

MOTORCYCLE HELMETS: A Situational Assessment in the Royal Kingdom of Cambodia

Summary Report



**National Helmet Action Workshop
Sihanoukville, Cambodia
May 24-25, 2007**



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1. Introduction

1.1. Background

The Global Road Safety Partnership (GRSP) launched its five year Global Road Safety Initiative (GRSI) on the 15th June 2005 in Bangkok, Thailand. The Association of South East Asian Nations (ASEAN) is the first regional area of focus for this initiative which is funded by seven of the world's largest auto and oil industry companies.

According to a recent study organized by the Asian Development Bank (ADB), road crashes killed more than 75,000 people in ASEAN in 2003, costing more than 2.2 per cent of the region's annual GDP. GRSI aims to reduce deaths and injuries in the region by helping governments and road safety stakeholders deliver a series of workshops and demonstration projects to facilitate the adoption of good and effective road safety practice. GRSI's programme will focus on the key risk factors identified in the World Health Organization's (WHO's) 2004 World Report on Road Traffic Injury Prevention. These include helmet use, alcohol, inappropriate speeds, and safety of pedestrians and vulnerable road users.

Because of the high proportion of motorcycle victims in road crashes in many countries of the region, the first series of workshops will focus on the development of national action plans aimed at improving the quality and usage of motorcycle helmets. The workshops are based on the recently-issued WHO good practice guidelines on helmets¹. A key part of the workshop process will be the assessment of each country's performance with respect to motorcycle helmets. Data on helmet wearing standards and legislation, the types and quality of helmets in use, helmet wearing levels and practice and motorcycle crashes and rider and passenger injuries will need to be collected and made available to the participants. To meet this need, GRSP will commission a helmet study in each of the countries² participating in the GRSI helmet programme.

1.2. The Cambodia Context

Given its relative stability and growth in recent years, Cambodia has seen a rapid increase in the volume of road traffic (+20% per year on average). In the same time, weak traffic regulation, insufficient enforcement, and a lack of road safety education have led to an alarming rising number of road accidents. Every day, **almost 4 persons die and more than 100 are injured** on the roads of Cambodia. Over the last 5 years, the number of accidents increased by 50% and the number of fatalities has double.

Motorcycle riders are particularly vulnerable. Data from the Cambodia Road Traffic Accident and Victim Information System (RTAVIS) show that **70% of road traffic casualties in Cambodia are motorcycle riders and 38% of them suffer from head injuries**. Alarming, 40% of these casualties are youth between the ages of 15-24.

To deal with this growing crisis, since 2004, governmental and non-governmental stakeholders active in the road safety sector have focused efforts on awareness raising, school-based educational programmes and advocacy related to helmet wearing. As a result, the National Road Safety Committee (NSRC) was established in 2005 guided by comprehensive action plan, and the new Land Traffic Law was ratified by the National Assembly in December 2006, which includes, for the first time, regulations and penalties on helmet wearing.

¹ WHO 2006. *"Helmets: A Road Safety Manual for Decision Makers and Practitioners"* www.who.org

² Vietnam, Laos and Thailand have already concluded their helmet assessment workshops.

However, the statistics remain grim and consequently, efforts need to be scaled up and systematized in this area to reverse the alarming rate of motorcycle, accidents, casualties and loss of life.

1.3. Objectives of the Study

Within this context, the objective of this study is to compile and present the data needed to assess Cambodian's current performance with respect to motorcycle helmets. The study will also provide a benchmarks and a baseline for evaluating helmet initiatives in the future. The report will be presented at the National Helmet Action Plan workshop on May 24/25, 2007.

The key objectives of the study are defined at the beginning of each section.

1.4. The Researchers:

➤ **National Road Safety Committee (objectives 1, 2, 3, 4):**

1. Mr Pheap Chanvibol
2. Mrs Men Chansokol
3. Mr. Yee Vantha
4. Mr Sous Sokha
5. Mr. Youn Yutheara

➤ **Handicap International Belgium (objectives 5, 8, 9, 10)**

1. Sann Socheata, Road Safety Programme Manager
2. Meas Chandy, Road Safety Project Manager
3. Sem Panhavuth, RTAVIS Project Manager
4. Ou Amra, RTAVIS Project Officer
5. Pea Kimvong, Program Assistant

➤ **Ministry of Health, Preventative Health Department (objective 6)**

1. Dr. Prak Piseth Raingsey
2. Dr. Khoun Eng Mony
3. Dr. Phok Chan Sorphea

➤ **BN Consulting (objectives 6, 7, 11, 12, 13)**

1. Mr. SENG Bunly
2. Mr. HOV Lenin

A Reporting consultant, Mr. Ryan Duly, was contracted to compile and edit the English summary report.

