



Regional Status Report on Drowning in **South-East Asia**

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Foreword



REGIONAL STATUS REPORT ON DROWNING IN SOUTH-EAST ASIA

Drowning is the third leading cause of unintentional injury deaths in the WHO South-East Asia Region. In 2019 more than 70 000 deaths were attributed to drowning,¹ however this is likely to be an under-estimation of the true burden. Current global estimates for drowning do not include deaths from climate-related extreme weather events or disasters, which could increase the burden by as much as 50% in countries where extreme weather events and incidents are common,² including in the Region.

Most drowning deaths are preventable. However, between 2014 and 2018 the burden of fatal drownings reported by eight of the Region's 11 countries showed no significant reduction. Exposure and interaction with water varies across countries, and there exists a wide range of challenges – as well as opportunities – for improving water safety in different parts of the Region.

As highlighted in WHO's 2014 *Global Report on Drowning Prevention*, and its 2017 *Preventing Drowning: An Implementation Guide*, WHO continues to promote a multisectoral approach that goes beyond the health sector, and which draws on the knowledge and reach of other stakeholders and organizations. It is imperative that interventions factor in local needs and resources, build on progress already achieved, and are attentive to gender, equity and human rights.

This report provides information on the burden and context of drowning, and shares examples of effective drowning prevention initiatives, which WHO will continue to support Member States to implement. By enhancing multisectoral collaboration, promoting strong leadership on drowning prevention, developing national plans, and implementing evidence-based, low-cost water safety interventions, all countries in the Region can prevent the tragedy of drowning and achieve a safer, healthier future for all.

Dr Poonam Khetrapal Singh

Regional Director
WHO South-East Asia Region

¹ GHE data

² WHO global report on drowning





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Strategic direction on the report was provided by David Meddings, Thaksaphon Thamarangsi and Patanjali Nayar, with project inception driven by Jonathan Passmore. Coordination of data collection, data verification and analysis, and oversight of report development at the regional level was led by Rania Abdelhamid (WHO Regional Office for South-East Asia) and Caroline Lukaszuk (WHO Regional Office for the Western Pacific). Additional support was provided by Shamila Sharma, Shalini Khattar and Indu Gulhar. WHO also wishes to thank the following contributors whose expertise made this document possible: Gemma May, Kate Eardley, Tom Mecrow and Amy Bestman.

This report has also benefited from the contributions and review by a number of other people. Particular acknowledgement is made to Angela Burton, who led the writing; Jane Labous, who developed the case studies; Inis Communications, which designed and developed the country profiles; and Alexander Pascual, who led the report layout and design.

Finally, WHO wishes to thank the Royal National Lifeboat Institution for its generous financial support in the development and publication of this report.

Abbreviations

BAC	blood alcohol concentration
BrAC	breath alcohol content
BASARNAS	National Search and Rescue Agency (Indonesia)
BHIS	Bangladesh Health and Injury Survey
BIWTA	Bangladesh Inland Water Transport Authority
CIPRB	Centre for Injury Prevention and Research, Bangladesh
CPR	cardiopulmonary resuscitation
ICD	International Statistical Classification of Diseases and Related Health Problems
NGO	nongovernmental organization
NIEM	National Institute for Emergency Medicine (Thailand)
NISC	National Injury Surveillance, Trauma Registry and Capacity Building Centre (India)
PFD	personal flotation device
RNLI	Royal National Lifeboat Institution
SDG	Sustainable Development Goal
SOLAS	International Convention for the Safety of Life at Sea
UNFCCC	United Nations Framework Convention on Climate Change
VIPC	Village Injury Prevention Committee (Bangladesh)
WHO	World Health Organization

Executive summary

Key messages:

- In 2019, drowning was responsible for 70 034 deaths in the South-East Asia Region. This is the second highest number of deaths from across all regions of the World Health Organization (WHO). Over 33% of these deaths occurred among children under the age of 15 years.
- Since the launch of the WHO's *Global Report on Drowning: Preventing a leading killer* in 2014, and the follow-up resource *Preventing Drowning: an implementation guide* in 2017, WHO has been working to scale up advocacy and action for drowning prevention in the South-East Asia Region.
- This report presents the findings of the first assessment of drowning prevention in the South-East Asia Region. Ten countries have taken part, shared their knowledge and experience, and taken their first collective step towards addressing drowning in this Region.

Burden of drowning in the South-East Asia Region

Between 2014 and 2018, eight of the Region's 11 countries reported no significant reduction in fatal drownings. The Region is vast, spanning 11 countries and encompassing a wide range of social and economic settings. As a result, exposure and interaction with water varies across the Region, giving rise to different drowning-related risk factors between countries. This introduces a wide range of challenges – and opportunities – for improving water safety in different parts of the Region.

Drowning is preventable

Drowning can be prevented through the implementation of evidence-based, cost-effective approaches. The WHO *Global Report on Drowning* (2014) outlines four strategies and six interventions for drowning prevention. Strategies focus on developing strong national mechanisms to ensure a coordinated and effective

approach to addressing drowning, while interventions promote community action. A comprehensive response to drowning requires a multisectoral approach that champions health beyond the health sector and draws on the knowledge, reach and capacity of other agencies and organizations. Effective strategies and interventions must respond to local needs, consider available resources and build on progress already made. Drowning prevention efforts must be underpinned by a gender, equity and human rights lens, to ensure no one is left behind. It is critical that drowning prevention programmes and interventions do not increase health inequities.

Drowning prevention in the South-East Asia Region: progress to date

Recent efforts to take action on drowning prevention in the South-East Asia Region, in line with WHO recommended guidance, include: swimming and water skills training

in Bangladesh, India, Nepal and Sri Lanka; community-based child-day care (Anchals) in Bangladesh and India; strengthening multisectoral collaboration and governance in Sri Lanka; and improved information systems and awareness-raising campaigns in Thailand. However, more needs to be done to stem the significant death toll from drowning in the Region.

Data collected through this report highlight:

- Despite its preventability, drowning rarely makes it to the policy agenda of the countries of the Region. A lack of drowning data may leave decision-makers unaware of its true scale and impact and often also unsure as to which sector or agency should take responsibility for drowning prevention. This lack of awareness – and therefore commitment – can translate into an absence of national-level resources and technical capacity for a concerted approach to drowning prevention.
- In the South-East Asia Region, data on drowning are available from diverse sources, ranging for example from: vital registration and death certificates in Myanmar and Thailand, Search and Rescue (SAR) data in Indonesia, tourism data sources in the Maldives, in-patient data in Bhutan, police and fire services' data in Sri Lanka and Timor-Leste, respectively. In Bangladesh, there is no routine vital registration system, and so the country's drowning data are based on a sample vital registration survey published in 2016. There is a need to strengthen monitoring and evaluation systems to gather a complete picture of who is drowning, under what circumstances, what initiatives and interventions are available and being undertaken to prevent drowning, and



evidence as to whether or not these efforts are successful. National or subnational data from linked sources can be more effectively used for intervention planning and monitoring.³

Recommendations to further reduce drowning in the South-East Asia Region

This report provides a first regional assessment of drowning prevention that corresponds to and follows on the WHO's *Global Report on Drowning* (2014), and the follow-up resource *Preventing Drowning: an implementation guide* (2017). The findings and recommendations in this report can be used to accelerate action to reduce drowning in the South-East Asia Region.

This report sets out seven key recommendations, which correspond to the key findings of the report:

1. Designate a lead agency, or support establishment of a coordination body, to drive drowning prevention efforts.
2. Develop and implement a national water safety plan that has national indicators for drowning prevention.
3. Formalize multisectoral mechanisms to address drowning prevention and water safety through establishing partnerships across sectors and assigning clear roles and responsibilities.
4. Document and share knowledge gained in drowning prevention efforts.
5. Perform a comprehensive review of drowning prevention legislation to ensure that best practice laws are developed and that appropriate resources for implementation and enforcement are available.
6. Evaluate intervention plans for drowning prevention from the outset, ensuring that evaluation is adequately planned for and funded.
7. Strengthen data systems that capture drowning incidents while improving the availability and quality of reporting.

The necessity and opportunity to share stories of success and learnings amongst stakeholders, within Member States and across the Region is critical, including opportunities for the scale-up of efforts.

