

# Cambodia

## Road Traffic Accident and Victim Information System



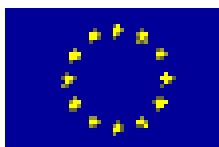
### Monthly Report March 2008



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European Union



Belgian Cooperation



World Health Organization



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# Cambodia Road Traffic Accident and Victim Information System Monthly Report – March 2008

## I. Introduction

The **objective** of the Road Traffic Accident and Victim Information System (RTAVIS) is to provide government and development stakeholders in Cambodia with accurate, continuous and comprehensive information on **road traffic accidents and victims**.

It should allow them to better understand the current road safety situation, plan appropriate responses and evaluate impact of current and future initiatives.

The system is being developed by the Ministry of Public Works and Transport, the Ministry of Interior and the Ministry of Health, with the support of Handicap International.

In Siem Reap, Otdar Mean Chey and Kampong Cham provinces, the system is also supported by the Belgian Technical Cooperation.

The system is run based on data collection forms filled in by trained staff at **major hospitals, private clinics and traffic police**.

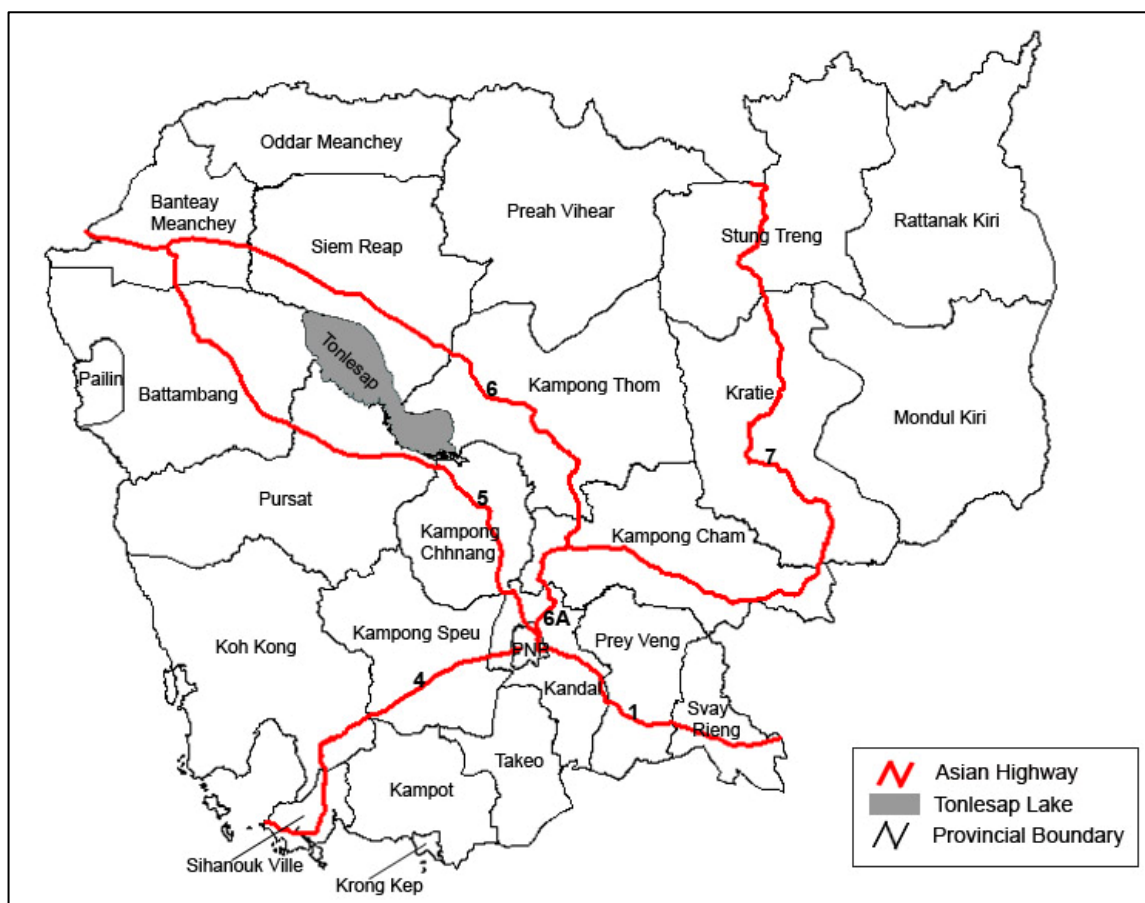
RTAVIS reports are **distributed monthly**. RTAVIS reports can also be found on the following websites: [www.roadsafetycambodia.info](http://www.roadsafetycambodia.info) and [www.cnctp.info](http://www.cnctp.info)