2. Results

Objective 1: Identify key agencies, their functions and current national standards relating to helmets including test specifications and any firm proposals already agreed to change the standards

To date, there is no nationally defined standard in place for motorcycle helmets in Cambodia. The country also does not manufacture helmets, and therefore imports helmets primarily from Thailand, China and Taiwan.

The main agencies responsible for overall import and export laws and regulations, quality control and inspection procedures include:

1. **Cambodia Import Export Inspection and Fraud Repression Department (CAMCONTROL) - Ministry of Commerce:** responsible for supervising and certifying the compliance with national standard and inspecting imported and exported goods;
2. **Ministry of Finance:** responsible for customs and import regulations, taxation and duties on import/export goods and quality control;
3. **Bureau Inspection Valuation Assessment Control (BIVAC):** a private company sub-contracted by the Ministry of Finance to assist with quality control of imported goods.

According to officials interviewed, no national inspection standards, regulations or tests exist for helmets during the import process. Consequently, the officials at the custom bureau and tax office rely on a visual inspection of the helmet – or in their words “*an eye control*”. If the helmet passes this informal test, they are deemed of a sufficient standard for the Cambodian market.

There currently are no proposals to define a national helmet standard. However, the National Road Safety Committee has stated that they may be planning a study on helmet standards; however, this initiative is not included in their action plan 2006-2010.

Objective 2: Identify how helmet standards are monitored and which agency is responsible for checking compliance

As discussed in objective one, there are no national inspection standards or quality tests for helmets imported into Cambodia. Consequently, there are no agencies directly responsible for compliance.

The officials at the custom bureau and tax office rely on an informal, visual inspection of the helmet – “*an eye control*” – to determine the quality of the helmet. According to the quality control officer based at the Pochentong International Airport in Phnom Penh, other methods beyond a visual inspection may include checking the date of production, the weight of the helmet and the thickness of the plastic casing.

However, there are no set regulations for officers to follow when testing the quality of the helmet, and it is not clear from the interviews what determines an “acceptable” or “unacceptable” helmet during this inspection process.

Objective 3: Identify current legislation about wearing helmets including penalties for breaking the law and any firm proposals already agreed to change the legislation

3.1 Current Legislation and Penalties

The previous Land Traffic Law, ratified in 1991, did not contain any legislation on wearing helmets and penalties for breaking the law. However due to the rapidly changing situation of Cambodian traffic patterns – **a 46% increase of motorbikes on the roads from 2001-2006**³ – helmet wearing regulations and penalties were inserted into the latest version of the Cambodian Land Traffic Law, ratified by the National Assembly in December 2006.

The specific measure can be found in Article Nine, Point #4 of the Land Traffic Law. It states:

“The drivers who drive motorcycles, tricycles and the motorcycles with trailers/remorques must wear helmets.”

Penalties for breaking the helmet-wearing law are deemed “minor penalties” and are identified in Article 88, Minor Penalty #1b. There are two types of penalties given to a rider who is caught breaking this specific law:

- 1. Fine – 3,000 riels (.75 cents US):** If the fine is not paid within a 30-day period, the fine is doubled; within a 60-day period, the fine is tripled; and if the fine is not paid within 90-day period, the traffic police can lodge a complaint with the courts;
- 2. 1 point deducted from the driver’s license:** A driver’s license has a total of 12 points, once the total reaches zero through violations of traffic laws, the license is legally revoked. This scoring system is under the responsibility of the Ministry of Public Works and Transport.

3.2. Proposals to Change Legislation

The NRSC confirmed that there are currently no proposals to change the current legislation. The challenge rather is to begin implementation and enforcement of the existing Article 9 in the Land Traffic Law.

Objective 4: determine the helmet wearing enforcement policy, levels of enforcement and any key issues which affect enforcement levels

Currently, while the helmet law has been approved by the National Assembly in December 2006, there has yet to be implementation or enforcement by the traffic police on Cambodian roads.

Key constraints for future enforcement policy and implementation cited by stakeholders active in the road safety sector include:

- Lack of financial support or political will from the government;
- Lack of human resources in the NRSC and traffic police in terms of technical skills, qualification and number of staff;
- Enforcement of the helmet is new for all actors, with little experience to draw from;
- Other enforcement priorities for Traffic Police (ie. mirrors for motorbikes in Phnom Penh, vehicle registration)

³ Ministry of Public Works and Transport 2006

Objective 5: identify current examples of employers who have introduced regulations aimed at controlling the use of helmets by their staff

5.1. Internal Road Safety Regulations

In Cambodia, the primary advocate for instituting road safety regulations within organizations since 2005, including clear helmet-wearing guidelines, has been the Road Safety Network (RSN), led by Handicap International Belgium. To be a member of the RSN, each organization must implement an internal road safety policy ensuring:

- **Every employee wears a helmet while riding a motorbike and ensure the helmet is in good condition and secured properly to the chin;**
- Every employee wears a seatbelt while riding a car;
- All vehicles are safe;
- All drivers are properly trained and fully licensed;

As a result, **79 organizations** are currently implementing internal road safety policies.