³ United Nations Economic Commission for Africa; African Union Commission; African Development Bank. Potentials of data linkages from civil registration and vital statistics and other systems in advancing the Sustainable Development Goals: the case of road safety. Fifth Conference of African Ministers Responsible for Civil Registration; Lusaka, Zambia; 14–18 October 2019 (<https://repository.uneca.org/bitstream/handle/10855/43083/b11968400.pdf>, accessed 10 July 2021).





Definition of drowning

Drowning is “the process of experiencing respiratory impairment from submersion/ immersion in liquid”.¹ Drowning can either be **fatal** or **non-fatal**. Non-fatal drowning events can cause severe brain damage that may result in long-term disabilities such as memory problems, learning disabilities and permanent loss of basic functioning.

¹ Drowning; World Health Organization; <https://www.who.int/health-topics/drowning>.

Introduction

Drowning ranks as the third leading cause of unintentional injury deaths in the South-East Asia Region, after road traffic injuries and falls. In 2019 alone, 70 034 deaths in the Region were attributed to drowning.² However, it is important to acknowledge that these statistics are likely to be an under-estimation of the true burden and impact for many reasons, including that WHO global estimates for drowning do not include deaths from climate-related extreme weather events or disasters. This under-representation could be as much as 50% in countries where extreme weather events and incidents are common³ – many of which are in the South-East Asia Region.

The WHO *Global Report on Drowning* (2016)⁴ outlines four strategies and six interventions for drowning prevention (Fig. 1).

At the national level, WHO recommends that each country **develops and implements a national water safety plan** which outlines the main principles, goals, objectives, actions and coordination mechanisms for reducing drowning. A comprehensive response to drowning requires **formalized multisectoral coordination mechanisms** to identify and align efforts which work to prevent drowning deaths, establish

partnerships across sectors and assign clear roles and responsibilities. Strong **data collection systems** and **quality reporting mechanisms** are critical for understanding risk factors for drowning and assessing the effectiveness of interventions. **Strategic communications** should be used to strengthen public awareness on drowning, to support the uptake and success of prevention measures.

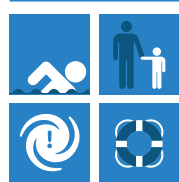
² Global health estimates: leading causes of death. In: Global Health Observatory [website] (<https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>, accessed 10 July 2021).

³ WHO global report on drowning: preventing a leading killer. Geneva: World Health Organization; 2014 (<https://www.who.int/publications/i/item/global-report-on-drowning-preventing-a-leading-killer>, accessed 10 July 2021).

⁴ Ibid.

FIG. 1. Four strategies and six interventions for drowning prevention

Strategies



Develop a national water safety plan



Advance drowning prevention through data collection and well-designed studies



Promote multisectoral collaboration



Strengthen public awareness of drowning through strategic communications

Interventions



Provide safe places (for example, a day-care centre) away from water for preschool children, with capable childcare



Train bystanders in safe rescue and resuscitation



Install barriers controlling access to water



Build resilience and manage flood risks and other hazards locally and nationally



Teach school-age children swimming and water safety skills



Set and enforce safe boating, shipping and ferry regulations

At the community level, it is important to ensure that **young children are appropriately supervised** around water. **Installing barriers** can control children's access to water in cases of absent or inadequate supervision. Teaching children aged over 6 years **swimming and water safety skills** is particularly relevant for school settings, while **training in safe**

rescue and resuscitation is applicable to the broader population. Working with communities to strengthen **resilience to floods and other hazards** is necessary, particularly with world flood risk expected to rise over time.⁵ Approaches to making travel over water safer include setting and enforcing **boating, shipping and ferry regulations**.

⁵ Ibid.

Drowning fits closely with existing international frameworks and global agendas, including the Sustainable Development Goals (SDGs) and other international development agendas, such as those to reduce the impact of climate change and to reduce social and economic inequities (Box 1).

How this report was produced

This is the first regional assessment on drowning prevention in the South-East Asia Region. As such, it represents an important first step towards understanding

the burden and impact of drowning, progress made towards its prevention in the Region, and opportunities for sharing knowledge to inform further action to reduce drowning rates in the South-East Asia Region.

This report was developed through a national consultation process with Member States in WHO's South-East Asia and Western Pacific Regions (Fig. 2). Participation was voluntary and followed a similar methodology to previous WHO global status reports (e.g. the *Global Road Safety Status Report 2018*). In the South-East Asia Region, 10 out of 11 countries

BOX 1. Drowning prevention: a contributor towards global commitments

Drowning prevention has the ability to contribute to and advance progress towards several global commitments and agendas, including the 2030 United Nations SDGs, United Nations Framework Convention on Climate Change (community resilience to climate change), the Sendai Framework for Disaster Risk Reduction and universal health coverage.

When considering the SDGs, drowning prevention interventions have the potential to

contribute towards Goals 1, 3, 4, 5, 6, 8, 10, 11 and 13. Drowning prevention efforts can support progress on early childhood targets linked to mortality, education, immunization and nutrition, and have the potential to be an innovative child survival intervention, protecting investment in child and adolescent development. This is particularly important in countries where drowning is a leading cause of child death.





participated (91%), representing 99% of the Region's population. These were: Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste.

In 2018, a questionnaire was developed to gain an understanding in each of the participating countries on:

- the scale of drowning burden;
- the development and status of action plans, laws and policies that respond to challenges of drowning prevention;
- the status of existing national, multisectoral collaborations to address drowning;
- the availability of drowning data and reporting mechanisms;
- the availability of drowning prevention interventions at the community level; and
- any technical assistance required to address shortcomings.

National reporting took place over a period of nearly 15 months, from January 2019 to March 2020. Final responses were validated and officially cleared by the relevant government ministry of the respective Member State.

Aim of this report

This report outlines current drowning prevention efforts across the South-East Asia Region, reporting progress made against the 10 key actions for reducing drowning as described in the *WHO Global Report on Drowning: preventing a leading killer* (2014), and the subsequent *Preventing Drowning: an implementation guide* (2017) (see Fig. 1). The findings and recommendations in this report can be used to accelerate action to reduce drowning in the Region.

Who this report is for

This report is aimed at all agencies and individuals concerned with drowning prevention. The intended audience ranges from national policy-makers to service providers, programme implementers, nongovernmental organizations (NGOs), researchers, and international and regional institutions.

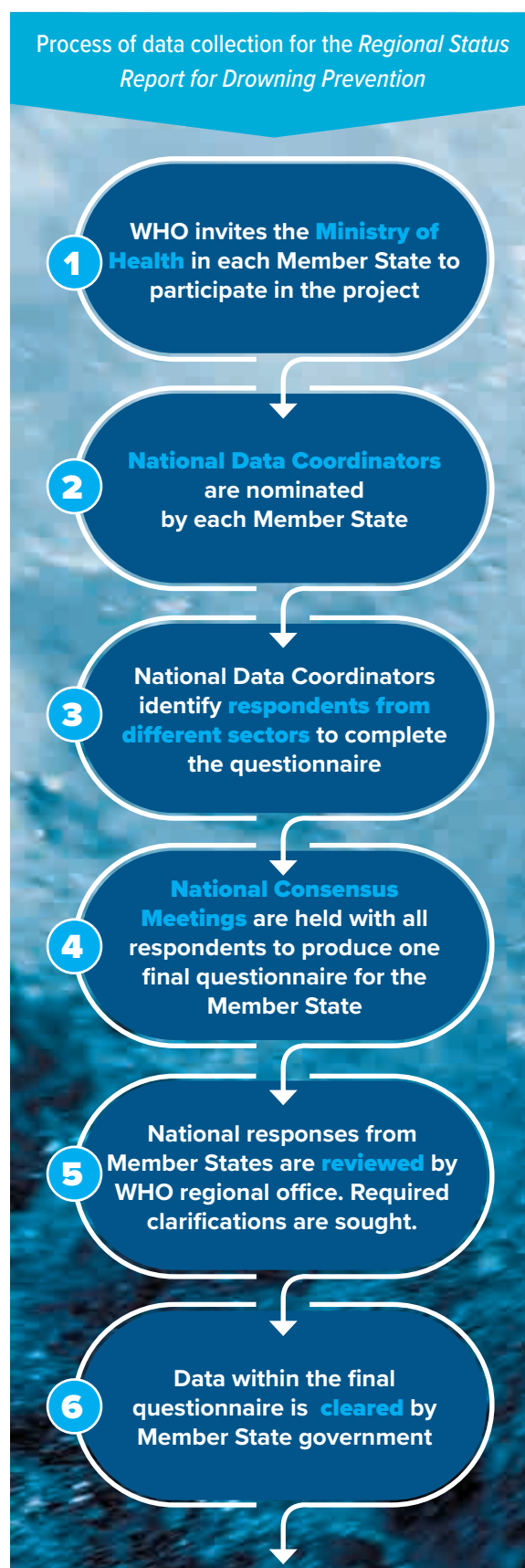
What this report contains

Section 1 sets out what is known about the Region's drowning burden and provides a snapshot of who is at risk and where.

