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# Evaluation of Child Injury Prevention Interventions in Viet Nam

Report to UNICEF Viet Nam

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## Executive Summary

Child injuries remain a growing public health problem and injuries are now acknowledged as one of the leading contributors to the global burden of disease. The evidence suggests that the burden of injury on children is unequal, with the greatest burden amongst the poor and in developing and middle income countries, compared with high income countries. These countries are where most of the world's children live. In these countries children are exposed to considerable risk from hazards in all environments.

While neonatal deaths is the primary cause of infant deaths in Viet Nam, unintentional injury-related deaths contributes significantly for children aged between 5 and 14 years (27%) and adolescents/young adults aged 15-29 years (40%) (WHO, 2008). Drowning has been identified as the leading cause of injury-related death in Viet Nam for children and adolescents accounting for over half (53.4%) of all injury-related deaths to children age 19 years and younger. Other leading causes of injury-related death and serious injury are road traffic crashes, poisonings, falls and burns (MOH, 2008; TACS, 2010).

**Preventing injuries**

Child injuries can be prevented. There are proven ways to reduce both the likelihood and severity of injury and UNICEF Viet Nam, in conjunction with the Vietnamese Government and non-Government organisations including community groups, have implemented a large-scale Child Injury Prevention (CIP) program in six selected Provinces[1]. The CIP program addressed key injury priority areas in Viet Nam, using a human rights based approach within communities and engaging key national and Provincial groups.

The CIP program was designed to be multi-faceted and include ongoing advocacy to decision makers, environmental modification, community-based projects, and supported the development of cross-sectoral plans of action. The output of the CIP project involved four key areas of intervention, namely i) increased public awareness, positive attitude change and skill building, ii) strengthened capacity of national and local authorities, iii) development, improvement and enforcement of appropriate legislation, and iv) provision of a safer environment to mitigate injury risks.

**Evaluation of the Child Injury Prevention Program**

The aims of the evaluation of the CIP program were to i) measure the effectiveness of the program in achieving its main aims and objectives, that is, to reduce the morbidity and mortality caused by injuries among children in Viet Nam, ii) understand the key facilitators and barriers in the process of implementation for each of the program phases (planning, implementation, delivery, capacity building, etc), and iii) provide recommendations for future programming of CIP interventions.

A two-staged evaluation was undertaken to assess the above aims and included i) a review of documents and publications outlining the implementation of the program and interviews with key partners and organisations, and ii) a comparative analysis of injury mortality and morbidity data, comparing injury data between the intervention and non-intervention communes pre- and post-intervention.

[1] Communes within the six Provinces were selected for inclusion in the CIP program. The Provinces were: Hai Phong, Hai Duong, Quang Tri, TT Hue, Dong Thap and Can Tho

**Results: Process evaluation**

Based on the findings from the desk review and interviews of key stakeholders, the findings suggest that the CIP which incorporated key elements of a human rights-based approach, met many of its objectives. The areas in which success was achieved were:

- engaging committed partners, stakeholders and community groups,
- achieving a number of important environmental improvements within the project (intervention) communes,
- developing a range of training courses for commune organisations, parents, caregivers and children,
- raising awareness of child injury prevention at both the national and Provincial level
- establishing capacity building activities at both the national and Provincial levels
- law and enforcement reform at both Provincial and commune levels
- establishment of an injury surveillance system,
- the provision of ongoing technical support for all activities, and
- while it was difficult to determine cost-effectiveness from the information available, it appears that, at least in some communes, funds were allocated and utilised well, and intervention programs reached target community groups, and

**Results: Outcome evaluation**

The analyses of injury morbidity and mortality data showed that, overall, drowning was the leading cause of death, while road traffic injuries were the most frequently reported cause of serious injury for children aged 1 to 19 years..The findings also highlighted that boys and older children and adolescents were over-represented for all causes of injury (Table i).

*Table i): Percent Injury by Age, Gender and Province*

| **Province:** | **Hai Dong** | **Quang Tri** | **Can Tho** | **TT Hue** | **Dong Thap** | **TOTAL** |
|---|---|---|---|---|---|---|
| **Gender:** | | | | | | |
| Male | 71.1 | 69.9 | 75.9 | 69.0 | 67.2 | 69.8 |
| Female | 28.9 | 30.1 | 24.1 | 31.0 | 32.8 | 30.2 |
| **Age:** | | | | | | |
| 0-4 years | 22.1 | 22.1 | 22.1 | 18.0 | 17.2 | 19.9 |
| 5-14 years | 41.4 | 40.5 | 44.2 | 52.6 | 27.3 | 41.8 |
| 15-19 years | 36.5 | 37.4 | 33.7 | 29.4 | 55.5 | 38.3 |

Comparison of injury morbidity data (comparison of injury mortality rates were not undertaken as the rates were unstable due to small numbers) among the intervention and control communes (comparing pre-intervention rates with post-intervention intervention rates) highlighted reductions in injury morbidity for children 19 years and under across 4 of the six Provinces (see Figure i), with significant reductions in injury morbidity rates for the Hai Duong, Hue and Hai Phong Provinces (while in Can Tho there were reductions, but the reductions were not statistically significant). Overall, there were significant reductions in

injuries in the intervention communes from 2006 to 2010 compared with the non-intervention (control) communes, F(3,6)=13.33, $p$<0.01.

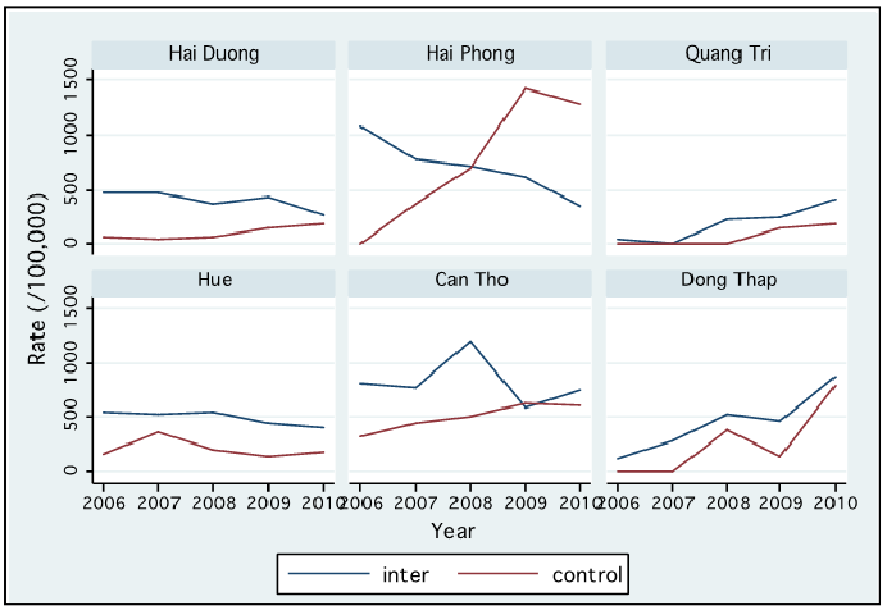


*Figure i): Rate of all injury morbidity (per 100,000 population) by year, Province and intervention group*

While the above findings suggest there may be a positive effect of CIP on non-fatal injuries, a clear interpretation of whether these changes can be attributed to CIP is difficult. This is due to the substantial difference in morbidity rates between the intervention and non-intervention communes prior to the implementation of the program; or, stated another way – there was no baseline equivalence between the intervention and control communes. Consequently, the positive change in the injury morbidity rates may be due to alternate explanations (other than the CIP program) for example inherent bias in the criteria for selecting communes for the intervention, differences in location and climatic environments, and/or differences due to the enhanced reporting systems.

**Lessons learnt and recommendations for future policy and intervention development:**

The findings of the process and injury outcome evaluations highlight there are a number of benefits from the CIP program but the benefits were not uniform across the six Provinces; which was, in part, due to the fact that the types of interventions implemented were not uniform across the Provinces. Despite this, it appears communes that had local counterparts (or champions) and which targeted high priority injury causes delivered better outcomes in relation to reductions in injury morbidity.

What is most apparent from this evaluation is that the overall dose or level of activity associated with the intervention was not sufficient to achieve an impact large enough to see significant reductions in child injury across all Provinces in which the interventions took place. Opportunities for improvement are highlighted in the report and the key recommendations for ongoing sustainability and the future development of an effective CIP program in Viet Nam are summarised in Table ii) below.

Table ii): Summary of key findings

| **Objective** | **Key issues** |
|---|---|
| To measure the effectiveness of CIP in terms of achievements of defined impacts, outcomes and outputs | Successful implementation of the CIP in some Provinces but not all Provinces.<br>Sustained declines in injury morbidity rates, however, not consistent across all Provinces in which the intervention was implemented.<br>Major achievements:<br>• program approach anchored within a human rights-based approach and incorporated key elements of this approach, i.e., realization of people's rights, a holistic view of the environment, a participatory process that is transparent and accountable, empowering people to participate and sustainable outcomes,<br>• good partnerships established with stimulation and encouragement to commit to reducing child injuries,<br>• good planning and program guidelines,<br>• establishment of injury surveillance system,<br>• high community involvement/engagement, and<br>• activities in intervention communes resulted in higher awareness of child injuries and strategies to reduce injuries, improvement to hazardous environments and building capacity in Provinces.<br>An assessment of the cost-effectiveness was difficult to determine, however, assessment of selected Province and commune activities revealed appropriate utilisation of resources, reaching substantial numbers of parents/caregivers and children. |
| Specific recommendations | The findings highlighted some important information related to the effectiveness of the CIP programs in Viet Nam, with encouraging declines in injury morbidity rates in 4 of the 6 Provinces. However, the declines may have been larger if greater effort was placed in activities that targeted reductions in injury.<br>**Initiatives to scale up**:<br>• Greater level of investment in implementing intervention programs and activities that directly relate to reducing high priority risks associated with child injury *.<br>• Increased engagement, commitment and collaboration from all agencies.<br>• Core and ongoing funding from key stakeholders for sustainability and success of CIP. More investment from the National Government to sustain long-term CIP activities *.<br>• Greater levels of investment in delivering 'best-practice' programs *.<br>• Provision of ongoing training for community members.<br>**Initiatives to scale down**:<br>• Guidelines and policies need not be developed further<br>• Focus on enhancing existing government data systems rather than investing in reporting systems specifically for the CIP program. |

* These recommendations are considered priority

**Summary**

The evaluation has highlighted important information related to the effectiveness of the CIP program in Viet Nam. The process evaluation revealed success in achieving the aims and objectives associated with the implementation of the program. The findings from the evaluation of the injury morbidity data point to a downward trend from pre to post-intervention in 4 of the 6 Provinces; albeit inconclusive due to the differences between the intervention and control communes observed at baseline.

Suggestions for future development of CIP are highlighted in this report. To achieve real gains in reducing the incidence and severity of child injury in Viet Nam, a greater level of investment is required. Importantly, a greater array of interventions and a greater level of intensity of intervention targeting high priority injury types are necessary if the CIP program is to see significant and sustained declines in child injury rates across all Provinces in which the interventions are to be implemented. Importantly, to achieve these gains, an ongoing financial commitment from the National Government is necessary.

## Chapter 1: Background

Despite the international recognition that every child matters and has overall rights to live and function in a safe environment and to protection from injury and violence, child injuries remain a growing public health problem and injuries are now acknowledged as one of the leading contributors to the global burden of disease. While neonatal injuries are still the primary killer of infants, injuries contribute significant proportions of deaths for children aged between 5 and 14 years (27%) and adolescents/young adults aged 15-29 years (40%) (WHO, 2008). Each year, injury and violence kills up to 950,000 children under 16 years of age and millions more suffer long-term consequences of non-fatal injuries. Unintentional injuries (such as traffic-related injuries, drowning, poisonings, falls and burns) account for the majority of these cases (approximately 90%), with the remaining 10 percent due to intentional injuries (violence, abuse, etc). Both types of injuries are a major source of trauma and devastating events for individuals, families, the community, and the system which is attempting to resource them.

Moreover, the evidence suggests that the burden of injury on children is unequal, being heaviest amongst the poor and in developing and middle income countries, compared with more affluent communities and high income countries. These countries are where most of the world's children live. In these countries children are exposed to high levels of risk from hazards in all environments, from unfenced ponds, to open fires, exposed poisons, unprotected stairways, unsafe work environments, to heavy traffic and a scarcity of safe places to play. For example, the rate of unintentional injuries amongst children 18 years and younger in high income countries worldwide in 2004 was estimated at 16.5 per 100,000 population, in contrast to 46.5 per 100,000 population in low and middle income countries. The rate in South East Asian countries (low and middle income) was 48.1 per 100,000 population (WHO, 2008). More importantly, many of these children die before reaching their fifth birthday.

### Evaluation of injury prevention initiatives

Child injuries can be prevented. As reported in Peden et al. (2008), simply reproducing safe strategies that are relevant to adults will not protect children sufficiently. Various developmental issues, risk taking behaviours, levels of activity and the child's degree of dependence make the matter more complicated. Given the complexity of injury causation and circumstances of real communities, the typical injury prevention program is necessarily multi-faceted. United Nations agencies recognise the importance of the human-rights approach in developing effective, sustainable and empowering programs and require that programs are based on international human rights standards and operationally directed to promoting and protecting human rights. This requires engagement from policy makers, enforcement agencies, advocates, social marketers, behavioural change agents, and community members themselves. With this, individual groups and whole communities can be empowered to increase control over and to improve their health through knowledge, attitudinal and behavioural, policy, social and environmental changes.

Moreover, prevention programs that take into account the vulnerabilities of children, and use a multi-disciplinary approach have been shown to be the most effective for reducing child mortality as a result of injury.

It is clear that we need to know how effective programs are in order to guide future developments that can achieve the greatest potential in reducing injuries amongst children. All too often, such programs are never evaluated, resulting in the development of subsequent initiatives that are not evidence-based and therefore not as effective as they could be.

In order to understand the effectiveness of any injury prevention program, it is imperative to undertake rigorous evaluation phases. Generally, evaluations of injury prevention programs aim to collect sufficient information on the intervention itself, the context of the implementation, the interaction between the intervention and this context, and the ultimate program outcomes, such that the evaluation will provide the stakeholders with the information required to support policy and practice decisions arising from the program.

Encouragingly, UNICEF Viet Nam and the Child Injury Prevention (CIP) program donors have called for an intensive evaluation of CIP interventions as well as the provisions of recommendations for 'best-practice' initiatives for future programming of CIP interventions.

**The current project: aims and objectives and outline of the report**

The purpose of the current evaluation was to assess and evaluate CIP program interventions in Viet Nam and make recommendations for 'best-practice' initiatives for future programming of the interventions. Specifically, the evaluation was designed to measure the effectiveness of the program in achieving its main aim, that is, to reduce the morbidity and mortality caused by injuries among children in Viet Nam. It also set out to evaluate the program in terms of achievements of defined impacts, outcomes and outputs, specifically, planning and implementation processes, monitoring, resources and partnerships, capacity building and sustainability. In addition to an overall evaluation, this project provides a set of recommendations for future programming of CIP interventions and for overall CDS initiatives.

The report comprises three following chapters addressing each aspect of the evaluation. The evaluation comprised two main evaluations, one addressing the process of implementation, and the second addressing the effectiveness of the CIP program in reducing child injuries.

Chapter two provides the results of the process evaluation and incorporates the findings of two components, the desk review and interviews. The desk review yielded important information on child injury and child injury prevention strategies, the nature and extent of the problems, international 'best-practice' approaches and documentation on overall implementation and management of CIP. The interviews were conducted with National sector Government departments, Provincial government agencies, non-government organisations and other agencies involved in CIP programs, and parents. The findings of the interviews complemented the findings of the desk review. A detailed desk review is

provided in Annex 1, however, the overall findings and conclusions drawn from the process evaluation (both desk review and interviews) are presented in Chapter 2.

Chapter three presents the results of the injury data evaluation. Analyses of commune mortality and morbidity health records in selected intervention and non-intervention communes in the six Provinces where CIP interventions have been implemented were conducted. Overall injury rates are presented, along with comparisons of mortality and morbidity injury data of intervention communes with control communes (comparing pre-intervention rates with post-intervention intervention rates).

Chapter four is the synthesis of the findings of the two evaluation phases. Here conclusions are made regarding the effectiveness of CIP programs in achieving the overall aims and objectives, incorporating expert opinion and backed with the evidence of the evaluation. Lessons learnt are discussed and recommendations are made. Specific recommendations are made on future policy development and interventions on CIP programs in Viet Nam and fall under four key categories, including recommendations for design and implementation, capacity building and sustainability, ongoing management and policy development, and sustained commitment from key stakeholders. In addition, recommendations for areas of further research and development are made.

## Chapter 2: Process review

The process review was undertaken to gain important information regarding the planning, implementation and monitoring phases of the program as well as documenting work toward establishing a sustainable program, including capacity building, resources and partnerships. Two complementary phases were conducted for the process review including a desk review of relevant literature and in-depth interviews.

The key tasks of the desk review were to review, evaluate and document the extent to which the program has achieved its set impacts, outcomes and objectives, particularly in terms of short and long-term impacts and the factors that have influenced its effectiveness. These findings were compared with other international initiatives to identify key factors contributing to the success of programs and the key mix of criteria that result in the most optimal interventions. A detailed outline of the desk review is provided in an annex (Annex 1) to this report, and the key findings relevant for the CIP Viet Nam context are reported in this chapter.

To enhance the findings of the desk review, interviews were held with i) key national organisations involved in the implementation of CIP programs and ii) Provincial and commune organisations involved in the implementation of CIP programs.