### **Notice:**

This monthly report is a snapshot of the situation at a particular time of the year. More analysis is provided in the annual report. The annual report 2007 has released in June 2008. The annual report 2008 will be released in April 2009.

## II. System Coverage

RTAVIS covers the whole country. The map here below illustrates the Asian Highway (national road 1, 4, 5, 6, 6A and 7). The analysis of the number of fatalities is shown in the executive summary.



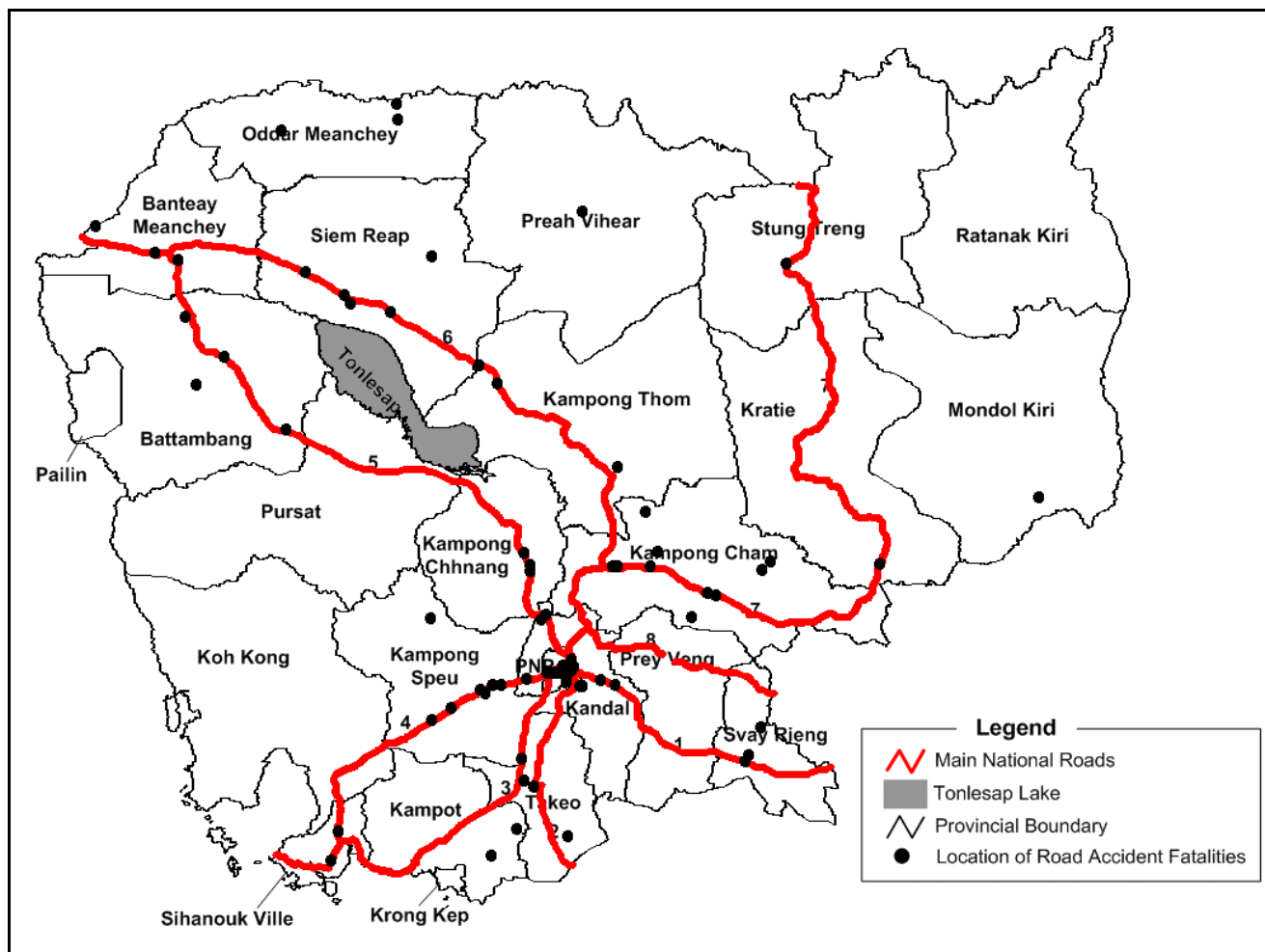
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### III. System Update