Section 2 presents findings from the consultation and survey carried out during 2019–2020, focusing primarily on the four key strategies and six key interventions for drowning prevention, described in the *Global Report on Drowning* (see Fig. 1).

The report concludes by identifying some of the challenges and opportunities involved in addressing drowning in the South-East Asia Region.

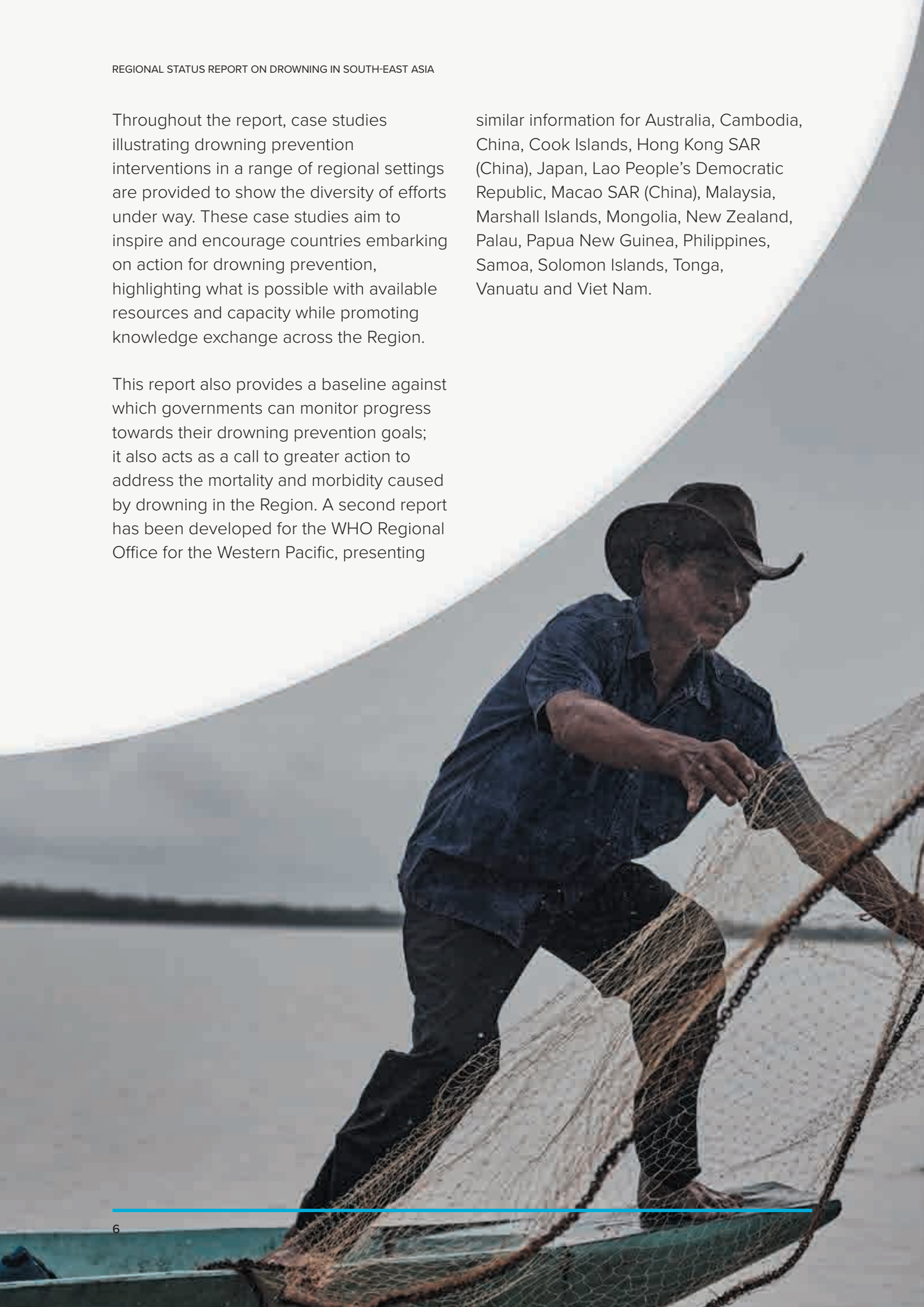
FIG. 2. Process of data collection for the *Regional Status Report for Drowning Prevention*



Throughout the report, case studies illustrating drowning prevention interventions in a range of regional settings are provided to show the diversity of efforts under way. These case studies aim to inspire and encourage countries embarking on action for drowning prevention, highlighting what is possible with available resources and capacity while promoting knowledge exchange across the Region.

This report also provides a baseline against which governments can monitor progress towards their drowning prevention goals; it also acts as a call to greater action to address the mortality and morbidity caused by drowning in the Region. A second report has been developed for the WHO Regional Office for the Western Pacific, presenting

similar information for Australia, Cambodia, China, Cook Islands, Hong Kong SAR (China), Japan, Lao People's Democratic Republic, Macao SAR (China), Malaysia, Marshall Islands, Mongolia, New Zealand, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Tonga, Vanuatu and Viet Nam.





1

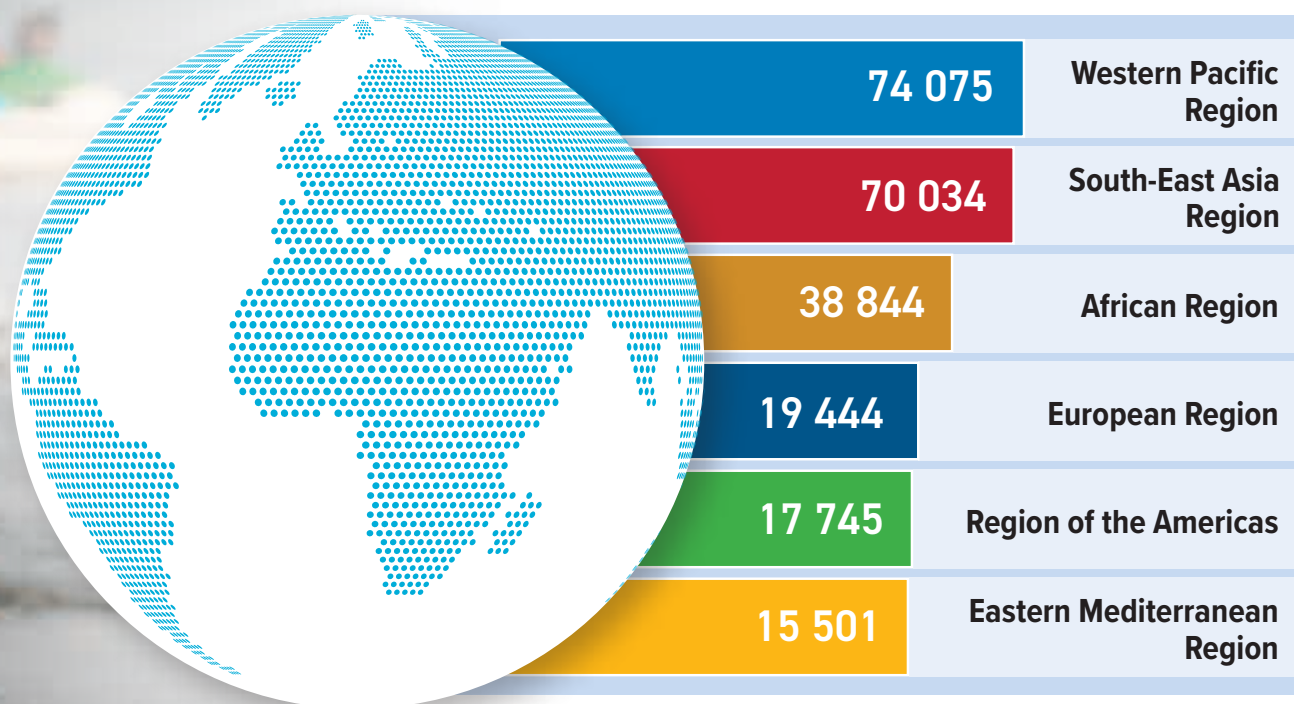


Magnitude and impact

Where is the greatest risk?