The information outlined in this chapter provides an understanding of the key outcomes of the program, particularly in terms of planning and implementation, sustainability, resources, relevance, and overall management of the program, and whether specific tasks and outcomes were achieved within the context of the UN framework in the region. Assessments of the success of specific outcomes are provided, along with a discussion of what appears to have worked and what has not.

**Overview and background**

Unintentional injury is a leading cause of death of Vietnamese children and teenagers. It is estimated that the fatal injury rate for children aged 0-19 years was 83.2 per 100,000 children in 2001, and injury accounted for 75 percent of child deaths (Vietnam Public Health Research Network, 2003). Similarly, for non-fatal cases, injury was by far the leading cause (57%) of hospital admission. This equates to 4,818 per 100,000 children of this age group, or 5 percent of all children injured enough to seek medical attention or lose at least one day of school or work.

More recent data shows that, in 2006 alone, 7,198 children and adolescents aged 0-19 years died as the result of an injury – this is equivalent to nearly 20 per day. Regions such as the Red river delta region, North East region, North Central Coast and Mekong river region recorded the highest number of cases of 1,389, 1,070, 1,272 and 1,095 respectively (MOH, 2006). This may well be an under-reporting of deaths, as the Alliance of Safe Children (TASC) estimates that every day in Viet Nam, 60 children die from injuries and 3,700 children are seriously injured.

With regard to the causes of child injuries in Viet Nam, drowning has been identified as the overwhelming major cause of in every age group of children and adolescents, and far

outstrips other causes, accounting for over half (53.4%) of all child deaths. Road traffic crashes are the second leading cause of child deaths and serious injuries, accounting for about 12.8 percent of deaths, with a fatality rate of 6 per 100,000 children (MOH, 2008; TASC, 2010). Poisoning is the third identified leading cause of death among children in Viet Nam, with a rate of acute poisoning in 2007 of 0.4 per 100,000 population for children under 19 years (MOH, 2008). Poisoning is also a significant cause of morbidity. While it is difficult to obtain accurate injury rates, the Ministry of Health reported a non-fatal rate of poisonings of 168.1 per 100,000 population, with the highest rate among infants 1 year old and below and the lowest among children aged 10-14 years (MOH, 2008). Other non-fatal injuries are due to falls (the leading cause of non-fatal injuries) and burns.

**Development of CIP strategies and programs in Viet Nam**

Child injuries do not happen by accident – they are predictable and preventable with appropriate and effective solutions. Reductions in child injuries can be achieved by teaching a child to swim, how to safely cross a road, or teaching parents ways and strategies to ensure a safe living environment for their children. National and local policy, safety legislation and law enforcement are also powerful tools to protect children from being injured. Peden et al. (2008) noted that a number of countries have achieved remarkable reductions in their child injury death rates and identified six basic principles that underlie most of the successful child injury prevention programs internationally. These are detailed in Annex 1 of this report, but the main points are listed below:

- Legislation, regulations and enforcement;
- Product modification;
- Environmental modification;
- Education and skills development; and
- Emergency medical care.

In 2001, Viet Nam was the first country in the region to recognize the need for the introduction of a systematic and sustainable child injury prevention program and developed the National Policy on Accidental and Injury Prevention (2002-2010) with the overall goal to ensure safety by reducing injuries in all environments. The program was systematically developed and planned with input from key stakeholders including government bodies, non-government international and national organizations and local communities. The processes undertaken to develop, plan and implement the CIP in Viet Nam are detailed in Annex 1.

**Desk Review**

The findings of the desk review are presented within four broad outcome categories, namely:

- Design and implementation of the program;

- Monitoring activities;
- Program resources, stakeholders and partnerships; and,
- Sustainability of the program

*Design, implementation and monitoring*

With the support of the Government of Viet Nam and other key stakeholders, UNICEF Viet Nam launched the CIP program in 2003. This program was a comprehensive response to the high prevalence of child injuries and designed to reduce the incidence and severity of injury rates for specific priority types of injuries to children. The design included a multi-faceted approach, with initiatives at all levels identified by Peden et al. (2008), including the introduction of policies and legislation, introduction of an injury surveillance system, targeted community-based interventions and guidelines to support monitoring, capacity building and sustainability of the program.

*Policies and legislation*

At the National government level, the National Policy and the National Plan of Action for Children was written and launched. These documents set out the overall aims of child injury reductions in Viet Nam and well as strategies and programs to be implemented, including establishment of the board of management, partnerships and resources, set up of the injury surveillance system, introduction of specific community-based interventions, and systems for monitoring of activities.

This component was a necessary initial process for the overall planning of the program and in general it appears that this component was largely successful in achieving its aims and objectives. The following planning phase outcomes were achieved:

- Launch of the National Policy and National Plan of Action
- Selection of communes for intervention
- Establishment of injury surveillance system
- Selection of community-based intervention programs addressing high priority injury types.

These findings are encouraging, however, there were some identified barriers to achieving the full potential of the National Policy. In their review of the implementation of the Policy and Plan documents, Ozanne-Smith and Nguyen (2010) noted that there is still a lack of adequate data systems and therefore some limitations in describing the extent of the injury problem, identifying specific injury mechanisms and settings to target for intervention, and in monitoring progress.

*Community-based interventions*

A suite of community-based interventions were developed, planned and implemented in six UNICEF project intervention Provinces. Planning and selection of interventions was undertaken in consultation with both national and Provincial government departments, committees, advocacy groups, community groups, etc., and the primary focus of interventions were in the areas of public health education (e.g., media broadcasts, campaigns, short films, educational leaflets, etc), training (e.g., swimming lessons for children, wearing life jackets, home improvements for parents, etc), and public space environmental improvements (e.g., road improvements, well coverings, fences around water, etc). More detailed examples of initiatives implemented in selected communes are provided in Annex 1.

Reports of implementation were positive, with all identified programs and methods of intervention activities being implemented and reaching target audiences. The reports reviewed showed overall successful implementation in terms of provision of public education initiatives, training of children, parents and caregivers, and improvements to hazardous environments, both in the home and in public spaces. However, the reports did not provide any information on barriers to the successful implementation of the programs.

*Monitoring activities*

Systematic and ongoing monitoring of programs was considered essential during the planning stages and reports suggest that sound monitoring activities were built into the implementation phase and documented extensively. Monitoring activities were planned and addressed two main aspects of the program, i) maintenance of the injury surveillance database, and ii) reporting on community-based initiatives and programs including educational public campaigns and training programs.

With regard to the injury surveillance system, Sawdon (2008) reported that the Ministry of Health had integrated the injury surveillance, reporting and statistical system of the CIP into the general reporting and statistical system of the health sector. Injuries were reported to have been recorded and compiled at communal healthcare stations on a monthly basis and reported to district and Provincial levels on a quarterly basis. While no reports suggesting this was unsuccessful were found in the desk review, there appear to be some issues in monitoring the quality and integrity of data input during interview sessions (see interview findings below for a more detailed discussion of this issue).

Despite the development of comprehensive guidelines for effective monitoring of community-based programs and initiatives, little evidence was found demonstrating that the guidelines were followed at any level of CIP implementation, or that monitoring was a priority for any involved organization. Indeed, Sawdon (2008) reported that, in terms of central level capacity development activities, there was practically no systematic monitoring of training. Moreover, while output data was gathered regarding activities conducted at sub-national levels, these data did not determine the effectiveness of the activities (Sawdon, 2008). Some of the reported monitoring activities carried out were:

1. Monitoring trips done by both UNICEF and partners which a report produced – but only done on ad-hoc basis, more qualitative, based on observations and perceptions; and,

2. Data collected systematically by partners on activities carried out but of low quality, not centrally collated and was not reported back to UNICEF on a regular basis.

*Stakeholders and partnerships, and program resources*

The successful delivery of any program relies on all stakeholders, partners and providers to engage as committed partners, have a clear understanding of how their work contributes to or impacts others, their roles and responsibilities, and for them to work as team members to ensure success of the program.

The desk review clearly showed that good partnerships had been established between organizations at the national and Provincial levels, community groups, and committed international organizations. Moreover, detailed guidelines were established outlining the roles and responsibilities of each group.

For example, national government organizations were involved in the implementation process, MOLISA managed the establishment of the injury surveillance system, while MOET was responsible for overseeing school-based training activities. Provincial government departments took responsibility for implementing specific activities within their communities, providing reports and health statistics. International organizations provided overall management and technical support.

An attempt was also made to report on program resources and make some assessment on the cost-effectiveness of the program. While some fund allocations associated with specific initiatives are documented in various reports (e.g., costs of advocacy and public education, model demonstration and capacity building, mine action, and program support), and some details of measurable outcomes are documented (e.g., number of training courses conducted, number of children attending swimming classes, number of households visited, etc.), it is a difficult task to make any meaningful assessments of these associations between costs and outcomes. Nevertheless, some details of costs and outcomes are provided here in Tables 1 to 3.

Funds were disseminated amongst the six Provinces from the year 2003 until the year 2008 only, UNICEF has stopped providing financial support to these Provinces starting from 2009 onwards and had focused more on supporting the Provinces to disseminate experience and knowledge in creating safer communities to other district and communes not supported by the CIP programme.

*Table 1: Overall funded allocations by year and by program activity (in USD). Source: UNICEF Viet Nam*

| PROJECT | 2006 | 2007 | 2008 | 2009 | 2010 | TOTAL |
|---|---|---|---|---|---|---|
| Advocacy & public education | **387,000** | **414,000** | **447,000** | **296,000** | **221,260** | **1,765,260** |
| Model demonstration and capacity building | **781,000** | **799,000** | **845,000** | **783,000** | **715,960** | **3,923,960** |
| Mine action | **279,783** | **279,783** | **279,783** | **279,783** | **279,783** | **1,398,915** |
| Programme support | **222,373** | **222,373** | **222,373** | **222,373** | **222,373** | **1,111,865** |
| TOTAL | **1,670,156** | **1,715,156** | **1,794,156** | **1,581,156** | **1,439,376** | **8,200,000** |

*Table 2: Budget allocation and disbursement to six project Provinces (in million VND). Source: UNICEF Viet Nam:*

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | Total |
|---|---|---|---|---|---|---|---|
| Hai Phong | 195.77 | 815.43 | 340.21 | 1,304.53 | 876.08 | 169.16 | 3,701 |
| Hai Duong | 0.00 | 396.44 | 393.13 | 1,167.80 | 801.41 | 117.26 | 2,876 |
| Quang Tri | 178.62 | 676.26 | 257.81 | 794.55 | 870.32 | 135.92 | 2,913 |
| TT Hue | 130.30 | 544.55 | 347.30 | 1,092.11 | 775.45 | 131.42 | 3,021 |
| Dong Thap | 113.65 | 653.78 | 343.88 | 946.05 | 753.80 | 185.61 | 2,997 |
| Can Tho | 103.70 | 497.21 | 334.00 | 1,191.83 | 728.28 | 118.39 | 2,973 |
| Total | 722.04 | 3,583.69 | 2,016.32 | 6,496.87 | 4,805.35 | 857.76 | 18,482 |

Table 3 provides a detailed description of program activities, outcomes and amounts spent at the National level and within intervention communes.

*Table 3: Summary of CIP program activities, outcomes and costs (in USD) (2007-2008). Source, UNICEF Viet Nam*

| **Safe Community Development: Environment modification activities** | | | | |
|---|---|---|---|---|
| **Level** | **Year** | **Description** | **Outcome** | **Amount spent** |
| National | 2007-2008 | Nil | Nil | Nil |
| Hai Phong | 2007 | Provision of safety devices | 545 thermos holders<br>500 medical cabinets<br>210 safe thermos<br>725 circuit breakers | 5,861.90 |
| | | Fencing in Duc Chinh commune | 3 lakes, 2 village wells and schools | 2,456.47 |
| | 2008 | Improvements to poor households | 500 well covers<br>200 stop gates | 10,168.98 |
| | | Safety devices for homes | 450 circuit breakers<br>600 medical cabinets | 10,700.06 |
| TT Hue | 2007 | Provision of baby pans and thermos holders | n/a | n/a |
| Can Tho | 2007 | Provision of safety device in poor households | 480 medical cabinets<br>489 safe thermos | 5,355.89 |
| | | Provision of bridge improvements | Handrails on 5 bridges | 3,952.19 |
| Dong Thap | 2007 | Safe home models in Tam Nong and Lai Vung districts | | 1,985.73 |
| | | Provision of safety devices | Fencing around schools, billboards, first aid kits | 3,770.46 |
| | 2008 | Provision for households in Tam Nong and Lai Vung districts | n/a | 1,282.37 |
| | | Provision of safety devices | Gates and fences<br>Safety boxes for sharp objects<br>Circuit breakers | 2,594.33 |
| | | Modifications in public spaces | Handrails for bridges | 4,731.87 |

| | | | | |
|---|---|---|---|---|
| | | | 26 traffic signs | |
| Quang Tri | 2007 | Provision for swimming lessons | Life jackets | 497.42 |
| | | Provision of devices for households | 200 stop gates<br>500 well covers<br>450 circuit breakers<br>Baby cots | 6,036.19 |
| | | Provision of devices for poor households | Baby cots to 270 households | 5,540.13 |
| | 2008 | Modifications in public spaces | Handrails on 4 bridges<br>Billboards<br>9 warning signs in dangerous places | 6,803.35 |
| | | Provision of devices in schools and kindergartens | 2 gates<br>Anti-slip pavement at playgrounds | 5,044.36 |
| | | House visits | 240 health collaborators, 600 home visits | n/a |
| **Training activities** | | | | |
| **Level** | **Year** | **Description** | **Outcome** | **Amount spent** |
| National | 2008 | Training for key health staff of non-intervention Provinces | 2 training courses on first aid treatment of burns | 8,153.36 |
| | | Training for staff of intervention communes | Training on safe community for staff of 12 communes, to be nominated as National Safe Communities in 2008 | 9,242.81 |
| | | Training course in non-intervention communes in Thai Bin Province | One training course on prevention and first aid and treatment of burns | 2,862.46 |
| | | Training at district level | 3 training courses on poisoning prevention, first aid and treatment | 12,752.53 |
| | | ToT courses | 2 training courses, one for FU trainees, one for ToT for FU Provinces in Da Nang | 13,938.59 |
| | | Orientation workshops | 2 workshops for new members in Hai Duong and Can Tho | 5,719.56 |

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|---|---|---|---|---|
| | | Tot courses | 2 training sessions for WU trainees in Hanoi and HCM | 4,961.20 |
| | 2009 | ToT courses | 25 participants attended Farmers Union course for teachers of FU training institute and key trainers of FU | 2,212.53 |
| | | ToT courses | 30 participants attended course on CIP communication for key trainers and communication leaders of YU in Norther Province | 4,656.82 |
| | | ToT courses | 60 participants attended courses on communication fro key trainers and communication leaders of YU | 12.991.43 |
| | | MOLISA training | 102 participants attended training courses for Provincial and district MOLISA staff on CIP Skills | 14,474.15 |
| | | People's Council training | 160 participants attended training courses for members at district and commune level in Dien Bien and Dong Thap | 11,998.65 |
| Hai Phong | 2008 | Training session | 30 participants attended one training course on essential trauma care | 1,273.66 |
| | | Training session | 30 participants attended on training course on recording and reporting of injury | 767.24 |
| | | Swimming training | 150 children attended swimming training | 2,513.86 |
| | | Swimming activities | 45 children attended swimming activities during summer vacation | 767.24 |
| Hai Duong | 2008 | Training for local staff | 45 participants attended one training session on recording, analysis and injury reporting | 760.47 |
| | | Training for WU staff | One training course for cadres in 12 districts/cities on injury and communication skills | 1,089.49 |
| | | Training for district and commune health staff | 26 participants attended training course on using computers for recording and reporting injury | 868.74 |
| | | Swimming activities | Activities during summer vacation in 12 intervention communes | 1,450.33 |