#### Introduction of GPS

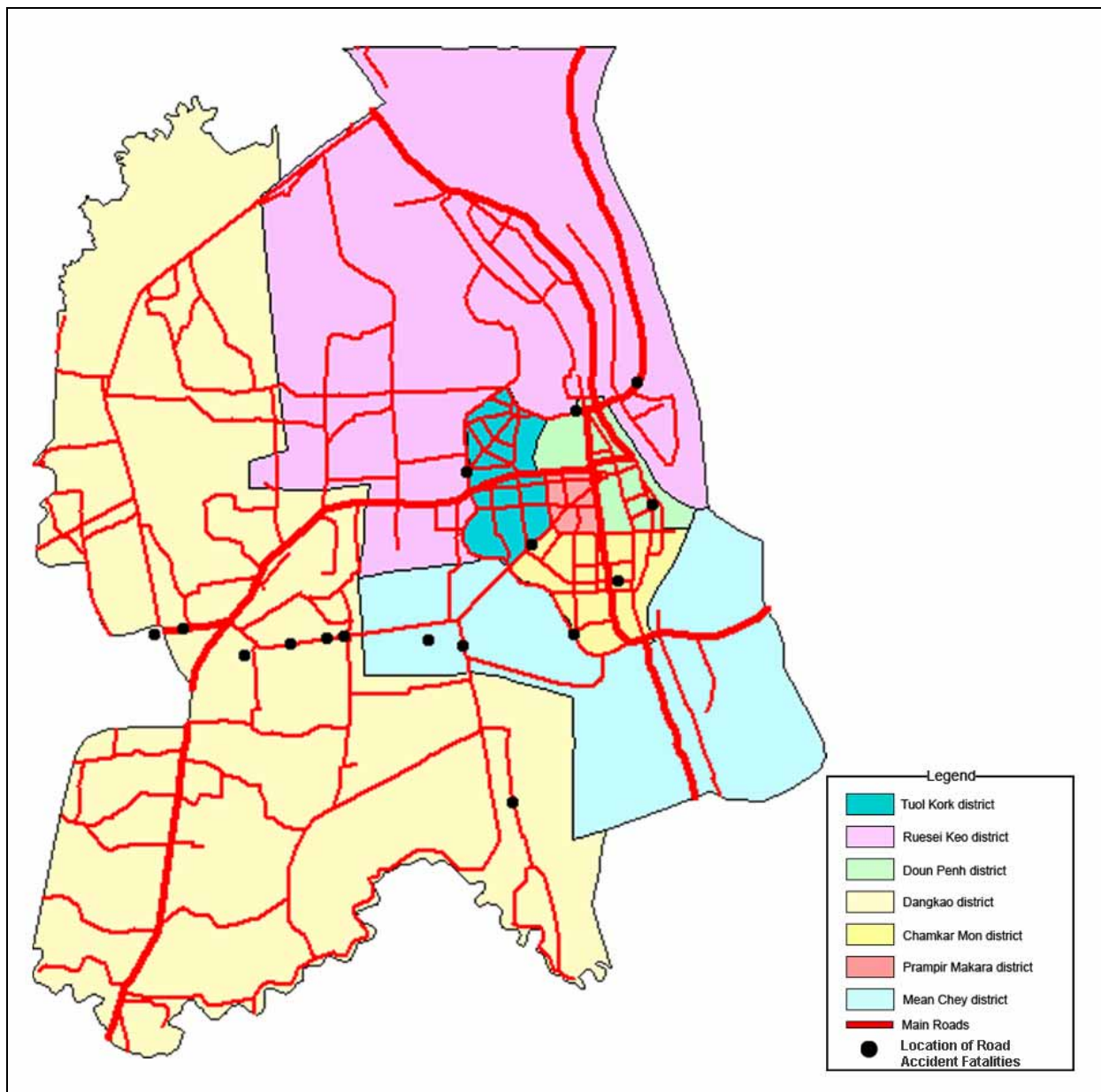
From July 2006, Global Position System (GPS) devices have been introduced to the traffic police in Russei Keo District in Phnom Penh. The GPS coordinates allow us now to exactly locate accidents, using GIS data. GPS devices have been progressively introduced to other districts of Phnom Penh and provinces crossed by major national roads from August 2007. On the medium term, this will enable RTAVIS to identify blackspots of the Cambodian Road Network.