Table 1: Number of organizations implementing road safety policies

Organization type	# organizations implementing internal road safety policy	Planned Objective
International and local NGOs	61	40
Private companies	12	5
Government departments	4	5
International organizations	2	8
TOTAL	79	58

The RSN allows each individual organization to decide the level of enforcement of the regulations. Purchasing of helmets for staff is also left to the discretion of the individual employer. However, HIB encourages members to institute a binding road safety policy for their organization.

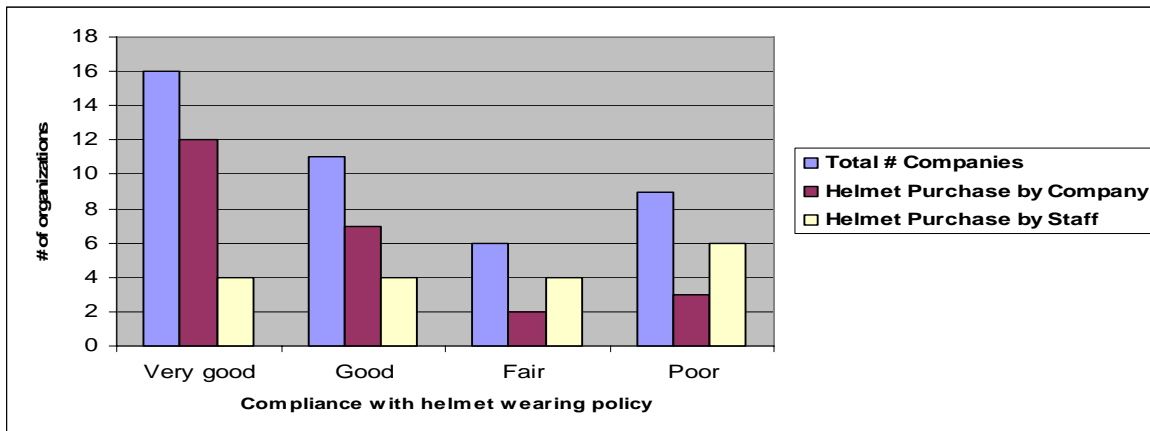
5.2. Impact of Internal Road Safety Regulations

In August 2006, HIB conducted an evaluation of 42 road safety network member organizations who have instituted road safety policies to gauge the level of compliance of the regulations, specifically on helmet use of staff.

The overall evaluation results demonstrated that 27 organizations (64%) are complying well with the helmet-wearing guidelines in the policy. However, 15 organizations (36%) have staff that are not meeting adequate implementation standards.

Interestingly, as the chart below demonstrates, a deeper analysis reveals that of the organizations who have instituted road safety policies, those that have purchased helmets for their staff have higher helmet wearing rates than those companies who request staff to purchase their own helmets.

Chart 1: Compliance on helmet wearing regulations against helmet purchasing policy



When asked by the evaluation team if instituting the road safety policy was difficult, 50% of organizations stated “yes”. Common reasons stated include:

- Difficulties in properly enforcing the regulations,
- staff cannot afford helmets,
- staff are not in the habit of wearing helmets or refuse to wear

Objective 6: determine helmet wearing levels (including proper versus improper wearing and standard versus non-standard helmets) for different groups of motorcyclists by key factors such as location and time of day

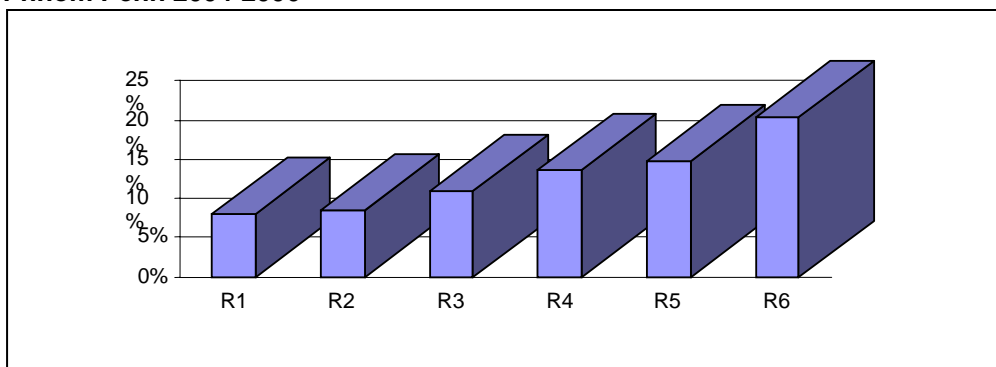
Two different surveys were conducted in the field to gather information for this objective: an observational survey and structured interviews.

