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# ANNUAL REPORT



# 2017



Global Road Safety Facility





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# OUR DONORS

The Global Road Safety Facility (GRSF) is supported by the following donors:

The 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, 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 FIA Foundation has an international reputation for innovative global road safety philanthropy; practical environmental research and interventions to improve air quality and tackle climate change; and high impact strategic advocacy in the areas of road traffic injury prevention and motor vehicle fuel efficiency. The FIA Foundation represents the Global Road Safety Facility's longest standing donor.

An incoming donor, CITA, the International Motor Vehicle Inspection Committee, 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 contributed to the GRSF in FY 17 with funding from its road safety Global Engagement Budget.



# OUR PARTNERS

The GRSF partners with the multi-lateral development banks, 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.



Multi-lateral Development Banks: African Development Bank, Asian Development Bank, CAF - The Development Bank of Latin America, European Bank for Reconstruction

and Development, European Investment Bank, Inter-American Development Bank, and the Islamic Development Bank



# FOREWORD



I am pleased to present the 2017 Annual Report of the Global Road Safety Facility (GRSF). This has been a very special year, in which the GRSF accomplished much and recently received the prestigious Prince Michael International Award for Road Safety Management, in recognition of its work over the past decade.

Since 2006, the GRSF has played a vital global role in providing funding and technical support for road safety to low and middle-income countries, partner organizations, academia and NGOs, and partnering with the private sector on specific initiatives.

This year, the GRSF has continued to play this essential role, creating and promoting multi-sectoral projects, conducting applied research and creating knowledge transfers to our client governments and within the World Bank Group. This has enabled stronger agency coordination for road safety, and results such as the increased use of road infrastructure rating systems, new road crash data collection partnerships, training for country officials, and a focused support to low-income and IDA countries.

In 2017, for instance, the GRSF road safety grants in Nepal supported critical road safety engineering works and institutional capacity efforts to implement the National Road Safety Action Plan, in coordination with our DFID donor partners. As a result,

the Nepal Road Safety Council was established in November 2017 under the leadership of the Ministry of Physical Infrastructure and Transport. This is an impressive achievement towards accountability and leadership by the transport department on this critical topic of road safety.

Our program in partnership with the Bloomberg Initiative for Global Road Safety (BIGRS) not only achieved its milestone of surveying high risk roads partnering with the International Roads Assessment Program - iRAP - (over 7,000 km surveyed by mid-2017), but established critical links between the technical assistance under the program and the Bank-financed projects. For instance, in Tanzania, where Bloomberg funds are being used to survey over 3,200 km of road networks, the road agency (TANROADS) has agreed to implement the recommendations with earmarked budget under the Tanzania Development Corridor Transport Project. This clearly demonstrates the leveraging power of the Trust Fund activities supported by the main donors to the Facility. On the analytical side, the World Bank completed a unique research study, that evaluates the economic impact of road traffic injuries on income growth and welfare benefits.

The GRSF team also contributes to the Bank's Road Safety Global Solutions Group, which in 2017 provided support to developing new standards to implement the road safety safeguard as part of the new World Bank Environmental and Social Framework. The team also led the development and delivery of road safety training for the Transport Learning Week. Finally, in October

2017, the GRSF team helped secure the first ever World Bank Annual Meeting event on transport, focusing on Sustainable Mobility.

At the International Transport Forum (ITF) meeting in Leipzig in June 2017, I was pleased to co-sign a Letter of Intent (LOI) on behalf of the Bank/GRSF with the OECD/ITF and the FIA (Federation Internationale de l'Automobile) for the promotion of regional road safety data collection observatories. This LOI was based on a scaling up of the successful Latin American Regional Data Observatory (OISEVI), which was strongly supported by GRSF and the World Bank at its inception.

Moving forward, road use is expected to continue to increase substantially: by 2030, annual passenger traffic will exceed 80 trillion passenger-kilometers—a 50 percent increase compared with 2015; global freight volumes will grow by 70 percent compared to 2015; and an additional 1.2 billion cars will be on the road—doubling today's total. Sustainable and safe mobility will require continued support to road safety initiatives and a scale up of the GRSF partnership, working closely with country governments, the UN, the Multi-lateral Development Banks and others to enable effective interventions to meet these challenges.

Sincerely,

**José Luis Irigoyen**

Senior Director, The World Bank Group  
Transport & ICT Global Practice

# LETTER FROM THE CHAIR



As Chair of the Global Road Safety Facility Board, I am pleased to present the GRSF's 2017 Annual Report. As road crashes are the number one killer of youth age 15-29 and are a major contribu-

tor to disability in low- and middle-income countries, road safety is a critical sector to achieve transport that is sustainable.

Against this backdrop and challenges, the GRSF has played a vital role as a partnership and global fund to transfer road safety knowledge and build coalitions since its inception in 2006. By funding programme delivery organisations such as the WHO, iRAP (International Road Assessment Program), the MDBs (Multi-lateral Development Banks), the NGO Global Alliance on Road Safety and other UNRSC (United Nations Road Safety Collaboration) partners, the GRSF has achieved resources and knowledge transfer leading towards action.

Very importantly, the GRSF partnership with the World Bank has allowed it to leverage the Bank's convening power in countries, and use its grant funding to help reshape

transport financing towards better road safety.

Challenges are emerging more strongly as we move towards the end of the Decade for Action, including mechanisms to most effectively transfer knowledge to low and middle income countries (LMICs) to effectively implement road safety programmes. The GRSF programme continues to support actions to address this challenge through training and road safety management capacity building for LMICs.

In this respect, along with the current donors and partners of the GRSF, UK Aid congratulates GRSF on winning this year's Prince Michael Award for International Road Safety in the category of Road Safety Management. The award recognises the effect that GRSF has had in reshaping developing country practices to manage the multi-faceted nature of road safety interventions.

Building on this momentum, UK Aid is pleased to see a continued growth in the GRSF portfolio focusing on applied research and evidence building, assisting low-income countries to arrest their road crash fatality rise, a focus on urban road safety as well as being engaged in key strategic global events. I congratulate GRSF on the achievements of this year.

## **Elizabeth Jones**

Senior Transport Adviser

UK Department for International Development

# GRSF WINS INTERNATIONAL ROAD SAFETY AWARD

On December 12, 2017 and in the presence of 400 road safety delegates and industry leaders, Prince Michael of Kent awarded the GRSF with his prestigious International Road Safety Management Award. The award recognized 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.



