, Bangkok, July 26, 2017.

Fundamentals of Road Safety Planning, Design, and Engineering. Workshop under the Bloomberg Initiative, Bandung, August 21-25, 2017.

Tools for evidence-based road safety interventions - iRAP Bangkok Results and DRIVER Workshop. GRSF and iRAP workshop under the Bloomberg Initiative, Bangkok, February 19-20, 2018.

Improving safety for pedestrians, cyclists and motorcyclists. Workshop organized by GRSF together with iRAP, AIP Foundation and FedEx under the Bloomberg Initiative, Ho Chi Minh, May 17, 2018.

### **CONFERENCE OR WORKSHOP PRESENTATIONS**

Bose, D. (2018). *Tanzania - Economic Impact of Road Traffic Crashes*. Road Safety Workshop, Dar es Salaam Urban Transport Project supervision mission. June 18, 2018.

Bose, D. (2018). *Vehicle Safety Standards in Developing Countries: Role of World Bank*. Invited guest lecture to a Graduate level Public Health Class, University of Chicago. April 18, 2018.

Bose, D. (2018). *Panelist* - GRSF & Bloomberg Philanthropies Partnership Meeting and Report Launch "The High Toll of Traffic Injuries: Unacceptable and Preventable". World Bank, Washington, DC, January 2018. Bose, D. (2018). *Speed Management: Policy and Interventions*. Bloomberg Philanthropies, Speed Management Workshop. Bangkok, November 27, 2018.

Burlacu, F.A. (2017). *Bloomberg Initiative for Global Road Safety Overview*. Presentation to the iRAP Results Workshop for local stakeholders, Bangkok, July 24, 2017.

Burlacu, F.A. (2017). Updates and next steps on GRSF and iRAP activities under the Bloomberg Initiative. Presentation to the BIGRS Partners' Meeting, Bangkok, July 26, 2017.

Burlacu, F.A. (2017). Road Safety issues, challenges and opportunities to build capacity - Word Bank's Involvement in SEAP region. Presentation to the Australasian Road Safety Conference, October 10, 2017.

Burlacu, F.A. (2017). *Introductory presentation on DRIVER*. Presentation to Traffic Police, Bangkok Metropolitan Administration and other local stakeholders, Bangkok, November 1-2, 2017.

Burlacu, F.A. (2017). Crash data collection system to prevent speeding - DRIVER. Presentation to Speed Management Workshop, Bangkok, November 27, 2017.

Burlacu, F.A. (2017). *Opening remarks and discussant*. iRAP workshop on preliminary results in Yangpu district, Shanghai, November 29, 2017.

Burlacu, F.A. (2017). Updates and next steps on GRSF and iRAP activities under the Bloomberg Initiative. Presentation to the BIGRS Partners' Meeting, Shanghai, December 1, 2017.

Burlacu, F.A. (2018). *iRAP assessment results for sidewalk designs in Bandung*. Presentation to Bappelitbang (Development, Planning and Research Agency), Institute of Road Engineering, Bandung, January 15, 2018.

Burlacu, F.A. (2018). *Introductory presentation on DRIVER*. Presentation to BIGRS embedded staff, Bandung, January 16, 2018.

Burlacu, F.A. (2018). *Bloomberg Initiative for Global Road Safety Overview*. Presentation to National Traffic Police and Ministry of Transport, Jakarta, January 17, 2018.

Burlacu, F.A. (2018). Updates and next steps on GRSF and iRAP activities under the Bloomberg Initiative. Presentation to the BIGRS Partners' Meeting, Ho Chi Minh, January 22, 2018.

Burlacu, F.A. (2018). *Introductory presentation on DRIVER*. Presentation to BIGRS embedded staff and traffic police, Ho Chi Minh, January 22, 2018.

Burlacu, F.A. (2018). *Opening remarks and discussant*. Presentation to GRSF and iRAP workshop under the Bloomberg Initiative - "Tools for evidence-based road safety interventions - iRAP Bangkok Results and DRIVER Workshop", Bangkok, February 19-20, 2018.

Burlacu, F.A. (2018). *Road safety database for evidence based interventions*. Video recorded presentation for the 1st Road Safety Webinar in Philippines, Manila, May 9, 2018.