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|---|---|---|---|---|
| | | Swimming training | Swimming training and rescuing classes for children in 2 intervention communes | 966.88 |
| TT Hue | 2007 | Training courses | 2 training courses on injury recording and reporting, and use of software on injury management | 1,976.00 |
| | 2008 | Training of kindergarten teachers | 120 participants attended one of 6 training courses on first aid skills | 2,904.13 |
| | | Training courses | 30 participants attended training on essential trauma care | 764.64 |
| | | Training for district and commune health staff | 45 participants attended course on using computer for recording and reporting injury | 935.40 |
| | | Summer vacation activities | n/a | 1,652.69 |
| | | Swimming lessons | 200 children attended swimming classes | 1,134.55 |
| Can Tho | 2008 | Training courses | 3 courses for CPFC collaborators | 1,856.93 |
| | | Workshop | 1 workshop on implementing safety regulations in localities | 645.40 |
| | | Swimming classes | 90 children attended swimming classes in intervention communes | 1,507.12 |
| | | Summer vacation activities | n/a | 1,415.88 |
| | 2009 | Workshops for health workers | 5 workshops on CIP<br>5 training sessions on recording injury cases and use of CIP software<br>5 training sessions on CIP and SC for health workers in 9 districts | 7,774.00 |
| Dong Thap | 2008 | Swimming classes | 17 classes in 12 communes | 1,425.15 |
| | | Summer vacation activities | n/a | 2,004.79 |
| Quang Tri | 2007 | Workshop | Workshop to strengthen implementation of safe regulations in localities | 1,349.25 |

| | | | | |
|---|---|---|---|---|
| | | Swimming lessons | 200 children attended swimming classes | n/a |
| **Media, communication and IEC materials** | | | | |
| **Level** | **Year** | **Description** | **Outcome** | **Amount spent** |
| National | 2007 | Cartoon | Production of 15 minute cartoon | 3,228.88 |
| | | TV broadcast | 2 cartoons, 2 short films | 2,161.10 |
| | | CIP materials | Provisions of IEC materials for MOLISA and YU | 17,261.89 |
| | | TV broadcast | Broadcasting communication products on central TV for MOLISA | 1,530.54 |
| | 2008 | Newsletter | Development and operation of electronic newsletter in CIP | 2,619.16 |
| | | Video | Development of child-to-child communication videoon CIP | 2,628.74 |
| | | Website | Support to post CIP articles on WU website | 538.92 |
| | | National broadcast | MOLISA broadcast product on National TV channels | 1,424.53 |
| | | Website | Construct and operate MOLISA website on CIP | 2,523.58 |
| | | Report | Documentation of lessons learnt from UNICEF CIP intervention (7 years) | 12,000.00 |
| | | Printing and videos | Printing of CIP materials and duplication of 3 videos | 20,590.50 |
| | | Videos | Duplication of video Lien Hoan cac do | 2,451.65 |
| | | Publications | Integration of CIP into FU publications, newsletter, rural area today newspaper | 731.07 |
| Hai Phong | 2008 | Broadcast | IEC activities broadcast through commune system | 186.32 |
| | | Communication | Communication and IEC activities through commune system | 2,155.71 |
| Hai Duong | 2008 | Broadcast | TV reports on CIP IEC activities through commune system | 1,312.72 |

| | | | | |
|---|---|---|---|---|
| TT Hue | 2007 | Newsletter | Production of newsletter on injury prevention | 390.95 |
| | 2008 | Newsletter | Production of newsletter in injury prevention | 244.31 |
| | | Communication | Communication of IEC activities through commune system | 648.74 |
| Can Tho | 2008 | TV broadcast | Develop and air CIP program on Provincial TV, and IEC through commune system | 1,757.68 |
| | | Newspaper | Develop and distribute local newspaper on CIP | 322.04 |
| | | Film | Develop documentary film on CIP model experience | 936.67 |
| Dong Thap | 2007 | Broadcast | TV and radio programs on CIP and IEC activities through commune system (3 communes) | 279.80 |
| | 2008 | Broadcast | TV program on CIP, broadcast CIP messages through commune system | 998.43 |
| | | Video | Develop video on safe communities in Hoa Long commune | 763.56 |
| Quang Tri | 2007 | Broadcasts | TV broadcast 12 times on Provincial TV | n/a |
| | 2008 | Broadcasts | CIP messages broadcast on commune system 4 times each month | n/a |
| | | Newsletter | 550 copies of 8 page newsletter in communes every quarter | n/a |

Clearly, many activities have been undertaken and the environmental modifications, training sessions and communication methods have reached substantial numbers of people in the communes. From what has been reported, we can summarize that:

- Environmental modifications cost approximately $81,063, and many households were provided with safety devices, numerous bridges were modified as well as fencing provided around schools and water.

- Training activities cost approximately $142,170, and health workers at National, Provincial and commune levels received essential training, and children received swimming training.

- Comunication activities cost approximately $79,690, with various forms of media used to promote safety messages.

As noted above, however, without any overall costings of injury to children in Viet Nam, no clear assessment of the cost-effectiveness of CIP can be made, and no clear conclusions can be drawn.

*Sustainability and capacity building*

An important component to ensure long-term sustainability of any intervention or program in developing countries is the ability of the program to build capacity within the community, organization or group it is serving. Ensuring that successful and culturally appropriate initiatives can be continued in the short and long-term future by local community processes or replicated on an ongoing basis is critical to the future success of any intervention.

This requirement was recognised by the CIP Steering Committee, and the major capacity building activity was the development and delivery of CIP implementation guidelines. The Ministry of Health issued a nation-wide circular guiding the national and Provincial health sector to develop strategies and criteria for ensuring the development of culturally-healthy families, units, villages, communes, wards, including criteria for safe communities. A handbook guiding safe community development with a new approach and including five key criteria was compiled, printed and circulated across the country (Steering Committee on Injury Prevention of the Health Sector, 2006). A detailed description of this can be found in Annex 1.

*Summary of desk review*

In general, the desk review revealed that CIP has the majority of components for a successful program and this is well documented in the reports, particularly setting out guidelines for planning and development, criteria for Provinces to develop safe communities, etc. Some of the positive findings from this review were:

- Policies and guidelines were prepared which set out detailed guidelines for planning, implementation, roles and responsibilities of partners and stakeholders, monitoring activities and capacity building.

- Successful establishment of injury surveillance system: Technical expertise was provided in the set up of the system as well as training of staff on use of the system.

- The partnerships developed and the commitment of Government and non-government organisations, advocacy agencies, and local communities were documented and it appears that these collaborations have worked successfully.

- Successful implementation of the programs: A systematic selection of communes for intervention, understanding of specific injury mechanisms to target in each commune, appropriate methods of communication and activities was achieved.

- The reports of training activities and public education resources demonstrate that numbers of courses being run have been met and that a substantial number of children had attended training courses.

The limitations identified from the review were:

- Despite efforts to develop comprehensive guidelines for monitoring and evaluating programs, there was little evidence that these had been followed. Moreover, any monitoring activities undertaken were not systematic or scientifically robust, and the reports produced were of low quality.

- While an effort was made to understand the cost-effectiveness of programs, there was little information available to draw any clear conclusions on this aspect of the programs. However, it appears that substantial numbers of Provincial and commune people received training, along with an awareness of safety, injury prevention and environmental modifications.

- While the planning and development stage appeared to be systematic, well planned and documented, the available evidence did not provide good information about the quality of the process, whether guidelines were followed or any aspects of the quality of training. Furthermore, no facilitators and barriers to the successful implementation of the program could be identified from this review.

**Interviews**

Interviews were conducted with key national informants. Interviews and focus group discussion sessions were conducted in selected communes in the six Provinces of Hai Phong, Hai Duong, Quang Tri, Hue, Can Tho and Dong Thap where UNICEF has implemented CIP interventions. Within the six Provinces, a random selection of communes that have received and implemented interventions and those that have not implemented interventions were invited to take part in the study. In addition to Provincial Government organisations, non-government organisations and community groups, parents and caregivers within communes were invited to participate.

For the national sector, a questionnaire was developed with the aim to gain a more definitive understanding of individuals' and organisational perspectives of the CIP program's

effectiveness. Specifically, the questionnaire components included a range of questions relating to the program's design, implementation, delivery, resources and sustainability.

For Provincial areas, questionnaires were developed with the aim to gain a more definitive understanding of individuals' and organisational perspectives of the CIP program's effectiveness. As above, the questionnaire for organisations was designed to elicit response relating to the program's design, implementation, delivery, resources and sustainability. The questionnaire for parents and caregivers was designed to gain a better understanding of their knowledge of child injuries, the prevention programs available, use of programs, and behaviour relating to their child's injury prevention.

*Results of national sector interviews*

*Characteristics of respondents:*

First, respondents were asked some general questions about themselves and the organisation they worked at. Table 4 provides a description of interviewee organisation, position within the organisation and the main functions of the organisation. All organisations reported that child injury prevention was an issue for them, and that they collaborated with UNICEF to prevent injuries in different ways including data collection, policy and law reform, education and training, advocacy and environmental changes.

*Table 4: Keyline sector organisation characteristics*

| Name of organisation | Position in organisation | Main function of organisation |
|---|---|---|
| World Health Organisation (WHO) | National Professional Officer | Provides technical support<br>Assisted in development of the injury surveillance system |
| UNICEF | CIP specialist | Promotes rights of children and women<br>Development of Country Program with Government of Viet Nam |
| Ministry of Labour, Invalid and Social Affairs (MOLISA) | Chief, Childcare Division | Development and planning of programs<br>Development of laws and regulations<br>Launch policy on children |
| Ministry of Education and Training (MOET) | Director, Student Affairs Department | Resolution – safety schools for injury prevention<br>Teach on injury prevention at district level |
| Women's Union (WU) | Deputy Dean, Faculty of Women Mobilisation Work | Training for women at central and provisional level |

*Media and public event activities:*

Respondents were asked a series of questions relating to public awareness activities. Three organisations indicated they had engaged in such activities, and these included development of awareness campaigns including documentary films, talk shows, cartoon series, competitions, television commercials, leaflets and posters, etc. The main foci of these campaigns were on drowning and safe traffic participation (helmet wearing and drink driving).

While there were few formal evaluations of these activities, respondents provided a positive outlook that their awareness campaigns were reaching a significant number of community members, especially children. A small evaluation of the public awareness of drink driving was conducted and results revealed an increase in knowledge of the dangers of drinking and driving (WHO).

Respondents were asked if they could identify any lessons learnt from these activities and issues or difficulties and some interesting and expected responses were found. Responses centred around the following four main issues:

- Financial resources: public campaigns are often expensive, especially when implementing mass media campaigns on the television and financial resources were limited

- Time resources: specific products take a long time to develop as well as liaison with some organisations – more time was deemed necessary to liaise with important groups and maintain involvement of all parties. It seemed that organisations perceived that much time and effort was spend collaborating with other partners.

- Communication: there were a number of issues here including some concern with the quality of messages delivered in mass media campaigns, lack of good communication with partners, the need to target messages appropriately for target audiences, and little input into delivery of messages from the target audience themselves (parents and caregivers).

- Data: lack of background data to guide where programs should be targeted, e.g., nature and extent of injury issues, priority injury types, etc. Importantly, one respondent identified the need to combine education campaigns with enforcement, pointing out that education alone is not effective and needs to be support by law enforcement. An example was provided to illustrate this: public education promoting not drinking and driving is not effective without enforcement of the laws to limit blood alcohol limits and police campaigns, presence on the road and enforcement of drink driving laws should be run on conjunction with behavioural programs.

Some thoughts on how these issues may be addressed and suggestions to improve publicity campaigns were offered. These included suggestions that evidence-based research content should be built into the design of programs to ensure optimum effectiveness, programs should be developed to target different ethnic groups, and forward planning should be

considered for large media events and launches, bringing all partners together in a strategic way.

Regarding activities related to providing messages directly to parents, caregivers and children, respondents generally indicated that they had focussed some programs and messages directly to these groups through household visits and provide support for parents and caregivers, but this is generally conducted only at project locations. The launch of the WHO report on Injury Prevention in 2008 was a major public event and was reported to have reached local communities, providing messages directly to parents, caregivers and children.

In terms of the success of programs in reaching these groups, it was noted that household visits were difficult to conduct and maintain. It was also noted that messages about road safety (helmet wearing and drink driving) were perhaps not getting through, given the poor helmet wearing rates. The issues raised included:

- lack of resources,
- poorly paid local health community workers,
- limited capacity of local counterparts,
- poorly worded and non-focussed messages, particularly for different ethnic groups,
- lack of integration with other government activities,
- high turnover of staff, and
- lack of collaboration with different sectors, particularly supporting law and enforcement sectors.

*Capacity development:*

Some questions were directed at understanding the issues surrounding capacity development. All respondents indicated that this activity is a priority of their organisation and reported on a number of training and train-the-trainer activities. Organisations reported working with partners and local counterparts in providing training in a number of areas as follows:

UNICEF: development of guidelines, training of local counterparts on CIP implementation, including communication, injury reporting, community development.

WHO: training on injury surveillance, first aid, technical support for Police (especially regarding helmet wearing and drink driving)

MOLISA: specific curriculum for primary school children, organised workshop and conference on injury prevention, general training courses for Women's Union and Farm Union, integrating injury prevention.

MOET: training courses conducted, focussing on disaster prevention, training teachers on safe swimming (in conjunction with UNICEF)

Women's Union: annual training, offering intermediate diploma program which includes child injury components.

The overall aims and objectives of these activities are to support those working on CIP programs and activities, and to ensure that appropriate messages and training is provided to communities. There was an overall feeling that these have been successful in meeting their objectives, particularly at the national level and by Government agencies, although it was noted that no known formal evaluations of capacity building activities have been conducted. Some of the positive feedback included:

- Government policies and papers have been prepared, passed, and thought to have created a greater awareness of injury prevention.

- The MOET reported that disaster training was 80 percent successful, although there was no elaboration on how this was measured.

- It was also noted that a study showed that knowledge on injury prevention amongst school children had improved after injury prevention training.

At the community level, however, the success of the activities was less positive, with some concerns about the quality of the training, particularly regarding the trainers themselves. It was noted that it is difficult to identify good trainers particularly ones with relevant and appropriate backgrounds, high reliance on local counterparts, there is little capacity to monitor the quality of the training provided by local counterparts, and some concerns regarding the impact this may have on the sustainability of the projects. There were also concerns that trainers are not involved in any planning, development or monitoring activities and this could further affect the quality of training provided.

Other issues regarding training centred around lack of financial resources to increase level of training, expand to other Provinces, and indeed continue training, some concerns about the content design of training and relevance of some messages to individual communities, particularly issues with transferring international 'best-practice' to local conditions.

Suggestions for improvements in these areas included:

- Financial: Increased funding and resources, particularly Government funding for schools to implement resolution 4458

- Partnerships and communication: A more concerted effort for involved organisations at both the national and Provincial level to form partnerships and collaborations to ensure the best mix of skills and commitments from appropriate departments and organisations is achieved.

- Increased/enhanced training: Given that the quality of trainers was an issue for some, it was suggested that more and targeted training be made available for local trainers. Training should be provided to address not only delivery of training

programs, but also training in all aspects of program implementation (development, delivery, monitoring, planning for sustainability, reporting methods, etc).

*Monitoring activities:*

In terms of monitoring activities, few activities were conducted, and the main barriers that were identified were lack of financial resources and lack of time. No formal monitoring had been conducted, apart from general questioning within communities to gauge awareness of the programs and reports from local TV and newspaper on use and distribution to of products. The WHO reported that the program addressing drink driving included a monitoring component as part of the project (HSPH and John Hopkins University collaboration) – no elaboration on these activities was pursued.

*Sustainability*

Respondents were well aware of the sustainability issue and that donors such as UNICEF will gradually phase out from projects. This was of some concern to them and Government agencies such as MOLISA, MOET and the Women's Union and the WHO repeatedly mentioned that the Government of Viet Nam should set aside specific budgets for CIP programs. This is in support of the National Policy on Prevention 2006-2010 and action plans developed by Government agencies such as MOLISA (e.g., Plan of action on childhood injury prevention for the period of 2009-2010), MOET and MOH.

It was also emphasised during interview sessions that support and commitment from Government leaders are needed to ensure that the programme continues. However, it was also noted that it is an extremely difficult and time- and resource-consuming task to advocate amongst the key Government leaders. Their support and commitment is needed from the beginning of project planning and development up until the process of organising and implementation of projects. This will ensure that key Government leaders are involved with such projects at the beginning to bear the responsibility and ownership of projects within the child injury prevention programme, only then such projects/programmes can be successful.

*Feedback on the effectiveness of CIP activities:*

Respondents were asked if they thought that the CIP activities had been effective in relation to three aspects, i) reducing injuries to children, ii) raising awareness in the community on child injury, and iii) improvements to the environment.

Although the responses were positive, suggesting that people thought the programs had resulted in a decrease in child injury, particularly drowning, there was an overall feeling that there needed to be a comprehensive evaluation of the program.

With regard to whether the program raised child injury prevention awareness in the community, responses were positive, with all respondents agreeing that the programs have raised the awareness of the issues, particularly regarding traffic safety. A comment was also made that raising awareness and commitment from government alone is not entirely effective without commitment and support of all agencies.

Responses were positive to the program's effectiveness in improving homes, schools and public places, with reports of some improvements such as hazards being removed from homes, increased safe school environments, and some improvement to public places. Again, there were some issues raised, suggesting that, while improvements were made, there was still much to be done. It was noted that improvements are only made in project localities and had not expanded to other regions. Moreover, limited funding was an issue, and the benefits of developing well-resourced multi-faceted programs should be considered. An example of some of the difficulties faced is provided here:

> *"In the Mekong Delta, children play at the river and provision of fencing is difficult and not practical, therefore children are taught to swim safely, but there is no program component to teach proper surveillance and supervision by adults. While the programs may be effective in raising an understanding of the risks, there are often not the economic resources to achieve real gains. It was suggested that this is where commitment to practice and implementation is required from all involved organisations and at all levels from national government bodies, to local authorities and community organisations. In particular, it was suggested that the national Government can contribute significantly for long-term effectiveness: with a better economy and more investment from the Government, children can be safer."*

*Summary*

The majority of respondents reported that CIP program activities were important to them and their organisation. Each organisation was clearly aware of their responsibilities and those of other organisations, and reported that they had fulfilled, to the best of their abilities, their roles and responsibilities. Some interesting feedback was provided regarding some of the barriers to their abilities to perform their activities more effectively, and these centred around lack of resources, lack of communication, lack of adequate time especially to perform monitoring activities, limited capacity of local counterparts, and poor reporting by local counterparts.

Suggestions for improvement address the issues identified as barriers. These suggestions have implications for the long-term sustainability of the program and centre around the following:

i) Resources and sustainability: better financial support and commitment from Government

ii) Communication: better communication between key partners and local counterparts

iii) Data: better baseline data to understand the issues, better reporting system on activities

*Provincial sector interviews*

*Characteristics of respondents:*

Interviews were conducted at Provincial and District levels in intervention communes and non-intervention communes. Similar to the key sector interviewees, respondents were asked general questions about themselves and the organisation they worked for. Table 5 provides a description of interviewee organisations and the main functions of the organisation.