Over 70 000 people drowned in the WHO South-East Asia Region during 2019, corresponding to the second largest number of drowning deaths across all WHO regions (Fig. 3).

FIG. 3. Number of drowning deaths by WHO region, 2019*

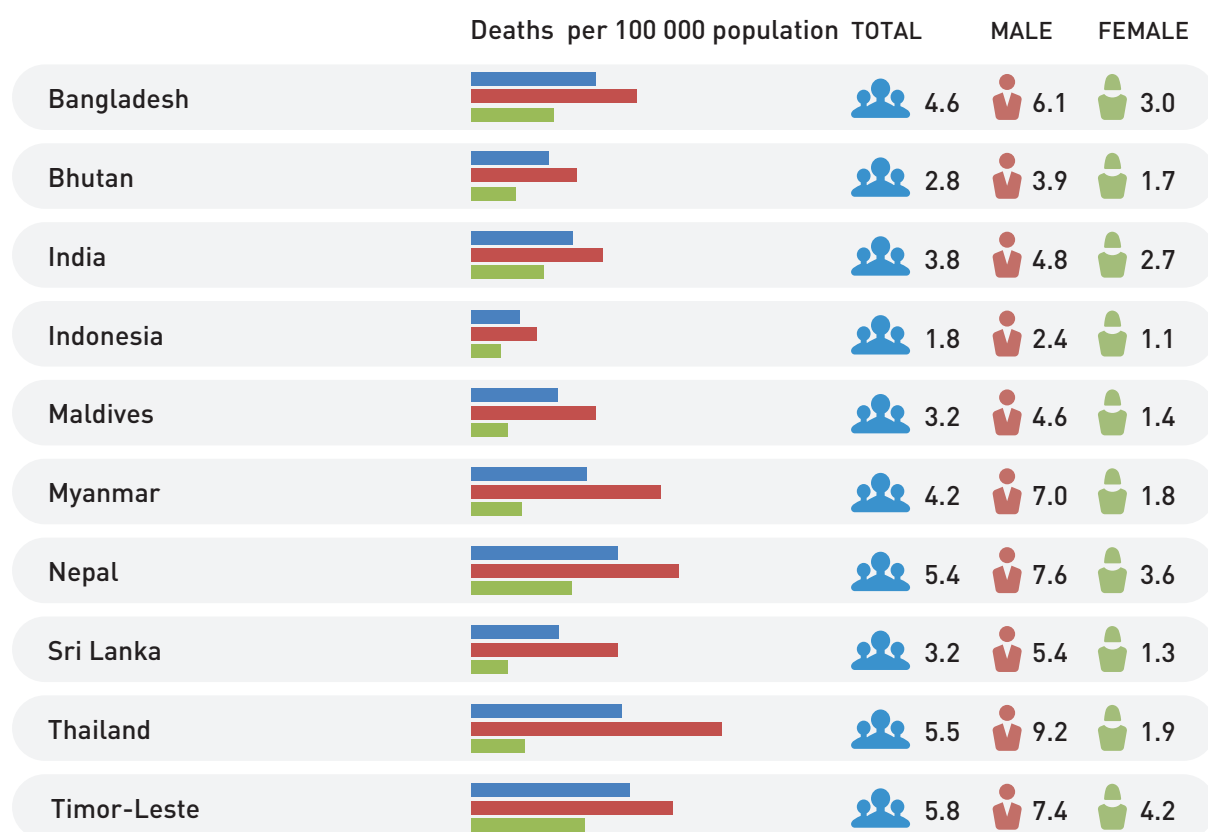


* Global Health Estimates (GHE) data, 2019

There are large disparities in drowning rates across the countries of the South-East Asia Region. Timor-Leste has the highest drowning death rate at 5.8 per 100 000 population, followed by Thailand at 5.5, Nepal at 5.4 and Bangladesh at 4.6 (Fig. 4).



FIG. 4. Drowning death rates, by sex, South-East Asia Region, 2019

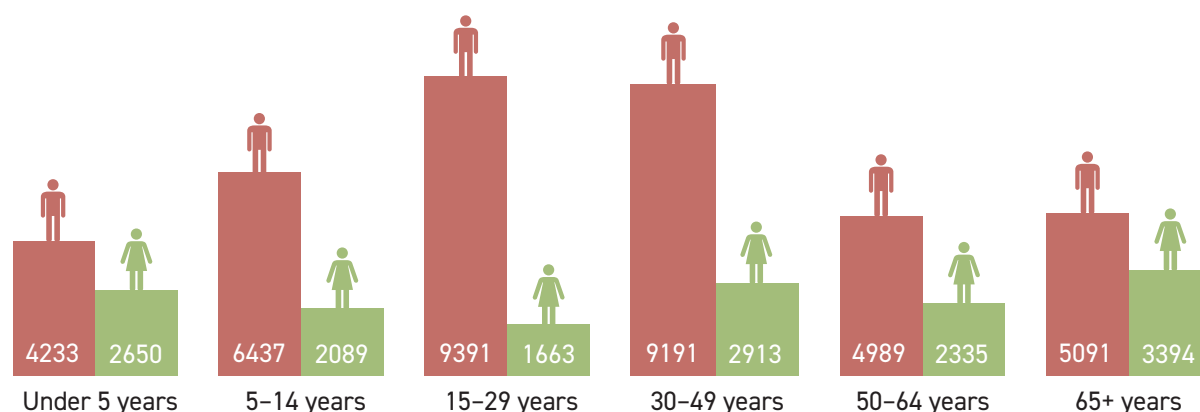


Source: Global Health Estimates (GHE) data, 2019

Who is most at risk?

In the South-East Asia Region, males and those aged under 24 years bear the greatest burden of drowning. At the regional level, males are three times more likely to drown than females, while in Sri Lanka and Thailand, males are four times more likely to drown than females (Fig. 5). More than half of estimated drowning deaths are among people aged 1–24 years.

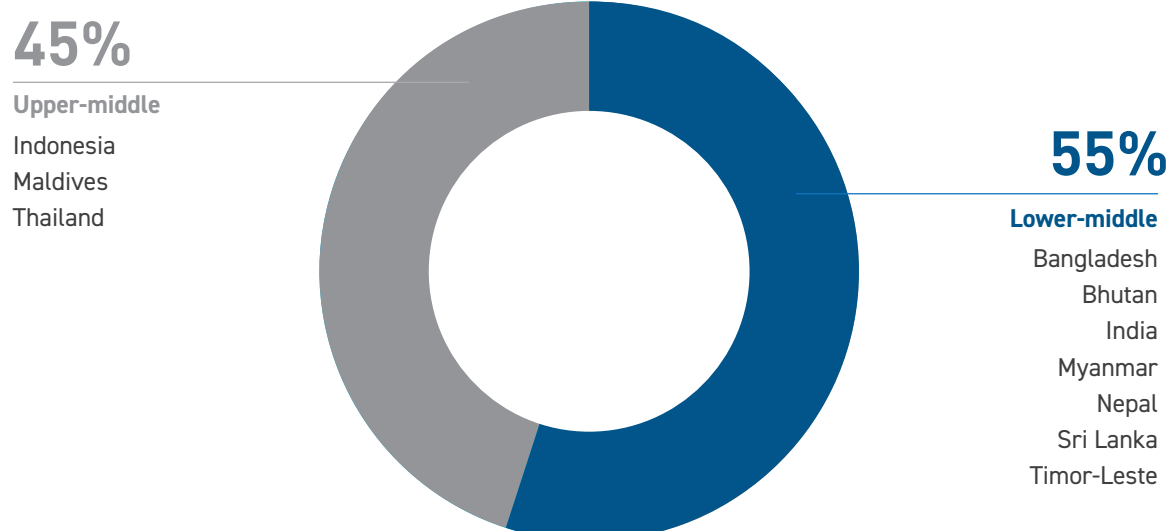
FIG. 5. Drowning deaths by age group and sex, South-East Asia Region, 2019



Source: Global Health Estimates (GHE) data, 2019

Drowning often affects the poorest members of a community who have the least resource to safely adapt to the risks around them. Drowning rates are also disproportionately high among minority populations in places where overall drowning rates are low.⁶ Drowning rates in the Region's lower-middle-income countries are higher than those of its upper-middle-income countries (Fig. 6).