Burlacu, F.A. (2018). BIGRS overview and updates on HCMC. Presentation to the workshop organized by GRSF together with iRAP, AIP Foundation and FedEx, under the Bloomberg Initiative - "Improving safety for pedestrians, cyclists and motorcyclists", Ho Chi Minh, May 17, 2018.

Burlacu, F.A. (2018). *Road Safety Engineering Tools*. Presentation to the workshop organized by GRSF together with iRAP, AIPF and FedEx, under the Bloomberg Initiative - "Improving safety for pedestrians, cyclists and motorcyclists", Ho Chi Minh, May 17, 2018.

Burlacu, F.A. (2018). Updates and next steps on GRSF and iRAP activities under the Bloomberg Initiative. Presentation to the BIGRS Partners' Meeting, Shanghai, June 8, 2018.

Job, RFS. (2017). *Impact Opportunities in Road Safety*. Invited Presentation to the Impact Evaluation Workshop, Lisbon, July 2017.

Job, RFS. & Sekerinska, L. (2017). *Improving Road Safety Management and Leadership in Macedonia*. Invited Presentation to the Review of Road Safety Management, Skopje, Macedonia, July 2017.

Job, RFS. (2017). *Value and Use of iRAP for Ghana*. Presentation to the Department of Urban Roads and the Ghana Highways Authority, Accra, Ghana, August 2017.

Job, RFS. (2017). *The World Bank and Road Safety*. Invited Address to the Global Sustainable Development Goals on Road Safety, EBRD Headquarters, London, December 2017.

Job, RFS. (2017). *Legislative opportunities for Delivery of Road Safety*. Invited Address to the Annual Leadership Council Meeting of the Global Network of Road Safety Legislators, London, December 2017.

Job, RFS. (2018). *Introduction to the report (& Moderator)*. GRSF & Bloomberg Philanthropies Partnership Meeting and Report Launch "The High Toll of Traffic Injuries: Unacceptable and Preventable". World Bank, Washington, DC, January 2017.

Job, RFS. (2018). *Panelist. Road Safety: Moving Towards Vision Zero.* Transforming transportation, Washington, DC, January 2017.

Job, RFS. (2018). *Road Safety plans and initiatives at the World Bank and the Global Road Safety Facility*. Invited presentation to Transportation Research Board Annual Meeting 2018 Global Road Safety Subcommittee ANB 10(8), Washington DC, January 2018.

Job, RFS. & Silva, M (2017). *Workshop discussant*. Invited to Formal Meeting of Member States on the road safety-related targets in the 2030 Agenda for Sustainable Development and the Global Plan for the Decade of Action for Road Safety, Geneva, November 2017. WHO: Geneva.

Job, RFS. (2018). *Workshop discussant*. Advisory Committee Meeting on the 4th Global Status Report on Road Safety, New York, April 2018. New York: WHO/Bloomberg Philanthropies.

Job, RFS. (2018). *DRIVER – A World Bank Tool for crash data collection*. Invited presentation to the Workshop Towards the Establishment of a Road Safety Observatory in Africa, Dakar, Senegal, February 2018.

Job, RFS. (2018). *Workshop discussant*. Workshop with Coalition of Road Safety NGOs, Yaoundé, Cameroon, February 2018.

Job, RFS. (2018). Introductory Comments: Lessons learned and creating a different approach. The next decade for road safety: Adopting lessons learned from the Decade of Action 2011-2020 at the International Transport Forum 2018 Summit, Leipzig Germany, May 2018.

Job, RFS. (2018). *Moderator*. The next decade for road safety: Adopting lessons learned from the Decade of Action 2011-2020 at the International Transport Forum 2018 Summit, Leipzig Germany, May 2018.

Job, RFS. (2018). Emerging issues and Road Transport work of the World Bank and GRSF (with a focus on Road safety). Invited presentation to the PIARC (World Road Association) Advisory Group Meeting, Leipzig Germany, May 2018

Mohamed, N. (2017). *Tanzania Bloomberg country activities launch workshop*. Presentation and discussions with government partners. Accra, July 2017.

Mohamed, N. (2017). Presentation on DRIVER to the Ministry of Works, Communications and Transport. Road Safety workshop. Dar es Salaam, October 2017.