Soames Job (GRSF), Rachel Turner (DFID), HRH Prince Michael, Liz Jones (DFID) and Marc Shotten (GRSF) at the Road Safety Awards Ceremony, Dec 12, 2017

From the official Press Release it was noted that:

*"The World Bank is very pleased that the GRSF has been recognized for helping low and middle income countries improve their road safety management practices,"* said José Luis Irigoyen, World Bank Senior Director for Transport and ICT.

A long-standing promoter of road safety issues, HRH Prince Michael established this Award scheme 30 years ago; first as a national road safety award and then internationalized in 2001.

The U.K. International Development Secretary Penny Mordaunt said: *"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"*.

# NOTE FROM THE GRSF MANAGEMENT AND DELIVERY TEAM

**The objective of the Global Road Safety Facility (GRSF)**, a global partnership program hosted by the World Bank, is to help address the growing crisis of road traffic deaths and injuries in low- and middle-income countries (LMICs). GRSF operates across four arenas to deliver funding, knowledge transfer, advocacy, and technical assistance to scale up and improve road safety delivery in LMICs: first, GRSF manages a grants program for approved external organizations and for World Bank-financed projects; second, we participate in the Bloomberg Philanthropies program, providing road safety infrastructure advice as well as contributions on road safety data systems and road safety advertising; third, we work in partnership with the World Bank to enhance the work of the World Bank's transport global practice and improve road safety investments in transport operations

in client countries; and, finally, we participate in global leadership, guidance, and advocacy. Because of its work in these arenas, GRSF is justifiably recognized as an effective leader and facilitator of the global road safety agenda. The GRSF management team is proud to present the annual report for the 2017 fiscal year, including work which heralds major changes in the World Bank's approach to road safety, and highlights work for key improvements in road safety leadership, management, and delivery across many countries in which GRSF has played a leading role.



**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

**Juan Miguel Velasquez Torres**, Transport Specialist, GRSF

**Florentina-Alina Burlacu**, Transport Specialist, GRSF

**Noor Ibrahim Mohamed**, Transport Specialist, GRSF

**Norma E. Silvera**, Consultant, GRSF



## FY 17 GRSF BOARD MEMBERS

Liz Jones (Chair), Senior Transport Adviser (DFID); Kelly Larson, Program Director (Bloomberg Initiative for Global Road Safety); Saul Billingsley, Executive Director (FIA Foundation); Jose Luis Irigoyen, Senior Director for Transport and ICT (World Bank).

## 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 (DFID); Bloomberg Philanthropies; the FIA Foundation; the World Bank (Development Grant Facility and the Transport and ICT Practice Global Engagement Fund).

## 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

# BY THE NUMBERS

Since launching operations in 2006, the GRSF has worked to improve road safety outcomes in over **60 countries** around the world with US **\$37 million** disbursed, of which 40% has gone to support external partners such as World Health Organization (WHO), Global Road Safety Partnership, UN Regional Commissions, International Road Assessment Programme (iRAP), Global Alliance of NGOs for Road Safety, UN Economic Commission for Europe, and others.

## ACTION & IMPACT

**7,152**

Kilometers of roads surveyed under the Bloomberg Program

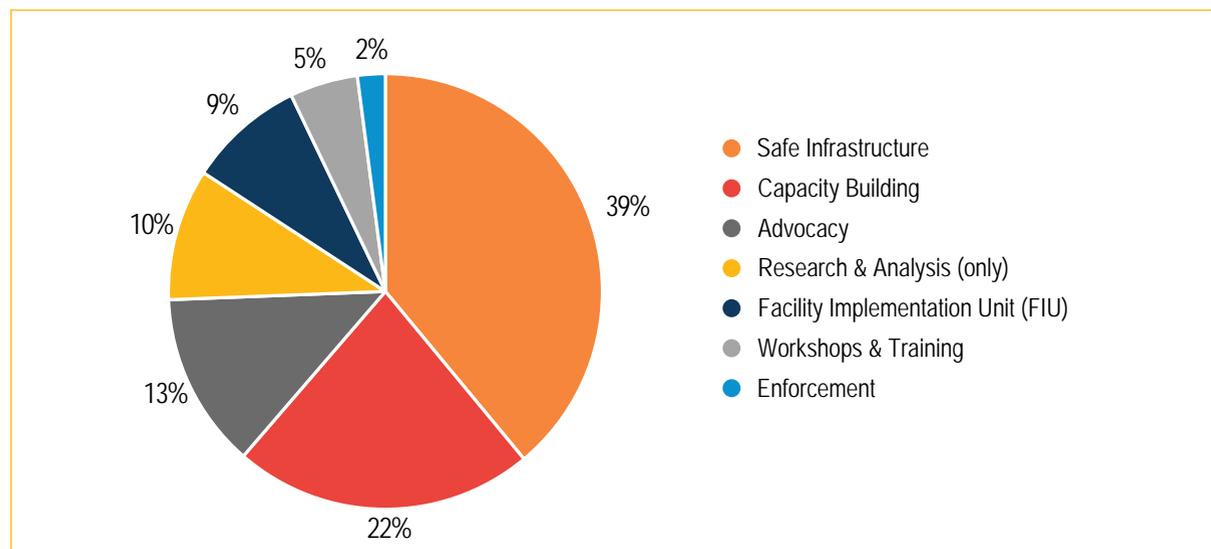
**53**

Road Safety Management Capacity Reviews

**23**

New projects approved in FY 17 and US\$4.4 million disbursed

## DISBURSEMENTS BY ACTIVITY SINCE INCEPTION



# FOCUS AREAS



## 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



## 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



## POLICE ENFORCEMENT

Through GRSF's RoadPOL program, to develop 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



## VEHICLE SAFETY

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

# OUR WORK IN FY 17

In FY 17, GRSF continued meeting its strategic objectives outlined in the 2013-2020 GRSF Strategic Plan, aligned with the Sustainable Development Goal (SDG) targets on road safety and the UN Decade of Action 2011-2020 goals.

Under the GRSF Multi-Donor Trust Fund, the GRSF held a Call for Proposals focused on receiving applications covering Transport and ICT, Health, and Urban road safety.

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

## MULTI-DONOR TRUST FUND ACTIVITIES

### ■ FUNDING TO GLOBAL PARTNERS

#### **CAF**

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GRSF is teaming with CAF, the Latin-American development bank, to work in Bolivia and assess national and city-level road safety plans to create more effective interventions in line with the SDG targets on road safety. Work will continue in FY 18.