FIG. 6. Proportion of drowning deaths in the South-East Asia Region by country income level,⁷ 2019



Source: Global Health Estimates (GHE) data, 2019




⁶ Ibid.

⁷ Countries were categorized using the World Bank Country Classifications by Income Level matrix 2020–2021.

What are the risks?

There are a range of circumstances that increase the risk of drowning (Fig. 7).⁸ Risk varies between settings and population groups across the Region.

FIG. 7. Circumstances that can increase drowning risk

<p>Travelling on water</p> 	<p>Boats that carry passengers travelling long distances while overcrowded and overloaded, in hazardous weather conditions, with little or no safety equipment, are associated with increased drowning risk. Additionally, boats operated by individuals who have not received appropriate safety training and boats that may not have undergone regular safety checks increase drowning risk.⁹</p>
<p>Flooding disasters</p> 	<p>Extreme weather events such as cyclones, hurricanes and tsunamis are occurring more frequently and with greater intensity and are at times attributed to climate change.¹⁰ In extreme instances, flash flooding may impact communities and lead to immediate loss of life. In other instances, floodwaters may remain in communities for weeks or months after the initial event, leading to increased drowning events.¹¹</p>
<p>Recreation around water</p> 	<p>Drownings happen all year round; however, they peak during warmer seasons when individuals are more likely to engage in recreational water activities.¹²</p> <p>Unfenced swimming pools, together with a lack of adult supervision in private settings or trained lifeguards in public settings, increase the risk of drowning among children.¹³</p> <p>Additionally, tourists are at increased risk of drowning as not all travellers have adequate water safety skills and not all tour providers are trained to ensure their clients' safety while swimming, kayaking, snorkelling or diving.³ Participating in water-based activities in unfamiliar environments can expose people to unknown dangers, particularly if signage or other forms of public information are not present to warn about potential risk or suggest minimum required water safety skills.</p>

⁸ Preventing drowning: an implementation guide. Geneva: World Health Organization; 2017 (<https://www.who.int/publications-detail-redirect/preventing-drowning-an-implementation-guide>, accessed 10 July 2021).






⁹ Jagnoor J, Lukaszyc C, Baset K, Ivers R, Easmin S, Rahman A. Context of water transport related drownings in Bangladesh: a qualitative study. BMC Public Health. 2019;19(1):1567.

¹⁰ Water and Disasters. In: UN Waters [website] (<https://www.unwater.org/water-facts/disasters/>, accessed 10 July 2021).

¹¹ Drowning [fact sheet]. 27 April 2021. In: World Health Organization [website] (<https://www.who.int/news-room/fact-sheets/detail/drowning>, accessed 10 July 2021).

¹² Drowning Facts and Figures. In: International Life Saving Federation [website] (<https://www.ilsf.org/drowning-facts-and-figures/>, accessed 10 July 2021).

¹³ Global report on drowning.

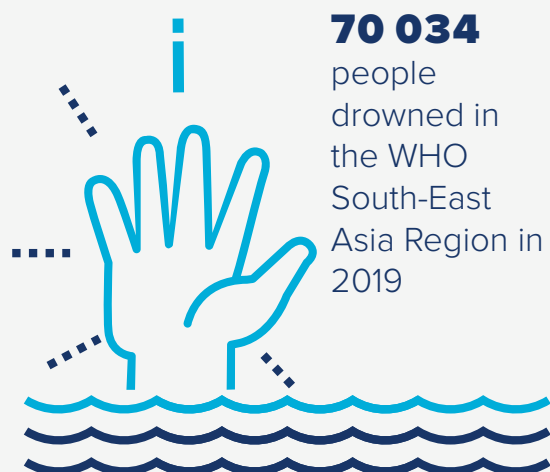
<p>Bathing</p> 	<p>Both private and public places for bathing increase risk of drowning, particularly among unsupervised young children and older people.¹⁴</p>
<p>Living near water</p> 	<p>Living in close proximity to water increases drowning risk,³ particularly for young, unsupervised children. For example, houses built on the banks of water channels or on stilts, floating houses and house boats are common in many countries of the Region. Rivers that burst their banks following severe rains cause flooding and increase drowning risk for those who live close by.¹⁵</p>
<p>Working on or around water</p> 	<p>Fishing and fisheries provide livelihoods and nutrition for many communities of the Region.³ Risk of drowning while fishing increases during hazardous weather, at night time when there is low visibility, and when appropriate safety equipment is not available.</p>
<p>Collecting and storing water</p> 	<p>Lack of access to safe, reliable and affordable supplies of clean water means that rainwater is often stored in large containers in households. Unsupervised children may fall into and drown into water storage or collection vessels, or other access points such as wells, when uncovered.¹⁶</p>
<p>Alcohol consumption</p> 	<p>Alcohol use may cause an individual to fall into water or affect their ability to operate a boat safely. Alcohol can increase risk-taking behaviour while inhibiting an individual's ability to swim, reducing the chance of survival in water.^{3,8}</p>

¹⁴ Lin CY, Wang YF, Lu TH, Kawach I. Unintentional drowning mortality, by age and body of water: an analysis of 60 countries. *Inj Prev.* 2015;21(e1):e43–50.

¹⁵ Floods. In: World Health Organization [website] (https://www.who.int/health-topics/floods#tab=tab_1, accessed 10 July 2021).

¹⁶ Preventing drowning.

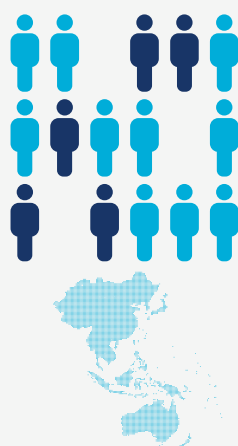
DROWNING IN THE SOUTH-EAST ASIA REGION – KEY FACTS 2019



33% of drowning deaths occurred among children aged **LESS THAN 15 YEARS OLD**



20% of drowning deaths occurred among people **AGED 60 YEARS AND ABOVE**



Drowning death rates across the Region ranged from **1.8 TO 5.8** per 100 000 population

Source: Global health estimates: leading causes of death. In: Global Health Observatory [website] (<https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death>, accessed 1 May 2021).



2





Drowning prevention in the South-East Asia Region: progress to date

Strategies to support drowning prevention interventions

1. Develop a national water safety plan

Of the 10 countries of the South-East Asia Region which participated in this report, four (40%) reported having either national or subnational strategies, policies or plans that aim to reduce drowning (Fig. 8).¹⁷ Of these four countries, only Thailand has set targets to measure the progress of that strategy.

Aligning and integrating drowning prevention with broader agendas can increase opportunities for establishing longer-term and broader-reaching water safety strategies. Sri Lanka reported to have included drowning prevention as a component of a broader injury prevention strategy, while Timor-Leste addresses drowning prevention through a maritime policy. Within India, drowning prevention is primarily addressed at the subnational state level, across a variety of sectors.

¹⁷ A national water safety (or drowning prevention) plan describes the main principles, goals, objectives, actions and coordination mechanisms for reducing and preventing fatal and non-fatal drowning. This is an essential tool to ensure a comprehensive and timely approach to addressing drowning, which identifies and involves all required actors.

FIG. 8. Strategies, policies or plans that include drowning prevention in the South-East Asia Region**STAND-ALONE NATIONAL STRATEGIES, POLICIES OR PLANS SPECIFIC TO DROWNING PREVENTION****Thailand**

The **National Strategic Plan for Public Health 2017–2036** is a ministry-specific national strategy for all injuries that specifies drowning; and the **National Disaster Risk Management Plan 2015** includes drowning prevention. These strategies set measurable targets to reduce the number of people who drown, including: decreasing the mortality rate from drowning among children aged 2.5–15 years, and decreasing the mortality rate from drowning in all age groups by at least 50%.

SUBNATIONAL STRATEGIES, POLICIES OR PLANS THAT INCLUDE DROWNING PREVENTION**India**

A few states in India are taking drowning prevention action at the subnational level. For example, Assam's State Disaster Management Authority has produced a flood safety document, while the Government of Maharashtra's Tourism Department has issued a notification for drowning prevention on beaches during bad weather.

