

MOTORCYCLE AND ROAD SAFETY

FOR A SAFER COEXISTENCE



Memories

São Paulo, Brasil
11 y 12 de septiembre 2013

MOTORCYCLE AND ROAD SAFETY
FOR A SAFER COEXISTENCE

Publisher: CAF

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Bogotá, Colombia – March 2014
This ebook is also available at publicaciones.caf.com
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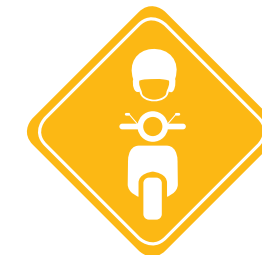
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Introduction



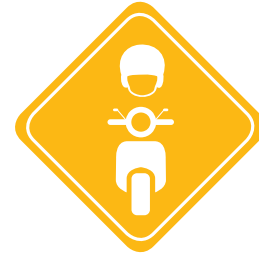
CAF –development bank of Latin America- in partnership with the Ibero-American Road Safety Observatory (OISEVI), with financial support from the Global Road Safety Facility (GRSF) of the World Bank, hosted the First Motorcycle and Road Safety Forum “For a safer coexistence.”

The forum’s objectives were:

- Present the state of affairs in regard to the growth of motorcycles in the region and the related consequences in terms of fatalities and injuries rate.
- Identify and disseminate successful experiences in reducing motorcycle fatalities and injuries at national and regional levels as well as in cities in Latin America, the Caribbean and other regions worldwide.
- Develop a regional working plan to reduce deaths and injuries in motorcycle -related incidents.
- Promote research on different aspects aimed at identifying good practices that make it possible to reduce the road safety indicators associated with PTW (power two wheeler).

This report summarizes the issues discussed, and presents the most important conclusions and future challenges.

A. Motorcycles in Latin America forum presentation



Since early 2011, when CAF started the development of its Road Safety Action Plan, motorcyclists' safety was identified as one of the main points to be considered in the region based on the growth of the number of registered motorcycles and negative externalities in terms of crash rates. Thus, CAF has been working on the following issues:

- Provide advice and support for the development of pilot plans aimed at motorcycle safety in specific cities, highlighting Buenos Aires, which has already been launched.
- Develop a methodology for drafting Motorcyclists' Safety Plans.
- Research the causes and consequences of the increased use of motorcycles in six Latin American cities.¹

At an OISEVI meeting held in 2012, Pere Navarro, Head of the Spanish General Traffic Board (Dirección General de Tráfico—DGT), proposed a regional forum on motorcycles be organized, given the dramatic change observed in the fatalities and injuries rates in some countries where motorcyclists were becoming the largest group of fatal victims on roads. A new reality that needed to be described and addressed with effective policies was emerging. Thus, OISEVI and CAF joined forces to organize this event.

¹ Caracas, Bogota, Barranquilla, Recife, São Paulo and Buenos Aires.

² Based on the methodology created by CAF in 2013 for designing road safety plans for motorcyclists.

This forum was the first held in Latin America to address the topic of motorcycle safety so broadly. The aim was to generate knowledge and create a common vision on road safety for motorcycles in Latin America and the Caribbean (LAC). To do this, national authorities of road safety policies throughout the region were summoned in an effort to formulate guidelines toward a regional motorcycle road safety plan.

In support of this shared vision, an innovative forum was designed based on a highly participatory format, without many keynote speeches, organizing every roundtable discussion around experiences, analysis and knowledge. National and local governments, large and small cities, researchers and consultants linked to the topic, universities, insurance companies, motorcyclist associations, associations of workers in the motorcycle industry, among others, participated in this open forum. Another objective was to share knowledge and successful experiences of regions that share this same reality and have achieved good results. Therefore, representatives from Australia, Spain, the UK and the Asian Development Bank participated on behalf of countries with many years of experience in the field of motorcycle mobility.

For more than 10 years CAF has worked to generate knowledge of the region, creating specialized departments to contribute to this purpose, including the Urban Mobility Observatory (www.omu.caf.com) five years ago. CAF's purpose is to create opportunities to share knowledge and respond to the need for ongoing dialogue between the different experts and managers of urban mobility, within which the road safety component is highly relevant.

Meanwhile the World Bank indicates the need to strengthen the countries' technical teams in regard to road safety in order to address the public health crisis posed by the growing number of road incidents. The goal is to reach the target defined under the United Nation's Decade of Action for Road Safety: a 50 % reduction in fatalities as a result of road incidents. Ongoing monitoring to design policies and new interventions, and the shared responsibility of governments, the civil society and economic sectors are key to achieving improved results.

Motorcycles are here to stay. They are not a pandemic disease; they are a reality and they offer many advantages in terms of transport. Mobility in cities is a complex system, on which the competitiveness of cities and the quality of life of their inhabitants depend. The forum was held in one of the most densely populated cities in the world, representing an ideal setting to address the new realities posed by motorcycles in urban contexts.

São Paulo has several years of experience developing programs and deploying measures to reduce motorcycle crash rates, which was why it was chosen as the host city for the forum. It has the largest municipal mobility organizational structure in Latin America and has three police bodies in place. Three years ago, São Paulo revamped its mobility body and policy to contribute to the challenge of the Decade of Action for Road Safety 2011-2020 decreed by the United Nations.

B. Motorcycles in Latin America



The rapid growth of motorcycles and the subsequent increase in the number of deaths and injuries resulting from their use is having a negative impact in meeting the goals of the 2011-2020 Decade of Action for Road Safety, in a significant number of countries in Asia and Latin America.

Issues like the vehicles' versatility, low acquisition and maintenance costs, ease of handling, among others, have become an incentive for growth. The use of motorcycles has increased in large low-income sectors, which are acquiring them not only as a mobility solution, but also as a means to generate revenue. The limited coverage and poor quality of public transport is another reason for the growth of the fleet of motorcycles, representing a door-to-door service, which, in some cases, is less expensive than other alternatives. Congestion in urban areas is also causing many users to transition from cars to motorcycles as a private mode of transport.

CAF's Urban Mobility Observatory, which collects information from the 25 largest cities in the LAC region, shows that the average time of a one-way intercity commute is less than half on a motorcycle than on public transport, and at a lower cost.

For this forum, the OISEVI team conducted a survey of all the countries regarding their motorcycle fleets and related accident rates, obtaining information from 14 of the 18 member countries. As reflected in the survey, 67 % of countries have no licensing or registration requirement, meaning that reliable motorcycle data is unavailable, only estimates. Survey data presentation is attached in Annex 2.

The data collected by OISEVI regarding motorcycle fleets for the past four years indicates that growth, while on the rise across the region, has varied from one country to another, for example 42 % in Mexico, compared to 320 % in Ecuador or Uruguay. On average, the fleet of motorcycles throughout LAC has grown 81 %, compared to 27 % for other vehicles, to reach 18 million motorcycles in 2012, up from eight million in 2008.

The increase in the motorcycle fleet in Latin America reflects similar situations in other regions. In the 80s, Southeast Asia underwent a growth spurt in motorcycles; around 2000, this growth extended to Africa and Middle East, and now over the decade of 2000-2010 the same phenomenon has occurred in Latin America. In regard to this point, Alan Ross has an interesting optimistic view, when he says that the problem in Latin America is still at an early stage and luckily the region can take advantage of the lessons learned in other regions.

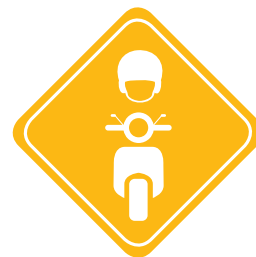
According to the Global Status Report on Road Safety 2013 for the Americas region presented by the World Health Organization (WHO), road traffic death rates for the 32 countries in the region is 16.1 per 100,000 inhabitants based on official government figures, with a wide range of results from 4.6 in Saint Vincent and the Grenadines (SVG) to 41.7 in the Dominican Republic. The 2007 estimate for the region's vehicle fleet is 387 million, with 24.5 million motorcycles; for 2010, it is 35 million motorcycles. In this study, data is collected from 32 countries, from the United States to Uruguay and Caribbean countries. Motorcyclist deaths represent 15 % of the total number of deaths resulting from traffic incidents, but in some countries, like the Dominican Republic, the rate is above 50 %.

The Pan American Health Organization study "Trends in fatal motorcycle injuries in the Americas 1998-2012" (Rodrigues, Villaveces, Sanhueza and Escamilla, 2013), which analyzed data regarding motorcycle-related deaths and injuries in 17 countries in the region, obtained important findings, such as men have a mortality rate 7.8 times higher than women; from 15 to 24 years of age, the mortality is 24 times higher than those under 15 years old, meaning that the most affected are young male motorcyclists. Countries with a more equitable income distribution have lower rates and countries with more un-

equal income distribution, such as Brazil, Colombia, Paraguay and Guyana, have higher mortality rates. Over the period under study, the motorcyclists' average death rate ranged from 0.8 to 3.5 per 100,000 inhabitants. The study is included in Annex 2.