*Table 5: Summary of interviewee organisation*

| Name of organisation | Position in organisation | Main function of organisation |
|---|---|---|
| Provincial Department of Health (POH) | Health leader in charge of CIP | Provides instruction for injury prevention activities in the Province; collaboration with all sectors, both Nationally and locally in implementing activities; direct involvement in managing CIP in intervention communes; managing injury prevention following strategic plan of MOH in non-intervention communes; mobilize resources from Province and other donors to implement CIP. |
| Provincial People Committee (PPC) | | Co-ordinates activities Provincial-wide |
| District Health Department (DOH) | | Directly involved in implementation activities; collects surveillance data, Province supervision and training when required |
| District Education Department (DEH) | | Direct involvement in safe school program; provide instruction to intervention schools |
| Commune Health Center (CHC) | | Main partner in intervention implementation at commune level; works together when other partners |

*Media program activities:*

Respondents were asked a series of questions relating to their activities regarding CIP programs. As shown in Table 4, each organisation was heavily involved in the implementation activities, including media activities and training in schools addressing drowning (Can Tho, Dong Thap Provinces), unexploded ordinance (UXO) in Quang Tri Province, and road traffic injury in most Provinces.

Interestingly, it was noted that many injury prevention activities were small scale and irregular. Moreover, some intervention activities were also implemented in 'control' communes, with most addressing road traffic injury and following the plan of the POH and DOH. Notwithstanding, positive responses were given regarding the overall success of the

activities and respondents at all levels felt that the objectives of raising awareness of injury prevention were met with many successes cited.

But there were some concerns. In response to questions on challenges and issues faced while running activities, the overwhelming response was the lack of support from collaborators. Some comments on this point were:

> *"While there was good support the activities ran well, but have become more difficult with no further support."*
>
> *"Most activities are now transferred to the commune health worker (only one worker per commune) and there is little involvement by collaborators now."*
>
> *"Changing behaviour of people is very slow, and often don't take note of the media or educational material. Changing behaviour within the family is highly dependent on the visits of collaborators."*
>
> *"The supervision from district or commune is good, but not frequent."*

Other issues relating to media resources and materials related to the fact that the provision of resources was limited, the messages were too general and sometimes did not reflect the situation in the local context.

When asked about issues of funding, those in intervention communes agreed that funding was received mostly on time, however, they pointed out that there were insufficient funds.

*Communication with special groups*

In response to questions regarding communicating with special groups (i.e., ethnic minorities, low income groups, etc.), it was noted that these activities only took place in the intervention communes and those involved were Health staff who were directly involved in communication with parents at the health centre and during home visits, teachers involved in communicating safety messages to children at school, and the Women's Youth, and Farmer's Unions who collaborated with these activities.

Overall, the responses were positive, with reports that most stakeholders at different levels agreed that communication activities were successful and safety messages were given directly to target groups. While there was a general feeling that the small group communication and direct guidance for the family were effective and that some parents changed practices and activities around the house and/or housing condition quickly to provide a safe environment, there were some difficulties and issues noted regarding communication. These included difficulty accessing parents as most work, families living in rural areas had limited knowledge and were less amenable to changing behaviour.

*Capacity development*

It was noted that, at all levels, capacity development activities are important and that higher levels are responsible to provide training for lower levels in the system (top down approach). At the Provincial level, 2-3 staff were selected as trainers and they were trained

by project staff on program implementation, planning, surveillance, etc. Unfortunately, there was a lack of dedicated or available staff for injury prevention activities with Provincial staff taking on responsibility for two or more positions. This reduces the time available and focus on injury prevention activities.

In general, respondents were happy with the training received by UNICEF and believe the activities provided met the objectives. However, there was some indication that communes would benefit from more training and suggested additional sessions at the beginning of the project and periodic refresher training, and that training on planning, communication and surveillance should be increased.

*Community engagement and mobilization*

Respondents were asked a series of questions relating to activities related to environmental improvements in homes, at schools and in public places. The Health sector are responsible of overall planning for safe homes, schools and public places, while the Education sector is directly involved in implementing the safe school program. The people's committee is involved in the planning process, collaboration in implementing social events and changing the environment at the commune level.

Again, these activities were considered successful overall, however, some difficulties were noted including general difficulty in community mobilization, difficulty integrating activities when many organisations are involved and difficulty in changing environments among poor families.

For school-based activities, there was some concern that integrating injury prevention messages within official curriculum is difficult and may not be optimal, however inclusion of these messages in extra-curricular activities seem to be effective and could be considered as a way to improve awareness.

It is essential for the success of any program to have effective community engagement, mobilization and alliance of leadership within each commune: engaged communities can support and sustain reforms, disengaged communities can jeopardise them. Effective engagement requires the following elements:

- an interactive forum where each commune can define its goals and implement collective planning,
- a shared agenda,
- relationships and structures to build capacity,
- culturally appropriate strategies, approaches and communication systems, and
- strong social networks with the support of local institutions.

*Monitoring activities*

In terms of monitoring activities, it was noted that the commune, district and Province health departments are responsible for monitoring activities, and there are records of some activities either in mass media or group activities and community events. However the details are scant, only recording the number of activities and not any details on which effectiveness can be assessed.

Regarding monitoring communications for special groups, this is the responsibility of the Health staff and this is achieved by two methods including i) direct evaluation by participating in program activities, and ii) through the community health centre report. Again, however, the information recorded is minimal and therefore limited.

The surveillance system is set up for monitoring morbidity and mortality changes and health stations are responsible for monitoring activities. It was noted that, while data is collected and stored, the information is rarely used for communication and forward planning.

*Overall effectiveness of CIP programs*

Last, respondents were asked some general questions relating to the effectiveness of CIP programs specifically relating to i) reducing injuries to children, ii) raising awareness in the community on child injury, and iii) improvements to the environment.

In general, respondents considered that the project had some effect on reducing injury and for child injury especially, and while there is some evidence that injury has decreased, the number of deaths has not been reduced.

All respondents at all levels emphasised the success of the program in raising awareness of child injury prevention, reporting that the communication activities through a range of channels have created a real awareness within communities, amongst parents and community leaders.

Moreover, responses regarding improvements to homes, schools and public places were positive. In each environment reports of attitudinal changes, development of injury prevention knowledge was reported. For schools, it was noted that teachers are the main resource for further development of the Safe School program. For homes, the Safe Home program has produced a team of trained collaborators who have developed a strong rapport within the community and bring energy, experience and knowledge to the project. For public places, too, the environment has improved with warning signs being put into place, inspections and modifications to public areas are occurring, and media materials are well distributed.

*Summary*

To summarise briefly the findings of these interviews, the focus of organisations at the Provincial and commune level were based on implementation of programs within communities, receiving training and guidance from collaborators and national bodies and reporting back to national government departments.

There was a general positive attitude towards the implementation of CIP at the Provincial and commune level, engagement with collaborators and desire for more support from collaborators. It was clear, however, that those at the commune level are concerned about future ongoing support for CIP activities, with the belief that, without that support, the activities would not continue as they have with good support.

Funding was not a major issue for most, apart from a desire to have increased funding, but the resource issue for commune workers was the lack of trained people and requirement for health workers to incorporate injury prevention work with their other duties and responsibilities.

The findings of the interviews and focus groups within Provinces have some implications for sustainability of the program and some general points are made here:

- Currently, there is a perception that injury prevention is not a high priority health issue generally and the focus of staff, personnel and resources are limited. For sustained continuation of the program, this attitude needs to change.

- Support of all partners at all levels is critical for success, from government right down to communities, households and other social groups: a major positive of the implementation is community participation in planning and implementing.

- The role of collaborators is critical, without them, the model might not be appropriate. There is a need for direct and ongoing supervision from Provincial, district and commune groups.

*Parents/caregivers interviews*

Last, groups of parents/caregivers living in all intervention communes selected for assessment (a total of 24 communes) participated in focus group discussions (FGD). Each group discussion consisted of six to eight people. Some general descriptions of the participants are listed below:

- The majority of parents/caregivers were female (96%), and they were either parents or grandparents

- the average age was 37 years (ranging from 27 years to 57 years of age),

- Participants had, on average, two children (ranging between 1 and 4).

*Knowledge and experience of CIP activities*

First, parents were asked about their knowledge regarding CIP activities in their communes, and almost all parents reported that they knew about these activities or had direct experiences with CIP activities, with most having participated in CIP activities at least once. As an example, it was noted that:

*"….the commune health station and village health worker had organized 2-3 meeting per year, we are invited to listen and discuss about the child injury issues, and how to prevent it…"* (Hai Duong FGD).

The majority of parents (about 80% of participants in each FGD) were able to list at least five activities related to the intervention program. Many parents talked in detail about small group meetings which were organized with parents, health/population collaborators, and the Women's union, to talk about the injury prevention program. They also mentioned specific meetings with target groups and that there were many IEC sections that were involved in meetings such as the Women's union, Farmer's union, etc. The content of these meetings often focussed on delivering safety messages for parents and caregivers about child injury problems and solution to prevent child injury.

*" … speaker, often are health workers, talked about child injuries at home, community, she showed example about burn, drowning, fall, etc. and told us the way to eliminate the risk for our children. For examples, clean your house, not allow children play near open water sources, keep sharp object in safe place, …" (*Mother of 4 years child in Dong Thap)

All parents/caregivers reported knowledge/awareness of IEC activities related to child injury. All of them reported having received/seen/read at least one printed resource material of child injury prevention program. Most of the messages addressed prevention of road traffic injury, burns, poisoning and electric shock and were promoted on the television (during game shows, through public announcement messages, and specific road traffic programs), and via pamphlets, flyers and posters in the local area, at schools and health centres. At the community level, most messages were delivered by the loud-speaker system each morning, with messages about burns, making knife racks, fencing ponds, and covering wells.

*"…. Collaborators have distributed pamphlet, flyers to us when they visit us at home, or we can take it in commune health station when we visit. .."* (FGD in Hue)

*"…. I saw many posters, pamphlet in commune health station, sometimes I took one and brought home for others to read. …. The content of those materials are very good, there are many interesting information about drowning, burn, fall, animal bite, … they have nice pictures, and I think I learn a lot from that. .."* (mother of 2 children- 2 and 6 year old in Hai Phong)

Almost all parents reported having seen or been involved in activities to modify environmental risk factors in their house or in their community, school. Most of them discussed the improvements they were aware of in their homes, at schools and in public places in the commune. They mentioned about installation of knife racks in the home, removal/repair/relocation of risky electricity wires and sockets, relocation of hot water tanks, flammable objects, medicines, poisons, chemicals and tools to be out of reach of children. Some also mentioned about fencing around ponds, putting signs near open water, removal of sharp blunt objects in the school yards, etc.

In addition, it was noted that communes had received support to help change the environment in poorer households, and many parents expressed concerns about the lack of support if the program ends.

> " ..*some households in our village received support from the program to change their electricity wire system, or covering their well. …. Commune also fencing pond, make bridge, … I heard that the program has supported them to do it…. I don't know without any support whether they change it or not…."* (mother 40 years old)

*Benefits of CIP activities*

Parents and caregivers discussed the benefits of CIP programs and their perceptions about the success of the programs. Overall, the discussions were positive and demonstrated a good understanding of the program and its benefits to them individually and for the community.

First, parents and caregivers were asked about child injury in general and there was a high awareness and consensus about the major causes of injury. They noted that, for younger children under 6 years most injuries are due to burns, falls and cuts, and for older children most injuries are due to road traffic incidents and drowning.

The main benefits of the program were also identified and included i) an increased knowledge of injury and ways to prevent injuries, and ii) the program has created more attention for safety issues from other community members including leaders, schools and other families. Some of the comments made were:

> *"…. The program helps us with more knowledge about injury prevention, we participate in small group meeting to discuss with other parent about how to raise children and keep them safety. We also share the experience with each other about child safety and other issues…."*

> *"… [the programs] have given us knowledge, and help us to make our home safer, I know how to do the safety check at my home. .."*

> *"…. I know to make fence, put more light in front door, not allow children access to medicine, make bridge crossing open water. We also got iron net (B40) from program for fencing pond, and also have first aid box… we also organize swimming lesson in the community…"*

Parents were asked to identify what they had done to protect their children and a range of responses were given and included not allowing children to play on the road, with sharp objects or around the kitchen when preparing hot food, remove electric sockets, taught children to swim, put helmets on their children when travelling on the motorbike, and using floating devices when travelling on water.

Parents also listed the areas in which they thought the programs had met with greatest success and the five areas identified were:

1. The program helps increase awareness and knowledge about injury and child injury in general.

2. Parents/caregivers are provided with specific knowledge and skills through IEC materials, small groups meeting, and also direct consultation at home. To support improvements to safety at households, the community and the school.

3. Helps to change environment at the community, home and school. There were many risky things have been removed and warning, signs are in place.

4. Helps to improve knowledge, skills of the community leaders, health workers and collaborators on child injury prevention.

5. Helps reduce injury in children (mortality and morbidity)

In addition to identifying the benefits and successes of the program, there were some suggestions and comments for improvements to the program, and the main suggestions are listed here:

- Need more activities on child injury prevention, especially changing environment.
- The program should have more small group meeting on specific injury issues such as education for young mother on child's burns, poisoning, fall.
- Provide more support for poorer households,
- Train more collaborators, health workers.

*Summary*

To summarise briefly the outcomes of the focus group discussions amongst parents and caregivers in intervention communes, it appears that the CIP has been very successful in raising the awareness of child injury and increasing general and specific knowledge of how to prevent these injuries. The responses regarding the benefits of the programs were very positive and showed a good understanding of how the environment can be changed to protect children, particularly within the home, but also at schools and in public places.

**Overall summary**

The process evaluation involved a comprehensive desk review, interviews with national sector, Provincial and commune organisations involved in the implementation of CIP, and focus group discussions with parents and caregivers.

The findings were largely positive, suggesting that the program has most of the essential components for a successful outcome. The most encouraging results were the development of national policies and plans, development of guidelines for planning, monitoring, partnership roles and responsibilities, criteria for Provinces and communes to develop safe

communities and increased awareness of the importance of reducing child injuries and knowledge on ways to achieve this.

The majority of reports accessed during the desk review provided limited discussion regarding barriers or facilitators to successful implementation, nor suggestions for improved performance. Notwithstanding, some of these details were addressed in the interview and focus group sessions and there is potential to learn from the thoughts and reflections of those engaged in the program and the end users to identify areas which can be improved.

Specific positive outcomes were:

- Policies and documentation: Generation of comprehensive policies and documents outlining the planning and implementation of CIP programs, with detailed guidelines and systems in place for achieving the overall objectives of the program, including systems for establishing roles and responsibilities of key partners, selection of intervention communes and priority injury areas to target interventions, establishing monitoring systems, capacity building activities and overall sustainability of the programs;

- Engagement: Establishment of good partnerships between organizations and commitment from key stakeholders at national, Provincial and commune levels;

- Data: Establishment and use of injury surveillance system;

- Implementation: Perception that messages and interventions were successful in reaching a significant number of community organizations, groups, parents/caregivers and children;

- Implementation: Increased awareness of child injuries and strategies to reduce the incidence and severity of injuries within project (intervention)communes;

- Capacity development: Good development of capacity within communes and Provinces; and,

- Sustainability: An overall desire by all to continue implementation and maintenance of CIP programs in pilot communes as well as expanding to other Provinces and communes.

These were positive findings and provide some evidence suggesting an effective program. Information was also sought on aspects of the program that were not working as well as anticipated and reasons for these limitations. Specific findings here were:

- Limitations in achieving the full potential of the injury surveillance system: there appears to be a lack of adequate data systems and sub-optimal data entry and use of these data systems. This seemed to be, in part, a result of lack of financial resources, poor working conditions for some (overworked and lack of time), lack of training and emphasis of the importance of these activities.

- Lack of monitoring activities: while systems were in place to achieve good monitoring activities, there was a distinct lack of these activities at any level of implementation. Monitoring appeared not to be a priority for any organization and there was little monitoring or evaluation of public awareness events, training activities, data entry or reporting on activities by local counterparts.

- Limited resources: the lack of resources (both financial and involvement/commitment by partners and collaborators) was a concern for many in the communes and this was perceived to have affected the quality of the interventions, training, provision of safety equipment to poor households, improving public spaces, etc.

- Sub-optimal communication: there seemed to be some concern regarding lack of communication between key partners and local counterparts as well as appropriate communication of safety message and adequately targeting community members.

- Sub-optimal capacity building activities: there was some concern that ongoing training was limited, and fears that this would cease once collaborators were not supporting activities and if resources were inadequate.

In summary, the process review provided a comprehensive assessment of documented components of the CIP program as well as thoughts and perceptions of those involved in the program and the end users. Specific features of the program were examined and assessments were made (where information was available) on the success of key components in achieving aims and outcomes. These components included planning, development and implementation, monitoring, partnership development and resources, sustainability and capacity building. The findings were synthesized and some recommendations are made for improvements and long-term sustainability of the program.

## Chapter 3: Evaluation of the rates of child injury: Analysis of health data

The second phase of the evaluation involved an analysis of commune mortality and morbidity health records in eight selected communes (namely, four in which intervention was implemented and four in which interventions were not implemented) in the six Provinces of Hai Phong, Hai Duong, Quang Tri, Hue, Can Tho and Dong Thap.

**Methods**

Commune-level health morbidity and mortality records were extracted and analysed using data from a total of 48 communes (24 intervention communes and 24 non-intervention communes). Injury data for children aged 19 years and under and between 2005 and 2010 were analysed. The time periods selected for analysis were dependent on the timing of the CIP implementation and availability of data from each commune. It is noted that interventions were implemented separately in each commune, but generally began in 2006. While it would have been desirable to collect data for a longer period of pre-intervention time (i.e., including data from at least 2003-4), this was not possible.