OTHER NATIONAL STRATEGIES THAT INCLUDE DROWNING PREVENTION**Sri Lanka**

There is an overall national policy and strategic framework on injury prevention and management that includes drowning (2016). In 2019, the Sri Lanka Tourism Development Authority's Domestic Tourism and Community Relations division implemented a drowning prevention and lifesaving programme to protect tourists. Run in conjunction with the Sri Lanka Coast Guard Department, three lifesaving units at Bentota, Mirissa and Hikkaduwa have been upgraded, with jet-skis provided to each.

**Timor-Leste**

Timor-Leste includes drowning prevention in its Maritime Policy Strategic article, 32 Decree Law 39/2009.

Opportunities for strengthening national water safety plans are strong, with six of the respondent countries (60%) that did not have any type of water safety strategies indicating an interest in developing one. Ministries of health were reported to have an interest in this work.

2. Promote multisectoral collaboration

A range of actors was reported to be involved in drowning prevention and water safety across the Region. The most common sectors and agencies involved in drowning prevention and water safety across the Member States of the Region include ministries of health; departments of police, transport, education and maritime safety; disaster risk reduction bodies; the coast guard; and meteorology departments (Fig. 9).

FIG. 9. Number of countries reporting involvement of specific sectors and actors in drowning prevention



Two countries (20%) reported to have a formal mechanism for whole-of-government¹⁸ coordination of drowning prevention efforts (Fig. 10).

¹⁸ Whole-of-government coordination refers to the inclusion of all necessary sectors in a coordinated strategy. This is important for establishing leadership, ensuring accountability, leveraging various resources and networks, accessing various expertise, identifying existing systemic gaps, preventing overlap and building a strong, cohesive, well-supported movement to address the issue.

CASE STUDY 1. Thailand: Merit Maker

In 2015, Thailand's Department of Disease Control (part of the Ministry of Public Health) rolled out the "Merit Maker for Child Drowning Prevention" strategy – a community programme to reduce child drowning that draws on local participation and resources.

The programme has 10 components: policy, management, situation analysis and data, risky water setting management, child centre operations, knowledge dissemination, survival swim skills training, cardiopulmonary resuscitation (CPR) training, public communication, and research.

The Merit Maker approach promotes implementation of the drowning prevention programme in a sustainable manner at the local level. The communities are first made aware of the problems and then the programme is implemented using multidisciplinary teams and local resources for the communities to resolve these problems by themselves.

During 2015–2017, a total of 3484 teams of Merit Maker were established in all 77 provinces across the country. The teams managed to introduce safety

measures in risky water settings (fences or warning signs and water safety devices), set up drowning prevention programmes in child development centres, organize monthly knowledge dissemination sessions on drowning prevention at health centres, employ survival swimming instructors, train children aged 6–14 years in survival swimming, train community members or children on CPR, and organize public communication sessions.

An evaluation of Merit Maker found that in communities where measures were taken, such as installing warning or advice signboards and making available water safety devices, 69% of residents realized that warning signboards were useful for child drowning prevention, while 87% regarded the water safety devices as useful for reducing drowning risk. These statistics were significantly different when compared with those in communities without such devices.¹⁹ About 20% of children who learn swimming for survival will have the chance of surviving a drowning event after falling into water. The drowning rate was halved in areas where Merit Maker was deployed.

¹⁹ Ekchaloermkiat S, Gerdmongkolgan S. PW 0768 Merit Maker: child drowning prevention program in Thailand. *Inj Prev.* 2018;24:A150.2–A150 (https://injuryprevention.bmj.com/content/24/Suppl_2/A150.2, accessed 10 July 2021).



FIG. 10. Mechanisms for whole-of-government coordination for drowning prevention in the South-East Asia Region

Thailand

Drowning prevention activities are coordinated through multiple mechanisms, including:

- **Child Drowning Prevention Committee 2009**
- **National Disaster Risk Management Plan 2015**
- **Protection of Maritime National Interests Act**
- **Coordination of the National Search and Rescue**
- **Ministerial Regulation of Office of the Permanent Secretary Ministry of Transport B.E. 2560.**



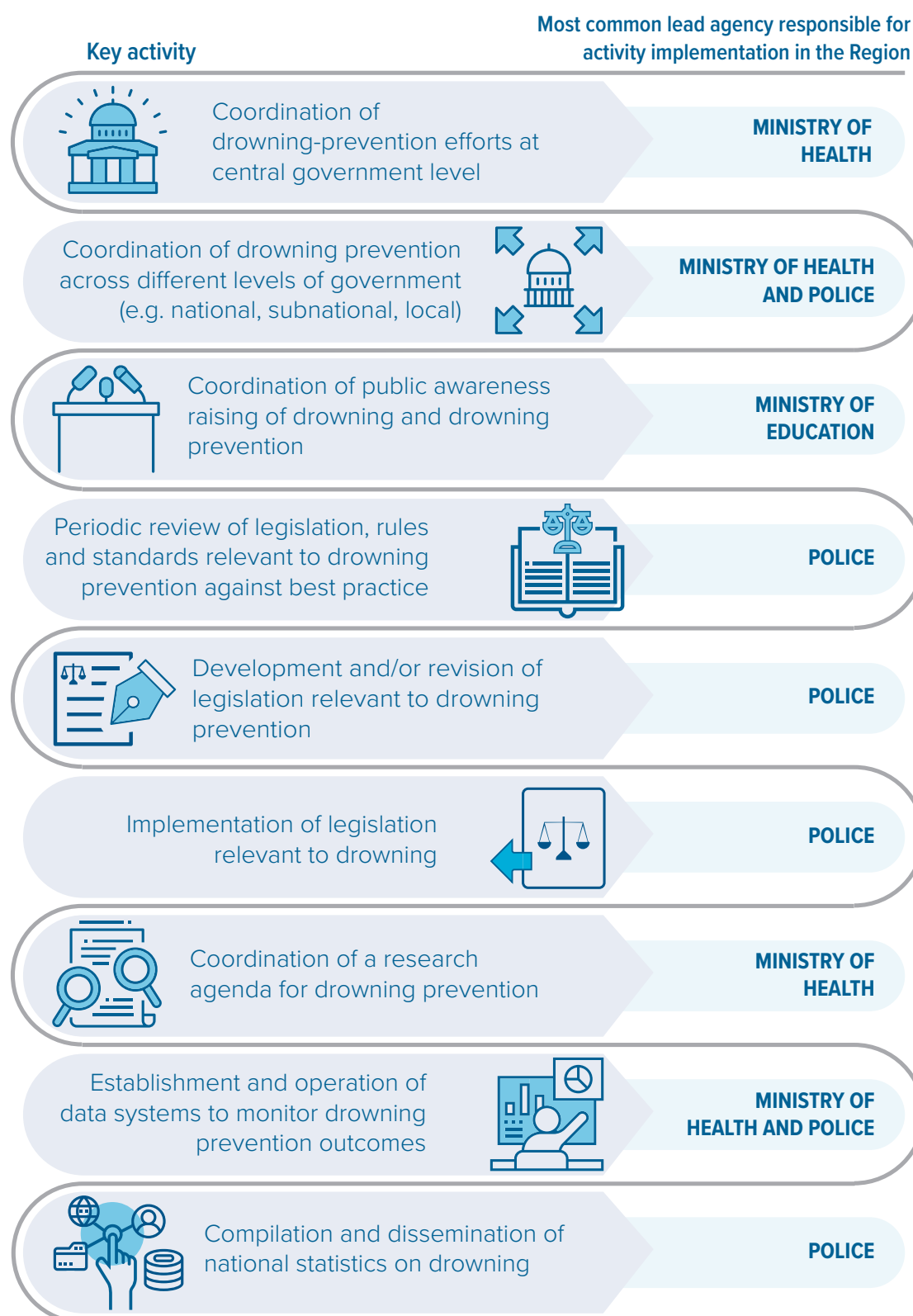
Sri Lanka

The **Disaster Management Centre** – part of the Ministry of Disaster Management – currently coordinates drowning prevention activities, and a drowning prevention working group has been established under the Non-Communicable Disease Unit of the Ministry of Health, which is responsible for overall coordination of drowning prevention activities. Recently, the Commander of Defence was also identified as a national coordinating body for drowning prevention.