- **Observational studies** have been conducted twice a year since 2004 (totaling six rounds to date) in Phnom Penh by the Preventative Medicine Department of the Ministry of Health to determine helmet wearing rates during busy/non-busy times in 20 locations around the municipality;
- **Structured interviews** were conducted by BN Consult to determine the level of proper versus improper use and standard versus non-standard, structured interviews. A sample size of 1450 motorcyclists, 36 helmet shopkeepers and 36 motorcycle retailer was chosen in Phnom Penh, Kandal and Battambang in March and April 2007.

6.1. Helmet Wearing Rates: Yearly and Time of Day

Since the launch of the observational studies in 2004, the mean average rate of helmet wearing in Phnom Penh has increased significantly by 11% from 10.4% in March 2004 to 21.4% in November 2006. The chart below highlights this increase:

Chart 2 : Mean average rate of helmet wearing among motorbike riders in Phnom Penh 2004-2006



When results are disaggregated to compare helmet usage between the morning (7:30-8:30am) and afternoon (16:30-17:30), data shows that wearing rates decrease in the afternoon time slot as compared to the morning. However, there has been little analysis as to the reasons for this disparity.

6.2. Helmet Wearing by Gender and Age

From the structured interview study by BN Consult in Phnom Penh, Kandal and Battambang, it was determined that:

- **Gender:** 78% of interviewees who wear a helmet are male and other 22% are female.
- **Age Groups:** 38% of 18-24, 50% of 25-44 year olds, and 9% of 45+ wear helmets

6.3. Helmet Wearing on National Roads

To gauge the impact of the ongoing helmet awareness campaigns (see Objective 10) in the provinces and along high –risks roads, HIB conducted a survey of 6,056 motorcycles in January 2005 along six national roads, each 10 kilometers away from Phnom Penh. The results showed that the helmet wearing rate was 16% on national roads, slightly higher than in Phnom Penh at the time (12-14%).

6.4. Improper versus proper, standard versus non-standard wearing rates

To determine the levels of improper and proper use⁴ of helmets when driving on the road, BN consulting sampled a total of 725 riders who were wearing helmets in the urban areas of Phnom Penh, Kandal and Battambang. The results are below:

Table 2: proper versus improper use of helmets by motorcyclists (BN Consult 2007)

Evaluation	Frequency	Percentage
Wearing improperly (less than five criteria)	292	40.28
Wear properly (five criteria)	400	55.17
Wearing without any proper criteria (none of five)	33	4.55
Total	725	100.00

⁴ There are five criteria used by the researcher for determining proper and improper helmet use 1) helmet balances on head; 2) helmet straps are equal to two ears; 3) helmet straps are not twisted; 4) locked buckle fits under chin; 5) helmet does not move as shaking head;

The table demonstrates that while **the majority is using helmets properly (55%), a large percentage of the sample (45%) are improperly wearing helmets.**

In terms of standard versus non standard helmets, Cambodia currently has not set a helmet standard. From this study however, follow-up questions on helmet standards and quality revealed interesting qualitative data from respondents:

- Reasons motorcyclist chose their preferred brand was quality (26%), design (22%), price (18%)
- Only 22% percent of respondents answered that they knew the characteristics of a standards helmet;
- When asked if their helmets have an approval mark or quality stamp: yes (26%), no (43%), do not care (30%);
- 98% stated that it is important to wear a standard helmet

Objective 7: determine motorcyclist (male/female, young/old) attitudes towards helmets and their reasons for wearing and not wearing standard helmets

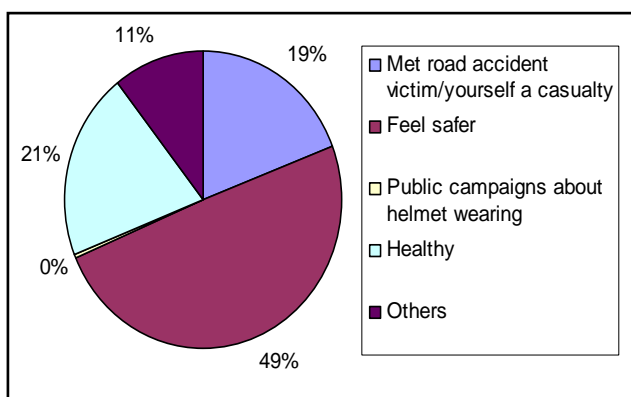
The same survey conducted by BN Consult was used for data against this objective