At the outset, we note some significant challenges in analysing the injury data and some major limitations associated with these data. First and foremost, it is noted that for the majority of Provinces, only a few selected communes received an intervention and therefore analysing the mortality rates for the entire Province made little sense. This can also be said for the morbidity rates.

Second, it is difficult to determine exactly when interventions were implemented in each commune. We are of the understanding that, even in 2005, interventions were beginning to be implemented in the six Provinces. Given that we only have data available from 2005 onwards, it is difficult to ascertain a 'pre-intervention' time period. However, it is unlikely that substantial changes in injury mortality and morbidity rates would have occurred soon after the intervention was initiated hence we have defined 2005-2006 data as the pre-intervention time period.

Third, is the issue of differential reporting. A major component of CIP was to develop and establish the injury surveillance system. There is little data to describe which communes and Provinces implemented this well. Good implementation of injury surveillance and record keeping would mean a better capture of injury-related deaths and injury. Consequently, the enhanced data collection systems in the intervention communes may result in greater levels of reporting compared to the non-intervention communes and thereby, point to a failure in the intervention when in fact, it is merely an artefact of the enhanced reporting.

Our analyses and conclusions focus on the comparisons of morbidity rates over time, that is, pre-test to post-test comparisons within each intervention grouping compared to controls within a Province.

**Overall injury rates**

Overall injury rates were calculated and proportions of all injuries by age and gender in each Province between 2006 and 2010 are provided in Table 6.

*Table 6: Proportions of injuries by age and gender by Province*

| | Hai Dong | Quang Tri | Can Tho | TT Hue | Dong Thap | TOTAL |
|---|---|---|---|---|---|---|
| **Gender:** | | | | | | |
| Male | 71.1 | 69.9 | 75.9 | 69.0 | 67.2 | 69.8 |
| Female | 28.9 | 30.1 | 24.1 | 31.0 | 32.8 | 30.2 |
| **Age:** | | | | | | |
| 0-4 years | 22.1 | 22.1 | 22.1 | 18.0 | 17.2 | 19.9 |
| 5-14 years | 41.4 | 40.5 | 44.2 | 52.6 | 27.3 | 41.8 |
| 15-19 years | 36.5 | 37.4 | 33.7 | 29.4 | 55.5 | 38.3 |

These figures show that the majority of injured children were male (approximately 70%). Moreover, children aged between 5 and 14 years accounted for approximately 42 percent of all injuries, followed closely by those aged 15 to 19 years of age. Only 20 percent of those injured were young children aged 4 years and under.

With regard to injury type, the mortality data showed that drowning is the leading cause of injury-related mortality, with an overall rate of 12.47 per 100,000 population. This was followed by traffic-related deaths at 6.37 per 100,000 population. Analyses of all injuries (deaths and serious injuries) highlighted that traffic-related injuries were the most frequently reported injury type, with an overall rate of 759.2 per 100,000 population. This was followed by falls and occupational injuries rates of 458.3 and 417.1 per 100,000 population, respectively. Less frequent injury types included assaults and animal bites. Interestingly, drowning injuries were relatively infrequent, with a rate of 25.2 per 100,000 population (Figure 1).

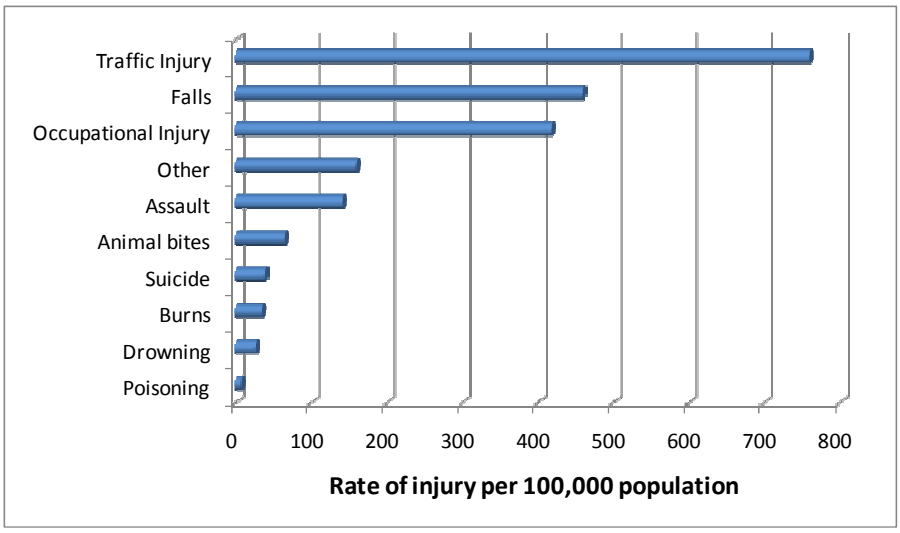


*Figure 1: Injury rates (per 100,000 population) by injury type*

**Comparison analyses**

There were no significant differences comparing pre-intervention and post-intervention time periods, nor between intervention group. It was no surprise to find few significant changes in mortality rates over time or differences between commune groups, given the relatively small number of injury deaths. Subsequent analyses therefore focussed on injury morbidity data and are presented below.

The injury morbidity data revealed an overall significant reduction in injuries in the intervention communes from 2006 to 2010 compared with the non-intervention (control) communes, $F(3,6)=13.33$, $p<0.01$. Interpretation of these overall reductions is difficult, given the substantial difference in morbidity rates of intervention and non-intervention communes prior to program implementation.

A closer examination of all injury morbidity rates by intervention and non-intervention group for each Province, 2005-2010 was undertaken (Figure 2). There were relatively low and stable injury morbidity rates in Hai Dong, Quang Tri and Hue Provinces in both intervention and control communes between 2006 and 2010. In contrast, Hai Phong and Can Tho reported relatively higher injury morbidity rates that changed within the period 2006-2010. In Hai Phong, morbidity rates decreased substantially in intervention communes, but increased in control communes. In Can Tho, rates increased slightly in intervention groups, however, remained high but relatively stable in control communes. For Dong Thap Province, rates were low in 2006-2007 and increased in 2009-2010 in both intervention and control communes.

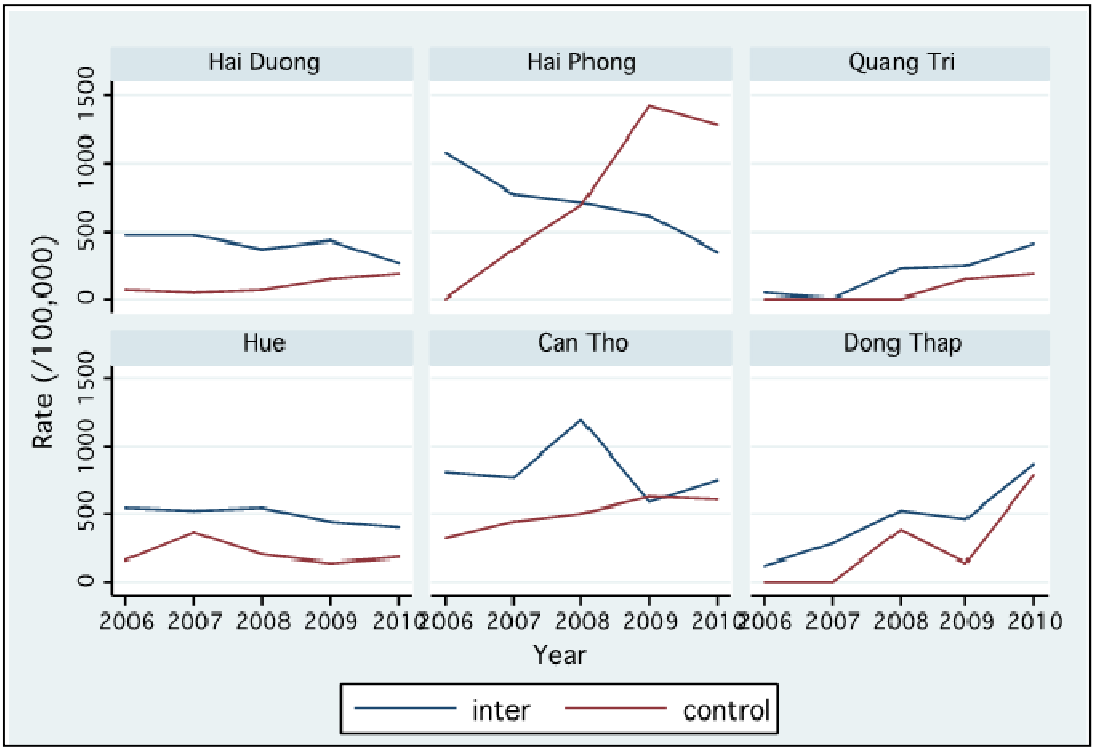


*Figure 2: Rate of all injury morbidity (per 100,000 population) by year, Province and intervention group*

While this suggests there may be a positive effect of CIP on non-fatal injuries, a clear interpretation if whether these changes can be attributed to CIP is difficult. This is due to the substantial difference in morbidity rates between intervention and non-intervention communes prior to the implementation of the program; or, stated explicitly, there was no baseline equivalence between intervention and control communes. Consequently, the positive change in the injury morbidity rates in some communes may be due to alternate explanations (other than the CIP program). These include biases in the selection criteria of communes in need of intervention programs, location and specific climatic and other differences in communes (e.g., Hue and Quang Tri are coastal Provinces and frequently suffer natural disasters such as flooding, the Hai Van pass on National Road #1 which as a particularly hazardous stretch of road runs through Hue Province), or limitations in reporting systems (specifically, it is possible that communes that established good injury surveillance systems recorded higher injury rates because of the availability and use of good systems while others that did not establish these systems simply did not have the capacity to record injuries). It may also be that the CIP program was more effective in some communes than others, however, it is difficult to ascertain which factors were associated with the reported changes in morbidity rates. Nevertheless, the regression analyses comparing morbidity rates prior to and after intervention (shown below) suggest that there has been some effect of CIP on non-fatal injuries in three of the six Provinces.

Regression analyses were performed on the morbidity data and comparisons of injury rates prior to and after intervention showed some significant differences, as follows:

- Hai Duong Province:
  Significant **reduction** in injuries: $F(1,3)=6.68$, $p<0.05$, CI: -99.4, 10.3.

- Hai Phong Province:
  Significant **reduction** in injuries: $F(1,3)=-6.76$, $p<0.01$, CI: -233.9, -84.1.

- Quang Tri Province:
  Significant **increase** in injuries: $F(1,3)=4.05$, $p<0.05$, CI: 20.4, 170.4

- Hue Province:
  Significant **reduction** in injuries: $F(1,3)=-3.43$, $p<0.05$, CI: -68.3, -2.5

- Can Tho Province:
  Non-significant **reduction** in injuries: $F(1,3)$, $p=0.7$, CI: -287.9, 228.1

- Dong Thap Province:
  Significant i**ncrease** in injuries: $F(1,3)=4.85$, $P<0.05$, CI: 57.8, 278.2

With regard to age and gender differences, Table 7 shows injury rates by age and gender comparing intervention and non-intervention communes. The rates of injury amongst males were higher than females for both intervention and non-intervention communes, however, overall higher rates were recorded in intervention communes. For age group, rates of injury were more evenly spread across the age groups in intervention communes compared with non-intervention communes. Moreover, a higher rate of injuries was recorded amongst older children aged 15-19 years in non-intervention communes.

*Table 7: Injury rates (per 100,000 population) by age and gender by commune intervention status*

| | Hai Dong | Quang Tri | Can Tho | Hue | Dong Thap | TOTAL |
|---|---|---|---|---|---|---|
| **GENDER:** | | | | | | |
| **Intervention:** | | | | | | |
| Male | 3031.7 | 4746.9 | 1521.2 | 5696.1 | 3192.4 | 3637.7 |
| Female | 1288.1 | 2519.1 | 427.2 | 2836.1 | 1394.0 | 1692.9 |
| **Non-Intervention:** | | | | | | |
| Male | 988.8 | 5766.4 | 453.2 | 2518.3 | 1683.3 | 2282.0 |
| Female | 288.7 | 2018.2 | 227.2 | 775.7 | 983.8 | 858.72 |
| **AGE:** | | | | | | |
| **Intervention:** | | | | | | |
| 0-4 years | 168.4 | 299.4 | 80.8 | 347.8 | 188.5 | 217.0 |
| 5-14 years | 342.0 | 431.9 | 174.3 | 909.3 | 276.3 | 426.8 |
| 15-19 years | 282.4 | 323.9 | 135.2 | 444.7 | 328.5 | 302.9 |
| **Non-Intervention:** | | | | | | |
| 0-4 years | 38.0 | 153.1 | 26.6 | 49.4 | 57.0 | 64.8 |
| 5-14 years | 38.0 | 392.2 | 35.5 | 230.4 | 113.9 | 162.0 |
| 15-19 years | 58.7 | 435.3 | 23.0 | 181.0 | 461.1 | 1159.1 |

Injury morbidity rates by injury type are shown in Table 7 by commune intervention status.

Table 7: Injury rates (per 100,000 population) by injury type and commune intervention status.

| | | Hai Duong | Quang Tri | Can Tho | Hue | Dong Thap |
|---|---|---|---|---|---|---|
| Intervention | RTI | 925.0 | 790.1 | 264.0 | 1211.5 | 802.7 |
| | Occupational injury | 393.8 | 878.4 | 136.4 | 535.9 | 464.8 |
| | Animal | 124.4 | 176.7 | 2.5 | 37.1 | 104.5 |
| | Fall | 349.8 | 1104.2 | 123.8 | 1750.2 | 354.7 |
| | Drowning | 62.2 | 19.6 | 1.3 | 42.8 | 16.8 |
| | Burn | 31.1 | 58.9 | 10.1 | 59.9 | 54.1 |
| | Poisoning | 18.1 | 4.9 | 1.3 | 8.6 | 3.7 |
| | Suicide | 13.0 | 9.8 | 0.0 | 11.4 | 18.7 |
| | Assault | 82.9 | 250.3 | 75.8 | 159.6 | 276.3 |
| | Other | 147.7 | 260.1 | 25.3 | 379.1 | 197.9 |
| Control | RTI | 241.6 | 1788.9 | 168.4 | 761.7 | 556.6 |
| | Occupational injury | 265.8 | 664.8 | 76.2 | 531.3 | 200.2 |
| | Animal | 0.0 | 124.4 | 0.0 | 2.4 | 53.3 |
| | Fall | 75.9 | 703.1 | 51.4 | 72.9 | 113.9 |
| | Drowning | 48.3 | 57.4 | | 4.7 | 0.0 |
| | Burn | 3.5 | 114.8 | 1.8 | 7.1 | 5.5 |
| | Poisoning | 0.0 | 19.1 | 0.0 | 0.0 | 0.0 |
| | Suicide | 0.0 | 19.1 | 0.0 | 0.0 | 3.7 |
| | Assault | 34.5 | 277.4 | 31.9 | 103.4 | 97.4 |
| | Other | 13.8 | 86.1 | 5.3 | 164.6 | 305.0 |

**Summary of injury data analyses**

The analysis of injury data revealed some differences between intervention and non-intervention communes. No significant changes over time were found for mortality rates in the intervention communes, however, there were some noted and significant differences in morbidity rates in intervention communes compared with non-intervention (control) communes. Further analyses revealed that these reductions were significant in three Provinces, namely Hai Duong, Hai Phong and Hue, while in Can Tho Province there was an insignificant reduction. For two Provinces, there were significant increases in injury morbidity rates.

It was noted that there are some challenges in using these data to draw strong conclusions about the effectiveness of CIP on reducing injury rates. There was no baseline equivalence between the intervention and control communes, there may have been inherent bias for selecting communes for the intervention, differences in location and climatic environments, and/or differences due to the enhanced reporting systems. Nevertheless, reductions in morbidity rates were found for intervention communes in four of the six Provinces, which is a promising outcome.

## Chapter 4: Discussion and Recommendations

In Viet Nam a significant number of children are killed or injured each year, mainly as a result of drowning incidents, road traffic crashes, poisonings, falls and burns. It is also recognised that child injuries do not happen by accident – they are predictable and preventable.

In recognition of the need to take bold steps to prevent injury-related crashes of child death and disability, the Viet Nam government along with supporting national and international groups, gave child injury prevention a high priority and was the first country in the region to develop a National Policy on Accidental and Injury Prevention (2002-2010) with the overall goal to ensure safety for people's life by reducing injuries in all environments including traffic, in labour, at home, at school and in common places. In conjunction with this, CIP programs were implemented in selected Provinces and communes from 2006. The programs include key elements of human rights-based approaches, with specific foci on providing ongoing advocacy to decision makers, environmental modification, community-based projects, and supporting the development of cross-sectoral plans of action. The outcomes and outputs of the CIP project address four key areas of intervention, including i) increased public awareness, positive attitude change and skill building, ii) strengthened capacity of national and local authorities, iii) development, improvement and enforcement of appropriate legislation, and iv) provision of a safer environment to mitigate injury risks.

An important component of the CIP program implementation has been the evaluation phase which was designed to measure the effectiveness of the program in achieving its main aims and objectives. A three-staged evaluation was undertaken to assess the above aims and included i) a review of documents and publications outlining the implementation of the program, ii) interviews with key partners, organisations, community groups and parents/caregivers, and iii) a comparative analysis of injury data, comparing injury data between the intervention and non-intervention communes and pre- and post-intervention time periods.