The Ministry of Health of Brazil presented a study about the motorcycle accident rate in Brazil for the period 2008-2010. Its findings indicate that over half of the traffic accidents in 18 of the 24 capital cities analyzed involve motorcyclists. The number of hospital admissions of motorcyclists in the 24 capital cities grew more than 100%. In 2000, 2,465 motorcyclists were killed in Brazil; by 2010, the number had grown to 11,433, a 463% increase. The study is included in Annex 2.

C. Call for papers to identify successful experiences

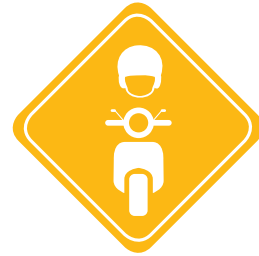


In order to identify successful experiences to be presented, a call for papers was issued. Of the 18 experiences from five countries submitted, the following nine were chosen:

Title of the paper	Entity	Lead author	Other authors	Country of origin
Time and space analysis of motorcycle accidents in Greater Santiago	CONASET	Dánica Mímica		Chile
Good public health practices in Paraguay – A program for primary and secondary school educators and road safety and safe motorcycle driving promoters	Ministry of Public Health and Social Welfare from Paraguay and Paraguayan Center for Permanent Education, Ministry of Education and Culture	Dra. Mercedes M. de González Cabello	Clara Duarte	Paraguay
<i>Child motorcycle helmet project in Thailand</i>	Disability & Injury Prevention and Rehabilitation (DPR), WHO SEARO	Dr. Chamaiparn Santikarn		Thailand
Motorcyclist training experience in Chile	Automobile Club of Chile	Alberto Escobar		Chile
Social and economic impact of motorcycle assembly production in Paraguay from 2002 to 2009	Asuncion National University	Jorge Garicoche		Paraguay
Integral motorcycle plan	Formosa local government; Formosa transit authority	Facundo Ramos		Argentina
Integral motorcyclist safety plan	Buenos Aires city government; Office of the Undersecretary of Transport	Jorge Rubino		Argentina
<i>A proposal for urban messenger and goods delivery services</i>	Transit and transport committee; Buenos Aires City Legislature	Fernando Verdaguer		Argentina
Road safety project	Local Government's Traffic Board	Lic. Laura Borrini	Lic. Ivan Paulina	Argentina

Interested parties can review the studies published on the event's website and in Annex 2. Their authors were present during most of the event.

D. Round tables



Addressing road safety plans for motorcyclists

A summary of the main issues discussed during the forum in each of the thematic round tables held is presented below.

Topics discussed at this round table were: how to address the issue of the safety of motorcyclists on a road system designed for four-wheeled vehicles, methodologies to develop safety plans, the actors involved, research into the causes and consequences of the growth in the motorcycle fleet and social issues associated with motorcyclists.

Despite it being a real problem for practically every country in the region, the OISEVI survey found that only 25 % of countries have plans or actions specifically addressing road safety for motorcyclists. The fact that 75 % do not have specific measures highlights the need for this meeting.

In cities, people are abandoning public transport and cars in favor of motorcycles thanks to the benefits they offer: speed, door-to-door, costs, etc. However, motorcycles have not been taken into consideration for road design and organization in cities and highways, resulting in an increase in crash rates.

Road safety plans for motorcyclists at a national, regional and city level should be part of the road safety plans, which, in turn, should be framed within mobility plans.

Pere Navarro presented the guidelines to be taken into account when developing a safety plan for motorcyclists, which are summarized below. He stressed that it is important that leading road safety agencies have a focal point related to the safety of motorcyclists; that agencies maintain regular contact with motorcyclist associations; and that, hopefully, among their team members there are motorcyclists familiar with their reality.

Design methodology for road safety plans

Motorcycles should not be treated as a problem. They are a reality and have advantages over other modes of transport. The debate needs to be opened and the role of motorcycles in mobility recognized. In this sense, the suggested methodology is rooted in the premise that the road system is designed for four-wheel vehicles and proposes how to identify measures that make the coexistence between the modes of transport possible with the active participation of the stakeholders involved.²

A first aspect to consider includes the mistakes to avoid in managing a safety strategy for motorcyclists that aims to get results:

- Do not look to assign guilt: it is essential to avoid bias, the approach is a shared responsibility.
- Handing over responsibility for the plan to an external consulting firm is not recommended: officials are the ones who will have to implement the plan, therefore they should feel proprietorship. The important aspects of the plan are the development, analysis, debate and the knowledge that it generates.
- The plan is not against motorcyclists, but rather for motorcyclists and these should play an active role in its definition
- Participation of all stakeholders in the drafting of a plan.

² Based on the methodology created by CAF in 2013 for designing road safety plans for motorcyclists.

- Avoid conflict of interests: different legitimate interests for each interest group. Engage in dialogue with pedestrians, bicycle riders, motorists and the other road users.
- Prioritize fluidity over road safety: safety is nonnegotiable.
- Do not adopt isolated initiatives: coordinated action and the sequence of actions mark the difference in obtaining results.

The plan is the agreement between different interests, as such, it is essential that it be based on a consensus view of the problem and a shared process for the development of actions and a minimum agreement to configure the plan process. The contents of the plan are created in the negotiation process, based on:

1. Overview of the situation, in particular fatalities and injuries, where, when and why they occur: diagnosis and baseline.
2. Surveys and interviews with all stakeholders to develop a complete diagnosis with all points of view.
3. Benchmarking for best practices and to identify mistakes.
4. Consultation with and participation of the involved social agents to identify possible actions.
5. Develop a consensual plan that includes actions of administrative agencies, users and economic sectors. Classify actions according to the level of consensus, impact and feasibility.

The plan should be a multidisciplinary project designed to determine the responsibilities of each person in the development of the agreed upon measures. In order for the plan to have short-term results, a limited number of actions should be identified as objectives and they should be pursued. It is suggested that the actions be chosen based on their level of impact, feasibility and consensus. At the same time, it is essential that a

reasonable balance is struck between the cost of actions provided for in the plan and their results. It is therefore important to monitor the actions deployed and show results with transparency to ensure accountability to citizens and share progress.

It is proposed that the plans include measures in the following areas:

- Safe driving: education and training.
- Decline in risky practices: rules, monitoring and control regulations.
- Minimize risky scenarios: safer vehicles and infrastructure.
- Ensure safe working conditions on motorcycles.
- Increase society's awareness about motorcycles.
- Post-accident care.
- More and better information, research.

Experiences

At the round table, diverse countries' experiences in the planning of road safety initiatives for motorcyclists were presented.

On the topic of road safety, the Asian Development Bank implemented Training the Trainer, a project aimed at training technical specialists as training multipliers, which required participants' willingness to work on road safety. Based on the participation of international experts, the program works to train different national actors and agents so that they can give depth to the actions in society. The end goal is the socialization of road safety in the projects and the people who implement them in an effort to understand the problem in order to define priorities.

Australia adopted the National Road Safety Strategy in 2003. The first strategy with an impact on motorcycle safety was not developed until 2008 in Canberra, where more than 100 people gathered to discuss the safety of motorcyclists.

After a process of research and *benchmarking*, a recommendation of 64 measures was approved in 2012. The priority areas highlighted were: data analysis, driver protection, training and driving licenses, driver education, infrastructure, and monitoring and enforcement. They followed the OECD recommendation to incorporate motorcyclists in road safety plans from the design stage, and not add them in later. Whenever an action, such as incorporating a new sign on the road, for example, is carried out, a new danger may be created for motorcyclists. In Australia, road safety plans are designed with Safe System, including motorcycles explicitly, with forgiving and well maintained infrastructure that aims to ensure that mistakes drivers may make on the road do not lead to their death or serious injury.

In Costa Rica, there has been a lot work carried out in legislative and educational topics with much participation of motorcyclist associations. The most important factor to consider is the infrastructure and maintenance of roads, given that these are designed for four-wheel vehicles without any regard for motorcycles. In Costa Rica, starting this year, legislation was passed that bans minors under five from riding on motorcycles.

The Safety Charter for Motorcycles in Paris is a good practice to include in plans for motorcycles. It describes the rights and obligations of motorcyclists in the city.

Mutua Motera, a motorcyclist association in Spain, confirmed the importance of the participation of motorcyclist associations and other groups in developing the plan. The debate between users, administrative agencies, and other agents, which initially may represent conflicting interests, is essential for understanding the problem and finding solutions. The case of Spain is a case in point.

Finally, as a result of this thematic round table, some general suggestions were made:

- Promote meetings to exchange experiences, especially those of cities.
- Use social media as a meeting point to engage with motorcyclists and for them to engage with one other.
- Take measures to slow down traffic by introducing areas with 30 km/h

speed limits.

- Promote exchanges between motorcyclists to share experiences, techniques for safe driving and general tips.
- Involve vendors in the formulation and implementation of safety plans.
- Prohibit advertising displaying risky practices.
- Be patient and perseverant.

