

The formulation and implementation of a national helmet law: a case study from Viet Nam

Jonathon W Passmore,^a Lan Huong Nguyen,^b Nam Phuong Nguyen^a & Jean-Marc Olivé^a

Problem Road traffic injuries are a leading cause of death and disability in Viet Nam. In 2008, official data reported 11 243 deaths and 7771 serious injuries on the roads, of which an estimated 60% of fatalities occur in motorcycle riders and passengers. In recognition of this problem, Viet Nam has had partial motorcycle helmet legislation since 1995. However, for a variety of reasons, implementation and enforcement have been limited.

Approach On 15 December 2007, Viet Nam's first comprehensive mandatory helmet law came into effect, covering all riders and passengers on all roads nationwide. Penalties increased ten-fold and cohorts of police were mobilized for enforcement.

Local setting The Viet Nam national helmet legislation was developed and implemented by the National Traffic Safety Committee.

Relevant changes Despite past barriers to enforcement, increased policing in 2008 led to 680 000 infringements being issued for non-helmet wearing. While changes in helmet wearing were not nationally observed, significant increases were documented in selected provinces in the first six months of the law's introduction. In Da Nang, helmet wearing increased from 27 to 99%. In the first three months after the law took effect, surveillance data from 20 urban and rural hospitals, found the risk of road traffic head injuries and deaths decreased by 16% and 18% respectively.

Lessons learnt Political leadership, intensive advanced public education and stringent enforcement have contributed to the successful implementation of the new law. Through continual monitoring of the legislation, loopholes detrimental to the effectiveness of the law have been identified and addressed.

Une traduction en français de ce résumé figure à la fin de l'article. Al final del artículo se facilita una traducción al español. الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Despite the reported magnitude of road traffic injuries,¹ various sources suggest official figures may underestimate the number of deaths by more than 30%.² As of January 2009, 27 million vehicles were registered in Viet Nam of which 95% are motorized two-wheelers, a figure that increased by an average 7680 new motorcycles each day in 2008.¹

The effectiveness of motorcycle helmets in preventing head injuries are well documented.³ Successful examples include China (Province of Taiwan)⁴ and Thailand⁵ where reductions in head injuries of 33% and 41% respectively were reported after the introduction and enforcement of mandatory helmet laws.

History of helmet legislation

Despite the long history of motorcycle helmet laws in Viet Nam, low penalties and limited enforcement coverage made them largely ineffective, resulting in approximately 30% compliance.⁶ A brief history of helmet legislation in Viet Nam is described in Table 1.

Collaborative advocacy from many sectors came to fruition on 29 June 2007 when the Prime Minister, Nguyen Tan Dung passed into law a strategy that represented a dramatic strengthening of helmet wearing requirements. Coming into effect on 15 December 2007, Viet Nam's new helmet law required ALL riders and passengers to wear helmets on ALL roads without exceptions.⁷

Loopholes

Shortly after the introduction of the legislation, several loopholes that had the potential to reduce its effectiveness were identified. Most loopholes have subsequently been resolved or are in the process of being closed.

First, the legislation omitted reference that required helmets to be correctly and securely fastened. Traffic police did not have powers to enforce unfastened helmets until November 2008 when riders and passengers with an unfastened helmet were penalized as if no helmet was worn.⁸

While the new law required helmet wearing for all riders and passengers, existing legislation prevented children under 16 years from being fined.⁹ Further, legislation did not make adults carrying children financially responsible when the children didn't wear helmets, effectively preventing enforcement of helmet wearing in children. The impact of this was seen in roadside surveys showing helmet wearing averaging 39% in children compared to more than 97% in adults. There are also ongoing challenges over widespread but unfounded beliefs that the weight of helmets increased children's risk of neck injury.¹⁰ Draft legislative revisions have introduced a mechanism that will make adults financially liable when a child passenger under 16 does not wear a helmet.

Availability and quality of helmets

Past attempts at effective helmet legislation were hampered by quality standards that only included heavy, full-face helmets that the Vietnamese semi-affectionately called "rice cookers". In 2001, the standards were revised to make provisions for a tropical

^a World Health Organization, Viet Nam Country Office, 63 Tran Hung Dao Street, Hanoi, Viet Nam.