#### **CITA**

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As part of a pilot program in Togo, GRSF and CITA will conduct the first ever AVIS, the Assessment of Vehicle Inspection Status, focusing on how the government inspects vehicles for safety and emissions. Work has commenced and will be concluded in FY 18.

#### **EBRD**

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The GRSF has agreed to fund the EBRD to conduct an analysis and create a toolkit to be shared among the Multi-lateral Development Banks (MDBs) on occupational safety practices for vehicle fleets. Work will commence in FY 18.

## ***iRAP***

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China's Belt and Road Initiative (BRI) started while countries across Central Asia, such as Kazakhstan, began expanding their highway network a number of years ago. In anticipation of increased traffic volumes through expansion and the forthcoming linkage to the BRI, the GRSF supported an iRAP assessments on the strategic Center-South Highway in Kazakhstan. A similar process is now ongoing in Vietnam where an iRAP assessment will be used to support the improvement of a major corridor connecting Cambodia and a port on the South China Sea.

## ***NGO Global Alliance***

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The GRSF was a main sponsor of the Fifth Global Meeting of NGOs advocating for road safety and road victims, held in Kuala Lumpur, Malaysia in April 2017. More than 200 road safety NGOs and stakeholders from more than 70 countries attended. The GRSF provided training to the NGOs on road safety advocacy as well as how to work with development banks.

## ***Post-Crash Care Training***

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GRSF has awarded a grant to the Norwegian Institute of Public Health (for FY 18) to support a scientific fellowship in Malawi in collaboration with the Public Health Institute of Malawi (PHIM) in Lilongwe to train staff and build capacity through collecting alcohol data to improve road safety in the country.

## ***FIA High-Level Panel***

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The GRSF participated in a high level mission with the FIA High Level Panel (chaired by Jean Todt, the UN Special Envoy for Road Safety) to Myanmar to conduct a road safety management assessment. The resulting report was delivered by Mr. Todt to the government of Myanmar, containing a series of recommendations to scale up road safety in the country.

## ***WHO Save Lives Package***

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GRSF agreed in FY 17 to fund WHO to carry out activities in coordination with the World Bank (to commence in FY 18) in three African countries focusing on post-crash care, training and legislation.

## ■ WORLD BANK PARTNERSHIP

In FY 17, the GRSF managed a portfolio of 28 grants in partnership with World Bank lending operations. These grants spanned 33 countries either through bilateral or regional engagements and all included research and development (R&D) activities.

### ***Enhancing Products through Research and Development***

*Brazil, Mexico, Mozambique, and Peru*

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One of the major aims of the R&D activities of the GRSF is to drive down the cost of iRAP surveys. This effort is being supported by a partnership in Mozambique and Brazil where a web-based imagery platform, Mapillary, is being used to supplement the traditional iRAP surveying approach. Additional R&D activities related to iRAP include the development of a web-based application for assessing design, which will improve consistency and efficiency of desk reviews. Research is also ongoing in Mexico and Peru to enhance aspects of non-motorized transport users and potential safety countermeasures in the iRAP model where the concept of “Level of Traffic Stress” for cyclists when planning and designing bicycle facilities is being explored. Another major initiative of the GRSF in this year, was to support the improvement of the Bank’s open-source road crash data management platform DRIVER (Data for Road Incident Visualization, Evaluation, and Reporting). The system, which was originally piloted in the Philippines and is now gaining interest in more than ten other countries worldwide, was developed to improve the efficiency and effectiveness of crash data collection, analysis, and reporting.

### ***Urban Mobility***

*Bangladesh, Kenya*

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A Bank team in Bangladesh is leveraging the Bank’s DRIVER platform and lessons learned from other countries to help improve data collection to inform the planning and design of pedestrian infrastructure in Dhaka.

Similarly, GRSF continues to support more established risk identification techniques in Kenya where the Facility is funding a road safety inspection of the main east-west arterial and a road safety audit of the first line of a bus rapid transit (BRT) system in Nairobi.

### ***Inter-Urban and Rural***

*Cameroon, Chad, Central African Republic, India, Liberia, and Nepal*

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In Nepal, one of the key achievements under the World Bank Road Sector Development Project has been the strategic focus on investing for road safety using project funds as well as securing co-financing through grants funded by bi-lateral donors. Using the GRSF, DFID funded a US\$7.4 million grant to support the road safety engineering works as well as build institutional capacity to implement the National Road Safety Action plan. Using the existing

project operation on the road sector as the platform, this project is one of the largest stand-alone road safety grant from the GRSF to a single country that has focused on improving road safety outcomes through multi-sectorial interventions. One of the development objectives of the grant was to implement engineering treatments to reduce the risk of road departure crashes along the dangerous hilly sections. With renewed push from the government the project completed the installation of the crash barriers covering 700 km of road network. Beyond safety engineering improvements, the Nepal DFID grant has helped the government to realize that investments in road safety operations should serve as a leverage to influence and drive policy and regulatory reforms as was truly the case in this project.



*Soames Job discusses Infrastructure Safety in Nepal*

As an example within months of the completion of the grant project, the National Road Safety Council was established as a direct outcome of the advocacy supported through the project and held its first inter-departmental meeting under the chairmanship of Secretary, Ministry of Physical Infrastructure and Transport. This demonstrates an impressive ownership and accountability that is expected of the transport ministry to lead the way. It has been encouraging to note the changing narrative from the government on how to prioritize their investment to not only improve connectivity but also integrate safety at the same time. In this regard the Government of Nepal is keen on further support from the GRSF to work specifically in the area of road safety and integrate it as part of its overall transport sector development.

In Liberia, a substantial iRAP evaluation of the national road network is ongoing. In addition to infrastructure issues, Bank lending operations addressing strategic corridors such as one connecting Cameroon, Chad, and the Central African Republic leveraged the GRSF to build relationships between the governments, private sector, and NGOs to inform safety policies and needs while facilitating trade. In rural areas, like India's Bihar State, the GRSF is assisting a state-level rural road safety strategy and action plan. This effort includes establishing a rural road safety inspection guideline and building capacity for rural road engineering, which will ultimately be leveraged to improve infrastructure through a Bank lending operation.

## **Health and Human Behavior**

*India, Tanzania*

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An App is being developed in India to support the testing of a road safety mass media campaign and motorcycle helmet use. In Tanzania, the GRSF is engaged in working across eight cities to build capacity around preparing behavior change and education campaigns in an attempt to inform road user behavior, in coordination with the local World Bank team.