User awareness and education, monitoring and enforcement

Training for novice drivers and experienced motorcyclists, driver's license requirements, involving vendors and manufacturers in training, creating practice spaces, campaigns for motorcyclists and other road users, enforcement of traffic rules, control plans.

Latin American motorcyclists learn to drive once they have already purchased the motorcycle. Novice motorcycle training is lacking, as in the case with progressive training programs for experienced riders who want to transition to more powerful vehicles.

Throughout the LAC region, the process of obtaining a motorcycle driver license needs to be improved in terms of the requirements demanded to acquire one, the type of training provided, and the type of practice and theory testing requirements for beginner drivers. In 2009, OISEVI member countries signed a declaration in Santiago de Chile stating their commitment to comply with the Ibero-American Charter of Driver Licenses. This is a guide that outlines the steps to be taken in the various countries to implement the system of driver's licenses; the licensing model; tests; training schools; and monitoring of the process.

Best Practices

In Australia, there are special programs for remote indigenous communities, which are difficult to reach and monitor. A specialized working team travels to the community and trains one of the members as an instructor authorized to repeat the training. This is especially important for beginner motorcyclists in rural areas who access a motorcycle as their first vehicle without any education, nor road training, in some cases without even primary schooling completed.

In less remote areas, such as the case of the state of New South Wales, young drivers starting at 16 years of age can access a six-month learner's permit after completing a two-day course and paying a USD 69 fee. They are provided with all the necessary equipment so they can learn to drive in the two days: motorcycle, helmet and protective clothing. They are given a written and practical exam and if they pass it, they receive a permit to drive for six months with restrictions. After this period, and after passing a practice test with an instructor present, they are granted a beginner license valid for 12 months still with restrictions regarding speed, passengers, alcohol consumption and cylinder capacity. A year later, they are granted a definitive license without restrictions.

The Head Municipal Office of Campinas in Brazil is working on a manual for motorcycle transport workers and motorcycle taxi drivers. For the municipality, it is easier to access a group such as motorcycle transport workers than to address the training of drivers in general. The municipality organizes courses so that riders in training are put out on the road. It is also working with the company Honda to develop courses for buyers.

Awareness and monitoring

Motorcyclists are not prepared for driving a motorcycle, not in terms of handling one, nor are they familiar with the rules. In general, motorcyclists do not understand the importance of the helmet, for example. How do you get motorcyclists to comply with the norms that protect them? The use of the helmet is very different according to each country, depending on whether cities or rural areas are involved. For example, in Paraguay, use is very low, but in São Paulo, Bogota and Buenos Aires, most motorcyclists wear helmets. Here lies the importance of enforcement, which makes it possible to ensure compliance with safety norms. It is essential to work to ensure small municipalities have a minimum number of police officers and support them so that they can enforce the rules as in the big cities.

The OISEVI survey asks about the main causes of crashes. The countries' overwhelming response is the generic "no respect for the rules," which is then specified as: "the non-use of helmets, an inadequate licensing system and alcohol." To achieve greater compliance with traffic rules, police monitoring plans and communication campaigns aimed at motorcyclists and other road users that promote coexistence are essential. It is in this regard that motorcyclist associations are the best spokespeople for conveying these ideas. In fact, in the survey, motorcyclists themselves request stricter controls and monitoring.

In Paraguay, Senator Eduardo Petta San Martin proposed an effort to battle the bad image of the police in the region, carrying out alongside traffic monitoring and control operations, preventive monitoring operations, in which the fine should be replaced by training initiatives. These may be courses or talks in lieu of a fine for not wearing a helmet, indicating the need to change a rear light that is not functioning, etc. In short, it's about getting drivers to think, make them feel protected and help them to change their behavior. Perseverance is key to this strategy.

First, it is essential that efforts be made to clean up the image of the police's flexibility in the face of corruption, with training and further education plans for police officers, better material resources for monitoring the objective, handling of complaints and the provision of a decent salary. To reflect on this, a meeting of Latin American traffic police is proposed. At the same time, there is a need to encourage politicians to enforce rules without fear of losing votes and that they relay to the officers their responsibility to save lives.

From this round table, the following proposals emerged:

- Encourage countries to comply with the Ibero-American Charter of Driving Licenses.
- Monitor the technical quality of motorcycles that are being assembled and sold in the region.
- Step up regulation and sobriety checkpoints for motorcyclists, as alcohol is an important factor in traffic incidents in many countries.
- Investigate more into the reasons behind motorcyclists' risky behaviors.

- In rural areas where children use a motorcycle to get to school, reach agreements with the schools to ensure compliance with the regulations regarding transport of minors on motorcycles.

Safe vehicles and infrastructure

Two important aspects of a safe road system for motorcycles are safety levels for vehicles and safe infrastructure. Daytime lights and standard mirrors, ABS brakes, modification of motorcycles, helmet, proper clothing, motorcycle body, mopeds, electric motorcycles, exclusive lanes for motorcycles, advanced stop zones and elements of safe infrastructure were the focus of this round table.

Vehicles

In 2000, 18.6 million motorcycles were sold worldwide, 26.7 million in 2005 and 40.7 million in 2010. It is expected that sales will reach 75 million units by 2015 and forecasts for 2020 estimate 138 million motorcycles sold per year. The motorcycle industry contributes to society by creating a significant number of jobs and in return receives very substantial benefits. However, the external costs of motorcycles pose a high cost to the State and therefore to society itself. In Paraguay, tax exemptions granted to the motorcycle industry outweigh by two or three times the costs generated by the emergency medical centers in which 80 % of the victims are motorcyclists. Tax exemptions are important to the industry, but they could be reduced by a percentage to finance research, for example. The emergency medical center in Paraguay costs about USD 180 million a year, money that could pave 150 to 180 km of roads.

Tied to the manufacturing aspect of motorcycles, proposals have been put forth: (i) Asian countries continue to have very large fleets of motorcycles since the 80s and many lessons can be taken from what happened in that region. One paper worth highlighting is "A review of potential countermeasures for motorcycle and scooter safety across APEC Project: Compendium of best practices on motorcycle and scooter safety," APEC Transportation Working Group, July 2010, included in Annex 2. (ii) Alan Ross proposed that if the industry were to pay governments USD 2 for every motorcycle sold, USD 150 million could be spent annually on motorcycle prevention efforts. (iii) Another way for companies to contribute directly to road safety can be through the quality control of their

products: the quality of the lights, brakes, etc. It was also suggested that vendors and manufacturers should be involved in training their new customers; that they should not be allowed to sell a motorcycle without a helmet, just as you cannot sell cars without seat belts; and they should give their customers training vouchers. Sellers should warn buyers about the risks of driving a motorcycle.

Legislation

Meanwhile, national governments should enforce basic and mandatory safety rules already in force for all motorcycles that are for sale in countries throughout the region. In 70 % of all countries, automatic lights are required; motorcycles must pass a technical vehicle inspection (known as ITV for its acronym in Spanish) also in 70 % of all countries; insurance is compulsory in 87 % and helmet certification standards exist in 55 %. At the same time, new elements are emerging that require new certification standards that governments need to regulate: standard mirrors, ABS brakes, modifications made to motorcycles, proper attire, body of the motorcycle for *delivery* vehicles, electric motorcycles, etc.

The Brazilian industry, through the Vehicle Commission, is working on new elements of active and passive safety: they are exploring the option of developing a specific *airbag* for motorcycles that could be built into the motorcyclist's jacket and the implementation of ABS or CBS on motorcycles. The proper regulation of protective clothing is also an important subject to be addressed, but in some areas it is difficult to wear because of the temperature.

In this regard, Nana Soetantri presented a case study carried out in Vietnam, where helmet use reached 90 % in a relatively short period by adapting their design, because the ones available in the market were too big and hot, along with awareness campaigns and new regulations. These processes take time and require not only proper legislation but also a willingness of civil society. It is worth mentioning that these helmets do not comply with UNECE WP regulations, because they do not meet the penetration testing requirements as a result of the aeration introduced to the hull to make it less hot for the motorcyclist. It is proposed that standards be reviewed to make them suitable for each location; the WP-089 is designed for the characteristics of European motorcyclists and motorcycles, which are not the same as those in Latin American countries.

Corporate Social Responsibility (CSR)

A sample of social responsibility was presented by Abraciclo, the Brazilian motorcycle manufacturers association, which represents 11 partners including the largest motorcycle vendors in the world. In Brazil, there are 20 million motorcycles and nearly 22 million motorcyclists. Their social contribution is framed in terms of research on drivers and causes of accidents involving motorcycles and awareness efforts targeting motorcyclists. The research concluded that in traffic incidents involving motorcycles, in 49 % of the cases, the motorcyclist caused the accident, while in 51 % of the cases, the crash was caused by other road users. Road conditions (potholes, oil spots, etc.) also contribute to incidents. They have found that motorcyclists do not know how to use the front brake to stop

Infrastructure

The second theme addressed by the round table was based on the debate regarding the role of infrastructure in the safety of motorcyclists. All two and three-wheel vehicles deserve a space on our roads. There was talk of dedicated motorcycle lanes, passing between lanes, elements for safe infrastructure. Pedestrian crossings and anti-slip paint, road maintenance: potholes, gravel and oil release by large vehicles.