The chart below shows locations of road accident fatalities in many provinces in **March 2008**.



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The chart shows the locations of road accident fatalities in Phnom Penh in **March 2008**.



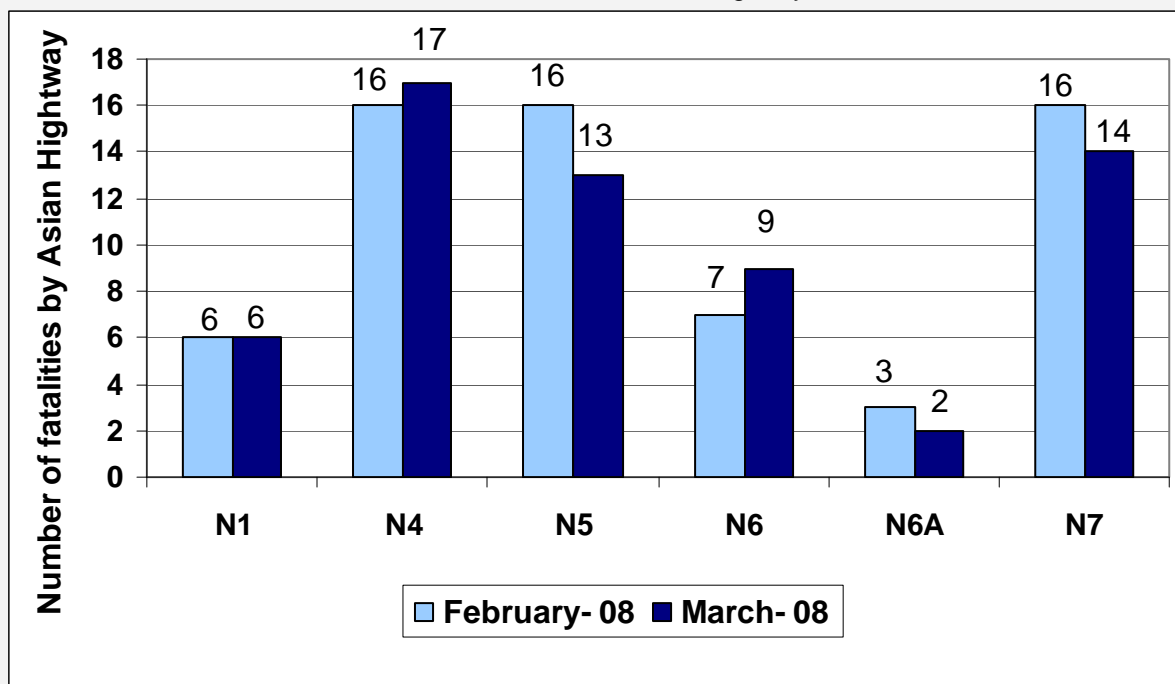
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**IV. Executive Summary**

Key findings for the month of **March 2008** are the following:

- A provisional number of **1,941 casualties** were reported by the participating hospitals, health centres, private clinics and traffic police departments in the 24 reporting provinces. Among them, **551 were severely injured and 130 died. The number of fatalities has increased by 23% compared to March 2007.**
- **In Phnom Penh, 466 casualties** were reported, corresponding to **2% increase compared to March 2007** and **1% decrease** compared to the previous month. Among them, **19 died.**
- In Phnom Penh, Dangkao district is the most deadly.
- **Motorbike-4 wheeler collisions** were responsible for **31% of the fatalities**, while **Motorbike-motorbike collisions** were responsible for 17%.
- Pedestrians were the second most affected group of road users. **Pedestrians aged between 5-9 years old represented the highest percentage of casualties (33%) and fatalities (25%).** Pedestrians aged more than 54 years old represented 21% of fatalities, while they represent only 11% of total casualties. It is interesting to note that **pedestrians were killed by 4 wheel vehicles (64%),** more than by motorbikes (28%).

Number of fatalities on Asian Highways



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**V. Evolution of Main Indicators**

|   | Oct-07             | Nov-07             | Dec-07             | Jan-08             | Feb-08             | Mar-08             |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Number of casualties reported to RTAVIS</b>  | 2,516              | 2,455              | 2,239              | 2,299              | 2,011              | 1,941              |
| <b>Gender</b>   |                    |                    |                    |                    |                    |                    |
| Percentage of males casualties  | 73%                | 71%                | 74%                | 73%                | 74%                | 75%                |
| <b>Age</b>  |                    |                    |                    |                    |                    |                    |
| Percentage of casualties aged between 15 and 24 years old                                 | 31%                | 31%                | 29%                | 28%                | 33%                | 28%                |
| <b>Type of road user</b>  |                    |                    |                    |                    |                    |                    |
| Percentage of motorbike riders  | 76%                | 75%                | 75%                | 74%                | 78%                | 75%                |
| Percentage of pedestrians   | 7%                 | 8%                 | 7%                 | 7%                 | 7%                 | 8%                 |
| Percentage of car riders (private and taxis)  | 6%                 | 5%                 | 6%                 | 6%                 | 4%                 | 5%                 |
| Percentage of bicycle riders  | 5%                 | 4%                 | 4%                 | 4%                 | 4%                 | 4%                 |
| <b>Occupation</b>   |                    |                    |                    |                    |                    |                    |
| Percentage of students  | 22%                | 24%                | 25%                | 21%                | 24%                | 23%                |
| Percentage of farmers   | 28%                | 25%                | 24%                | 29%                | 25%                | 25%                |
| Percentage of workers   | 18%                | 19%                | 22%                | 21%                | 22%                | 21%                |
| Percentage of house keepers   | 7%                 | 6%                 | 6%                 | 6%                 | 5%                 | 5%                 |
| Percentage of vendors/small businesses owners   | 5%                 | 5%                 | 5%                 | 4%                 | 5%                 | 6%                 |
| Percentage of motorbike taxis   | 3%                 | 4%                 | 4%                 | 4%                 | 3%                 | 4%                 |
| <b>Residence of casualty</b>  |                    |                    |                    |                    |                    |                    |
| Percentage of casualties residing in another province than the province of accident       | 16%                | 19%                | 16%                | 15%                | 17%                | 17%                |