## **Speed Management**

*Nigeria, Ukraine*

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In the Ukraine, the Facility funded legislative drafts and the upstream work related to the establishment of an automated speed enforcement system. The team working there also linked this activity with the creation of a road fund, which will provide fiscal sustainability to the system. At the urban-level, the GRSF supported a speed management strategy for the Lagos BRT extension.

## **Road Safety Management and Capacity Building**

*Georgia, India, Kenya, Mali, Moldova, Nepal, Nigeria, Paraguay, Romania, ten Pacific Island countries, and Uganda*

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In Mali, the GRSF is supporting the establishment of a ten-year road safety strategy and action plan. In Uganda, the GRSF is working with a Bank task team and NGOs to address all pillars of the UN's Decade of Action for Road Safety. The holistic program includes establishing a national road safety authority, supporting the National Road Safety Policy and Strategic Action Plan, developing a five-year action plan to guide the new agency, strengthening enforcement of relevant laws and regulations, as well as conducting road safety audits along a strategic corridor in the country.

In Georgia, the GRSF is also supporting the establishment of the National Road Safety Secretariat that will focus on the first task of establishing guidelines for the identification and development of a black spot improvement program. Similarly, the Facility is working in Moldova to re-start the National Road Safety Council with specific aims of identifying the most feasible and sustainable institutional arrangements and financing options, which were major impediments in the past. In Romania, greater focus is being placed on treatment of hazardous areas on the road network, which resulted in the GRSF supporting an infrastructure management capacity review and revising the road safety strategy and action plan that is now being leveraged to mobilize Bank or EU financing.

As middle-income countries like Paraguay attempt to elevate their road safety management to another level, the GRSF is assisting in the establishment of a national driver license registry and evaluation system, promoting inter-agency coordination, developing road safety education programs, and enhancing the monitoring and evaluation of road safety performance through the National Road Safety Observatory.



*The conveying strength of the Bank continued to be used in countries like India where the GRSF helped to facilitate the National Workshop on Road Safety that brought together top officials from the central government and representatives of eleven states. The workshop highlighted the urgent need to place focus on safety as the burden of road traffic injuries grows in the country and included thematic sessions on all pillars of the Safe System approach*

The GRSF also supported the Bank to assemble ten Pacific Island countries to leverage economies of scale around evaluating road safety capacity and determining priorities. The Bank agreed to continue working with the countries on a bilateral level to address road safety through lending operations.

Looking towards the future of road safety engineering, the GRSF funded an activity in Nepal to help establish a bachelor and master level road safety curriculum that is now being administered by one of the leading academic institutions in the country.

In countries where a lead agency is already established, the GRSF is working at the sub-national level like in India's Rajasthan State to take stock of the road safety management capacity and to evaluate trainings, data agreements, policies, and fiscal needs. Engagement and capacity building support to municipal agencies like the Nairobi Metropolitan Area Transport Authority and the Lagos Metropolitan Area Transit Authority, which is aiming to develop a core group of road safety specialists with a particular emphasis on road safety audit, is ongoing. As cities continue to grow, the GRSF is placing greater attention on this layer of government.

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

The GRSF continued its engagement as one of the key partners of the BIGRS (2015-2019) in FY 17. The full scope of 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 seven of the cities and two of the countries.

Two 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-2017, iRAP evaluations completed totaled 7,152 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*

The GRSF focused on an expansion of iRAP assessments to more than 600 km of roads completed or planned in 2017 in Accra and Addis Ababa. Similarly, in Asia, the Bank increased iRAP assessments to between 100 and 200 km in each of the Asian cities – work focused on networks that accounted for a significant portion of reported road crash fatalities and serious injuries in the previous three years and areas with substantial percentages of vulnerable road users, such as school zones in Ho Chi Minh City. In South America, there

was also an uptick in requests for iRAP assessments and establishment of potential for long-term use with the Secretariat of Mobility in Bogota now considering policy to mandate iRAP as the standard tool for safety evaluation of the city's road network.

## **Country Level**

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

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The Facility continued to manage assessments in initiative countries, including through seven World Bank lending operations in China with two more identified by mid-2017. The National Highway Authority of India engaged the Bank for an iRAP assessment and design support on two of the four legs of the Golden Quadrilateral for a total length of around 5,000 km. In the Philippines, the Bank and iRAP team completed a major post-construction assessment and continued design support resulting in the inclusion of safety interventions in 1,043 km of previously assessed roads. Tanzania's work gained momentum in the first half of 2017 with assessments completed on significant portions of the current and planned Bus Rapid Transit system. In Thailand, the team turned their attention to an initiative with the Thai Department of Highways to commence work on the "Building ThaiRAP Phase I", which will initially focus on establishing a domestically adapted version of iRAP.

## **Capacity Building**

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Capacity building events continued throughout the first half of 2017 with the development of three iRAP courses related to analytical, management, and policy needs. A half-day workshop on DRIVER and a weeklong workshop on the fundamentals of road safety planning and engineering were also developed during the fiscal year. Studies on improving the Road Traffic Safety Law and operationalizing the ISO 39001 standard in China were nearly completed by the end of the fiscal year. Finally, the GRSF completed 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.



# FY 2017 EVENT HIGHLIGHTS

## WHO MEETING ON GLOBAL VOLUNTARY TARGETS ON ROAD SAFETY

**GENEVA, SEPTEMBER 2, 2016**

GRSF participated in this strategic meeting to develop voluntary targets on road safety by UN member states and adopted as directed by the World Health Assembly. The objective of the meeting was to formalize a WHO discussion paper and to prepare an initial list of road safety indicators and targets under the SDG framework under each individual pillar on road safety.

## CLINTON GLOBAL INITIATIVE (CGI)

**NEW YORK CITY, SEPTEMBER 19-21, 2016**

The GSRF made a pledge of US\$2 million towards helping grow road safety management focusing on low income countries. The CGI Commitment was fulfilled with the GRSF 2017 Call for Proposals.

## UNITED NATIONS ROAD SAFETY COLLABORATION (UNRSC) MEETINGS

**GENEVA, NOVEMBER 17-18, 2016 AND BANGKOK, MARCH 16-17, 2017**

The GRSF team briefed UNRSC members on the GRSF Call for Proposals, the World Bank Sustainable Mobility for All (SuM4All) initiative, and chaired UNRSC Working Group 1 on Road Safety Management. The GRSF launched an online road safety knowledge management repository in coordination with the International Road Federation's Geneva office as part of the Working Group outputs.