7.1. Reasons for Wearing and Not Wearing Helmets

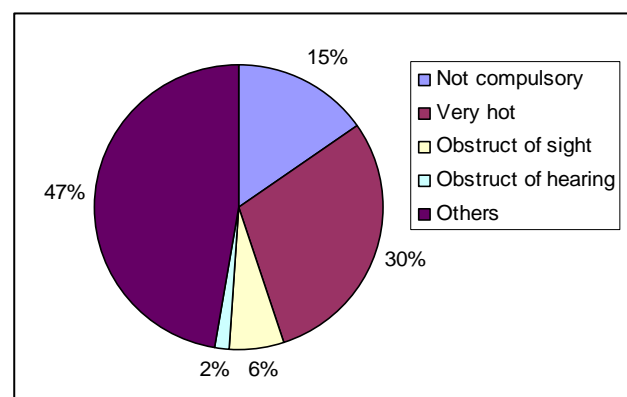
The survey results showed that the majority of motorcycle riders, when interviewed, stated they always wear a helmet (45%), sometimes (24%) and never (31%).

When asked the reasons why their wear a helmet or why they do not wear helmets, results varies as the chart below demonstrates:

Chart 3: Reasons for wearing helmets



Reasons for not wearing helmets



It is interesting to note that only 0.3% of respondents answered that publicity campaigns on helmet wearing convinced them to wear helmets. These results reinforce the need to study in greater depth the link between the increase in helmet use and effectiveness of the publicity campaigns.

7.2. Awareness of the Land Traffic Law, Helmet Regulations and Penalties

The survey showed that awareness of the Land Traffic Law, which went into force in March 2007, was low. **Only 26% of respondents were aware of the law;** although 94% stated that this law is important as it can contribute to reducing accident rates in Cambodia.

Other interesting statistics include:

- The main factors highlighted for the success of the law were community participation and dissemination of the law;
- 97% of respondents believed that helmet laws would be included in the Land Law;
- More than half (55%) did not know the penalties for breaking the law and 33% stated that fines would be the agreed penalty;
- 96% agreed that the helmets law is a positive step towards reducing head injuries during accidents, and 98% stated that they will follow the new helmet law

Objective 8: determine numbers of motorcycle crashes and casualties by severity in 2006 and provide an estimate of number of head injuries from existing data sources

The primary source for data against this objective was a review and analysis of the Road Traffic Accident and Victim Information System (RTAVIS) annual reports in 2005 and 2006. RTAVIS aims to provide government and development stakeholders in Cambodia with accurate, continuous and comprehensive information on road traffic accidents and victims in Cambodia.

8.1. Motorcycle Crashes and Casualty by Severity Data

According to RTAVIS data, the number of road traffic accidents and casualties has increased significantly in the past three years. It is important to note, however, that RTAVIS began covering the entire 24 provinces in 2005. This larger scope can in part be attributed to the significant jumps in the table below:

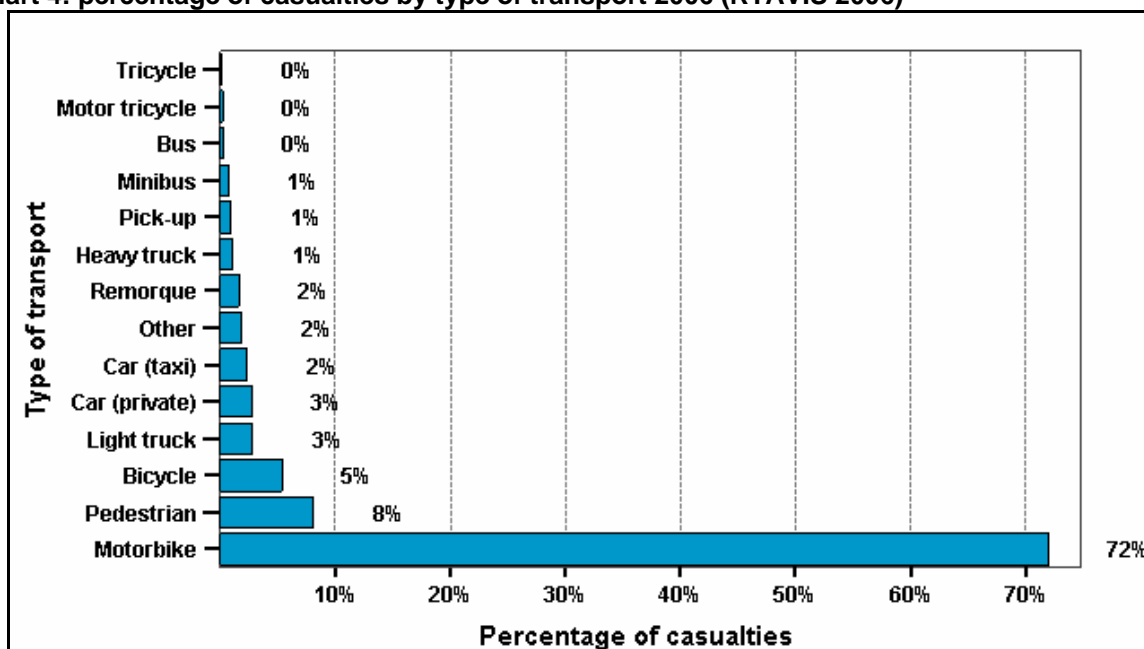
Table 3: statistics on total RTAs, casualties and fatalities in Cambodia 2004-2006⁵