Mohamed, N. (2017). *Presentation on road safety assessment*. Road Safety workshop. Addis Ababa, November 2017.

Mohamed, N. (2017). Technical presentation on iRAP Accra work. Accra, December 2017.

Mohamed, N. (2018). *Presentation of iRAP BRT report to TANROADS and World Bank*). Dar es Salaam, February 2018.

Mohamed, N. (2018). *Presentation and discussions of technical issues with implementing agencies and project consultants*. Workshop on implementation of iRAP BRT report. Dar es Salaam, February 2018.

Mohamed, N. (2018. *Presentation to Head of Addis Ababa Roads and Transport Bureau*. iRAP Phase 1 report. Addis Ababa, May 2018.

Mohamed, N. (2018). *Presentation on Dar es Salaam BRT. Road safety workshop*. Dar es Salaam, June 2018.

Shotten, M. (2017). *Workshop Discussant*. Regional consultation: "Developing voluntary global performance targets for road safety risk factors and service delivery mechanisms" Pan-American Health Organization, Washington, DC, September 2017.

Velasquez, JM (2017). Introductory presentation on DRIVER. Bogota, Colombia, July 2017.

Velasquez, JM (2017). *Presenter and Panelist*. Active Mobility Seminar, São Paulo, Brazil, September 2017.

Velasquez, JM (2017). Introduction of iRAP assessments in Avenida dos Bandeirantes and Radial Leste, São Paulo, Brazil, September 2017.

Velasquez, JM (2017). *Presentation on Speed Management*, International Road Safety Seminar, Bogota, Colombia, October 2017.

Velasquez, JM (2017). *Roundtable participant*. Workshop on Vehicle Technologies for Safer Public Transport, Bogota, Colombia, October 2017.

Velasquez, JM (2017). Judge, Road Safety Hackathon, Bogota, Colombia, October 2017.

Velasquez, JM (2017). *Opening remarks and discussant*. Road safety assessments workshop and training, Fortaleza, Brazil, December 2017.

Velasquez, JM (2017). *Opening remarks and discussant*. iRAP introduction and training, São Paulo, Brazil, December 2017.

Velasquez JM (2018). *Introductory presentation on DRIVER and panelist*. Principles for Digital Development BBL. World Bank, Washington, DC, January 2018.

Velasquez JM (2018). *Introductory presentation on DRIVER*. Presentation to Metropolitan Traffic Authority, Quito, Ecuador, February 2018.

Velasquez, JM (2018). *Opening remarks and discussant*. iRAP workshop on results in Inner Ring Road, São Paulo, Brazil, February 2018.

Velasquez, JM (2018). Data for evidence-based decision-making and Introductory Presentation on DRIVER, Salvador, Brazil, February 2018.

Velasquez, JM (2018). Data for evidence-based decision-making and Introductory Presentation on DRIVER, Palmas, Brazil, February 2018.

Velasquez, JM (2018). *Opening remarks and discussant*. iRAP workshop on results in Fortaleza, Fortaleza, Brazil, April 2018.

#### FORMAL TRAINING DELIVERED: EVENTS ORGANIZED/SUPPORTED AND PRESENTATIONS DELIVERED

Bennett, C., Chesheva, E. & Job, RFS. (2018). *Implications and Processes*. Presentation to Addressing Road Safety during Project Preparation and Appraisal - The New Road Safety Safeguard: Training session in the T&DD Learning Forum, Washington, DC, May 2018.

Bose, D. (2018). *Nepal - Road Safety in Low Volume High Risk Roads*. Presentation to Addressing Road Safety during Project Preparation and Appraisal- The New Road Safety Safeguard: Training session in the T&DD Learning Forum, Washington, DC, May 2018.

Bose, D. (2017). *Strengthening Lead Agencies*. Instructor for WHO Legal Development Program (Bloomberg Initiative for Global Road Safety).

Bose, D. (2017). *Politics, Government and Persuasion in road safety*. Invited module in the Global Road Safety Leadership Course, Baltimore, USA, August 2017.

Bose, D. & Job RFS. (2017). *Role of Infrastructure in Road Safety*. Invited module in the Global Road Safety Leadership Course, Baltimore, USA, August 2017.