| <b>Severity of injuries:</b>  |                    |                    |                    |                    |                    |                    |
| Percentage of severely injured casualties (requiring surgical intervention of ICU)        | 28%<br>(695 cases) | 28%<br>(678 cases) | 28%<br>(618 cases) | 30%<br>(689 cases) | 24%<br>(485 cases) | 28%<br>(551 cases) |
| Percentage of deaths  | 6%<br>(152 cases)  | 6%<br>(144 cases)  | 6%<br>(128 cases)  | 6%<br>(145 cases)  | 7%<br>(148 cases)  | 7%<br>(130 cases)  |
| <b>Nature of injuries:</b>  |                    |                    |                    |                    |                    |                    |
| Percentage of casualties suffering from cranial trauma                                    | 44%                | 40%                | 51%                | 49%                | 47%                | 49%                |
| Percentage of them being considered as severe (coma)                                      | 10%                | 7%                 | 4%                 | 8%                 | 7%                 | 9%                 |
| Percentage of casualties suffering from fracture  | 16%                | 20%                | 20%                | 23%                | 19%                | 20%                |
| Percentage of casualties having wounds/cuts   | 51%                | 54%                | 53%                | 50%                | 56%                | 52%                |
| <b>Day of accident:</b>   |                    |                    |                    |                    |                    |                    |
| Percentage of casualties injured during the weekend (from Friday 6 pm to Sunday midnight) | 27%                | 40%                | 37%                | 35%                | 33%                | 37%                |
| <b>Time of accident:</b>  |                    |                    |                    |                    |                    |                    |
| Percentage of casualties injured during nighttime (from 6 pm to 5.59 am)                  | 26%                | 33%                | 30%                | 31%                | 32%                | 35%                |
| Peak(s) of casualties   | 3pm-4pm            | 6pm-7pm            | 6pm-7pm            | 5pm-6pm            | 7pm-8pm            | 5pm-6pm            |
| <b>Cause of accident</b>  |                    |                    |                    |                    |                    |                    |
| Percentage of casualties injured in accidents due to human error                          | 96%                | 96%                | 97%                | 97%                | 97%                | 97%                |
| High speed  | 45%                | 52%                | 54%                | 49%                | 52%                | 50%                |
| Alcohol abuse   | 14%                | 14%                | 12%                | 13%                | 14%                | 15%                |
| Non respect of rights of way rules  | 11%                | 8%                 | 7%                 | 9%                 | 9%                 | 9%                 |
| Changing lane without due care  | 6%                 | 5%                 | 5%                 | 6%                 | 6%                 | 6%                 |
| Dangerous overtaking  | 13%                | 11%                | 13%                | 14%                | 9%                 | 12%                |
| Driving against flow of traffic   | 3%                 | 3%                 | 3%                 | 3%                 | 4%                 | 2%                 |
| Other   | 4%                 | 3%                 | 3%                 | 3%                 | 3%                 | 3%                 |
| Percentage of casualties injured in accidents due to road conditions                      | 9%                 | 10%                | 12%                | 15%                | 6%                 | 10%                |
| Percentage of casualties injured in accidents due to weather conditions                   | 3%                 | 0%                 | 0%                 | 0%                 | 0%                 | 0%                 |
| Percentage of casualties injured in accidents due to vehicle defect                       | 3%                 | 3%                 | 1%                 | 2%                 | 1%                 | 2%                 |