Year	RTAs	Casualties	Fatalities	Deaths per 100,000 inhabitants	Deaths per 10,000 vehicles
2004	4,255	6,925	1,042	7.7	21.5
2005	6,301	15,943	904	6.5	15.7
2006	9,338	26,146	1,292	9.2	18.1

Motorcycle crashes and casualties represent an alarmingly high percentage of overall accidents and casualties in Cambodia. As the chart below highlights, out of 9,338 total road accidents in 2006, **70% (6,537) involved motorcycles and out of 26,146 total casualties, more than 70% (18,351) were motorcyclists.**

⁵ RTAVIS only began covering all 24 Cambodia provinces in 2005, therefore national data on the fatality in 2004 and 2005 are based from traffic police data only.

Chart 4: percentage of casualties by type of transport 2006 (RTAVIS 2006)



In terms of the breakdown of motorcycle casualties by severity, RTAVIS data for 2006 is included in the table below:

Total # of motorbike casualties	18,351
Total # and % of motorbike casualties between ages of 15-24	7,438 (40%)
Total # and % of casualties wearing helmet	660 (3%)
Total # of superficial injuries	6,496
Total # of moderate injuries (requiring sutures)	5,858
Total # of severe injuries (requiring surgery or intensive care)	4,110
Total # and % of head injuries	6,956 (38%)
Total # and % of fatalities	749 (4%)

8.2. Head Injury Data

RTAVIS reports that **38% of motorcyclist suffered from head injuries** in road accidents in 2006. The vast majority of the casualties with head injuries were motorcyclists who do not wear helmets. The table below provides a breakdown by severity:

Table 5: Motorcyclists with head and facial injuries by helmet wearing and severity in 2006 (RTAVIS)

Severity	Helmet		No Helmet		Unknown		Total	
	cases	%	Cases	%	Cases	%	Cases	%
Superficial	69	38	1847	28	70	52	1987	28
Moderate	49	27	2953	44	38	28	3042	44
Severe	57	31	1522	23	17	13	1596	23
Fatalities	2	1	128	2	0	0	130	2

Unknown	5	3	183	3	10	7	201	3
Total	182	100	6633	100	135	100	6956	100

From the data provided above, it is immediately apparent that **95% of head injury casualties** in all categories and fatalities were not wearing helmets. These sobering statistics drive home the critical need to begin enforcement of the helmet laws and greater awareness raising on the life-saving potential of wearing helmets.

Objective 9: Determine numbers of motorcycles in use and their annual growth

Motorcycle users are the most vulnerable road users in Cambodia, composing 70% of both RTAs and casualties rates in 2006. These high rates parallel the high growth rate and overall number of motorcycles since 2000, as demonstrated in the table below:

Table 6: Total number of motorcycles and annual growth rate 1998-2006 (MPW 2006)

Year	2000	2001	2002	2003	2004	2005	2006
# Motorcycles	247,965	291,655	308,611	336,502	359,166	429,689	541,146
annual % growth	10%	15%	5.5%	8%	6%	17%	21%

A further analysis is required as to the specific reasons why there has been a large increase in the annual growth rate since 2005. However, this data is consistent with the fact Cambodia is at the bottom of its motorization curve, with most analysts stating that growth rate in all types of road vehicles to significantly increase over the next five years⁶.

Objective 10: Identify any initiatives and campaigns to improve the proper usage of standard helmets in 2006 including the scope and cost of the initiatives, the agencies responsible and the impact if known

10.1. Road Safety Campaigns

A key component of the NRSC Action Plan 2006-2010 is road safety publicity campaigns (Action # 12). The campaigns organized since 2004 by various stakeholders including HIB, NSRC, Ministries of Health, Public Works and Transport, Education, and WHO, JICA, Coalition for Road Safety (CRY), Development Appropriate Technology (DATE) and Cambodia Red Cross are aligned with the NSRC action plan, targeting the most vulnerable road users – motorcyclists – by campaigning for the importance of helmet wearing.