In Australia, geo-analyses related to accidents are carried out to identify the black spots or areas of concentration of accidents involving motorcycles and the interventions that were carried out to improve them have had very good results, with a 20 % decrease. The areas of concentration of motorcycle and car crashes do not match, therefore they require different measures and analyses.

Below are some of the practices related to infrastructure:

- *Lane Splitting* is allowed and widespread in California. The real danger of this practice needs to be evaluated, as it is believed that the danger is not so big and it greatly helps reduce congestion. The motorcycle passes between vehicles traveling along the dashed line. The additional difficulties that this practice generates are, first, the shift that the two vehicles undergo, as one moves toward a possible exit route, and the other may cause a possible intrusion in the opposite lane. On the other hand the motorcycle has to pass through the blind spot of the vehicle that it is passing, especially in the case of large vehicles (trucks and buses). The following is needed to facilitate

safe Lane Splitting: wide lanes (3.65 m), delineations with high friction surfacing; the prohibition of the use of road studs, beacons, etc. and limiting the width of the delineation between lines. Thus, in São Paulo 35 % of fatal incidents are caused by movement between vehicles because of the blind spots of other vehicles. For that reason, motorcycles were banned from the fast lanes on expressways where large vehicles travel, achieving a 35 % reduction in fatal crashes.

- *Lane Sharing*: two or more motorcycles share a lane. It may be next to each other, alternating or one slightly behind the other. Either way, the goal is to protect motorcyclists from cars by gaining visibility. Research is needed to determine which method is the safest. The bus/motorcycle lane is not recommended.
- *Dedicated motorcycle lanes*: this was one of the most debated issues in regard to infrastructure. In Latin America, they are in use in Barranquilla, Cali and São Paulo. Dedicated lanes are recommended in locations where there is a high density of motorcycles and should be designed with collapsible elements. In Nana Soetantri's opinion, in general, the effect of the measures taken is not monitored. A dedicated lane may be built, but if people do not know how to use it properly, they are not going to use it. Lanes need to be promoted to ensure drivers are aware of their existence. For Alan Ross, the dedicated lane has worked in Malaysia, where casualties declined 45 %. From this experience one can learn that some measures only work under specific conditions. This measure works when the traffic volume exceeds 15,000 vehicles/day and only 20-30 % of these are motorcycles; these lanes should have a width of at least 1.70 m to allow passing.

In São Paulo, a dedicated lane for motorcycles was launched as a pilot program that did not yield the expected results: collisions with pedestrians and vehicles increased by 30 %. Although it was very well received by 90 % of motorcyclists and 40 % of other drivers, from the point of view of safety, the targets were not achieved: pedestrians walked across without looking and cars passed over into the lane because there was no physical barrier. The lion's share of crashes were the result of traffic violations caused by the various actors on the road. To be successful, these programs must invest much more in control and monitoring of driving infringements, and the placement of static cameras to control pedestrians and drivers. According to São Paulo

authorities, spaces need to be designed that contemplate everyone's movement. Segregation of personal transportation is not the most productive way; the intention is to start segregating public transport so it involves less risk. Work is also being done to lower speeds to reduce risks. The experience in Asia suggests that when motorcycle density is insufficient for the development of a dedicated lane for motorcycles. Four-wheel vehicles should be trained in regard to the importance of the safety of motorcyclists sharing the road.

- Exclusive space for motorcycles at traffic lights: this measure has been launched in Spain. It separates motorcycles and cars as they come out of the intersection marked by traffic lights in two platoons to avoid conflict when turning or related to pedestrians. Intersections are the highest-risk point for motorcycles. These exclusive spaces have also been implemented in Buenos Aires and São Paulo.
- Guardrails with motorcycles in mind: there is an important debate about the cost-benefit of this measure and its effectiveness, given that 70 % of motorcycle incidents on highways go over the guardrail and it is ineffective in terms of preventing damage. However, there are important case studies in Europe that point to their effectiveness. This issue needs to be studied in more detail.
- Longitudinal and transverse dropoffs, speed bumps, speed humps: Any unevenness can be a risk for the bikes. Because intersections are high-risk sites, it is suggested that they be well lit.

Data collection and post-crash care

Research, data, rescue actions and rehabilitation of victims, information gathering about motorcycle-related traffic incidents were the topics put forth for discussion at this round table.

Data saves lives. Improving police data collection mechanisms and data from health care institutions according to international healthcare standards is one of the most important aspects for all countries. In the LAC region, information gathering has advanced significantly, but there is still a long way to go. The methodology is complex because the information that needs to be included originates from different sources. Primary data from traffic crashes and their circumstances are collected by law enforcement authorities at the site. Supplementary and qualitative data are provided by the healthcare system, in addition to data about injuries. Finally, data about causes and culpabilities arise from the analyses performed by experts reporting to the courts and insurance companies.

The development of strategic road safety plans for motorcyclists requires as much information as possible to deploy interventions where the impact can be strongest. Liz de Rome proposes effective forms to keep in mind and some basic points to cover: crossing data from fatalities and injured with demographic data to identify the highest risks; analyzing events by subgroups: for example, falling from the motorcycle, colliding against another vehicle; another vehicle against the motorcycle, etc. It is necessary to break down data because what is important are the circumstances and the cause of the incident. For example, based on incidents mapping along a specific road segment during five years, it was observed that the peak area for motorcycle crashes is different than the area of vehicle crashes; therefore, different interventions are required. This is very important for more effective planning of actions. Other interesting methods are interviews of motorcyclists involved to assess, for example, how protective equipment influenced the seriousness of their injuries. Based on this system, figures revealed that 92 % of the motorcyclists who were not wearing a jacket were injured; 67 % of those who were not wearing gloves suffered injuries compared to 55 % of the motorcyclists who were not wearing boots.

Julia María D'Andrea Greve stresses the importance of data to make more effective decisions. She presented recently concluded research carried out by the University of São Paulo at the hospital taking care of the highest number of motorcycle victims, funded by Abraciclo. The objective was to assess the causes of motorcycle crashes where the

motorcyclists had been injured, in the West area of São Paulo. The victim profile is a man, 30 years of age on average, 20 % with higher education studies completed and 58 % with secondary studies completed, contributing one to three minimum wages to their family income. Twenty three percent of casualties did not have a driving license and in 21 % of cases they had consumed some type of alcohol or drug. Most of them used the motorcycle for work purposes or as a means of transport, not for recreation. An analysis carried out by a forensic expert showed that in 37 % of cases culpability fell upon the motorcyclist; in 18 % of cases, road conditions were the cause; the condition of vehicles in 8 %; and drivers of the other vehicles in 37 % of the cases. This analysis was conducted by a team of experts from a vehicle insurance company based on training received from a criminal expert; it had no judicial value.

Presented examples

Chile presented the joint work being developed by the government, motorcycle manufacturers, user associations and the police force in the matter of regulations, investigations into crashes and their causes, and driver training. Chile has managed to reach a shared vision on how to approach motorcyclists' safety. In the area of research, a spatial accident analysis was performed in Santiago for several years to identify critical sites and severity indexes. This has helped define where interventions are most needed.

The MAPFRE Foundation mentioned its recently published paper on motorcycles in Latin America: "A report on the safety of motorcyclists in Latin America—2013."³

This report states that the "tsunami of deaths and casualties from motorcycle incidents" in Latin America is upon us. It points out that there is abundant legislation in the region to protect motorcyclists but it appears that it is not enforced. It is difficult to determine the actual number of casualties in the world of motorcycles. The reason is partly due to the limited medical assistance provided to motorcyclists as many of them are uninsured; for example, only 9.1 % of motorcycles in Mexico are insured. It is estimated that more than 22,000 people die in crashes involving a motorcycle and about 250,000 individuals are injured in LAC. The risk run by motorcyclists is believed to be 30 times higher than the risk of car occupants.

3 It can be downloaded for free from: http://www.fundacionmapfre.org/fundacion/es_es/images/informe-seguridad-motociclistas-latinoamerica_tcm164-31469.pdf.

In Uruguay, 66 % of individuals who died in cities were motorcyclists or passengers. Total vehicle fleet includes 1.5 million motorcycles in a country with 3.3 million inhabitants. What is still missing in Uruguay is information about the causes of crashes since the court needs to take part in determining culpability, hindering rapid data evaluation.

In Chile, there was a change in the trend of motorcycle fleet statistics related to incidents in 2007 as a result of the implementation of rules requiring the use of a helmet and different protective elements.