## SAFE KIDS SUMMIT

**WASHINGTON, DC, DECEMBER 8-9, 2016**

GRSF team members spoke at sessions highlighting the scaling up of assistance targeting children's road safety initiatives. This included speaking about building successful behavior change campaigns, and successfully implementing speed management legislation and enforcement.



*Marc Shotten details the GRSF pledge at the CGI*

## ROAD SAFETY LEARNING FORUM

**WASHINGTON, DC, MARCH 8-9, 2017**

GRSF hosted a two-day learning session for Transport and ICT staff titled, "Road Safety and the new World Bank safeguards: Training on multi-sectoral interventions". The event was taught by international road safety speakers and university faculty (Johns Hopkins University and University of Chicago and representation from external organization like CITA, WRI-EMBARQ and the Government of Burkina Faso). Over 50 staff participated during this event.



*Soames Job (GRSF), Eduard Fernandez (CITA), Kanvaly Bamba (CCVA-Burkina Faso), Marc Shotten (GRSF), and Spiros Voyadzis (PFD Group) at the World Bank training session on vehicle safety inspections.*

## BLOOMBERG ROAD SAFETY LEADERSHIP COURSE

**KUALA LUMPUR, MARCH 19-30 AND BALTIMORE, JULY 31-AUGUST 10, 2017**

GRSF participated as technical faculty at the regional and annual Global Road Safety Leadership Course funded by the Bloomberg Philanthropies. Two technical sessions on the topics of "The Role of Infrastructure in Road Safety" and "Financing and Funding for Road Safety" were prepared and presented by the GRSF team. The course, being a global benchmark training on road safety management, attracted more than 60 participants in each event including government officials, NGOs, academia and staff associated with the BIGRS.



*Dipan Bose presenting at the Global Road Safety Leadership Course, August 8, 2017*

# 5TH GLOBAL MEETING OF NGOS FOR ROAD SAFETY

**KUALA LUMPUR, APRIL 3-6, 2017**

In April 2017, GRSF sponsored, along with the WHO, FIA Foundation and others, the Fifth Global Meeting of NGOs advocating for road safety and road victims, held in Kuala Lumpur, Malaysia.



During this meeting, more than 200 road safety NGOs and stakeholders from more than 70 countries renewed their commitment to support governments meet the SDGs road safety targets. The GRSF provided training on working in coordination with the World Bank and Multilateral Development Banks.



## GRSF CELEBRATES UN ROAD SAFETY WEEK

**WASHINGTON, DC, MAY 11, 2017**

The GRSF and Road Safety Global Solutions Group (GSG), together with Centers for Disease Control and Prevention (CDC), held a seminar with partners to discuss efforts to reduce fatalities on the world's roads. Focusing on speed management, the seminar included contributions from the health sector, global NGO partners, and donors.



*Erin Sauber-Schatz (CDC), Jose Luis Irigoyen (World Bank), and Natalie Draisin (FIA Foundation) celebrate the UN Road Safety Week at the World Bank*

## BLOOMBERG WORKSHOP ON URBAN ROAD SAFETY MODEL DEVELOPMENT

**NEW YORK CITY, MAY 17-19, 2017**

A workshop was held in New York City to consult with partners on ways to improve the urban application of the iRAP methodology. The workshop, led by iRAP and World Bank/GRSF, had attendance from BIGRS Embedded Staff (Sao Paulo), WRI, NACTO, KiwiRAP, and CycleRAP (ANWB, SWOV, Province of Friesland in the Netherlands). The group agreed that the use of Star Ratings and Investment Plans are currently applied in urban areas and do help provide a measure of infrastructure safety and the likely investment returns of potential treatments. The assessments are guiding investment in proven treatments like speed management, pedestrian provision and intersection upgrades.

## INTERNATIONAL TRANSPORT FORUM (ITF) MEETING

**LEIPZIG, MAY 31- JUNE 2, 2017**

At the ITF Forum, the World Bank (as host of GRSF), the FIA (in association with the High Level Panel for Road Safety), and the OECD/ITF signed an MOU to work jointly on the creation of road safety regional observatories. The observatories, based on the GRSF-supported Latin American and Caribbean Road Safety Observatory, will serve as vital cogs for country data gathering, analysis, legislation information, capacity building and coordination.

## BLOOMBERG PARTNERS MEETING

**MUMBAI, JUNE 4-11, 2017**

GRSF personnel played active roles contributing to our reputation for expert engagement in road safety during the following events:



*Site inspection by the Bloomberg team in Mumbai, June 9, 2017*



*Panel discussion at the Bloomberg Partners' Event, June 7-9, 2017*

**India Vision Zero conference:** GRSF presented an invited address on “The Safe Systems Approach to Road Safety” and participated in a workshop. These events contribute to increased understanding of road safety, increased appreciation of what needs to be done, the need for a sound evidence base for decisions including the need for better crash data, and of what can be done with limited resources in India.

**GRSF/GRSP partnership meeting:** The meeting resulted in the revision of the Enforcement Guide which would create a guide for Road Policing in LMICs; and the development of a tolls for assessment of readiness of a country for automated enforcement technology.

**BIGRS technical meeting:** The three-day technical meeting brought together the BIGRS partners and the city agencies for stocktaking on the progress achieved under BIGRS (2015-2019) and the next steps. A key aspect of this meeting was to show the comparative performance of the program in terms of what has been achieved and further provide diagnostics on the key risk factors as applicable along with intermediate indicators as achieved in the first half of the five year program.

**Media Round Table hosted by GRSP:** GRSF advocated for the passage of the major piece of legislation currently before the National Parliament which will substantially amend and augment current road law, including improved delivery of infrastructure for safety.

**Introduction to the DRIVER crash data platform:** An overview presentation on the DRIVER platform was made to the road safety surveillance group in the partnership. The presentation generated lots of interest in terms of adapting the platform in the individual cities.

## CITA GENERAL ASSEMBLY MEETING

**ZAGREB, JUNE 9, 2017**

The GRSF addressed the General Assembly of CITA, regarding working with GRSF and the World Bank. In particular, the focus was on how to scale up in-country safety and emissions inspections in the developing world, a critical emerging area that is relatively underrepresented to date. The result of the meetings included GRSF and CITA agreeing to fund work in sub-Saharan Africa for pilot studies to increase government technical ownership of vehicles inspections, as well as CITA’s Board deciding to become a donor to GRSF.