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|  | Oct-07          | Nov-07          | Dec-07          | Jan-08          | Feb-08          | Mar-08          |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| <b>Type of accident:</b>   |                 |                 |                 |                 |                 |                 |
| Percentage of casualties injured in motorbike-motorbike collisions   | 45%             | 45%             | 44%             | 39%             | 43%             | <b>40%</b>      |
| Percentage of casualties injured in motorbike-4 wheeler collisions   | 16%             | 17%             | 20%             | 18%             | 18%             | <b>20%</b>      |
| Percentage of casualties injured in motorbike-pedestrian collisions  | 7%              | 8%              | 7%              | 7%              | 9%              | <b>7%</b>       |
| Percentage of motorbike casualties who fell alone  | 6%              | 6%              | 6%              | 8%              | 7%              | <b>8%</b>       |
| <b>Average number of people injured per accident</b>   | <b>3</b>        | <b>3.2</b>      | <b>2.6</b>      | <b>2.5</b>      | <b>2.4</b>      | <b>2.1</b>      |
| <b>Hit and Run</b>   |                 |                 |                 |                 |                 |                 |
| Percentage of casualties injured in accidents where the driver of the vehicle causing the accidents escaped after the accident | 23%             | 22%             | 23%             | 19%             | 21%             | <b>22%</b>      |
| <b>Estimation of average vehicle damage cost</b>   | <b>160 US\$</b> | <b>166 US\$</b> | <b>190 US\$</b> | <b>220 US\$</b> | <b>148 US\$</b> | <b>216 US\$</b> |
| <b>Percentage of four-wheeled vehicles with</b>  |                 |                 |                 |                 |                 |                 |
| Left-hand-drive  | 74%             | 70%             | 70%             | 68%             | 75%             | <b>78%</b>      |
| Right-hand-drive   | 26%             | 30%             | 30%             | 32%             | 25%             | <b>28%</b>      |
| <b>Location of accident:</b>   |                 |                 |                 |                 |                 |                 |
| Percentage of casualties injured in urban areas  | 41%             | 50%             | 44%             | 42%             | 44%             | <b>42%</b>      |
| Percentage of casualties injured in accidents occurring on national roads  | 58%             | 54%             | 55%             | 53%             | 56%             | <b>55%</b>      |
| Percentage of casualties injured in accidents occurring on provincial roads  | 6%              | 4%              | 5%              | 10%             | 9%              | <b>6%</b>       |
| Percentage of casualties injured in accidents occurring on paved roads   | 79%             | 79%             | 76%             | 76%             | 80%             | <b>76%</b>      |
| <b>Characteristics of location:</b>  |                 |                 |                 |                 |                 |                 |
| Percentage of casualties injured in accidents occurring on straight roads  | 78%             | 80%             | 83%             | 80%             | 77%             | <b>79%</b>      |
| Percentage of casualties injured in junctions (X, T, Y-junctions and roundabout)   | 12%             | 8%              | 9%              | 9%              | 14%             | <b>11%</b>      |
| Percentage of casualties injured in curves   | 10%             | 12%             | 7%              | 9%              | 9%              | <b>10%</b>      |
| <b>Safety Measures:</b>  |                 |                 |                 |                 |                 |                 |
| Percentage of car/truck/bus drivers having a driving licence   | 50%             | 55%             | 50%             | 46%             | 41%             | <b>41%</b>      |
| Percentage of motorbikes' casualties wearing a helmet  | 3%              | 7%              | 4%              | 6%              | 10%             | <b>7%</b>       |
| <b>Time to be transferred to hospitals:</b>  |                 |                 |                 |                 |                 |                 |
| Percentage of casualties arriving at hospitals between 10 and 30 minutes after the accident                                    | 39%             | 36%             | 30%             | 34%             | 32%             | <b>35%</b>      |
| Percentage of casualties arriving at hospital more than 2 hours after the accident   | 33%             | 33%             | 39%             | 37%             | 36%             | <b>34%</b>      |
| <b>Way to be transferred to hospitals:</b>   |                 |                 |                 |                 |                 |                 |
| Percentage of casualties transported by ambulance  | 34%             | 31%             | 43%             | 34%             | 27%             | <b>30%</b>      |
| Percentage of casualties transported to the hospital by their family or relatives  | 59%             | 61%             | 53%             | 58%             | 68%             | <b>65%</b>      |
| Percentage of casualties arriving alone at the hospital  | 7%              | 8%              | 4%              | 8%              | 5%              | <b>5%</b>       |
| <b>Estimation of average cost of treatment</b>   | <b>146 US\$</b> | <b>173 US\$</b> | <b>185 US\$</b> | <b>170 US\$</b> | <b>260 US\$</b> | <b>176 US\$</b> |
| <b>Attendance of police:</b>   |                 |                 |                 |                 |                 |                 |
| Percentage of cases where police was present on the accident site  | 73%             | 64%             | 69%             | 70%             | 72%             | <b>66%</b>      |