Other sectors involved in drowning prevention in some (but not all) of the countries of the Region include:

- Governmental organizations: ministries of youth, shipping, tourism, information, home affairs, finance, women and child development, urban development, social welfare, agriculture; local government.
- Other governmental authorities: Inland Water Transport Authority in Bangladesh (BIWTA); Hydropower Projects in Bhutan; Central Water Commission in India (the main technical organization working in the field of water resources); National Institute for Emergency Medicine in Thailand (NIEM; the body responsible for the administrative management and coordination of relevant agencies, both public and private sectors, including the promotion of local governments to play a role in the management of emergency medical services, including drowning prevention); and the conflict prevention department in Timor-Leste.
- Academia and Research Organizations.
- NGOs: Maldivian Red Crescent; Myanmar Red Cross Society; Sri Lanka Life Saving; Thai Life Saving Society; Timor-Leste Red Cross Society.

Nine key activities were identified that contribute to an effective national multisectoral response to drowning prevention (Fig. 11). There was no uniform mix of stakeholders or lead agency for these activities in countries across the Region. It was also reported that coordination of the drowning prevention research agenda was less than that for other activities in the Region. Agencies that were leading implementation of these nine key functions were most commonly ministries of health and the police.

FIG. 11. Key activities and lead agencies for drowning prevention

3. Advance drowning prevention through data collection and well-designed studies

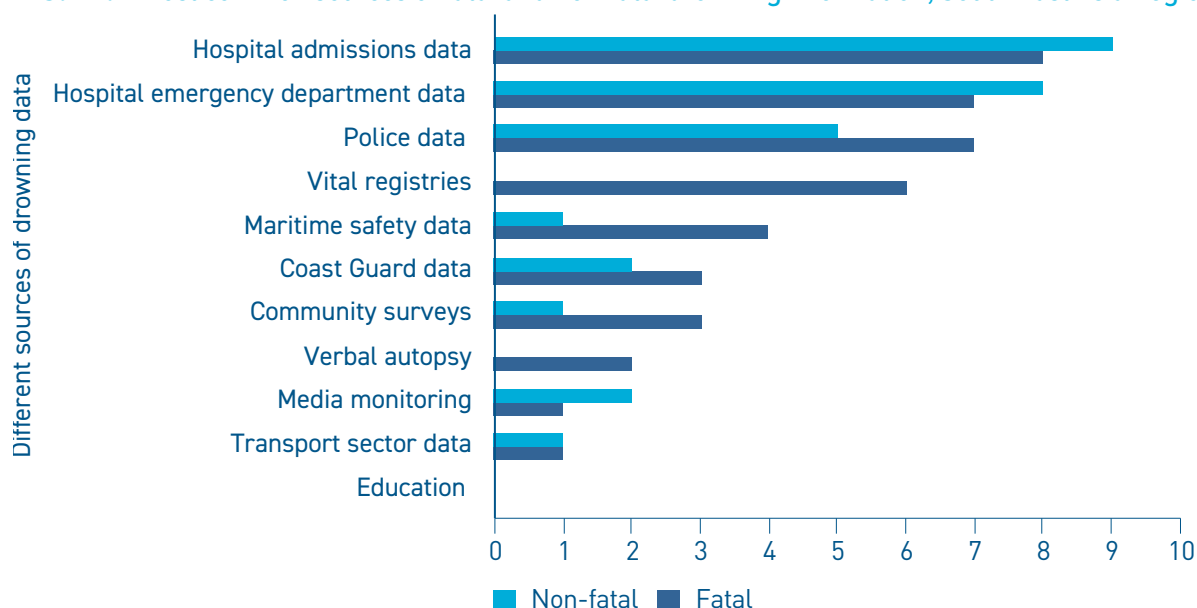
All countries reported to have systems in place to capture national data on both fatal and non-fatal drowning events.

The most common sources of data on fatal drowning were the records maintained by the hospital admissions department, hospital emergency department and the police. The most common sources of data on non-fatal drowning were the records maintained by the hospital admissions department, emergency department and the police (see Fig. 9). Bangladesh, India and Indonesia conduct nationally representative, community-based surveys that capture drowning deaths, while India and Maldives capture data on drowning fatalities from the tourism sector. India also collects drowning fatality data from the transport sector, while Timor-Leste captures fatality data from its fire-fighting service. Media monitoring data are captured in Thailand, while in Indonesia, the Government (as a result of preparations for this report) began to collect media data and planned to establish

a system for media monitoring. Myanmar, Sri Lanka and Thailand have injury surveillance systems that can capture drowning deaths. Thailand has systems in place for sentinel and event-based injury surveillance.

Two major sources of non-fatal drowning data are hospital admissions records and emergency department records (Fig. 12). Non-fatal drowning data from the police exist in half of the countries. In Bangladesh, the transport, coast guard and tourism sectors capture data on non-fatal drowning, and in Sri Lanka the coast guard also provides data on non-fatal events. Indonesia and Thailand include media monitoring in their data capture, while Sri Lanka includes maritime safety data. In Myanmar, Sri Lanka and Thailand, injury surveillance systems are in place to capture non-fatal drowning, whereas the only national community survey providing non-fatal drowning data was the Bangladesh Health and Injury Survey (BHIS) 2016.

FIG. 12. Most common sources of fatal and non-fatal drowning information, South-East Asia Region



CASE STUDY 2. India: National Programme for Trauma Care

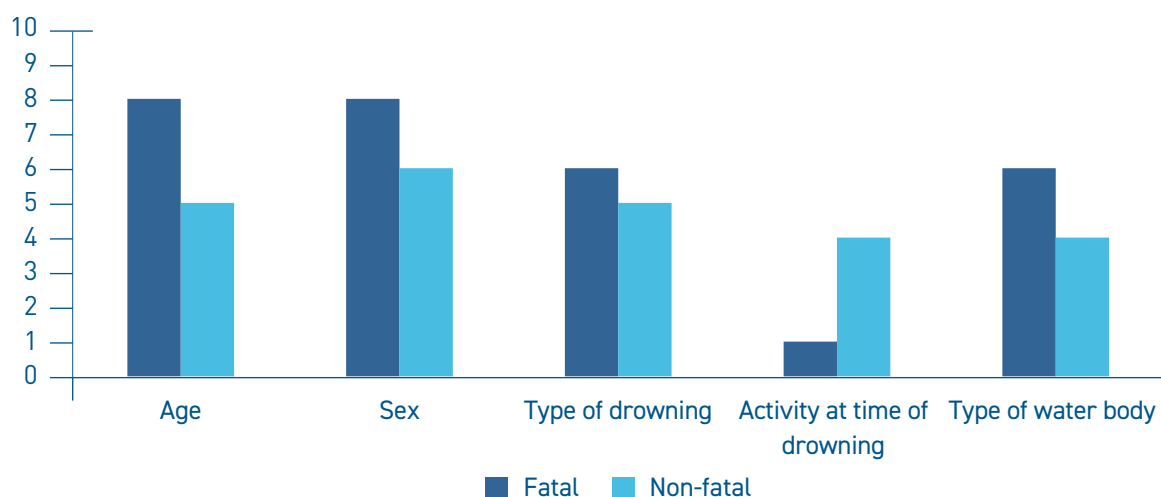
Under India's National Programme for Trauma Care, a National Injury Surveillance, Trauma Registry & Capacity Building Centre (NISC) has been established to collect, collate and analyse injury-related data, including data on drowning. The NISC

has a network of 46 hospitals in 14 states for collection of injury-related data. Printed material and audio-visual spots are being developed under the National Programme for Trauma Care for generating awareness on "Prevention and First Aid in Drowning".



Data are collected from many sources, though most data are disaggregated only by age and sex and contain no further detail on the activity, type of body of water and whether the drowning event was intentional or unintentional (Fig. 13).

FIG. 13. Number of countries capturing specific details on fatal and non-fatal drowning events, South-East Asia Region

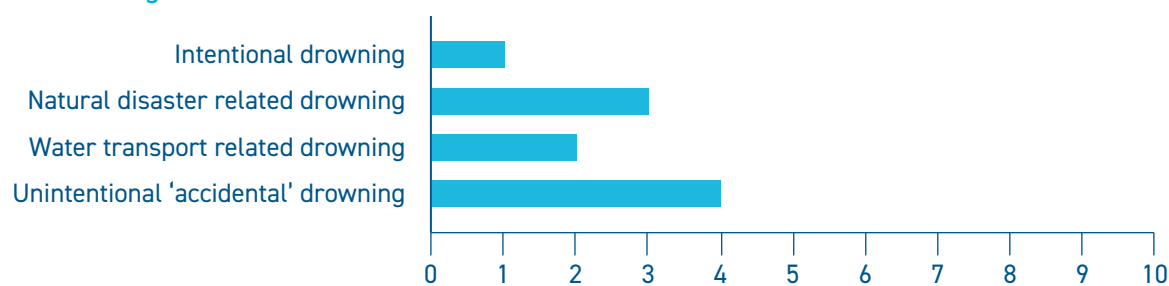


While all of the respondent countries collected data on drowning, only a smaller number (60%) report or publish this information.