**Results: Process evaluation**

The findings of the desk review, interview and focus group discussion responses suggested that the CIP met many of its objectives. Specific positive outcomes were:

- Policies and documentation: Generation of comprehensive policies and documents outlining the planning and implementation of CIP programs, with detailed guidelines and systems in place for achieving the overall objectives of the program, including systems for establishing roles and responsibilities of key partners, selection of intervention communes and priority injury areas to target interventions, establishing monitoring systems, capacity building activities and overall sustainability of the programs;

- Engagement: Establishment of good partnerships between organizations and commitment from key stakeholders at national, Provincial and commune levels;

- Data: Establishment and use of injury surveillance system;

- Implementation: Perception that messages and interventions were successful in reaching a significant number of community organizations, groups, parents/caregivers and children;

- Implementation: Increased awareness of child injuries and strategies to reduce the incidence and severity of injuries within project (intervention)communes;

- Resources: At least in some communes, funds were allocated and utilised well, and intervention programs reached target community groups;

- Capacity development: Good development of capacity within communes and Provinces; and,

- Sustainability: An overall desire by all to continue implementation and maintenance of CIP programs in pilot communes as well as expanding to other Provinces and communes.

These were positive findings and provide evidence suggesting an effective program. Information was also sought on aspects of the program that were not working as well as anticipated and reasons for these limitations. Specific findings here were:

- Limitations in achieving the full potential of the injury surveillance system: there appears to be a lack of adequate data systems and sub-optimal data entry and use of these data systems. This seemed to be, in part, a result of lack of financial resources, poor working conditions for some (overworked and lack of time), lack of training and emphasis of the importance of these activities.

- Lack of monitoring activities: while systems were in place to achieve good monitoring activities, there was a distinct lack of these activities at any level of implementation. Monitoring appeared not to be a priority for any organization and there was little monitoring or evaluation of public awareness events, training activities, data entry or reporting on activities by local counterparts.

- Limited resources: the lack of resources (both financial and involvement/commitment by partners and collaborators) was a concern for many in the communes and this was perceived to have affected the quality of the interventions, training, provision of safety equipment to poor households, improving public spaces, etc.

- Sub-optimal partner engagement: there seemed to be some concern regarding lack of communication between key partners and local counterparts as well as appropriate communication of safety message and adequately targeting community members.

- Sub-optimal communication strategies: there seemed to be some concern regarding appropriate communication of safety messages and adequate targeting of commune members.

- Sub-optimal capacity building activities: there was some concern that ongoing training was limited, and fears that this would cease once international partners (e.g., UNICEF) and National government collaborators were not supporting activities and if resources were inadequate.

**Results: Injury data evaluation**

Analyses of health data, specifically injury mortality and morbidity rates for children aged 19 years and under between 2005 and 2009 in the six communes selected for intervention were undertaken.

Traffic injury was by far the most frequently reported injury type, followed by falls and occupational injuries. Interestingly, drowning injuries were relatively infrequent. Moreover, children aged between 5 and 14 years accounted for approximately 42 percent of those injured, followed closely by those aged 15 to 19 years of age. Only 20 percent of those injured were younger children aged 4 years and under.

Some significant challenges in interpreting the data were noted in the previous section, particularly regarding the low rates of deaths, small numbers of communes receiving interventions, and difficulty in determining when interventions were introduced in communes. Notwithstanding, comparisons of injury data between intervention communes with control communes (comparing pre-intervention rates with post-intervention rates) were undertaken and revealed some expected and unexpected results.

With regard to the mortality rates, no significant changes over time were found in the intervention communes. This was not surprising, given the relatively small numbers of deaths. Further analyses of individual Provinces revealed some interesting, but insignificant, differences in mortality rates between Provinces and between intervention and control communes.

With regard to the morbidity rates, there were some significant differences. Overall, there were significant reductions in injuries in the intervention communes from 2005 to 2009 compared with the non-intervention (control) communes. Closer examination of morbidity rates in each Province revealed some interesting differences. For three Provinces, there were significant reductions in injury morbidity rates (while in another there were reductions, but insignificant). For two Provinces, there were significant increases in injury morbidity dates. While this suggests there may have been a positive effect of CIP on non-fatal injuries in some Provinces, there may be a number of reasons for the substantial differences between communes, such as location and climatic differences between regions and therefore differences in injury patterns, limitations in reporting systems, etc.

While it may be that the CIP program was more effective in some communes than others, it is difficult from morbidity rates alone to ascertain which specific factors were associated with the reported changes in morbidity rates and whether these changes can be attributed to CIP. Nevertheless, reductions in morbidity rates were found for intervention communes in four of the six Provinces, which is a promising outcome.

**Recommendations for future policy and intervention development:**

The findings of the process and injury data evaluations revealed successful implementation of the CIP program in some Provinces and not others. This is evident from the findings of the desk review as well as the feedback from the interview and focus group respondents. In addition, the injury data evaluation suggested that there may have been sustained declines in injury morbidity rates for children however, this was not consistent across all Provinces in which the intervention was implemented. It s not clear from the data we examined as to why we saw declines in 4 but not the 6 Provinces. Notwithstanding this, the evaluation highlighted the fact that only a small number of communes within each Province received interventions. While some positive trends and outcomes were apparent, overall the level of intervention was not sufficient to achieve high impact and significant reductions across all Provinces in which the intervention took place.

General conclusions regarding what has worked and what hasn't worked are drawn, based on the current findings as well as previous evaluations of injury prevention programs, and provided below, along with recommendations (if appropriate) for improvements. These are presented as they relate to defined impacts, outcomes and outputs of the CIP (Table 8).

*Table 8: Summary of outcomes and recommendations*

| Key objectives and defined impacts | Positive outcomes | Negative aspects | Recommendations |
|---|---|---|---|
| Planning and implementation | Good and comprehensive documentation and guidelines for intervention Provinces and communes to implement appropriate programs<br><br>Implementation of various programs in six Provinces<br><br>Established injury surveillance system<br><br>Addressed high priority injury areas<br><br>Some reductions in injury morbidity | Limited translation of policies and guidelines at ground level<br><br>Small number of communes received interventions, therefore an overall insufficient does of interventions to achieve significant changes in injury rates<br><br>Limited ongoing maintenance of the injury surveillance system and therefore some limitations in describing the extent of the injury problem, identifying specific injury mechanisms and settings to target for intervention, and in monitoring progress.<br><br>Poor understanding of the causal factors for injury | ***Initiatives to scale up***:<br>Greater level of investment in implementing intervention programs and activities that directly relate to reducing the risks associated with child injury is necessary. By implementing more of these activities, one is likely to see more significant reductions in child injury.<br><br>Improved data management: Is necessary to adequately evaluate the CIP program. However, rather than establish these systems, work with the Government to enhance the existing commune-level reporting systems such as the A6 system.<br><br>***Initiatives to scale down***:<br><br>Given the comprehensive nature of guidelines and policies, these are adequate and need not be developed further.<br><br>While it is essential that, at the government level, strategies are in place to ensure the integrity of the surveillance system including stringent monitoring systems and training of commune staff to ensure data is recorded regularly and accurately, it may not be cost-effective to invest heavily in monitoring activities. |

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| Resources and partnerships | Established good partnerships with appropriate stakeholders and clearly set out roles, responsibilities<br><br>Established good communication with partners and local contractors<br><br>Allocated funds to specific program activities | Some indication of communication breakdown between national collaborators and Provincial/commune co-ordinators<br><br>Substantial concern by Provincial and commune co-ordinators regarding future support and involvement from national bodies<br><br>Limited records regarding utilization of funds | ***Initiatives to scale up***:<br><br>Increased engagement, commitment and collaboration from all agencies including National Government, local authorities, non-government organisations, advocacy groups, agencies, and community groups working with children.<br><br>More investment from the National Government to sustain long-term CIP activities, particularly to continue the injury surveillance system, public campaigns, and training courses.<br><br>***Initiatives to scale down***:<br><br>While good financial recording systems to monitor funds utilization and expenditure are important, heavy investment in these activities is inefficient |
| Program approaches | Effective approaches in communes (including public education campaigns, training sessions and environment improvements)<br><br>Raised awareness of injuries and provided strategies to reduce injuries<br><br>Anticipated activities met targeting appropriate | Limitations in ongoing training of initiative organizers | ***Initiatives to scale up***:<br><br>Greater levels of investment in delivering 'best-practice' programs (public education, training children and parents/caregivers, environmental improvements) in more communes within the Provinces is needed.<br><br>Enhanced co-ordination with program collaborators to ensure appropriate messages are promoted.<br><br>Continued training and support for program co-ordinators<br><br>***Initiatives to scale down***:<br><br>While monitoring of injury data trends is beneficial ensuring |

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| | community groups.<br><br>Generally appropriate delivery of messages and employing appropriate teaching methods for the target audience. | | priority injury types are being addressed and appropriate programs are implemented, the level of investment in these activities could be scaled down. |
| Capacity building | CIP appears to have provided good initial training of co-ordinators and program delivery personnel within intervention Provinces and communes | Limited ongoing training in many communes | ***Initiatives to scale up***:<br><br>Provision of ongoing training for community members and organizations – this will ensure that initiatives are delivering messages, education and training that they are intended to deliver. CIP could consider strategies to ensure continued high performance such as: more stringent and continuous monitoring, co-ordination and assessment of performance; provision of ongoing skill development opportunities; provision of feedback on work performance<br><br>***Initiatives to scale down***:<br><br>None |
| Monitoring | Guideline developed outlining monitoring systems and activities | Little ongoing monitoring of performance of co-ordinators and program delivery personnel. | ***Initiatives to scale up***:<br><br>None<br><br>***Initiatives to scale down***:<br><br>While monitoring is essential in understanding how successful initiatives have been, allocating responsibility to program managers to adequately record and report on progress, the |

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| | | | current level is likely to be sufficient. Importantly, rather than establishing injury surveillance systems specifically for the program, encourage the government to implement the necessary enhancements to the commune-level reporting systems. This will then enable the CIP program to redirect the funds spent on establishing and supporting injury surveillance systems to implementing innovative interventions that target reductions in child injury. |
| Sustainability | Policies and guidelines developed outlining systems to ensure sustainability | Limited translation of policies and guidelines in practice | ***Initiatives to scale up***:<br><br>Core and ongoing funding: Securing ongoing long-term funds and resources from key stakeholders and organizations who should take responsibility for the long-term implementation of the program should now be a key focus for the long-term sustainability and success of CIP. More financial investment from the National Government departments such as MOH, MOLISA, MOET to sustain long-term CIP activities is required. More ownership of the program by these organizations is also required and this can be achieved by engaging them more fully in planning, decision-making and monitoring activities.<br><br>Communication: A key focus should be on enhancing collaborative and cultural competence and leadership capacity to facilitate the delivery of appropriate messages, engage the target community group and assist in transforming knowledge to action.<br><br>Systematic guidelines for sustainability: Unsuccessful programs often suffer from ad hoc and sporadic efforts which might work well for a while however are not sustainable for the long-term. It appears that this is the case for some components of the CIP. Systems should be in place to ensure that adequate capacity is available in each commune, that is, training groups of program co- |

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| | | | ordinators, ensuring their full involvement and funds/resources are available to support ongoing activities.<br><br>Engaging co-ordinators and building capacity: Successful programs ensure that those working on the program are committed and engaged. It is therefore important to select appropriate community members: ideally, program co-ordinators represent the full range of diversity within the community, are credible, and respected members of the community, and who are community partners/stakeholders. |
| Further research | | | There are numerous opportunities here for further research to enhance our understanding of the nature and extent of child injuries in Viet Nam, and to promote 'best-practice' and effective programs that will achieve substantial reductions in child injury mortality and morbidity rates.<br><br>CIP should consider engaging research institutes such as Ha Noi School of Public Health to undertake essential research projects such as:<br><br>• In-depth analysis of injury surveillance data<br><br>• In-depth community surveys to understand underlying causes of injuries<br><br>• Large-scale randomized control trials of best-practice initiatives |

**Summary**

The evaluation has highlighted some important information related to the effectiveness of the CIP programs in Viet Nam. The process evaluation revealed elements of the program to be successful and there were encouraging declines in injury morbidity rates in 4 of the 6 Provinces in which the intervention was implemented in the selected communes. However, the declines may have been larger if greater effort was placed in activities that targeted reductions in injury; for example, 14% of the finances for the program supported activities such as establishing injury surveillance systems. Although such activities are necessary, they don't directly contribute to reducing the likelihood of child injury. Suggestions for future development of CIP are highlighted in this report. To achieve real gains in reducing the incidence and severity of child injuries, it is clear that a greater level of investment is required. Importantly, a greater array of interventions and a greater level of intensity of intervention is necessary if one is likely to see significant and sustained declines in child injury rates across all Provinces in which the interventions were implemented. To achieve this, one needs a financial commitment from the National Government.

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**ANNEX 1: Detailed outcomes of desk review.**

This Annex presents a detailed presentation of the outcomes from the desk review of literature. The key components of the desk review are to provide background information on child injuries in Viet Nam, understand the components of the Child Injury Prevention (CIP) programs in Viet Nam, and review, evaluate and document the extent to which the program has achieved its set impacts, outcomes and objectives, particularly in terms of short and long-term impacts and the factors that have influenced its effectiveness. In addition, other international child injury prevention initiatives are discussed, along with any evaluations undertaken to identify key factors contributing to the success of programs and the key mix of criteria that result in the most optimal interventions.

**Methodology:**

Important information was collected on the effectiveness of the programs through a desk review of documents and publications. This involved a detailed review of key documents and publications in the area of child injury prevention and interventions.

The World Health Organisation and UNICEF's World Report on Child Injury Prevention (WHO, 2008) is a landmark document and provides excellent information and recommendations on effective interventions, rankings of current and promising interventions. This report has formed the basis of the review. In addition, other categories of documents were sourced for this phase of the project:

1. The published international literature on child injury and child injury prevention. Literature from 2006 to the current was accessed to gain a good understanding of international 'best-practice' approaches, programs and interventions. Appropriate databases (e.g., PsychInfo, Medline and the Cochrane Library) and the internet were searched to identify relevant published scientific literature.

2. Key documents provided by UNICEF and the key stakeholders/partners associated with CIP Viet Nam were systematically reviewed during this phase. These include the National Policy, CIP program outline, internal reports, statistical documents, and related documents.

**Child Injury morbidity and mortality in Viet Nam**

In 2008, Viet Nam had a population of 86.21 million with an annual population growth of 1.2 percent (World Bank, 2010), with children under the age of 19 years making up approximately one-third (34%) of the total population (General Office of Population and Family Planning, 2009). Viet Nam has become one of the few countries in South East Asia that has achieved tremendous economic growth and poverty reduction in the last 15 years. In terms of achieving the Millennium Development Goals (MDGs), Viet Nam is well on the way to achieving many of the 15 MDGs targeted by 2015. One of the goals is to reduce the mortality rate of children aged five years and under by two thirds between 1990 and 2015.

Unintentional injury is still a leading cause of death of Vietnamese children and teenagers. It is estimated that the fatal child injury rate was 83.2 per 100,000 children in 2001, and injury

accounted for 75 percent of child deaths (Vietnam Public Health Research Network, 2003). Similarly, for non-fatal cases, injury was by far the leading cause (57%) of hospital admission. This equates to 4,818 per 100,000 children, or 5 percent of all children injured enough to seek medical attention or lose at least one day of school or work.

More recent data shows that, in 2006 alone, 7,198 children and adolescents aged 0-19 years died as the result of an injury – this is equivalent to nearly 20 per day. Regions such as the Red river delta region, North East region, North Central Coast and Mekong river region recorded the highest number of cases of 1,389, 1,070, 1,272 and 1,095 respectively (MOH, 2006). This may well be an under-reporting of deaths, as the Alliance of Safe Children (TASC) estimates that every day in Viet Nam, 60 children die from injuries and 3,700 children are seriously injured.

Drowning has been identified as the overwhelming major cause of death in Viet Nam in every age group of children and adolescents, and far outstrips other causes, accounting for over half (53.4%) of all child deaths. In 2007, there were a reported 3,786 drowning-related deaths amongst children, and this is partly due to the abundance of rivers and lakes which children regularly use as play areas, as well as frequent flooding and typhoons [MOH, 2008]. Drowning-related deaths are most prominent amongst younger children. According to the 2002 National Health Survey, the highest rates of drowning-related deaths were amongst the 0-4 year age group, and amongst male children (MOH, 2008). A great proportion of these deaths occur in the wet season, and, as such, local Vietnamese, especially parents, often refer to the summer vacation as the 'drowning season' (Linnan et al., 2003).

Road traffic crashes are the second leading cause of child death, accounting for about 12.8 percent of deaths, with a fatality rate of 6 per 100,000 children (MOH, 2008; TASC, 2010). Motorization has increased rapidly in Viet Nam during the past 10 years and is associated with economic and social development. While cars have increased at an annual average rate of 12 percent, motorcycles have increased at an annual average rate of over 40% per year. This has resulted in a 16.5 fold ratio between two-wheel motor vehicles and four-wheel motor vehicles.

For young children under the age of 5 years, most road traffic deaths occur as pedestrians, for middle-aged children (aged between 5 and 14 years), it is a mix of pedestrian and bicycle injuries. For older children (between 15-19 years), vehicle-related crashes appear to be the major cause of death and serious injury, with motorcycle-related crashes accounting for the majority of deaths (Linnan et al., 2003; Viet Nam Public Health Research Network, 2003; MOH, 2008).

Based on the data collected by the Ministry of Health from 54 Provinces and cities, out of 495,545 cases of head injuries due to traffic crashes, 13.4 percent were aged 14 years and younger. Out of these, 50 percent were not wearing a helmet. Moreover, for those children ages 15-18 year of age, according to the VMIS, four percent were income-earners for their family, confirming that death and disability due to traffic crashes has far reaching consequences and impact on the children's family.