^b Global Road Safety Partnership, Hanoi, Viet Nam.

Correspondence to Jonathon W Passmore (e-mail: passmorej@wpro.who.int).

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Table 1. History of helmet wearing legislation in Viet Nam

| Date legislation introduced | Authority | Legislation | Description and major revisions on previous legislation |
|-----------------------------|-----------|------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 29 May 1995 | GOVN | Decree 36 | Introduced helmet wearing but prescribed no penalty for non-helmet wearing |
| 10 Aug 2000 | MOT | Circular 312 | Helmet wearing compulsory on upgraded highways leading to Hanoi, Hai Phong, Da Nang and Ho Chi Minh City |
| 2 Mar 2001 | GOVN | Resolution 02 | Helmet wearing compulsory on all regulated roads for all people on motorbikes, from June 2001 |
| 16 May 2001 | MOT | Circular 08 | Helmet wearing made compulsory for all on motorbikes on all highways |
| 2001 | MST | TCVN 5756 & 6979 | Introduced helmet standards for adults and children |
| 13 July 2001 | GOVN | Decree 39 | Fines of 20 000 VND (US\$ 1.12) for not wearing a helmet on regulated roads |
| 8 Jan 2003 | MOT | Circular 01 | Helmet wearing made compulsory for all on motorbikes on all specified roads |
| 19 Feb 2003 | GOVN | Decree 15 | Fines of 10 000–20 000 VND (US\$ 0.56–1.12) for not wearing a helmet on regulated roads |
| 15 Dec 2005 | GOVN | Decree 152 | Fine for not wearing helmets increased to 20 000–40 000 VND (US\$ 1.12–2.24), plus confiscation of the offender's motorcycle for 3 days. |
| 29 Jun 2007 | GOVN | Resolution 32 | From 15 December 2007, helmet wearing made compulsory for all motorbike riders and passengers on all roads. |
| 14 Sep 2007 | GOVN | Decree 146 | Regulated that riders and passengers not wearing helmet would be penalized 100 000–200 000 VND (equivalent to US\$ 6.25 – 12.5) |
| 14 Oct 2008 | MPS | Circular 23 | Confirmed an unfastened helmet was considered non-wearing from enforcement perspective |
| 28 Apr 2008 | MST | Decision 4 | Strengthening of provisions for quality assurance inspection of helmets to ensure they meet national standards |
| 2008 | NPA | Law 23 | The new road safety law mandated that all riders and passengers must wear and fasten helmets. The new law took effect from 1 July 2009 |

GOVN, Government of Viet Nam; MOT, Ministry of Transport; MPS, Ministry of Public Security; MST, Ministry of Science and Technology; NPA, National People's Assembly; VND, Viet Nam Dong.

helmet that provided both a high degree of impact protection but was also lighter and more suitable to the tropical climate in Viet Nam.

While revised standards provided a well needed boost to the public acceptability of helmets, the quality of helmets has the potential to limit the effectiveness of legislation. A survey in April 2008 by the Viet Nam Standard and Consumer Association found that up to 80% of motorcycle helmets on the market did not meet national standards.¹¹ In November 2008, the Ministry of Science and Technology introduced revised standards (QCVN2) that strengthened quality assurance requirements to limit market infiltration of substandard products.

Enforcement of legislation

The new law substantially increased penalties for non-wearing from 20 000–40 000 Viet Nam Dong (VND) (approximately US\$ 1–2) under the 2007 legislation to 100 000–200 000 VND (US\$ 6–12) per offence,¹² which represents more than

30% of the average monthly income per capita.¹³ Data from the traffic police indicate that in 2008 more than 680 000 infringements were issued against riders and passengers for not wearing a helmet. Revenue from road traffic infringements are collected by the State Treasury. Some of these funds go towards strengthening road safety; however these are not specifically earmarked for this purpose alone.