# GRSF AND WORLD BANK COLLABORATION IN FY 2017

The GRSF and the World Bank's Road Safety Global Solutions Group (GSG) work closely 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.

Transport safety is one of the four key pillars of the Sustainable Mobility for All (SuM4All) Initiative, and road safety is the statistically dominant issue within transport safety, with the vast majority of transport related deaths and injuries. A broad body of work is required to develop road safety to more effectively align and capture co-benefits with the other pillars of the SuM4All, and to increase our focus on road safety delivery in Bank-financed projects. The Bank funded deliverables and outcomes in the partnership with the GRSF towards this end were:

- Development of a new Guideline for Road Safety Management Capacity Reviews for the MDB Road Safety Working Group, thus improving the reviews of all the MDBs globally, not just those conducted by the World Bank. The revised draft guidelines are under consideration by the MDB working group, for publication as an MDB product;
- A framework for SDG delivery on Road Safety, called the Save LIVES Package, was developed by a working group which included World Bank/GRSF road safety staff, and was published by WHO. The World Bank led a successful refocus of the document onto speed management;



- Road Safety Flagship Projects were chosen and expert input was provided by multiple members of the road safety GSG team. A report of lessons learned from these projects is in development for FY 18;



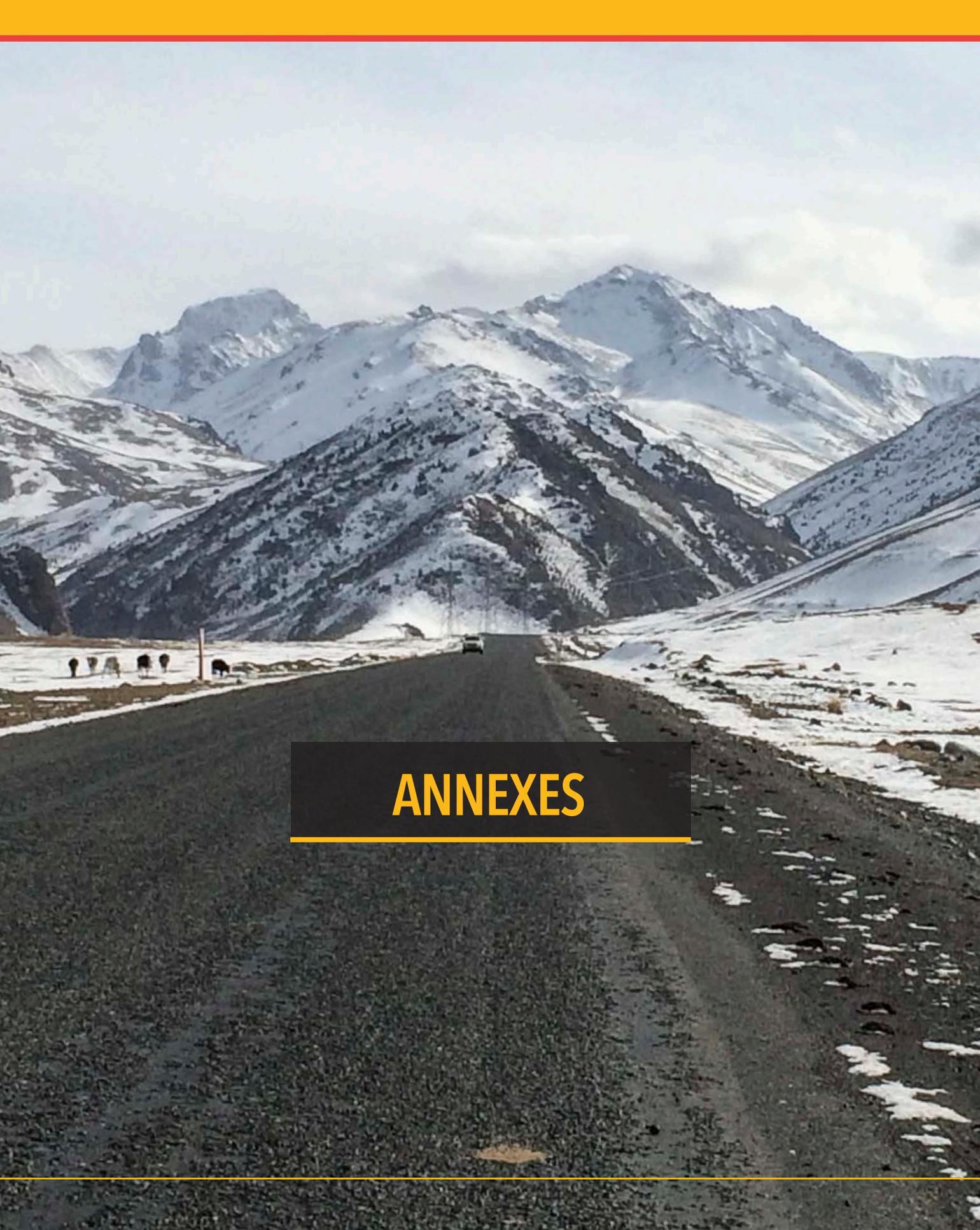
- Guidance was developed for the new World Bank Road Safety Safeguard that will be in effect in 2018 for all projects under the new Environmental and Social Framework. Tier 1 (overview) Guidance was rewritten by the road safety team and Tier 2 (detailed) Guidance development is ongoing;

- A two-day training course in road safety during the Transport and ICT Learning Forum was conducted for staff;

- Two seminars on safety interventions in urban roads and rural asset management were conducted by the GRSF staff in coordination with the Road Safety GSG;

- A UN Road Safety Week seminar was organized with the GRSF, Road Safety GSG, and the CDC to discuss efforts to reduce road fatalities in the developing world.





# ANNEXES



## PAPERS AND TALKS 2016-17

### PEER-REVIEWED JOURNAL PAPERS AND CONFERENCE PROCEEDINGS

Global Burden of Disease Study Authors (2017). Measuring progress and projecting attainment on the basis of past trends of the health-related Sustainable Development Goals in 188 countries: an analysis from the Global Burden of Disease Study 2016. *The Lancet*, Volume 390, No. 10100, p1423-1459, 16 September 2017.

Global Burden of Disease Study Authors (2017). Global, regional, and national disability-adjusted life-years (DALYs) for 333 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*, Volume 390, No. 10100, p1260-1344, 16 September 2017.