Poisoning is the third identified leading cause of death among children in Viet Nam, with a rate of acute poisoning in 2007 of 0.4 per 100,000 population for children under 19 years

(MOH, 2008). Poisoning is also a significant cause of morbidity. While it is difficult to obtain accurate injury rates (e.g., the VMIS reported mortality rates that were ten times higher than those of the MOH), the non-fatal rate of poisonings was 168.1 per 100,000 population, with the highest rate among infants 1 year old and below and the lowest among children aged 10-14 years (MOH, 2008). It was found that food poisoning was the major cause of acute poisoning among children (44.1%) while poisoning due to poisonous fruits and/or vegetables was second at 27 percent, while gas and smoke was 15 percent. Pharmaceutical overdoses and liquid poisons were 11.8 percent and 4.3 percent respectively.

Other non-fatal injuries are due to falls (the leading cause of non-fatal injuries) and burns. Burns ranked fifth as the leading cause of morbidity in Viet Nam but there were no fatalities. According to VMIS, approximately 65,000 children were burned in 2001, severe enough for them to seek medical attention and had serious consequences which included permanent disability. Children are often exposed to open fires from cooking and heating because most rural homes in Viet Nam do not have a separate room as a kitchen (Linnan et. al, 2003).

**Reducing the burden of child injuries**

In addition to understanding the major causes of child injury, it is also important to understand the underlying and contributing factors in order to develop the most appropriate and effective interventions.

The well-established host-, agent-, and environment-model is proven to be a powerful concept to aid the development of interventions that address different aspects of the injury problem. In this model:

- The host is the individual at risk;
- The agent is the available energy (either mechanical, thermal, chemical electrical, or radiation);
- The vector, object, or vehicle is the means for the transfer of the energy; and,
- The environment is the physical and/or social context within which the injury event, its precursors, and consequences occur.

The most commonly used tool to allow the effective analysis of injury in terms of the interacting factors and phases of intervention across the spectrum of injury is Haddon's Matrix (Haddon, 1968). Within this matrix, three distinct phases in an injury event are described and include: a pre-event phase, during which the necessary conditions for the transfer of energy develop; an event phase, during which the transfer of energy occurs; and a post-event phase, during which the host attempts to regain homeostasis after the transfer of energy has ceased. The tool can be used effectively to design and review a range of interventions for any type or cause of injury. Importantly, to identify effective interventions the agent of injury must be understood in terms of energy transfer and opportunities to prevent harmful energy from coming into contact with an individual must be identified.

It is recognised that child injuries do not happen by accident – they are predictable and preventable. Therefore, effective prevention of injury and associated trauma relies on a

comprehensive identification and understanding of the broad societal and community factors, as well as more localised factors at the household and individual level. It starts at recognising the problem followed by political will, commitment and policy change. This entails partnerships with key stakeholders and organisations to undertake research, lobbying, legislation, environmental modifications, public education and improvements in emergency services.

Experience also tells us that injury is largely preventable with simple and effective solutions. Reductions in child injuries in Asia could be achieved by teaching a child to swim, how to safely cross a road, or teaching parents ways and strategies to ensure a safe living environment for their children. National policy, safety legislation and law enforcement are among the most powerful tools to protect children from being injured. These need to be supported by community-based interventions aimed at raising awareness of the issues, providing and building the skills and knowledge to practice safe behaviour, and providing modifications to the environment to remove hazards and provide safety devices to reduce harm. Most importantly, these initiatives require multi-sector collaboration.

Findings of the 2003 nationwide Knowledge, Attitude, Practices (KAP) and Communication models research on child injury prevention revealed a number of issues related to the high prevalence of child injury in Viet Nam, and they are listed as follows:

i) The general public's low awareness and unconcerned attitudes towards prevention measures related to sources of major child injuries result in many unsafe practices;

ii) Low awareness among decision makers and the donor community of the injury burden (injury's contribution to common mortality, morbidity, to economic loss and other results).

iii) Existence of many inherent and environmental child injury risks such as the abundance of bodies of water in the country, poor roads and traffic safety facilities, inadequate housing construction and dangerous play equipment.

iv) Organisations and agencies' insufficient knowledge and skills related to the integration of CIP into their normal agenda/plan of action.

v) The absence of a coherent and strong legal system supporting child injury prevention and child safety issues

Childhood injury has also shown to be linked with disparity globally, and in Viet Nam. According to a qualitative causality survey conducted in 2003 in three communes in Hai Phong, Quang Tri and Dong Thap, children from the poorest families were more frequently injured than the children from more affluent families. Similarly, according to Thanh et al. (2005), low-cost housing quality contributed to a higher risk of injury, particularly injuries as a result of falls and fires.

**Child Injury Prevention programs: International comparisons**

In order to both increase safety and reduce the burden of injuries experienced by individuals, families and communities, it is necessary to develop appropriate safety

promotion and injury prevention interventions. Community-based programs employing multiple interventions as the main strategy for achieving population-level changes in risk behaviours and health status have evolved steadily over several decades, representing a shift in emphasis from individually focussed explanations of health behaviour to explanations that also encompass social and environmental influences.

Peden et al. (2008) noted that a number of countries have achieved remarkable reductions in their child injury death rates, in some cases by more than 50 percent. This report also points out that there is no single plan for success, however, identifies six basic principles that underlie most of the successful child injury prevention programs internationally. Table A shows the key approaches identified by Peden and her colleagues to address child injuries.

Table A: Key approached to address child injuries

| Key approaches | Traffic | Drowning | Burns | Falls | Poisonings |
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| **Legislation, regulations, enforcement** | Speed limits, drink-driving laws, child restraints | Four-sided pool fencing | Hot water tap temperature legislation, smoke alarms | Playground equipment standards | Manufacture, storage and distribution of harmful substances requiring safe packaging |
| **Product modification** | Vehicle-front modifications, child restraint systems | Personal floatation devices | Non-tip lanterns and candle holders | Baby walker modification, safety glass | Medication packaging, child resistant closures |
| **Environmental modification** | Child-friendly infrastructure, safer routes to school, safer play spaces | Barriers – such as well coverings and fencing | Separation of cooking area from living area | Window guards on tall buildings, roof railing, non-climbable banisters | Safe storage of potentially harmful substances |
| **Education and skills development** | Helmet wearing, using child restraints | Swimming training and supervision | First aid – 'cool the burn' | Supportive home visitation to identify fall hazards | Immediate first aid |
| **Emergency medical care** | Child-sized equipment, child-friendly environment | Immediate resuscitation | Burns centres | Appropriate paediatric acute care | Poison control centres |

Child injury prevention interventions have been conducted globally, in high-, middle- and low-income countries. An example of CIP interventions in a low-income country is Bangladesh. Bangladesh authorities identified injury as the biggest killer of Bangladeshi children under 17 years of age. Each year in Bangladesh, 70,000 people die from injury and 30,000 of them are children while 13,000 children are permanently disabled due to injury. One form of injury alone, road traffic accidents, is costing the Bangladesh community more than $700 million annually [Centre for Injury Prevention and Research, Bangladesh, 2008].

The Bangladesh government and non-government organisations have developed and implemented a range of interventions within their communities, through its *"Prevention of Child Injuries through Social intervention & Education"* (PRECISE) programme.

The PRECISE programme was based on injury data from the Bangladeshi Health and Injury Survey (BHIS) conducted in 2003 and published in 2005 (Rahman et al., 2005). The survey was a product of collaboration between the Institute of Mother and Child Health (ICMH), the Ministry of Health and Family Welfare (MOH&FW), UNICEF Bangladesh and the Alliance for Safe Children (TASC). This survey was the first and most comprehensive effort made to gather accurate data at the community level on the burden of injury in a developing country. Over 171,366 households were included in this survey, representing more than 800,000 infants, children and adults.

The survey revealed a previously unrecognised epidemic of child injury and prompted calls for a new emphasis on child health and survival as over 80 children die as a result of injury every day in Bangladesh, a country of 140 million people. The survey showed that drowning was the overwhelming danger in early childhood, accounting for 26 percent of deaths among children aged 1 to 4 years. Burns, poisonings, traffic crashes and selected intentional injuries were also highlighted (Rahman et al., 2005). In addition to identifying the nature and extent of the problem, the survey also captured some cultural and behavioural factors related to the perception of risk, prevention and practices relating to injuries. Taken together, these data provided a road map for future action designed to promote an agenda of safety for children in Bangladesh.

The PRECISE programme was implemented between September 2005 and December 2008, and based on three main principle components: i) Safe Homes – improvements made to remove physical hazards and changes risk behaviour of household members; ii) Safe Schools – training teachers with practical teaching tools to help students learn how to avoid and minimise injury; and, iii) Safe Communities – including the Creche Programme; Swim for Life Programme, Social Autopsy and Courtyard Meetings.

An independent evaluation was performed on the programme from September 2005 until December 2008 and revealed that one of the most successful interventions was the swimming activity, also known as the "Swimsafe Programme". The SwimSafe program was designed to equip children with life saving swimming and rescue skills. Children 4-10 years who could not swim were the target children. Swimming teaching was provided by the trained Community Swimming Instructors (CSIs) who were local paid volunteers. A training manual was developed in collaboration with Royal Life Saving Society Australia (RLSSA) and Bangladesh Swimming Federation and it was repeatedly pre-tested before finalisation. The CSIs taught children swimming and rescue skills in a local pond, which was made safe for the activities using locally available resources. The criteria of swim graduation were - swimming for 25 metres and treading for 90 seconds, which met the international criteria of life saving swimming skills. The detailed of the programme are available in the PRECISE Document: SwimSafe – Strategies, Guidelines and Training Manual.

The evaluation also showed that the community, especially mothers, appreciated the swimming learning activities to protect children from drowning, recognising that drowning is a major cause of child death. Some of the respondents expressed their willingness to pay

Taka 10 to 50 per month as teaching fee (Fazlur Rahman, et al, 2009). During the intervention period of three years, 150 swimming centres were developed, the same number of community swimming instructors (CSIs) were trained and over 27,574 children learnt to swim.

More importantly, the study revealed that drowning amongst children four years and over was effectively prevented by acquisition of swimming skill. While naturally acquired swimming skill was also effective, the addition of formal survival swim training appears to have been effective in enhancing the prevention of drowning. There were no deaths or injuries that occurred in the process of swim-learning for these children. In addition, various communication measures and counselling in the intervention areas resulted in an increase in knowledge and practice of injury prevention strategies among mothers of infants and young children.

Through 4,930 courtyard meetings 197,000 community people were made aware on injury prevention. About 700 video shows on injury prevention were organised which covered over 330,000 population. Eighty doctors and paramedics received training on emergency injury care and about 1200 community people received first responders training.

In a developed country, such as Australia, the Child Pedestrian Injury Prevention Project (CPIPP) was implemented between 1995 and 1997. This was the result of data showing pedestrian injuries were the leading cause of injury death in children aged 5–9 years in Western Australia (Health Dept of Western Australia, 1995). CPIPP was the first comprehensive community intervention trial that was implemented as an extensive school-based education program as well as with active engagement from the community, improving the environment to reduce a child's risk of injury in the road environment. This multi-component project comprised an educational intervention for students, their parents and teachers, and the local community, as well as several environmental interventions. The primary aim of CPIPP was to improve children's road-related behaviour and to enhance the safety of their road environment (Stevenson et al., 1996).

An evaluation of the CPIPP was undertaken. Three communities were assigned to treatment conditions: i) high-education, community, and environmental interventions; ii) moderate-education intervention only; and iii) a control comparison community (with usual road safety education). Children's pedestrian knowledge and road crossing and playing behaviours were measured using a pre and post-test self-report questionnaire. Their self-reported road crossing behaviours were validated using an observational schedule and brief interview (Child Health Promotion Research Centre, 2011).

Both the PRECISE and CPIPP projects were monitored and evaluated to assess the effectiveness of each one of the activities carried out. For PRECISE, an Injury Surveillance System (ISS) was created to allow monitoring and evaluation of project activities and the outcomes associated with those activities. The ISS allowed programme staff to track the trend of various child injuries over time and to better determine the factors involved and evaluate effectiveness of PRECISE interventions. Data are collected by monthly household visit and managed by the Centre for Injury Prevention and Research, Bangladesh (CIPRB). The ISS became one of the largest community based injury surveillance system ever implemented in a developing country.

For CPIPP, a Community Index was developed to assess the effectiveness of the intervention. The index was developed in three stages. The first stage involved recording details of various activities that either reduced the risk of child pedestrian injury in the road environment or heightened the community's awareness of road safety over the three year period of the trial. This was undertaken by reviewing the local government records in the three communities. The second stage involved a survey to canvass the public's opinion of various community/environmental interventions. That is, the public's perception of whether the various activities would lead to changes in road safety behaviour. In the third and final stage, a score for each road safety activity initiated in intervention groups 1 and 2 and the comparison group, was calculated (Stevenson et. al, 1996).

For both of these initiatives, evaluations measured injury outcomes primarily. Only modest reductions in injury rates were found as a result of these interventions, and therefore difficult to draw causal conclusions about the observed changes. The importance of focusing evaluation questions on the processes of implementation was also highlighted in these evaluations. The issues that were highlighted included program planning, implementation, resources, developing partnerships, monitoring and evaluation.

Peden et al (2008) argued that, in countries where the greatest reductions have been recorded, a combination of approaches as listed in Table 1 in the main report have been employed. In addition, countries that encourage a culture of safety and display strong political commitment have made great progress in reducing their child injury burden.

As such it is important that the Child Injury Prevention Programme (CIP) in Viet Nam is also being assessed and evaluated in terms of its effectiveness in preventing injuries among children in Viet Nam, as well as issues of barriers and facilitators to successful implementation and ongoing monitoring.

**Development of the CIP strategy and programs in Vietnam**

Sustained interventions have been implemented in Viet Nam through concerted efforts by committed organisations and governments. In 2001, Viet Nam was the first country in the region to develop a National Policy on Accidental and Injury Prevention (2002-2010) with the overall goal to ensure safety for people’s life by reducing injuries in all areas including traffic, in labour, at home, at school and in common places.

This was followed by elaboration of a national programme of accident and injury prevention under a cross-sectional managing board headed by the Ministry of Health (GoV & UNICEF, 2010). Injury prevention was also incorporated into the National Plan of Action for Children 2001-2010 by the Committee for Population, Family and Children (CPFC) and was endorsed by the Prime Minister. With the support of the Government of Viet Nam UNICEF Viet Nam launched the ‘Childhood Injury Prevention’ (CIP) project in 2003. Since its commencement, it has introduced a comprehensive response towards child injury and substantial progress on injury prevention has been reported in many areas. Based on a recent review on the implementation of the National Policy, however, it was found that there is still a lack of adequate data systems to describe the extent of the injury problem, to identify specific injury mechanisms and settings to target for intervention, and to monitor progress (Ozanne-

Smith & Nguyen, 2010). These, as noted by the authors, are substantial barriers to achieving the full potential of the National Policy.

The CIP has the overall objective to reduce injuries among children and young people and help reduce children's disability due to injuries. In order to achieve this, several steps are required such as:

i) improving awareness and changing attitudes of children, parents and caretakers as well as local leaders on safety and injury prevention;

ii) providing these groups with knowledge and equipping them with specific skills in an effort to reduce child and adolescent deaths and disability due to injury;

iii) modifying aspects of the physical environment that predispose children to injuries and to deploy necessary safety devices that protects children from being injured; and,

iv) influencing policy on issues related to safety and to foster injury prevention legislation and its enforcement.

The CIP has nationwide components such as advocacy, public education, capacity building, research and surveillance. It has also implemented pilot initiatives at the Provincial level in six Provinces.

The six Provinces selected for inclusion in the CIP program are shown in Table B, along with some general features of each.

Table B: Summary of intervention Provinces

| **Province** | **General features** |
|---|---|
| Hai Phong | Representative for urban areas and located on National Road #5<br>Two districts, 216 communes/wards, 413,611 households and 402,492 children under 15 years<br>High rate of traffic crashes, burns and poisonings |
| Hai Duong | Located in Red River's Delta area and located on National Road #5.<br>11 districts, 1 city and 263 communes/wards<br>High rate of traffic crashes |
| Quang Tri | A UNICEF prioritized Province, located on National Road #1<br>A coastal Province and agricultural dominated economy. Population of 573,404 (48% under 20 years). Former war location and high flooding area<br>High rate of traffic crashes and injuries related to unexploded ordinance. |
| Thua Thien Hue | A coastal area located in the centre of the country and a cultural heritage location. Population of 1,045,134, with 9 districts, city of Hue and 150 communes/wards.<br>The main type of transport is by sea, river, road (esp. at Hai Van pass) and railway. |

| | |
|---|---|
| | High rate of road and rail crashes, drowning and other injuries during raining and flood seasons, and injuries related to unexploded ordinance. |
| Dong Thap | Located in the Mekong River delta area, with 11 districts, 139 communes/wards, and population of 1,595,278 (34% aged under 20). Main economy is farming.<br>High rate of traffic crashes, drowning, burns and poisoning. |
| Can Tho | Located in the Mekong River delta area, and urban area with 7 districts and 118 communes/wards, population is 1,855,991, and the main economy is farming.<br>High rate of drowning and traffic crashes. |

The programme was further developed to become a fully-fledged CIP program that included the Child Survival and Development (CSD) programme as part of the wider co-operation between the Government of Viet Nam and UNICEF from the year 2006 until the year 2010. The 2006-2010 CIP is composed of three key projects, each comprising a number of sub-projects, as outlined follows:

i) Advocacy and public education:

   Sub project 1: Awareness raising

   Sub project 2: Development and enforcement of safety legislation

ii) Model demonstration and Capacity Building:

   Sub-project 1: Comprehensive injury prevention models in 6 Provinces

   Sub-project 2: Institutional strengthening, research, monitoring and surveillance

iii) Mine Action:

   Sub-project 1: Advocacy and capacity building

   Sub-project 2: Mine risk education

Initially, the first and third projects were spearheaded by the former Viet Nam Committee for Population Family and Children (VCPFC), which covers the areas of population, family and children, but by July 2007, this committee was dissolved and most of its responsibilities were divided. The Ministry of Health (MOH) assumed responsibilities in relation to population, MoCTS assumed responsibilities in relation to family and the Ministry of Labour, War Invalids and Social Affairs (MOLISA) assumed responsibilities in relation to children. Furthermore, the first and third projects are currently officially managed by the newly established Bureau of Protection and Care of Children under MOLISA, while the second project is managed by the Department of Preventive Medicine under the Ministry of Health.