Intersectoral collaboration

In 1997, Viet Nam established a multidisciplinary council comprising representatives from 15 ministries and agencies including transport, police, health and education to lead the development and implementation of all national road safety programmes.¹⁴ This National Traffic Safety Committee (NTSC) is hosted and chaired by the Minister of Transport and is duplicated in each of Viet Nam's 63 provinces.

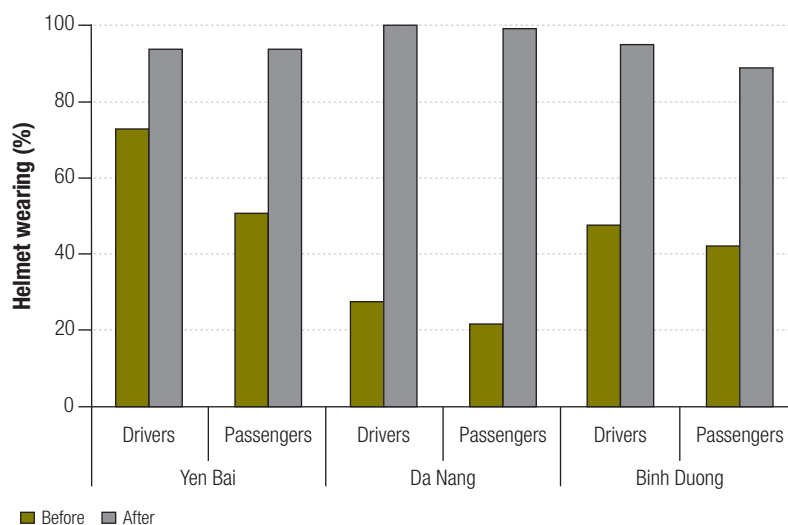
The national helmet law was developed and implemented by the NTSC on behalf of the Vietnamese Government.

The NTSC work included obtaining the clearance on the details of the helmet law, collaborating and consulting with provincial networks to ensure nationwide implementation and for reporting on implementation progress and any barriers to the Prime Minister.

Specifically, individual members of the NTSC contributed to important processes, including the Ministry of Transport (drafting the legislation), the Ministry of Public Security (enforcement), the Ministry of Health (hospital surveillance), the Ministry of Education and Training (school based safety programmes) and the Ministry of Culture and Information (social marketing). The successful implementation of the law is a tribute to the intersectoral collaboration of the NTSC around this defined national objective.

The NTSC has also established partnerships with bilateral and multilateral agencies, nongovernmental organizations and private companies to streamline international assistance towards achieving national road safety objectives. One such

Fig. 1. **Motorcycle helmet wearing in three provinces of Viet Nam before (November 2007) and after (June 2008) the introduction of mandatory helmet-wearing legislation**



Box 1. Summary of main lessons learnt

This review has highlighted key contributions to the successful implementation of helmet legislation in Viet Nam:

- The highest level of political support;
- Unequivocal legislation requiring all riders and passengers to wear helmets on all roads at all times; and
- Stringent and consistent enforcement and substantial increases in fines applied to offenders.

partnership with social advocacy group, the Asia Injury Prevention Foundation, has produced three national mass-media campaigns since 2005 and distributed 350 000 free helmets to school-age children nationwide.

Impact of the helmet law

While no national surveys have been completed either before or since the introduction of the helmet legislation, time-series observations from a random selection of the road network in three of Viet Nam's 63 provinces (Yen Bai, Da Nang and Binh Duong) found significant increases in helmet wearing in both riders and passengers. In Da Nang, wearing in riders increased from 27% (November 2007) to 99% (June 2008) and 21% to 99% in passengers (Fig. 1).

Differences in the enforcement of pre-2007 legislation resulted in variations between provinces in baseline wearing rates. For example, a pilot programme in Yen Bai mandated helmet wearing in 2003, hence the higher baseline in November 2007 compared

to Da Nang and Binh Duong. With regards to injury outcomes, findings from a Ministry of Health study in 20 central and provincial hospitals (out of 100 nationwide), capturing a total of 49 782 road-traffic injured patients between September 2007 and March 2008, indicated the risk of head injuries decreased 16% and the risk of death by 18% after the first three months of the law's introduction. Both of these figures are statistically significant.¹⁵

By December 2008, one year after the legislation took effect, national police data reported 1557 lives saved and 2495 serious injuries prevented compared to the same time in 2007.