Since 2011, Mexico has been working toward road safety with an integral and cross-industry approach and the results are starting to become visible. As the Global status report on road safety 2013 states, the number of registered vehicles recorded a significant increase in Mexico and fortunately deaths and injuries show a downward trend, except in connection with motorcycles. The fleet of motorcycles grew 100 % in six years and the number of deaths per motorcycle rose by 80 %. Mexico has 115 million inhabitants, 32 states with their own regulation and more than 2500 local governments regulating their road safety. Of the 33 million registered motor vehicles in Mexico, 1.3 million are motorcycles.

Local scientific evidence needs to be gathered by each LAC country so that they can individually collect the data they require to design a good integral road safety plan for motorcycles; actions supported by scientific data help to use resources more efficiently.

However, countries cannot passively wait for scientific evidence to be gathered in order to act; measures need to be taken to reduce the number of accidents and protect motorcyclists and other road users. Scientific evidence will be gathered as long as actions are taken and properly measured.

Motorcycles as a working tool

The use of motorcycles as a working tool is generating many fatalities and injuries. Legislation in the different countries in the region is not accompanying the changes taking place in the motor vehicle fleet.

For example, motorcycle taxis grew without suitable regulation in many urban and rural zones. Motorcycle taxi practice is not included as a professional risk and motorcyclists are not provided with required training or protective elements. There are many types of motorcycle workers: messengers; goods transport or *delivery* services; different types of motorcycle taxis (two, three and four wheeled; with and without bodywork); and people who use a motorcycle to travel and render services in different areas.

The topics discussed at this round table were motorcyclists' working conditions, labor legislation for motorcyclists, monitoring of companies, occupational hazard training related to motorcycle driving, motorcycle as a work tool, the provision of protective elements for motorcyclists, motorcycle ownership title, maintenance responsibility and safety for motorcycle taxis.

Roundtable results

Fundacentro from Brazil presented the results of the work it has been developing on regulated safety as opposed to managed or acquired safety solutions, regarding motorcycle workers. They explained that regulated safety needs to reflect motorcyclist demands. Formal and informal dialogue channels with motorcyclists who use their motorcycle as a tool to make a living need to be established in order to define their concerns, their opinion about successes and failures, and to put forward consensual solutions to improve safety. It is motorcyclists who are most aware about what problems they have to face: slippery road paints, lack of parking, etc.

Further, it is important that motorcyclists can learn from their peers; training sessions should be given by other motorcyclists who use their motorcycle as a working tool with a view of the reality they face and who can provide practical advice as to how to work safely and efficiently.

The report "*Recomendações técnicas para a prevenção de siniestros no sector de moto-frete*" (Technical recommendations to prevent motorcycle courier accidents), a document developed by Fundacentro outlining 55 technical recommendations for preventing accidents addressed to those who use the motorcycle as a work element is included in Annex 2.

The São Paulo case

The work niche of motorcycle couriers or messengers emerged from the use of a mo-

torcycle to make a living by many people. A Law to regulate this service was passed in 1995 and updated in 2003, but with little success.

The São Paulo Road Safety Oversight Agency presented the case study of a program called "Safe traffic stamp for motorcycle couriers," designed to instill safe practices to curb the growing traffic incidents rate among "motorcycle couriers" and encourage motorcycle courier companies to regularize their situation.

This program was established in 2006, when motorcycle lanes started to be built. Companies receiving this stamp, valid for one year, would stand out in the market as safe and reliable among their clients. The stamp was awarded to companies that:

- Implemented health plans.
- Provided traffic education and training.
- Furnished protective equipment to motorcyclists.
- Carried out social actions in education.
- Performed motorcycle maintenance.
- Evaluated crashes
- Monitored motorcyclists' fines and traffic violations.

In 2005, 41 companies were awarded the stamp, but this number fell to 26 in 2008 and not a single company applied for the stamp in 2009. This was related to the costs involved in meeting the requirements, which meant companies needed to raise their rates for their customers; in 2009, the Federal government passed a law on motorcycle couriers.

With this new law and the active work by the São Paulo Trade union of messenger motorcyclists, bicycle riders and motorcycle taxi drivers, the situation started to improve, even though company oversight is still inadequate. At present, companies use their own motorcycles and monitor motorcyclists, who have become professionals. Today, from the total number of motorcycle couriers involved in incidents, only 11 % die, which is considerably lower than historical

rates. CET data, including hospitals, clinics and the trade union, show that motorcycle professionals have fewer crashes than other motorcycle users, although they drive more (about 2500 km).

The São Paulo Trade union of messenger motorcyclists, bicycle riders and motorcycle taxi drivers claims that four collective bargaining agreements are in place covering deliveries, courier service providers and newspaper distributors. The market became stricter with the involvement of the Labor Ministry through a collective bargaining agreement. The trade union oversees compliance with this agreement and alerts authorities in the event of non-compliance so that the companies are fined or a strike organized. They have a legal department handling more than 1000 proceedings per year against companies.

As a result of a strike organized by this trade union, the form of payment to motorcyclists was regulated; they can be paid either by work day or by kilometer traveled, with a maximum set on the number of kilometers per day and a 44-hour work week.

Large companies comply with these regulations, but many small companies hire motorcycle couriers and pay low rates in violation of collective bargaining agreements in force; however, these companies disappear very quickly from the market.

The São Paulo Trade union of messenger motorcyclists, bicycle riders and motorcycle taxi riders is working to achieve regulation of the law governing motorcycle couriers and taxi activities in this state in order to reduce the number of work-related fatalities. This law is planned to regulate 39 local governments; even though the law was passed three and a half years ago, only 1 % of workers is currently regulated (slightly more than 10,000) on account of the huge bureaucracy and workers' resistance because of lack of interest or information. São Paulo can be compared to the rest of the country. The regulation being worked on would require all workers to take a 30-hour course. The State of São Paulo comprises 670 local governments, of which barely 30 have both activities regulated (motorcycle couriers and taxis), making law enforcement extremely difficult. Awareness needs to be created among competent agencies so that all local governments implement this law. Jointly with DETRAN, a forum is being developed to raise awareness among local government officials about the reality motorcycle workers are facing. The trade union has just started to set up its own educational center to have more motorcyclists embrace the law, with an investment of 1,000,000 reais.

The Buenos Aires case

- Fernando Verdaguer submitted a draft for the regulation of the urban motorcycle courier and parcel distribution services, which included the use of bicycles, in Buenos Aires.

The regulatory process in the city started with taxis and then passed on to urban messenger services, and motorcycle and bicycle *delivery* services. It is estimated that motorcycle *delivery* services hire between 30,000 and 40,000 people in Buenos Aires. The main problems described were: vulnerable users and a high rate of traffic accidents.

- Critical issues: night trips, very short *delivery* deadlines, adverse weather conditions.
- Vulnerable working conditions: informal work status for motorcyclists, motorcycles in a poor state, lack of healthcare assistance and social benefits, payment by the job and unfair competition (casual workers, not professionals).

Among the main measures proposed were recommendations that working conditions be improved, and based on them, try to ameliorate road safety conditions. An important matter is that labor conditions need to be regulated under the city Traffic and Transport Code. Proposed recommendations are:

1. The following roles should be defined: job giver, agency, service provider.
2. The motorcycle should be owned either by the agency or the worker and not by third parties so as not to evade responsibility.
3. Watch for fake cooperative associations implementing abusive practices on workers.
4. All workers should have their documentation in order to ensure control over illegal work.
5. Vehicle safety should be checked: age, technical requirements, quality of components, control and maintenance frequency, technical vehicle inspections (ITV).
6. Work protective elements should be provided: visibility, working lights, lights on bicycles, reflective clothing and motorcycle trunks.

7. Risk prevention for drivers: annual training, psycho-physical exams.

The results expected to be achieved under this approach are: i) reduced illegal or informal work; ii) lower rate of traffic accidents; iii) workers' professionalization. The major problem is who will fund this initiative. When taxis were regulated, a license transfer fee was established.

The Spanish case

Spain has been working for several years on the issue of work-related traffic crashes. The reality of motorcycles as a work element is very complex. As in other fields, the participation of the different stakeholders is of critical importance: companies, third-party workers, freelancers with their own means of transport and, finally, those who work illegally. As an initiative spearheaded by the DGT, in partnership with the Ministry of Labor and the National Labor Health and Safety Institute, studies were conducted that documented that 17 million workers in the country were involved in 500,000 occupational accidents per year, of which 10 % were traffic related. Based on this data, measures attractive to businesspeople were proposed, for example, reduced taxes if sufficient evidence was shown that companies were enforcing road safety measures. Out of these 50,000 occupational traffic incidents, 6,000 occur on motorcycles, 2,000 of which happen during the work day. Figures from irregular workers should be added to these. In Spain there is an industry collective bargaining agreement in place regulating the work day, periods of rest, insurance, benefits in the event a motorcyclist suffers a crash, etc. However, clarification about who is responsible for vehicle condition and equipment is yet to be resolved.