The 2006-2010 CIP has seven key outcome results, and these are:

1. Development and enforcement of national laws and regulations on child safety, including safe homes, schools, kindergartens, child care centres and public spaces;

2. Greater awareness at all levels of contribution of injuries to mortality and morbidity and of preventive measures for major child injuries including those caused by UXO/landmines;

3. Comprehensive community and institution-based injury prevention models, including swimming skills, environmental modification and alternative parental supervision during school holidays, developed, evaluated and taken to scale through a national policy on safe communities;

4. Reduced risk behaviour among adolescents;

5. Development of cost-effective child-safety devices to be promoted through new safety legislation;

6. Establishment of an effective accident injury surveillance system; and

7. Strengthened co-ordination and Government response on mine action.

**Program resources, stakeholders and partnerships**

The successful delivery of any program relies on all stakeholders, partners and providers to have a clear understanding of how their work contributes to or impacts others, their roles and responsibilities, and for them to work as team members to ensure success of the program. Here, the use of resources, program approaches, management, and commitment of partners is examined to provide a good understanding of costs of initiatives, resources required, use of resources, efficiency of management strategies, etc.

The Country Programme Cooperation 2006-2010 between the Government of Viet Nam and UNICEF focused on continuing the previous cooperation cycles (access to safe water and sanitation, school retention, injury prevention, etc.,) as well as child protection issues and childhood injury. The CIP programme received funding from the Atlantic Philanthropies (AP) and Dutch Committee for UNICEF (Dutch Natcom) and UNICEF for all its programme implementation. UNICEF Viet Nam provided resources for technical support and monitoring & evaluation.

At the national level, a number of Government departments were involved in the implementation process. The Ministry of Labour, Invalids and Social Affairs (MOLISA) and the Ministry of Health undertook overall programme management for all CIP interventions and some programme implementation. Other ministries and organisations that implemented several specific activities (and to some level provided technical inputs when needed) were the Ministry of Education and Training (MOET), Ministry of Transport, Ministry of Justice, Ministry of Public Security, Ministry of Construction, Youth Union, Women Union and Farmers Union.

At the sub-national Provincial level, government departments that were involved in implementing specific activities were the Department of Health, the Department of Labour, Invalids and Social Affairs and district commune health centres.

At the policy level, the National Assembly was responsible in monitoring the implementation of key national policies and plans.

Other international organisations that provided technical support with joint activities (e.g., advocacy for helmet wearing and child helmet wearing, child drowning prevention) included the World Health Organisation (WHO), Asian Injury Prevention Foundation (AIPF), Counterpart International, the Alliance for Save Children (TASC), Plan International, World Vision.

In summary, it appears that all contributing organisations, stakeholders, partners, community groups had their roles and responsibilities set clearly with guidelines from UNICEF. There were no reports suggesting this process was unsuccessful, nor that any of the organisations failed to follow the guidelines.

**Design and implementation of the program**

Limitations of 'in principle' programs are that they often fail to deliver at the implementation phase with the result that they are deemed unsuccessful despite meeting all other criteria for a successful program. An understanding of how the CIP Viet Nam program and its components was designed and implemented is provided here and includes reporting of initial development stages, the design and implementation processes and strategies undertaken, operational issues, initiatives undertaken and identifies some important facilitators and barriers to successful implementation.

Within the framework of the CIP, UNICEF has been working in collaboration with the MOLISA, primarily in the areas of public health education and community interventions, to reduce the burden of injury. Interventions that have been implemented are focussed specifically on reducing the risk of drowning and include IEC activities in schools such as drawing competitions and children's performances, training for swimming instructors and support for swimming lessons and first aid training for school teachers and collaborators (Thanh et al., 2009).

The program was implemented in six UNICEF project Provinces (Hai Phong, Hai Duong, Quang Tri, Hue, Can Tho and Dong Thap), and over 3,000 children were taught to swim. According to MOLISA, the Sports Committee also conducted swimming training programmes between 2002 and 2010 in several Provinces, with around 140,000 children being taught to swim under the programme.

Child drowning prevention education has also been implemented in the form of leaflets, posters, cartoons and short films. MOLISA, in collaboration with the Sports Committee, has developed material for children and national swimming and drowning rescue competitions (MOLISA, 2007). From June until December 2007, 23 TV programmes, 15 radio programmes and leaflets were produced and broadcasted. Through these TV and radio broadcast programmes, children and adults nationwide understood that they need to fence ponds and

lakes, wear life jackets when taking boats thus would reduce the risk of children being drowned.

In an attempt to raise community awareness of CIP, various communication activities on CIP topics in project localities such as dissemination through loudspeakers, communication sessions by collaborators through households visits were implemented. For example, in the first and second quarter of 2007, Can Tho DoH coordinated with TV stations and commune health stations to broadcast 6 reportages on CIP through Provincial TV, 166 communication sections through commune loud speakers. Further, 146 collaborators made 5,800 household visits to disseminate CIP messaged to commune groups.

In Quang Tri and Hue Provinces, environment modifications were carried out in 2007 by providing 545 thermos holders, 130 knife holders, 500 medical cabinets, 210 safe thermos, and 725 circuit breakers for poor households in Hai Duong Province. Fences were erected around three lakes, two village wells and three schools in Duc Chinh commune – Hai Duong. Handrails were built for 7 bridges, gates and fencing were provided for schools and playgrounds, and household amenities were provided including safe circuit breakers and safety containers for 240 households in Dong Thap Province. In Can Tho Province, 480 medical cabinets and 480 safe thermos were distributed to households, handrails for 5 bridges were provided as well as fencing for schools, and installation of 14 billboards on CIP. In Hue Province, 780 thermo holders and 40 baby cots were provided for households, fencing was provided at two primary schools and IEC corners were set (UNICEF First Progress Report, 2007).

In the following year (2008), three bridges in Vinh Trung and Gio Chau communes (Quang Tri) were made safer for people to cross with handrail installation. A fence and gate were built around Dong Hamlet and Gio Chau kindergartens (Quang Tri) to protect students from injury risks. A safer playground was built for primary school students in Gio Chau commune (Quang Tri). 270 poor households with children under five years in Quang Tri received baby cots to keep them safe while parents busy with house work. The project distributed 200 stop gates, 500 well covers and 450 circuit breakers to poor households with young children in project localities in Hai Phong to make their homes safer (UNICEF Second Progress Report, 2008).

In summary, the reports reviewed outlined the implementation phase, describing the program components and measurable outcomes. While the reports reveal successful implementation in terms of training and public education (e.g., numbers of training courses provided, high numbers of children attending swimming training courses, distribution of educational materials, leaflets and resources, etc), no discussion on the barriers and facilitators to successful implementation was reported in these documents. These issues are explored further in the interviews of key sector and community organisations.

**Capacity building activities**

Another important aspect of the development and sustainability of community-based interventions is to ensure that community leaders and organisations are trained and encouraged to take responsibility for the programs themselves.

This requirement was recognised by the Steering Committee, and the major activity to ensure capacity building within communes was achieved was the development and delivery of CIP implementation guidelines.

The Ministry of Health issued a nation-wide circular guiding the national and Provincial health sector to develop strategies and criteria for ensuring the development of culturally-healthy families, units, villages, communes, wards, including criteria for safe communities. A handbook guiding safe community development with a new approach was compiled, printed and circulated across the country. The Vietnamese safe community comprised of safe families, safe schools and community-based effective injury prevention (Steering Committee on Injury Prevention of the Health Sector, 2006). These criteria included five main components:

1. A Steering Committee on Primary Health care is in place at communes, wards and towns;

2. Over 60 percent of households in the community are aware of the danger of accidents and injuries in the community and participate actively in accident and injury prevention;

3. Reduce 80 percent of hazards in the community and develop safety models for high risk groups in the community;

4. Establish a network of volunteers who would join hamlet and village workers in supervising, taking notes and analysing over 80 percent of injury and accident cases, as well as conducting satisfactory first-aid; and,

5. Reduce 10 percent of the total number of accident and injury cases compared to the previous year.

In addition, the Ministry of Health has conducted numerous other capacity building activities at all levels of the national and Provincial health sector. These have included conducting training courses at medical schools and institutes, which aimed at improving injury prevention capacity of health workers. Some of the components for these training sessions were on injury epidemiology, injury surveillance, communication skill, development of injury prevention models in the community. Thirty three training courses on injury first-aid and emergency skills have been conducted, with approximately 1,352 communal/district health workers graduating from the training (Steering Committee on Injury Prevention of the Health Sector, 2006).

Training courses on injury recoding and reporting were conducted in Can Tho (for 300 key health staff of all districts and communes), in Thua Thien Hue (for 322 key health staff of all districts and communes) in Hai Duong (for 71 key health staff of all districts and 12 selected communes), in Ninh Thuan (for 40 health staff of six district and communes) and in An Giang (for 45 staff of 10 districts and communes). Participants learned how to accurately record and report injury statistics and will disseminate further these knowledge and skills in their localities in order to improve the injury recording and reporting system in 2009 (UNICEF Third Progress Report, 2009).

Building of capacity amongst project staff was also supported by various activities in 2007 in intervention communes:

1. Three training courses on essential trauma care for 90 health workers were organized in Hai Phong, Hai Duong, TTHue Provinces.

2. Four training courses on using a computer software in injury recording and reporting for 60 staff in Quang Tri, 21 staff in Hai Phong, and 26 staff in Hai Duong were completed

3. Five training courses on CIP and injury recording and reporting were conducted for 213 CPFC staff and collaborators in Hai Phong (45), Quang Tri (132), Hai Duong (36).

4. One training course was organized for Women's Union cadres in 12 districts of Hai Duong on injury prevention and communication skills.

5. Six training courses on first aid skills for 120 kindergarten teachers were held in Hue Province. The teachers found those courses very useful.

6. Five workshops to reinforce implementation of safety regulations in Dong Thap (3 workshops in 3 districts), Hai Duong, Hai Phong. These workshops reviewed and shared all the available safety legislations in each sector and to what extend it has been implemented in their localities. The workshops discussed solutions to enforce those legislations and make it work effectively.

Between 2008 and 2009, The Youth Union's training Institutes conducted four CIP training courses in Hanoi and Ho Chi Minh cities to train 130 Youth Union (YU) teachers on how to integrate CIP into specific activities of the Youth Union network, and use active learning and teaching skills to effectively convey CIP knowledge and practices to students. Furthermore, the Farmers Union revised and adapted available training materials on CIP topics, used these materials, and trained 75 key Farmers Union on CIP, equipping relevant authorities, project and mass organizations staff with appropriate knowledge and skills on injury prevention. A total of 53 heads and experts of Provincial Departments of Justice from central, highland and southern regions were trained on existing legal documents on CIP.

These concerted efforts were further enhance in 2009 where 102 participants representing a network of MOLISA at 34 selected Provinces were trained on the prevention of major childhood injuries, designing good communication activities, implementing child safe home and the development of a comprehensive CIP plan of action. This was followed by training of 25 key members from the Training Institute and the Center for Population, Family and Children of Farmers Union as trainers on CIP. Furthermore, three training courses on CIP for 90 key staff of the Youth Pioneer Council in 15 Provinces selected from three regions of the country were conducted within the same year. Participants of the training had increased their knowledge on child injury prevention. Specifically, they could identify relevant activities of the Youth Union that could integrate communication on CIP, describe essential elements and how to design effective CIP communication activities, and identify core CIP contents for further training of their peers in their localities.

While the reporting of these activities demonstrates that key implementation aims and outcomes were achieved, the reports made no mention of facilitators nor barriers to successful implementation of capacity building activities.

Financial resources and cost effectiveness

The sponsors of the program provided financial resources to support implementation of programs in the six Provinces between 2006 and 2010. It is a difficult task from the information available to provide an estimate of the cost-effectiveness of the program, however,

**Monitoring of programs**

Systematic and ongoing monitoring of programs is also an important component of successful interventions. Monitoring and evaluation are fundamental aspects of good programme management at all levels (national, regional, local) (Global Fund, 2011). Monitoring and evaluation activities have a number of important functions as listed below:

- Provides data on programme progress and effectiveness;
- Improves programme management and decision-making;
- Allows accountability to stakeholders, including funders;
- Provides data to plan future resource needs; and,
- Provides data useful for policy-making and advocacy.

Monitoring is essentially the routine tracking of the key elements of programme/project performance, usually inputs and outputs, through record-keeping, regular reporting and surveillance systems as well as health facility observation and client surveys. It is the periodic overseeing of the implementation of an activity which seeks to establish the extent to which input deliveries, work schedules, other required actions and targeted outputs are proceeding according to plan, so that timely action can be taken to correct deficiencies detected. In addition, monitoring is useful for the systematic checking on a condition or set of conditions, such as following the injury situation of children (UNICEF Guide, 2011).

The strategies and systems put into place to monitor the implementation and operations of the CIP initiatives are identified and summarised here.

The process of monitoring and evaluation of the CIP was guided by a conceptual framework (UNICEF, 2009). It was advised that, throughout the implementation of programs, all participating organizations would implement input/output monitoring to track services, beneficiaries and resources used. It was also expected that most organizations would develop strategies to evaluate their activities through process evaluation. In addition, the guidelines suggested that only some organizations were required to implement outcome evaluations because this requires a higher level of expertise, training and other resources (UNICEF, 2009).

Despite the development of comprehensive guidelines for effective monitoring, little evidence was found demonstrating that the guidelines were followed at any level of implementation, or that monitoring was a priority for the involved organisations. As an example, based on the thematic review of capacity development, Sawdon (2008) reported that, in terms of central level capacity development activities, there was practically no systematic monitoring for training. Moreover, while output data was gathered regarding activities conducted at sub-national levels they did not determine the effectiveness of the activities (Sawdon, 2008). Some of the reported monitoring activities carried out were:

3. Monitoring trips done by both UNICEF and partners which a report produced – but only done on ad-hoc basis, more qualitative, based on observations and perceptions; and,

4. Data collected systematically by partners on activities carried out but of low quality, not centrally collated and was not reported back to UNICEF on a regular basis.

However, according to the same report compiled by the Steering Committee on Injury Prevention of the Health Sector, the Ministry of Health had integrated the injury surveillance, reporting and statistical system into the general reporting and statistical system of the health sector from 2003 onwards. Injuries recorded from the communal healthcare stations were compiled on a monthly basis and reported to district and Provincial levels on a quarterly basis.

In summary, as such, there were no reports of standardised monitoring activities being performed despite several training and workshops being conducted by UNICEF to develop M&E plans. Moreover, there were no reports or discussions on the barriers and facilitators to successful monitoring and evaluation.

**Sustainability of programs**

Wherever possible, sustainability should be a key consideration when planning programs and projects. Ensuring that successful initiatives can be continued into the future by local community processes or replicated on an ongoing basis is critical to the future success of any intervention.

Available documents were reviewed for information identifying the strategies for sustainability of the programs, promotion of sustainability, and identification of any facilitators or barriers successful sustainability of the program. No information was cited reporting any aspect of sustainability.

**Summary**

The desk review was conducted to provide the background information on CIP programs in Viet Nam. A discussion of the nature and extent of child injuries in Viet Nam was provided along with international ‘best-practice’ child injury intervention initiatives. The specific features of the CIP program in Viet Nam were also discussed, in terms of key objectives of the CIP program, namely, developing partnerships, design and implementation, capacity building, monitoring and ensuring sustainability of the program.

First, overall components of successful initiatives were presented, with examples of good practice strategies and initiatives. Clearly, a multi-faceted, multi-disciplinary approach that is targeted and culturally appropriate with commitment from key partners is the key to successful intervention programs.

In terms of the CIP program, the review revealed that it has all the components for a successful program and this is well documented in the reports, particularly setting out guidelines for planning and development, criteria for Provinces to develop safe communities, etc. Some of the positive findings from this review were:

- The partnerships developed and the commitment of Government and non-government organisations, advocacy agencies, and local communities were documented and it appears that these collaborations have worked successfully.

- The reports of training activities and public education resources demonstrate that numbers of courses being run have been met and that a substantial number of children had attended training courses.

The limitations identified from the review were:

- Despite efforts to develop guidelines for monitoring and evaluating programs, there was little evidence that these had been followed. Moreover, any monitoring activities undertaken were not systematic or scientifically robust, and the reports produced were of low quality.

- While an effort was made to understand the cost-effectiveness of programs, there was little information available to draw any clear conclusions on this aspect of the programs.

- While, the planning and development stage appeared to be systematic, well planned and documented, the available evidence did not provide good information about the quality of the process, whether guidelines were followed or the quality of training. Furthermore, no facilitators and barriers to the successful implementation of the program could be identified from this review.