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**VI. Data by Provinces**

|   | Oct-07     |            | Nov-07     |            | Dec-07     |            | Jan-08     |            | Feb-08     |            | Mar-08     |            |
|---|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Number of casualties reported to RTAVIS all provinces | 2,516      |            | 2,455      |            | 2,239      |            | 2,299      |            | 2,011      |            | 1,941      |            |
| Severity of injuries                                  | Severe     | Death      | Severe     | Death      | Severe     | Death      | Severe     | Death      | Severe     | Death      | Severe     | Death      |
| Banteay Meanchey                                      | 9          | 3          | 21         | 2          | 21         | 9          | 19         | 7          | 22         | 5          | 22         | 5          |
| Battambang  | 31         | 7          | 29         | 3          | 22         | 5          | 55         | 8          | 32         | 7          | 27         | 6          |
| Kampong Cham  | 49         | 17         | 79         | 37         | 58         | 21         | 58         | 18         | 53         | 22         | 57         | 20         |
| Kampong Chhnang                                       | 20         | 7          | 19         | 6          | 30         | 3          | 16         | 6          | 7          | 6          | 12         | 6          |
| Kampong Speu  | 17         | 3          | 15         | 5          | 15         | 3          | 37         | 7          | 25         | 12         | 18         | 10         |
| Kampong Thom  | 36         | 14         | 32         | 10         | 35         | 6          | 31         | 5          | 4          | 0          | 22         | 5          |
| Kampot  | 24         | 2          | 15         | 2          | 7          | 4          | 7          | 1          | 21         | 2          | 3          | 2          |
| Kandal  | 65         | 14         | 62         | 14         | 70         | 6          | 77         | 18         | 74         | 14         | 63         | 18         |
| Koh Kong  | 9          | 3          | 4          | 1          | 9          | 3          | 7          | 2          | 3          | 0          | 4          | 0          |
| Kratie  | 34         | 2          | 31         | 7          | 15         | 3          | 16         | 3          | 17         | 8          | 31         | 5          |
| Mondol Kiri   | 7          | 1          | 4          | 1          | 5          | 1          | 2          | 2          | 6          | 3          | 8          | 2          |
| Phnom Penh  | 101        | 29         | 173        | 21         | 121        | 18         | 101        | 18         | 96         | 28         | 111        | 19         |
| Preah Vihear  | 4          | 1          | 3          | 3          | 1          | 0          | 8          | 1          | 8          | 1          | 4          | 1          |
| Prey Veng   | 54         | 2          | 8          | 2          | 25         | 5          | 13         | 7          | 19         | 8          | 12         | 2          |
| Pursat  | 30         | 8          | 27         | 13         | 22         | 1          | 12         | 6          | 10         | 4          | 11         | 0          |
| Ratanak Kiri  | 8          | 0          | 8          | 1          | 4          | 6          | NYA        | NYA        | 1          | 0          | NYA        | NYA        |
| Siem Reap   | 86         | 10         | 70         | 7          | 82         | 7          | 129        | 7          | 16         | 8          | 97         | 7          |
| Sihanoukville   | 18         | 3          | 14         | 1          | 18         | 5          | 26         | 10         | 12         | 3          | 10         | 2          |
| Stung Treng   | 9          | 0          | 3          | 1          | 10         | 0          | 10         | 1          | 10         | 2          | 3          | 1          |
| Svay Rieng  | 11         | 10         | 11         | 3          | 10         | 2          | 18         | 5          | 13         | 1          | 13         | 7          |
| Takeo   | 28         | 12         | 22         | 2          | 22         | 15         | 24         | 5          | 26         | 6          | 11         | 6          |
| Otdar Meanchey  | 35         | 2          | 20         | 0          | 10         | 2          | 7          | 6          | 8          | 7          | 5          | 6          |
| Krong Keb   | 1          | 1          | 0          | 0          | 1          | 0          | 6          | 0          | NYA        | NYA        | NYA        | NYA        |
| Krong Pailin  | 8          | 1          | 7          | 2          | 4          | 3          | 7          | 2          | 2          | 1          | 3          | 0          |
| Unidentified province                                 | 1          | 0          | 1          | 0          | 1          | 0          | 3          | 0          | 0          | 0          | 4          | 0          |
| <b>Total</b>  | <b>695</b> | <b>152</b> | <b>678</b> | <b>144</b> | <b>618</b> | <b>128</b> | <b>689</b> | <b>145</b> | <b>485</b> | <b>148</b> | <b>551</b> | <b>130</b> |

Notice: **NYA** i.e. Not yet available.





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### Contacts

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**Further analysis** and **additional information** is available on request. Please do not hesitate to contact one of the following persons

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