Cases in Asia

In Asia, one of the first examples of motorcycle taxis appeared in Bangkok in the 1970's due to urban public transport deficiencies. The government attempted to introduce regulations for this transport through the implementation of two different licenses, one to drive motorcycles and another one to carry a passenger. Over time this became a fraudulent practice of the police and criminal organizations. In the year 2000, a law was passed that was blocked for four years on account of affected interests. However, this law began to be enforced starting in 2005. Salaries, work hours, insurance and equipment, fares, and the annual register were regularized; an annual fee was also established for all motorcycle taxis. At present, motorcycle taxis operate well in Bangkok; they provide an important public service in peripheral urban zones and off main streets, except for

specific routes to cross certain parts of the city.

Another Asian experience that was presented was related to the motorcycle taxi company Gojek, an NGO that embarked on the provision of safe public transport services.

Gojek owns the motorcycles, hires motorcyclists and provides them with full social benefits, protective clothes, insurance and GPS. Additionally, it controls service safety.

Regularization actions bring a certain stability, but these have to be implemented carefully not to benefit fraudulent third-parties. For example, the use of helmets was regulated in Thailand, but only one company monopolized helmets at exorbitant prices.

The El Salvador case

Motorcycle taxis in El Salvador are regulated under the general public transport rules, covering vehicle mechanics, the number of passengers allowed, the lifecycle of motorcycles, the professional driver's license, the conditions to be met by motorcyclists and the areas where this service can be provided (those without public transport service along tertiary roads). Two-wheel motorcycle taxis are not allowed. Motorcyclists need to attend training sessions and a follow-up of their traffic violations is made; if necessary, they are instructed to attend a road re-education course. This service is basically provided in border and tourist zones, and is controlled by local governments.

Government bodies, such as local governments, started to use motorcycle taxis, but as these were not public transport vehicles, their use was regulated only for patrol purposes. While regulation was in place, the assembly and import of new motorcycle taxis was banned. As to labor security, a law was passed for the medical attention of traffic casualties. This law sets forth that a special contribution is to be made through the vehicle registration cards (tarjetas de circulación) of all drivers as a funding source, of which 60 % would be allocated to medical attention for traffic accident victims and 35 % to strengthening and supporting the Ministry of Health. Sixty percent of the Ministry of Health's budget is allocated to traffic accident casualties.⁴

⁴ The model for the law on traffic accident victims and motorcycle taxi regulatory precedents can be found on the Vice-Ministry of Transport's web page: <http://www.vmt.gob.sv/>.

The Peruvian case

There are about 653,000 motorcycle taxis in Peru and no labor law governing the benefits or rights of motorcycle taxi drivers. In some areas of the Peruvian forest, motorcycle taxis were found providing services with no protection at all. The Ministry of Transport and Communications, as the governing agency on transport issues, through the National Road Safety Council, is trying to change the current method used to grant specific licenses by local governments due to the overall lack of control. The coming 2014-2022 National Road Safety Plan will include motorcycles as a topmost priority. One action taken in this regard is the sale of motorcycles with helmets. There is a social problem associated with work carried out on motorcycles given the large social development differences, leading to high rates of informal workers. Greater social awareness is needed from society as a whole.

The Guatemalan case

Guatemala is also working on the regulation of three-wheel vehicles used as motorcycle taxis, with the support of the private sector. The police participated in several round tables jointly with trade unions to enact laws with greater support from all stakeholders involved.

The role of mass media in reducing motorcycle crashes

Politicians and government leaders need to appeal to mass media regarding the importance of road safety because it is a social issue. Once a data monitoring system is established, mass media should transmit a continuous analysis of recorded data, reporting measures taken and results achieved. The media should assume the role of checking the work performed and reporting it to society. This is how behavior changes will be attained. Are there any successful communication campaigns in place? What elements are essential to create behavior changes from the point of view of communication?

In Argentina, a group of journalists established APTTA, a non-profit association of traffic and transport journalists aimed at training communications professionals, adding value to the information they provide. If 85 % of crashes are caused by a human error, they can be avoided and, therefore, they are not accidental crashes. In addition to reporting a road event, the function of journalists is to raise awareness. Journalists play a critical role that should be fulfilled properly.

The role of journalism and mass media is closely related to culture generation and can help change the world in terms of their values. Journalists, beyond the informative value of the news they report, should shift the sensationalist emphasis of journalism to an undertone of implicit moral responsibility, moving from an economic benefit toward an ethical benefit. An example is the campaign developed by ATT, a US cell phone company, about the dangers of texting while driving. In this case, a balance was struck between commitment and the corporate need to make money.

Discourses that do change behaviors are those actually reaching the intended recipients. The yellow or morbid press is of no use. Communications must have an impact, but above all they must touch people's hearts. Criteria unification would be highly effective, and APTTA can be of great help as unifies journalists' criteria to communicate a single and consistent message.

In Spain, mass media became indispensable agents for the 2005-2008 road safety strategy aimed at decreasing the number of fatalities by 40 %. The priority line of work was to attain a behavior change among drivers to reach safety levels in line with countries with the lowest fatalities and injury rates. Thus, mass media cooperated by communicating concepts and values to promote other habits and attitudes.

First of all, the population needs to be perfectly aware of the risks involved. Spaniards believed that less than 1,000 individuals died each year on highways, while real data showed that there were 5,400 traffic-related deaths per year, a figure that had remained stable for the past 10 years. The first drastic measures were: billboards on highways showing the expected number of fatalities for that weekend, social debate on mass media, and testimonials by victims' associations.

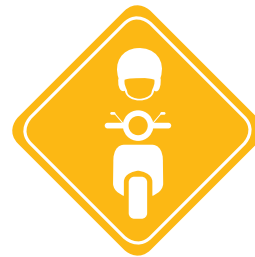
Monitoring, reports of activities and results, transparent policy management were the second most important elements of this campaign. Drivers and other road users are

stakeholders making decisions and they need information to do so. Public opinion should be informed to reach the highest possible levels of objectiveness and responsibility.

Journalists are information professionals. Informed journalists not only communicate information; they also express their opinion. How is objective opinion created?

The PAHO work experience with journalists in Brazil was presented. It was conducted at the offices of the main mass media in order to reach editors, reporters and the highest possible number of journalists. Talks were organized to ensure that they understood the road safety problem and a commitment was reached to report traffic events appropriately, while administrative entities sent them easy-to-publish consolidated information.

E. Forum conclusions and future challenges



State of the art of motorcycle growth in the region and its associated fatalities and injuries rate

- The presentations and comments made by forum participants ratified the accelerated growth of the registered number of motorcycles in the region and the alarming rise in the number of fatalities and injuries as a consequence of motorcycle-related incidents. As it was figuratively said, “the tsunami is over” with more waves coming based on projected growth of motorcycles sales.

- The issue of the fatalities and injuries rate for the most part is mainly found in urban zones, but it is also present in rural areas where motorcycles have many advantages. Therefore, safety measures are needed for motorcyclists in towns, on intercity highways and through isolated rural areas.
- It is urgent that governments and society as a whole take medium and long term tough measures to ensure the safety of motorcyclists. It is important that these measures are based on scientific evidence for effectiveness. However, given that there is not a lot of research in the region available, it is also necessary to take risks and test measures arising from specific country or city analyses on a case-by-case basis, and monitor results to implement corrections and adjustments on the go, to generate, in turn, new evidence for the future.
- The challenge is achieving the coexistence of the different modes of transport: four-wheeled vehicles, motorcycles, bicycles and pedestrians within a reduced road space.
- The profile of the motorcyclist involved in the majority of accidents is young men with less than two years of experience driving a motorcycle.

Successful national, regional and urban motorcycle crash rate reduction experiences in Latin America, the Caribbean and Asia

- There are many successful experiences that can be analyzed and adapted to the specific situation in each city or country. Annex 2 shows:

- *Papers* received during the call for papers.
- Documents mentioned during the forum.

Conclusions from round tables

Addressing road safety plans for motorcyclists

- Leading agencies or government officials need to appoint individuals to be responsible for overseeing road safety matters affecting motorcyclists; preferably, these individuals will be motorcyclists to ensure ongoing interaction with motorcyclists' associations and facilitate understanding of each problem area in every place, implementing programs jointly with motorcyclists.
- It is important to have specific road safety plans for motorcyclists that they and other stakeholders—vendors, insurance companies, other road users, among others—participate in actively.
- The safety of motorcyclists is a shared responsibility between the government and the civil society as a whole.
- The design of plans does not aim to seek out guilty parties, but rather aims to develop a shared view of the challenges and possible solutions among the many stakeholders involved. The most important part of a plan is its process and the participation of all stakeholders, particularly motorcyclists.
- Plans need to involve all industries to address any aspects regarding motorcyclist safety matters.
- Motorcycles need to be incorporated to (urban and rural) mobility planning explicitly and from the beginning.
- Public transport systems need to be improved to decrease motorcycle growth.
- A group of short, medium and long term actions should be prioritized to focus efforts more efficiently.