Job RFS., Sakashita C, Pauligk K, Konstad A, Maxwell P, Raftery S, Cornish M., (2016). "Should We Treat Fatal and Injury Crashes Differently for Road Safety Treatment Selection? The Evidence says Sometimes Yes Sometimes No". *Peer-reviewed paper in Proceedings of Australasian Road Safety Conference 2016, Canberra, Australia, September 2016*. Canberra: Australasian College of Road Safety.

Moran D, Bose D, Bhalla K (2017). Impact of improving vehicle front design on the burden of pedestrian injuries in Germany, the United States, and India. *J Traffic Injury Prevention*, Vol. 18, 2017 - Issue 8. <http://dx.doi.org/10.1080/15389588.2017.1324200>.

# NON PEER-REVIEW PUBLICATIONS, PAPERS AND REPORTS

Job, RFS. (2017). Re-invigorating and refining Safe System advocacy. *Journal of the Australasian College of Road Safety*, 28(1), 64-68. [<http://search.informit.com.au/documentSummary;dn=695138702955264;res=IELNZC>]

Job, RFS. (2017). Setting Road Safety in a Global Context to Guide Future Actions. *Paper in Proceedings of Australasian Road Safety Conference 2016*, Canberra, Australia, September 2016. Canberra: Australasian College of Road Safety.

Job, RFS. (2017). *Report on Road Safety for the Central Highlands Connectivity Improvement Project*. Washington, DC: World Bank.

Sakashita C. and Job RFS. (2016). Addressing key global agendas of road safety and climate change: synergies and conflicts. *Journal of the Australasian College of Road Safety* 27(3):62-68. [<http://acrs.org.au/wp-content/uploads/Journal-of-ACRS-27-3-final-for-web.pdf>]

Sakashita C. and Job RFS. (2016). Road safety: a pandemic to be tackled on many fronts *Journal of the Australasian College of Road Safety* 27(3):3-4. [<http://acrs.org.au/wp-content/uploads/Journal-of-ACRS-27-3-final-for-web.pdf>]

Wegman F., Watson B., Wong S.V., Job S., Segui-Gomez M. (2017). *Road Safety in Myanmar*. Recommendations of an Expert Mission invited by the Government of Myanmar and supported by the Suu Foundation. Paris, FIA.

Wegman F., Watson B., Wong S.V., Job S., Segui-Gomez M. (2017). *Brief Note on Road Safety for Mandalay City*. The Expert Mission invited by the Myanmar Government and supported by the Suu Foundation. Paris, FIA.

## CONFERENCE AND WORKSHOP PRESENTATIONS

Job, RFS (2016). *Road Safety Institutional Set Up for Georgia: Recommendations based on international experience*. Action Plan Workshop for the Georgia Road Safety Strategy, November 30, 2016 Tbilisi.

Job, RFS (2016). *Priorities in road safety research*. Invited presentation to the ITF Joint Transport Research Committee Meeting, October 2016, Paris, France.

Job, RFS (2016). *Road safety Financing Opportunities in Georgia*. Action Plan Workshop for the Georgia Road Safety Strategy, November 30, 2016, Tbilisi, Georgia.

Job, RFS (2016). *Priorities in road safety*. Invited keynote presentation to the Insurance for Safer Road Workshop, October 2016, Paris, France.

Job, RFS. (2017). *World Bank and MDB Priorities, Actions and Challenges*. Invited presentation to Transportation Research Board Annual Meeting 2017 Global Road Safety Subcommittee ANB 10(8), Washington DC, January.

Job, RFS. (2017). *Implementing Safe Systems*. Invited presentation to the Bloomberg Partners meeting, Washington DC, January 2017.

Job RFS., Sakashita C, Pauligk K, Konstad A, Maxwell P, Raftery S, Cornish M. (2016). *Should We Treat Fatal and Injury Crashes Differently for Road Safety Treatment Selection? The Evidence says Sometimes Yes Sometimes No*. Paper to the Australasian Road Safety Conference 2016, Canberra, Australia, 6-8 September 2016.

Job, RFS. (2016). *The Importance of evidence based laws and enforcement to reduce trauma dramatically in the short term*. Invited Paper to the Australasian Road Safety Conference 2016, Canberra, Australia, 6-8 September 2016.

Job, RFS. (2016). *Setting Road Safety in a Global Context to Guide Future Actions*. Invited Keynote Address to the Australasian Road Safety Conference 2016, Canberra, Australia, 6-8 September 2016.

Job, RFS. (2016). *Infrastructure & behavior change for road safety in Nepal*. Invited Keynote to Institute of Engineering, University of Nepal, Workshop on Proposed Center of Excellence on Road Safety in Nepal, Kathmandu, August 2016.

Job, RFS. (2016). *Speed management: A key opportunity for Road Safety in India*. Invited Keynote Presentation to the National Workshop on Road Safety, Visakhapatnam, India, August 2016.

Job, RFS. (2016). *Opportunities for Road Safety in India*. Invited Conference Opening to the National Workshop on Road Safety, Visakhapatnam, India, August 2016.

Job, RFS. (2016). *The Role of infrastructure & behavior change for road safety in Addis Ababa*. Invited presentation to the Road Safety Workshop for Addis Ababa & Ethiopia, July 2016.

Job, RFS. (2016). *Practicalities and Success Factors in Laws and Enforcement, for Child Road Safety*. Invited presentation to the Safe Kids Summit, Washington DC, December 2016.

Job, RFS. (2017). *Presenter Plenary Session 3: Vision Zero. Transforming Transportation*, Washington DC, January 2017.

Job, RFS. (2017). *International experience in promoting road safety: issues and possible ways forward*. Invited presentation to Transportation Research Board Annual Meeting (TRB) Washington DC, January 2017 (Session: "Beyond Safety Belts and Airbags: Implementing Road Safety Internationally"), Washington DC, January 2017.

Job, RFS. (2017). *World Bank and MDB Priorities, Actions and Challenges*. Transportation Research Board Annual Meeting 2017, Global Road Safety Subcommittee ANB 10(8), Washington DC, January 2017.

Job, RFS. (2017). *Sustainable Mobility for All*. Presentation to the UNRSC, Bangkok, March, 2017.

Job, RFS. (2017). *Infrastructure and speed issues for Bandung*. Presentation to the Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS) Partners meeting, Bandung, March 2017.

Job, RFS. (2017). *Speed Management: Approaches that work for LMICs*. Invited keynote Address to the Seminar on Managing Speed in Low- and Middle-Income Countries. The Bloomberg School of Public Health, Baltimore, May 2017.