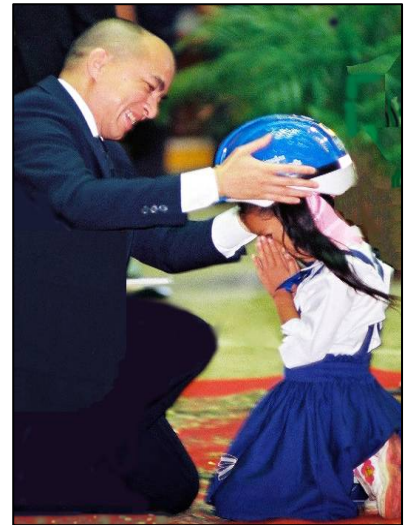
Campaigns can be divided into six categories:

- 1. TV and Radio Spots in 2004-2007:** (organized by HIB, in collaboration with the Ministry of Health, the World Health Organization and UNICEF) focused on specific target groups with key messages including *“Always use a helmet even if you drive slowly and on a short distance”* (young parents with children), *“Even an action and risk-taking guy like Jackie Chan wears a helmet when he drives a motorbike”* (high school and university students), *“I am not stupid to take the helmet off”* (general public). Radio spots were also broadcast by HIB in 2004, targeting youth and the general public;

⁶ Asia Development Bank, *“Road Accident Cost in Cambodia”* Final Report 2004

2. **Helmet distribution ceremony:** In December 2004, HIB distributed 1,500 helmets to children and their teachers from three schools in Phnom Penh during a ceremony chaired by his Majesty Norodom Sihamoni, King of Cambodia with 8,000 participants. In addition, since 2005, another 1,000 helmets have been distributed during other awareness campaigns around the country;
3. **Posters/sticker/leaflet distribution:** HIB and CRC have produced and displayed/distributed thousands of posters, stickers and leaflets aimed at increasing the use of helmet and improving knowledge of basic traffic rules;
4. **Community based awareness activities:** Since 2005, HIB has cooperated with **two local NGOs** (DATE and CRY) to conduct community-based education projects along National Road 5 in Kampong Chhnang province and in Phnom Penh. These activities include public awareness campaigns and student forums in high schools and universities.

The Cambodia Red Cross has also been actively involved in campaigns through their Red Cross Youth network, organized in Phnom Penh and Battambang town since 2004 to raise awareness on general road safety messages and helmet wearing. Leaflets, posters, CDs with road safety songs have been produced and distributed during the campaigns.



His Majesty King Sihamoni giving a helmet to a primary school student

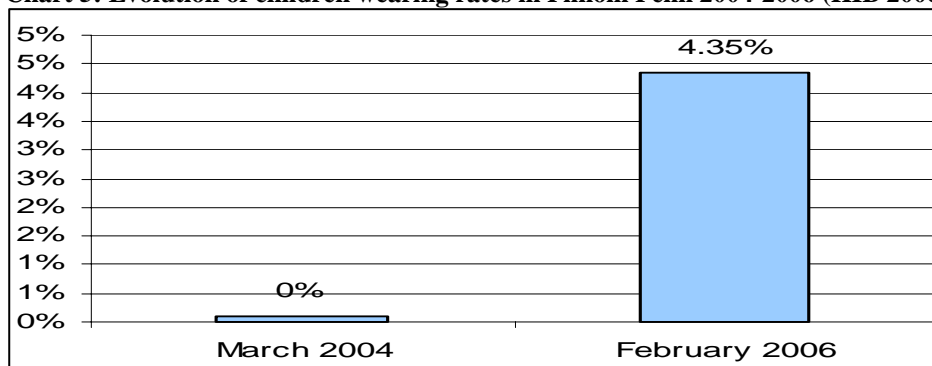
5. **Awareness events:** Major public holidays, which tend to witness a surge in accidents and casualties, such as the Water Festival and Khmer New Year have been targeted as appropriate opportunities to conduct awareness raising campaigns on road safety issues, such as drunk-driving. These events are typically jointly organized by all stakeholders active in the sector through the road safety network structure. **World Day of Remembrance for Accident Victims** was also commemorated in November 2006 attended by over 700 participants.
6. **Road Safety Education:** HIB, in collaboration with the Ministry of Education, Youth and Sports (MoEYS), developed a new road safety curriculum for primary school pupils from grade 1 to grade 6 (age 6 to 12), approved by the ministry in June 2005. It will form part of Local Life Skills Program of the national curriculum. A curriculum for the lower secondary school has been introduced in March 2007, in partnership with the MoEYS and Educating New Zealand. **The Cambodia Red Cross** has also focused on road safety education in schools in Phnom Penh and Battambang since 2004. Workshops and camps are conducted for students focusing on the traffic laws, road safety habits, first aid training, and peer education. Helmets are distributed to students at the end of the events. The project will expand to Kompong Speu province in 2007.

10.2. Impact of Awareness Campaigns

The impact of the helmet campaigns since 2004 in both the urban context and along the national roads has been detailed in objective six. However, it is important to mention here results of a survey conducted by HIB on impact of helmet wearing among children. Six elementary schools were selected for the survey. They are located along the main roads in Phnom Penh and all have implemented the road safety curriculum since November 2005.