Education, control and awareness

- Special regulation for novice motorcyclists with restrictions is needed urgently in order to reduce the fatalities and injuries rate. Recommended restrictions for the first year are: no passengers, bans from heavily transited avenues or high-speed highways, zero tolerance for alcohol consumption, and the use of only low-cylinder motorcycles.
- Motorcyclist training needs to be improved with the participation of well-trained instructors, duly authorized spaces for motorcyclist training, and improvement of theoretical and practical educational materials.
- Requirements to obtain driving licenses, and written and practical exams need to be updated.
- The implementation of the Ibero-American Chart for driving licenses is important.
- Control and awareness are fundamental to reeducate motorcyclists involved in an accident.

Safe vehicles and infrastructure

- Motorcycle manufacturers and vendors should allocate a percentage of their sales revenue to reduce the fatalities and injuries rate and cover expenses originating in motorcycle use (support to victims).
- Motorcycle vendors should inform buyers of the risks involved in driving a motorcycle and include protective clothing and a helmet with a motorcycle purchase, as well as provide them with driving training.
- Protective elements should be mandatory, including a helmet, suitable boots or footwear, vests, gloves and *airbags*.

- Design recommendations for safe urban and rural motorcycle lanes should be issued
- Suitable lane maintenance is important for motorcyclist safety, including: safe demarcations that do not pose a risk to motorcyclists, suggested barrier types, infrastructure elements that do not generate risks to motorcyclists, advanced stop zones.
- Some motorcycle infrastructure design aspects should be further researched, such as exclusive lanes.

Data collection and post-crash care

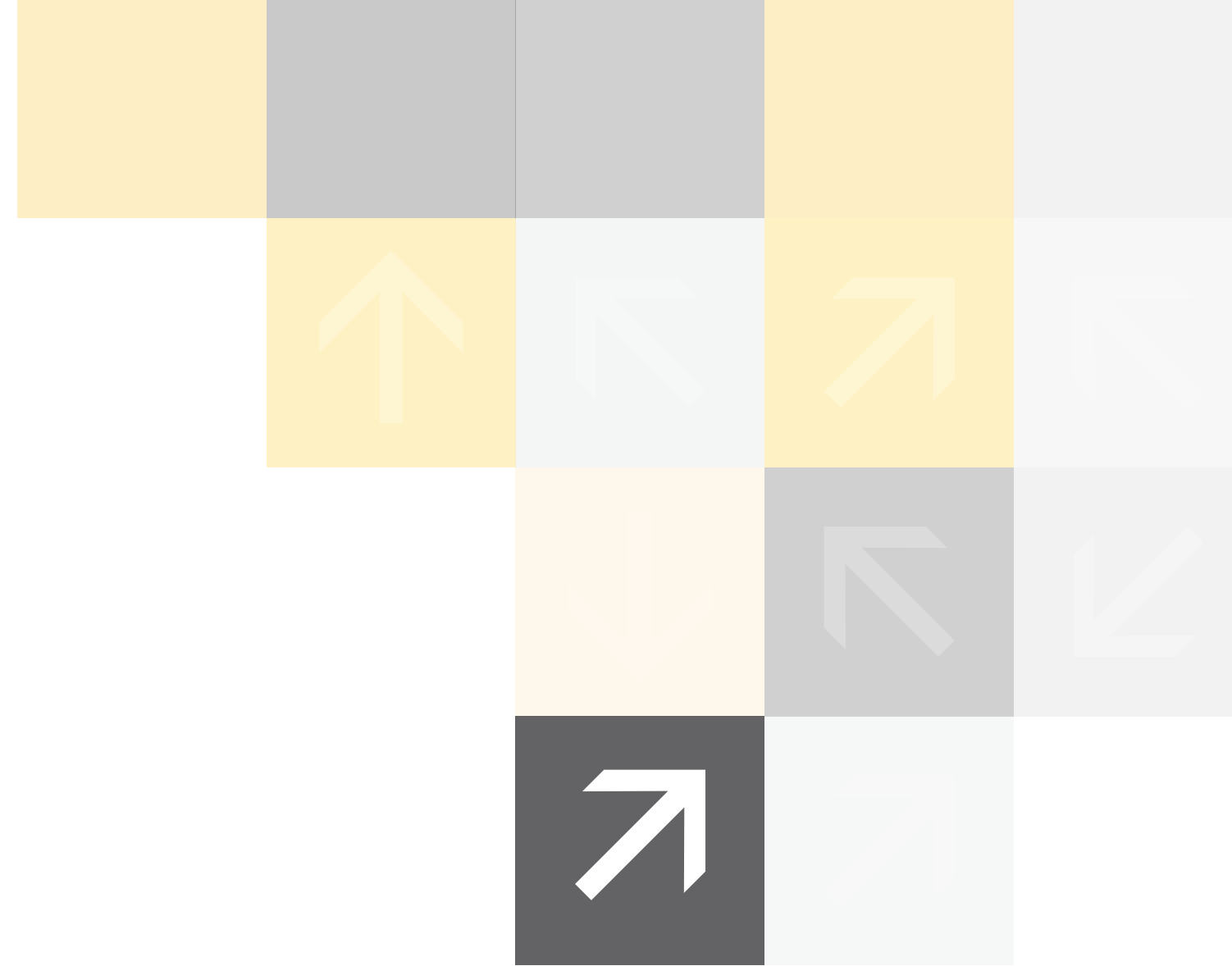
- A protocol to take care of motorcyclist emergencies should be in place; it could be developed on a regional level.
- Data saves lives. Gathering, analyzing and disseminating information about the causes of accidents and the conduct of motorcyclists and other road users is essential to designing effective remedial measures.

Motorcycles as a work element

- Every type of activity should be regulated for motorcyclist safety purposes: messengers, couriers, *delivery* services or package transport, urban and rural motorcycle taxis, freelancers, traffic police officers.
- Companies hiring motorcyclists or motorcycle courier service companies should be responsible for the safety of the motorcyclists. They need to train them, provide them with suitable protective elements and grant them access to social benefits. The Ministries of Labor and Transport should be involved in the development and implementation of these regulations.

Annex I

Final agenda and list of speakers





Motorcycles and Road Safety

Motorcycles Safety on roads designed and operated by cars

São Paulo, Sept. 11-12, 2013

MOTORCYCLES AND ROAD SAFETY FORUM

September 11:

Registration and Inauguration

7:30 – 8:30 Registration

8:30 – 9:00 **INAUGURATION**

Brazilian Highway Safety and Transit Authorities

Jarbas Barbosa – Surveillance Secretary of the Health Ministry.

Antonio Claudio Portella Serra e Silva – Director of DENATRAN (National Department of Transport) – President of CONTRAN (National Transit Council)

Hugo Leal – Federal Congressman – Argentina – President of the Parliamentary alliance in defense of safe transit and member of the transit and transport commission at the chamber deputies.

São Paulo Highway and Road Safety Authority

Jilmar Tatto – Local Transport Secretary of the city of São Paulo

Daniel Annenberg – Director of Estate Transit Department – São Paulo

Lic. Felipe Rodriguez Laguens – President of the OISEVI directive committee

Mrs. Moira Paz Estressoro – Director representative of CAF-Brazil

Anonio Juan Sosa – Vicepresident of Infrastructure of CAF

9:00 – 9:45 **INTRODUCTION**

Lic. Pablo Rojas – OISEVI – ANSV and **Eugenia Rodrigues** – PAHO/WHO
“Motorcycle road safety in Latin America”

Diego Sánchez – Director of Sectorial Analysis and Programing of CAF
“Background and forum expectations”

Dr. Otaiba Libanio de Morales Neto - Representative of the Health



Ministry of Brazil "Analysis of fatalities and Injuries on motorcycles, epidemiology and hospital costs for the public health system of Brazil."

Topic 1: ROAD SAFETY PLANS FOR MOTORCYCLES

How to address the issue of motorcycle safety on road and highway networks designed for four-wheel vehicles, the methodologies of road safety plans design, the actors involved in the road security, research on the causes and consequences of Latin America's growing motorcycle fleet, and social issues associated with motorcycles.

Moderator: Lic. Corina Puppo – Director of the National Road Observatory (National Agency of Road Safety) Technical Secretary of OISEVI

9:45 – 10:15 Panelists:

Pere Navarro Olivella, Former Director of Spain's General Traffic Administration

Liz de Rome – Road Safety researcher

Jorge Rubiano – Representative of the Government of the city of Buenos Aires. "Comprehensive Road Safety Plan for Motorcycles"

10:15 – 11:15 Debate

• Coffee Break 11:15 to 11:45 •

TOPIC 2: EDUCATION AND CAMPAIGNS TO RAISE PUBLIC AWARENESS

Training for the novice and the advanced rider, driver's license requirements, involving sellers and manufacturers in training, creating zones for practice, campaigns for motorcyclists and other road users, transit compliance, control plans.