Job, RFS. (2017). *Global State of the Art in Motorcycle Safety: Challenges and good practices based on scientific evidence*. 6th General Assembly of OISEVI, Costa Rica, June 2017.

Job, RFS. (2017). *Global Overview of Road Safety Initiatives, Targets, and Indicators*. Eastern Partnership Road Safety Workshop, Brussels, June, 2017.

Job, RFS. (2017). *Principles of Good Practice in Enforcement*. Eastern Partnership Road Safety Workshop, Brussels, June, 2017.

Job, RFS. (2017). *Speed Management as a Key Component of Systems Approach to Road Safety*. Invited keynote presentation to Road Safety in Romania - Challenges and Opportunities, Bucharest, Romania, 27 June 2017.

Job, RFS. (2017). *Panel Discussant on: How to improve road infrastructure safety*. Road Safety in Romania - Challenges and Opportunities, Bucharest, Romania, 27 June 2017.

Job, RFS. (2017). *Reliable Statistics for better Road safety*. UNECE SafeFits Roundtable, Geneva, June, 2017.

Job, RFS. (2017). *Assessing Readiness for Automated Speed (and other) Enforcement*. Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS) Partners meeting, Mumbai, June 2017.

Job, RFS. (2017). *Speed: The biggest killer - opportunities for cities and partners to develop concerted speed strategies*. Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS) Partners meeting, Mumbai, June 2017.

Job, RFS. (2017). *Safe Systems approach to road safety*. Invited presentation to the India Vision Zero Conference, Mumbai, June 2017.

Shotten, M. (2016). *The GRSF and SDG 3: Partnership Opportunities*. Invited presentation to the Clinton Global Initiative (CGI), New York City, September, 2016.

Shotten, M. (2016). *Building Successful Behavior Change Campaigns*. Panel Discussant at the Safe Kids Summit, Washington, DC, December 2016.

Shotten, M. (2017). *Road Safety, The World Bank and GRSF*. Invited presentation to the IRF Global Fellows, Washington, DC, January 2017.

Shotten, M. (2017). *Working with the World Bank and GRSF: An Overview Discussion for NGOs*. Invited Presentation to the 5th Meeting of Global NGOs for Road Safety, Kuala Lumpur, April 2017.

Shotten, M. (2017). Meeting the SDG Road Safety Targets. Keynote speech to the 5th Meeting of Global NGOs for Road Safety Kuala Lumpur, April 2017.

Shotten, M. (2017). *CITA and the GRSF: Working Together*. Invited speech to CITA General Assembly, Zagreb, June 2017.

Shotten, M. (2017). Safety on the New Silk Road. Panelist. Center For Strategic and International Studies (CSIS), Washington, DC, June 2017.

## FORMAL TRAINING DELIVERED: EVENTS ORGANIZED AND PRESENTATIONS DELIVERED

Bose, D & Job RFS (2017) Global Road Safety Leadership Course at Johns Hopkins Center for Injury Research and Policy - *Role of Infrastructure in Road Safety*, August 7, 2017.

Bose, D & Job RFS (2017) Global Road Safety Leadership Course at Johns Hopkins Center for Injury Research and Policy - *Politics, Government and Persuasion in Road Safety*, August 8, 2017.

Bose, D (2017). *Road Safety Activities in Bank Projects*. Road Safety Session during Transport and ICT Learning Week, Washington, March 8, 2017.

Bose, D (2017). *An Integrated Motorization Management Approach in East Africa: Vehicle Safety*. Brown Bag Lunch series, June, 2017.

Job, RFS. (2016). *Safety on Low-Volume Rural Roads. Safe mobility, infrastructure, and issues for rural and road asset management: a joint-GSG discussion*. Presentation to the BBL Jointly Hosted by Rural Accessibility/Road Asset Management and Road Safety GSGs, October 2016.

Job, RFS. (2016). *Overview of road infrastructure safety - pros and cons of various safety interventions assessment methodologies*. Presentation to: Monitoring and Evaluation of Safety Interventions in Urban Roads: Back to School Jointly Hosted by the Urban Mobility and Road Safety Global Solution Groups, World Bank, Washington DC, October 2016.

Job, RFS. (2017). *Course Objectives and new Road Safety safeguards*. Road Safety and the new World Bank safeguards: training on multi-sectoral interventions in the Transport and ICT Global Practice 2017 Knowledge and Learning Forum, World Bank, Washington DC, March 2017.

Job, RFS. (2017). *Role of enforcement in road safety*. Road Safety and the new World Bank safeguards: training on multi-sectoral interventions in the Transport and ICT Global Practice 2017 Knowledge and Learning Forum, World Bank, Washington DC, March 2017.

Job, RFS. (2017). *Media, Advocacy and Persuading Governments*. Road Safety and the new World Bank safeguards: training on multi-sectoral interventions in the Transport and ICT Global Practice 2017 Knowledge and Learning Forum, World Bank, Washington DC, March 2017.

Job, RFS. (2017). *UN Global Road Safety Week -Speed, Road Safety, and Development*. UN Road Safety Week Road Safety BBL, World Bank, Washington DC, May 2017.

Job, RFS. & Bose, D. (2016). *Politics, Government and Persuasion in road safety*. Paper to the Global Road Safety Leadership Course, Baltimore, November 2016.

Job, RFS. & Bose, D. (2017). *Role of Infrastructure in Road Safety*. Paper to the Global Road Safety Leadership Course, Kuala Lumpur, March, 2017.

Job, RFS. & Bose, D. (2017). *Politics, Government and Persuasion in road safety*. Paper to the Global Road Safety Leadership Course, Kuala Lumpur, March, 2017.

Shotten, M. & Bose, D. (2016). *GRSF-GSG Resources*. Presentation to the BBL Jointly Hosted by Rural Accessibility/Road Asset Management and Road Safety GSGs, October 2016.

Shotten, M. (2016). *Road Safety Indicators*. Back to School Jointly Hosted by the Urban Mobility and Road Safety Global Solution Groups, World Bank, Washington DC, October 2016.

Shotten, M. (2017). *Conducting Road Safety Management Capacity Reviews*. Road Safety and the new World Bank safeguards: training on multi-sectoral interventions in the Transport and ICT Global Practice 2017 Knowledge and Learning Forum, World Bank, Washington DC, March 2017.

Shotten, M. (2017). *Introduction to the BBL and Moderator*. UN Road Safety Week Road Safety BBL, World Bank, Washington DC, May 2017.



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