Results showed that the average wearing rate among children was 4.35%. This percentage is low compared to the adult wearing rate of 15.3% in Phnom Penh, but in 2004 the percentage of children wearing a helmet was 0%.

Chart 5: Evolution of children wearing rates in Phnom Penh 2004-2006 (HIB 2006)



Objective 11: identify manufacturers and retailers if any who regularly provide a standards approved helmet with the cost of new motorcycles sold and determine the percentage of new motorbikes sold with one/two helmet included in the price

Retailers (helmet shops, small businesses) were identified as the preferred choice for purchasing helmets in Cambodia. However, Cambodia does not manufacture their own helmets and therefore imports all helmets.

Furthermore, there is no defined standard helmet, thus retailers rely on the tests performed by the manufacturer in the country of origin. From the survey conducted on motorcycle retailers, the below motorcycle brands sold in Cambodia provide helmets with purchase of a new motorcycle:

- 1) HONDA, 2) RAMBO, 3) SPIDER, 4) VIVA, 5) WAVE, 6) SUZUKI, 7) OMC -

Only new motorcycle retailers include helmets with the purchase of a motorcycle, none of the second hand motorcycle shops surveyed provide a helmet with the customer’s purchase.

The study was not able to obtain data on the percentage of new motorbikes sold with helmets included in the price. Additionally, further analysis will be required to determine if any of these retailers are providing helmets that meet satisfactory “international standards”.

Objective 12: determine the standards approved helmet brands and types in common use and their relative costs

During the interviews conducted by BN Consult on road safety attitudes, motorcycle riders who wore helmets were asked an additional question concerning helmet brand they purchased. The results of identifying the most popular brand names are provided below:

Table 7: Most popular brand by number users and pricing (BN Consult 2007)

Brand name	Number Users	Average price (In USD)
INDEX	283	14.32
SPACE CROWN	242	14.02
CARTING	146	14.13
ZEUS	42	10.20

LUCKY	12	12.25
ASIA	5	29.95
PROTEC	1	15.00
other	81	11.13
Total	812	13.44

The study did not determine if any of these helmet brands meet international standards and national standards do not exist yet.

Referring to most popular types of helmets, the same survey of motorcyclists shows that:

- **68% prefer full face helmets;**
- **24% open face helmets;**
- **7% half face helmets**

Objective 13: identify the 3 most commonly used standards approved helmets for GRSP to purchase for subsequent laboratory testing

Survey results show that the following three helmets brands should be purchased by GRSP for further testing and analysis, as they represent the highest percentage of usage among Cambodian motorcycle riders.

Brand	Percentage Usage	Price (USD)
1. Index	29%	14.32
2. Space Crown	25%	14.02
3. Carting	15%	14.13

3. Conclusion and Recommendations

The number of motorcycles in Cambodia has been rising significantly over the past five years. This increase is paralleled with greater numbers of road accidents, casualties, head injuries, and fatalities involving motorcycles. Furthermore, it is the youth of Cambodia which are most severely affected by this crisis.

There has been good progress made since 2004, with several local and international organizations becoming active in the road safety sector, implementing awareness raising campaigns, school-based education and advocacy on the helmet issue. The creation of the National Road Safety Committee and the adoption of the new Land Traffic Law in 2006 are significant milestones, demonstrating the government's commitment to prioritizing the road traffic and safety issue.

However, this study has shown that there remains tremendous work and challenges to tackling the helmet issue. It is recommended that priorities should include setting a national standard for helmet, and producing guidelines for import officials when inspecting helmet shipments. Support to quality control could be established in the form of a monitoring body to protect riders who buy helmets, and mechanisms and incentives should be put in place to ensure that retailers are only selling standard-approved helmets.

Implementation of the Road Traffic Law, in particular the helmet wearing regulations and fines, is critical. Without sustained enforcement, positive impact in terms of helmet wearing increase and reduction of casualties will not be achievable. Specific focus and technical resources should be given to the National Road Safety Committee and relevant ministries to adequately begin planning and implementing this crucial law.

To have an impact in the long term, road safety education is key. There is good progress with the integration of road safety curriculum into the life skills programme in primary and secondary schools. This curriculum should be expanded all grades, particularly targeting those vulnerable groups of youth. Awareness-raising has been the primary means of disseminating the road safety messages since 2004 in Cambodia, however, their effectiveness should be evaluated and approaches shifted, if necessary, to reflect the changing road traffic patterns and situations.

Finally, a realistic, clear and motivating action plan which draws on the resources and skills of all road safety stakeholders in Cambodia must be drafted in order to systematically address the growing crisis of road accidents and casualties.