Given the predominance of motorcyclists, the law will make a substantial contribution to a reduction in total road-traffic deaths. While there are limitations in available information and therefore the strength of the causal link between the introduction of the legislation and the injury reductions, the outcomes are consistent with the known effectiveness of helmets and enforced helmet legislation.³⁻⁵

Discussion

This review has highlighted some key contributors to the effectiveness of the 2008 helmet legislation. The well documented history of effective helmet programmes from many countries could have contributed to instilling confidence in the Government that similar legislation could also be successful in Viet Nam, despite unsuccessful attempts in the past.

This legislation was implemented in a manner that research has shown to be effective: (i) strict penalties were set for not wearing helmets, ten times higher than previous levels; (ii) advanced public education and social marketing ensured the population was aware of the legal obligations and high penalties; (iii) the Government used the civil service as role models, requiring that all government employees (approximately 4 million citizens, plus members of the armed forces) wear helmets three months before the law came into effect; (iv) enforcement was stringent from the date the law became effective; (v) legislation covered riders and passengers on all roads, reducing the potential for any confusion regarding the obligation to wear a helmet; and (vi) affordable, high-quality, climatically appropriate helmets were readily available to the population.

Legislation was issued by the Prime Minister, ensuring the highest level political commitment. National leaders also supported public education efforts in the lead up to 15 December, including the distribution of 50 000 helmets to low-income families nationwide.

Conclusion

The implementation of the motorcycle helmet legislation has been an important milestone in road safety in Viet Nam. The experiences and lessons learnt through this implementation should serve as an important example of multisectoral collaboration to other developing countries with a high burden of road traffic injuries and a predominance of motorized two-wheeler transport (Box 1). ■

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ملخص

وضع وتنفيذ القانون الوطني لارتداء الخوذة: دراسة حالة في فيت-نام

التغيرات ذات الصلة بالرغم من العقوبات السابقة أمام تفعيل القانون، إلا أن زيادة أفراد الشرطة عام 2008 أدى إلى تحرير 680 ألف مخالفة لعدم ارتداء الخوذة. ومع أن سلوك ارتداء الخوذة لم يتغير على الصعيد الوطني، إلا أن زيادة موثقة ويعتد بها قد حدثت في مقاطعات منتقاة خلال الستة أشهر الأولى من بدء سريان العمل بالقانون. ففي مقاطعة دانانغ، زاد ارتداء الخوذة من 27% إلى 99%. وفي الأشهر الثلاثة الأولى من سريان القانون، دلت بيانات التردد المستقاة من 20 مستشفى حضرياً وريفياً أن اختطار وقوع إصابات الرأس الناجمة عن حوادث الطرق المرورية قد انخفض بنسبة 16%، وأن وفيات الحوادث المرورية قد انخفض بنسبة 18%.

الدروس المستفادة أسهمت القيادة السياسية، والتوعية العمومية المكثفة والمتطورة في نجاح تنفيذ القانون الجديد. ومن خلال الرصد المستمر للتشريع، سيجري التعرف على الثغرات السلبية في القانون والتصدي لها.

المشكلة تُعد إصابات الطرق المرورية سبباً رئيسياً للوفيات والعجز في فيت-نام. ففي عام 2008، سجلت البيانات الرسمية وفاة 11243 شخصاً، وتعرض 7771 لإصابات خطيرة على الطرق، ويقدر أن 60% من الوفيات قد وقعت بين قائدي وراكبي الدراجات النارية. وإدراكاً بفداحة هذه المشكلة، أصبح لفيت-نام منذ عام 1995 تشريعات وطنية مناصرة لارتداء الخوذة. إلا أن أسباباً متنوعة أدت إلى محدودية التنفيذ والتفعيل.

الأسلوب في الخامس عشر من كانون الأول/ديسمبر 2007، أصبح أول قانون إجباري شامل لارتداء الخوذة ساري المفعول، وقد أُلزم جميع سائقي وراكبي الدراجات النارية في جميع الطرق على الصعيد الوطني بذلك. وقد زيدت العقوبات إلى عشرة أضعاف، وحُشدت فرق من الشرطة لتفعيل ذلك.