Burlacu, F.A. (2017). *Factors involved in Road Safety*. Presentation to "Fundamentals of Road Safety Planning, Design, and Engineering" training workshop, Bandung, August 21-25, 2017.

Burlacu, F.A. (2017). *Road Safety Inspection (RSI)*. Presentation to "Fundamentals of Road Safety Planning, Design, and Engineering" training workshop, Bandung, August 21-25, 2017.

Burlacu, F.A., Prakash, A. (2017). *Overview on the Bloomberg Initiative for Global Road Safety*. Presentation to "Fundamentals of Road Safety Planning, Design, and Engineering" training workshop, Bandung, August 21-25, 2017.

Burlacu, F.A. (2018). *Ho Chi Minh City - Road Safety in urban areas*. Presentation to Addressing Road Safety during Project Preparation and Appraisal - The New Road Safety Safeguard: Training session in the T&DD Learning Forum, Washington, DC, May 2018.

Burlacu, F.A. (2018). *The global use of DRIVER*. Opening remarks to Laos Crash Reporting Training, Vientiane, May 22, 2018.

Job, RFS. (2017). *Road safety policies worldwide*. Invited module in the Delft Road Safety training, Accra, August 2017.

Job, RFS. (2017). *Global status report and road safety knowledge (manuals)*. Invited module in the Delft Road Safety training, Accra, August 2017.

Job, RFS. (2018). *Politics, Government and Persuasion in road safety*. Invited module in the Global Road Safety Leadership Course, Nairobi, Kenya, March 2018.

Job, RFS. & Bose, D. (2018). *Role of Infrastructure in Road Safety*. Invited module in the Global Road Safety Leadership Course, Nairobi, Kenya, March 2018.

Job, RFS. (2018). *Speed and Safety in Bank projects*. Presentation to Using the new World Bank Road Safety Appraisal Tool: Training session in the T&DD Learning Forum, Washington, DC, May 2018.

Job, RFS. (2018). *Introduction to Road Safety E&S Framework and Guidance Documents*. Presentation to Addressing Road Safety during Project Preparation and Appraisal- The New Road Safety Safeguard: Training session in the T&DD Learning Forum, Washington, DC, May 2018.

Job, RFS. & Chesheva, E. (2018). *How Do We Advise Governments to Implement the Road Safety Safeguard*? Presentation to Addressing Road Safety during Project Preparation and Appraisal- The New Road Safety Safeguard: Training session in the T&DD Learning Forum, Washington, DC, May 2018.

Job, RFS. & Lancelot, E. (2018). *Opportunities for Road Safety in Senegal & Africa*. World Bank BBL on Road Safety Opportunities, Dakar, Senegal, May 2018.

Job, RFS. (2018). *Global perspective on Road safety*. Invited module in African Road Safety Leadership Programme, Dakar, Senegal, May-June 2018.

Job, RFS. (2018). *Road Safety Financing Opportunities in Africa*. African Road Safety Leadership Programme, Dakar, Senegal, May-June 2018.

Job, RFS. (2018). *Speed Management and Road Safety*. Invited module in African Road Safety Leadership Programme, Dakar, Senegal, May-June 2018.

Mohamed, N. (2018). *Presentation and discussions with participants on road safety assessment*. iRAP training workshop. Dar es Salaam, February 2018.

Mohamed, N. (2018) *Presentation and discussions on road safety assessment with regional engineers.* Road safety training. Dar es Salaam, June 2018.

Shotten, M. (2017). *The MDBs, GRSF and Enforcement: Working Together*. Invited presentation the International Association of Chiefs of Police Annual Conference. Philadelphia, USA, October 2017.

Shotten, M. (2017). *GRSF, NGOs and EASST*. Invited Presentation to the EASST Partnership Meeting. London, UK. December 2017.

Shotten, M. (2018). *Introductory Remarks to the Partnership Meeting*. GRSF & Bloomberg Philanthropies Partnership Meeting and Report Launch "The High Toll of Traffic Injuries: Unacceptable and Preventable". World Bank, Washington, DC, January 2018.

Shotten, M. (2018). *Sustainable Transport and Road Safety.* Presentation to the International Road Federation Fellows Class. Washington, DC. January 2018.

Shotten, M. (2018). *Moderator*. The Road to Zero USA Coalition Meeting. Washington, DC, June 2018.



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