Moderator: **Jorge Kogan** – Infrastructure Vice-president Advisor CAF.



11:45 – 12:15 Panelists:

Shaun Lennard - Chairman, Australian Motorcycle Council

Eduardo Petta San Marín – Senator of the Republic of Paraguay

Facundo Ramos – City of Formosa, Argentina "Comprehensive motorcycle plan"

Dr Chamaiparn Santikarn - Thailand paper "Project of helmet use in children in motorcycle"

12:15 – 13:15 Debate

• Lunch 13:15 to 14:30 •

Topic 3: VEHICLES AND SAFE INFRASTRUCTURE

Daytime running lights and original rearview mirrors, ABS brakes, motorcycle reforms, helmet use, proper clothing, mopeds, electric bikes, driving and alcohol, especial lanes for motorcycles, safe infrastructure for motorcycles.

Moderator: **Lic. Pedro Centeno** – Director of the Research on road infrastructure and vehicle safety - ANSV

14:45 - 15:15 Panelists:

Greg Speler – Road Safety Consultant

Alan Ross, - Road Safety Consultant

Maros Zaven Fermanign – President of ABRACICLO – Association of Motorcycle, Moped and Bicycle producers of Brazil.

Aurelio Ramglho – National Observatory of Road Safety of Brazil

Jorge Garicoche – Paper "Socioeconomic impact of production and Assembly of motorcycles in Paraguay in the period 2002 – 2009"

15:15 - 16:15 Debate

• Coffee Break 16:15 to 16:45 •

Topic 4: ACCIDENT ATTENTION AND DATA COLECTION

Research, emergency rescue and rehabilitation of victims, data collection on motorcycle incidents and analysis.

Moderator: **Lic. Pablo Rojas** - Statistics Director - ANSV

16:45 - 17:15 Panelists:

Julia Maria D'Adrea Greve - Institute of orthopedics and Traumatology of the Medicine Faculty at University of São Paulo.

Paulo de Tarso Monteiro Abrahao - General Coordinator of the Emergency Network.

José Eduardo Fogolin Passos - General Coordinator of medium and high complication

Julio Laira de Vals - General Director of the Road Safety Institute of the MAPFRE FOUNDATION

Dr. Mercedes M. de González Cabello - Paper "Good practices on public health in Paraguay, program for elementary level teachers and road safety promoters and safe driving in motorcycles."

17:15 - 18:15 Debate

• CLOSE OF FIRST DAY •

September 12

8:30 – 9:00 Reception

Topic 5: WORKING WITH MOTORCYCLES

Working conditions in motorcycles, working legislation for motorcycles, control on companies, professional risk prevention training related to motorcycle as a working tool, the use of safety equipment for motor riders and motorcycle taxis and road safety.

Moderator: **Hilda María Gómez** – Road Safety Consultant - CAF

9:00 -9:30 Panelists:

Jilmar Tatto – Local Transport Secretary of the city of São Paulo

Gilberto Almeida dos Santos – Messenger union *Sindicato de Mensajeros, Motociclistas, ciclistas y Mototaxistas de São Paulo*

Alan Ross, - Road Safety Consultant

Fernando Verdaguer – Paper "Propuesta para mensajería urbana y delivery"

9:30 - 10:30 Debate

• Coffee Break 10:30 – 11:00 •

Topic 6: THE MEDIA'S ROLE IN REDUCING MOTORCYCLES CRASHES

Analysis of successful awareness campaigns on road safety, basic elements on good prevention and communication policy design.

11:00 -11:30 Moderators

Prof. Rubén Saucedo – International representative of road safety and training of UNITAR-CIFAL – United Nations Institute for learning and research.

Panelists:



Alexandre Costa Nascimento – Journalist from Curitiba, Brazil

Hugo s. Palomara – President of the Transit Journalist Association of Argentina – APTTA-

Ernesto Arriaga – Press chief and public relations of the National Direction of Roads. Awarded for his service Twitter.

11:30 - 12:30 Debate

12:30 –13:00 Closing

17:00 – 18:00 Define specific action plans, timeframes, responsibilities, and monitoring and evaluation mechanisms.

Identify action plans

18:00 - 18.30 Next steps and closing

OISEVI MEETING (Exclusive to OISEVI members and guests)

Inauguration

14:00 –14:15 **Inauguration**

OISEVI Chairman

Strategic planning for motorcycle and road safety

Defining structure and action for an Ibero-American Motorcycle Safety Plan (PIM)

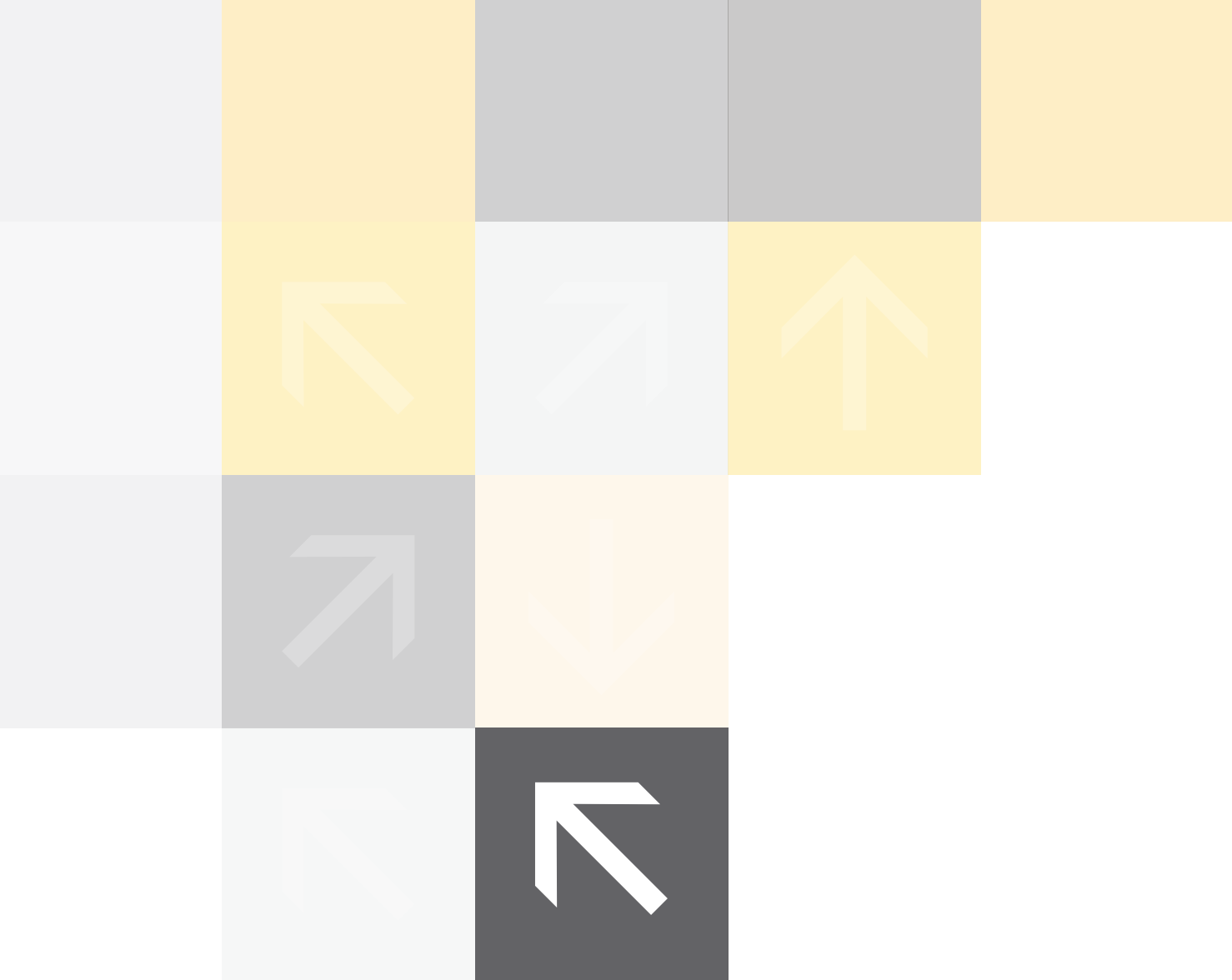
Moderator:

14:15 -14.30 Group assembly and explanation of workshop assignments

14:30 –16:30 Group work

Develop structure of principle PIM activities. Identify countries or groups of countries to address special circumstances and needs.

• *Coffee Break* • 16:30 – 17:00



Annex II

List of
documents

Annex II may be found at the following website:
<http://eventos.caf.com/motos-y-seguridad-vial/documentos>



Annex III

List of
participants

The event was broadcast as a live video stream. Upon conclusion, the “2013 São Paulo motorcycle meeting” site recorded more than 470,000 visits from different sources, according to Google.

During the event, the www.eventos.caf.com/motos-y-seguridad-vial page registered 12,875 one-time visits, mostly from www.oisevi.org, www.caf.com, and Twitter and Google.

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