الوضع المحلي قامت اللجنة الوطنية للسلامة المرورية بإعداد وتنفيذ التشريعات الوطنية الفيتنامية بشأن ارتداء الخوذة.

Résumé

Formulation et mise en pratique d'une loi nationale sur le port du casque: étude de cas du Viet Nam

Problème Les blessures des suites d'un accident de la route sont une des causes majeures de décès et de handicap au Viet Nam. En 2008, les données officielles ont fait état de 11 234 décès et de 7 771 blessures graves sur les routes, parmi lesquels on estime que 60% des victimes sont des motocyclistes et leurs passagers. Reconnaisant ce problème, le Viet Nam a voté en 1995 une loi partielle sur le port du casque sur moto. Cependant, et pour plusieurs raisons, la mise en pratique et l'application de cette loi sont limitées.

Approche Le 15 décembre 2007, la première loi complète et obligatoire sur le port du casque au Viet Nam est entrée en vigueur, concernant tous les motocyclistes et les passagers sur l'ensemble des routes du pays. Les amendes sont dix fois plus sévères et des groupes de policiers ont été mobilisés pour la faire appliquer.

Environnement local La loi nationale du Viet Nam sur le port du casque a été développée et mise en pratique par le Comité national de la Sécurité routière (National Traffic Safety Committee).

Changements significatifs Malgré certains obstacles à l'application antérieurs, l'augmentation de la présence policière en 2008 a permis de constater 680 000 infractions au non-port du casque. Bien qu'e les changements en matière de port du casque n'aient pas été observés au niveau national, des améliorations significatives ont été notées dans certaines provinces au cours des six premiers mois suivant la mise en application de la loi. À Da Nang, le port du casque est passé de 27 à 99%. Au cours des trois premiers mois suivant l'introduction de la loi, les données de surveillance de 20 hôpitaux urbains et ruraux ont noté une diminution de 16% du risque de blessures à la tête suite à un accident de la route et une diminution de 18% du nombre de décès.

Leçons tirées Les dirigeants politiques, une éducation du public à la fois avancée et intensive, ainsi qu'une application rigoureuse ont participé au succès de la mise en pratique de la nouvelle loi. Grâce au contrôle continu de la législation, les lacunes préjudiciables à l'efficacité de la loi ont été identifiées et corrigées.

Resumen

Formulación y aplicación de una ley nacional sobre el uso del casco: caso práctico de Viet Nam

Situación Las lesiones ocasionadas por accidentes de tráfico son una de las principales causas de muerte e incapacidad en Viet Nam. En 2008, los datos oficiales señalaron 11 243 muertes y 7771 casos de lesiones graves en las carreteras y, de ellas, se calcula que el 60% de las muertes se produjo en conductores de motocicletas y pasajeros. Reconociendo este problema, Viet Nam cuenta desde 1995 con leyes parciales sobre el uso del casco en motocicletas. Sin embargo, por diversos motivos, la aplicación y ejecución de dichas leyes ha sido limitada.

Enfoque El 15 de diciembre de 2007 entró en vigor en Viet Nam la primera ley integral sobre el uso obligatorio del casco para conductores y pasajeros en todas las carreteras del país. Las multas se multiplicaron por diez y, para exigir el cumplimiento de la ley, se movilizó a numerosos efectivos policiales.

Marco regional La legislación nacional vietnamita sobre el uso obligatorio del casco fue desarrollada e implementada por el Comité Nacional para la Seguridad Vial.

Cambios importantes A pesar de los obstáculos existentes en el pasado para el cumplimiento de la ley, el aumento en 2008 del número de efectivos policiales destinados a garantizar su cumplimiento permitió detectar y notificar 680 000 infracciones por no llevar el casco. Si bien no se han observado cambios en el uso del casco en todo el país, se han constatado aumentos significativos en su uso en diversas provincias en los primeros seis meses tras la introducción de la ley. En Da Nang, el uso del casco aumentó del 27% al 99%. En los tres primeros meses tras la entrada en vigor de la ley, los datos de vigilancia procedentes de 20 hospitales urbanos y rurales revelaron que el riesgo de traumatismos craneales y fallecimientos causados por accidentes de tráfico se había reducido en un 16% y un 18%, respectivamente.

Lecciones aprendidas El liderazgo político, la intensiva concienciación de la opinión pública y el estricto cumplimiento de la ley han contribuido al éxito de la aplicación de la nueva ley. Gracias a una supervisión continua de la legislación, se han identificado y resuelto los vacíos legales perjudiciales para la eficacia de la misma.

References

1. *Report on activities to ensure traffic order and safety* [in Vietnamese]. Hanoi: National Traffic Safety Committee; 2008.
2. Le L, Pham C, Linnan M, Dung VD, Phuong NL, Hanh HL, et al. Viet Nam profile on traffic related injury: facts and figures from recent studies and their implication for road traffic injury policy. In: *Road Traffic Injury and Health Equity Conference, Cambridge, MA, 10–12 April 2002*.
3. Liu B, Ivers R, Norton R, Blows S, Lo SK. Helmets for preventing injury in motorcycle riders. The Cochrane Library. Chichester: Wiley; 2008.
4. Chiu WT, Kuo CY, Hung CC, Chen M. The effect of the Taiwan motorcycle helmet use law on head injuries. *Am J Public Health* 2000;90:793–6. doi:10.2105/AJPH.90.5.793 PMID:10800433
5. Ichikawa M, Chadbunchachai W, Marui E. Effect of the helmet act for motorcyclists in Thailand. *Accid Anal Prev* 2003;35:183–9. doi:10.1016/S0001-4575(01)00102-6 PMID:12504139
6. Hung DV, Stevenson MR, Ivers RQ. Prevalence of helmet use among motorcycle riders in Vietnam. *Inj Prev* 2006;12:409–13. doi:10.1136/ip.2006.012724 PMID:17170192
7. *Resolution on a number of urgent countermeasures to curb traffic safety and alleviate traffic congestion* (Resolution number 32/2007/NQ-CP, 29 June 2007). Hanoi: Government of Socialist Republic of Viet Nam; 2007.
8. *Guidance on the implementation of certain article in Decree 146/2007/ND-CP of the Government on the application of civil fines in road traffic* (Circular number 23/2008/TT-BCA-C11 dated 14 October, 2008). Hanoi: Ministry of Public Security; 2008.
9. *Ordinance on handling of administrative violations* (no: 44/2002/PL-UBTVQH10). Hanoi: National People's Assembly of Socialist Republic of Viet Nam; 2002.
10. Pervin A, Passmore J, Sidik M, McKinley T, Nguyen THT, Nguyen PN. Viet Nam's mandatory motorcycle helmet law and its impact on children. *Bull World Health Organ* 2009;87:369–73. doi:10.2471/BLT.08.057109 PMID:19551255
11. *Majority of helmet brand will fail crash test*. Thanh Nien News. Available from: <http://www.thanhniennews.com/healthy/?catid=8&newsid=37944> [accessed 12 August 2010].
12. *Regulating the sanctioning of administrative violations in road traffic domain* (Decree number 146/2007/ND-CP, dated 14 September 2007). Hanoi: Government of Socialist Republic of Viet Nam; 2007.
13. General Statistics Office of Viet Nam (Internet site). Available from: http://www.gso.gov.vn/default_en.aspx?tabid=474&idmid=3&ItemID=9174 [accessed 12 August 2010].
14. *Decision on the establishment of the national committee for traffic safety* (Decision number 917/1997/QĐ-TTg, dated 29 October 1997). Hanoi: Government of Socialist Republic of Viet Nam; 1997.
15. Passmore J, Tu NTH, Luong MA, Chinh ND, Nam NP. Impact of mandatory motorcycle helmet wearing legislation on head injuries in Viet Nam: results of a preliminary analysis. *Traffic Inj Prev* 2010;11:202–6. doi:10.1080/15389580903497121 PMID:20373241