The *International Statistical Classification of Diseases and Related Health Problems* (ICD) provides an international system for reporting diseases and health conditions, and contains multiple codes related to drowning. This system is able to capture additional standardized detail on drowning events. In the South-East Asia Region,

more than half of countries use ICD codes to report types of drowning, but incidents related to water transport and natural disasters are less reported. Data relating to the code “Unintentional ‘accidental’ drowning”²⁰ were most frequently collected (seven countries), followed by data on “Intentional drowning”²¹ (six countries). Fewer countries collected “Water transport–related drowning” (five countries) and “Natural disaster–related drowning” (five countries) (Fig. 14).

FIG. 14. Number of countries that collect drowning data using specific ICD codes, South-East Asia Region



Drowning deaths that occur away from hospitals, particularly in rural and remote areas, are often not issued death certificates or captured through formal death registries. These two factors

contribute to under-reporting of drowning deaths.²² Six countries (60%) reported capturing drowning deaths that occur in the community (Table 2).

TABLE 2. Capturing drowning deaths away from health facilities, South-East Asia Region

Bangladesh	Local government data system.
Sri Lanka	Case reporting followed by post-mortem.
Nepal	Case reporting followed by post-mortem.
Thailand	The law recognizes that drowning is an unnatural death. Therefore, drowning events require at least an investigator (i.e. physician or police).
Timor-Leste	Data are captured by Maritime Police and Fire Brigade only in response to the community request.

²⁰ Unintentional “accidental” drowning refers to any drowning event that occurs unplanned, excluding drowning related to a natural disaster or a transport accident.

²¹ Intentional drowning refers to any drowning event that results from purposeful human action. This includes suicide and homicide.

²² Preventing drowning.

Alcohol is a key risk factor in drowning events,²³ but only one country (10%) had data collected on the proportion of

drowning deaths associated with alcohol – in Thailand, 10.86% of fatal drowning events are associated with alcohol use.

4. Strengthen public awareness of drowning through strategic communications

Six respondent countries (60%) reported implementing mass media communication campaigns directly relevant to drowning prevention, while five countries (50%) reported implementing initiatives to raise awareness about the dangers of

consuming alcohol before or during swimming or boating activities. In addition, seven countries (70%) reported implementing initiatives to enhance awareness and highlight the vulnerability of children to drowning.



²³ See Gender section in Drowning fact sheet (<https://www.who.int/news-room/fact-sheets/detail/drowning#:~:text=Gender,overall%20mortality%20rate%20of%20females.&text=Studies%20suggest%20that%20the%20higher,before%20swimming%20alone%20and%20boating>, accessed 10 July 2021).

Interventions to prevent drowning

1. Provide safe places for pre-school children with capable child care

Capable adult supervision of children while they are near water is critical to drowning prevention. Three respondent countries

(30%) reported the availability of safe places for pre-school children with capable child care (Fig. 15).

CASE STUDY 3. Bangladesh: Community-based day care keeps children safe during peak drowning hours

Daily exposure to water in Bangladesh means that drowning is a real risk, especially for young children. According to the 2016 Bangladesh Health and Injury Survey (BHIS), an estimated 19 000 people die from drowning every year, including an estimated 14 500 children under 18 years, which is 40 children per day. The burden is particularly high in rural areas, where children are exposed to ponds and other water bodies, and where the risk of drowning is twice that in urban areas.

The Centre for Injury Prevention and Research, Bangladesh (CIPRB) is at the forefront of drowning prevention research and the delivery of practical interventions, working in partnership with communities to implement tested, low-cost solutions. Two interventions proven to be effective in Bangladesh are the supervision of young children (aged 1–5 years), via the Anchal model, and survival swimming skills for older children (aged 6–10 years), via a programme called SwimSafe.

“*Anchal* is a Bangla word meaning ‘mother protecting her child’,” explains Dr Aminur Rahman, Deputy Executive Director at the CIPRB. “The Anchal model is a low-cost intervention for community-

based day care, which provides a safe space for young children aged 1–5 years. Each Anchal is run by a trained Anchal Maa (caregiver) and Anchal Assistant (caregiver’s assistant) who supervise 20–25 children from 9 a.m. to 1 p.m., six days a week. This is the most vulnerable time for child drowning in Bangladesh, because during that time, parents and caregivers are busy working and doing household chores.”

The Anchal model aims to prevent drowning and injuries, while the children are also involved in early childhood development activities that stimulate their physical, intellectual, linguistic, social and emotional development. The Anchal Maas and assistants receive specialized training for their roles, including vital first aid and resuscitation skills.

CIPRB partnered with a charity from the United Kingdom and Ireland, the Royal National Lifeboat Institution (RNLI), to provide Anchals and other drowning prevention interventions to communities in the Barishal division, a rural area of Bangladesh that recorded the highest drowning estimates in the 2016 BHIS. Over the three-year project, a total of 17 651 children were enrolled in Anchals



across three subdistricts of the Barishal division. Thousands of women were involved in running the crèches.

Although the Anchals' main task was to supervise children and keep them safe from injury, the children who attended also received additional benefits from early childhood development activities. Results from a study by CIPRB indicated that children who attended Anchals showed significant progress in all early childhood development domains measured, compared to those who did not attend.

Community engagement was a key element in ensuring successful enrolment in Anchals. Monthly parents' meetings at the Anchals attracted more than 50% of parents. Anchal Maas discussed injury prevention, equal development of girls and boys, birth registration and hygiene, among other topics.

Parents welcomed the Anchals and recognized the benefits to their children. "In the monthly parents' meetings, they tell us about drowning events, they tell us to cover the pond with a net or fence," said one parent. "They made us aware of the problem, so we can take action, so that children don't fall into the water."

2. Install barriers to control access to water

All 10 respondent countries (100%) reported implementing interventions to promote the use of barriers to control access to water, including the installation of door gates, covering of wells, and mandatory fencing

around water bodies. Two (20%) countries reported legislation for fencing around swimming pools to prevent unsupervised children from accessing water.



3. Teach school-aged children swimming and water safety skills

Swimming and water safety skills are critical components of drowning prevention. Seven (70%) countries reported that school-aged children are taught basic water safety and safe rescue skills. Schools are the preferred entry points for

swim skills and water safety training and this intervention is proven to be effective. Only one country (10%) reported legislation requiring swimming lessons and water safety competencies to be integrated within primary school curricula.



CASE STUDY 4. Bangladesh: Swim survival lessons for children provides protection against drowning

SwimSafe is an initiative to teach survival swimming skills to children aged 6–10 years, developed by the Centre for Injury Prevention, Bangladesh (CIPRB). Research has shown that this approach is an effective intervention to prevent drowning amongst children in this age group, in Bangladesh.

“The course teaches children how to swim, float and perform a land-based rescue, within a locally appropriate context – either a modified pond within the village or via a portable pool,” explains Dr Aminur Rahman, Director of CIPRB. “The intervention is led by a community group, the Village Injury Prevention Committee (VIPC), which is involved in identifying and selecting the pond or place to be used, as well as recruiting community swimming instructors (CSIs), enrolling

children and encouraging participation in the programme.”

The instructors are trained to teach survival swimming and water safety. Each class comprises 15–25 children, with a teaching ratio of five children to each instructor, to ensure safety.

“To become a SwimSafe graduate, a child needs to complete 21 steps of the programme, and attain some key skills, including swimming 25 metres, floating for 30 seconds and demonstrating the land-based reach-and-throw rescue,” said Dr Rahman. “A ceremony is held for SwimSafe graduates to celebrate their achievements.”

The SwimSafe programme has been well-received by parents, who said they feel their children were safer when

exposed to bodies of water on the way to and from school. Many community members also believed that these skills could help children survive during a disaster such as a flood or a cyclone.

“We like the swimming training and the techniques they provide to train,” said one parent of an enrolled child. “And the fact that you started this SwimSafe programme. We are able to learn many things through it. Our children are learning many things: swimming, floating, safely rescuing others.”

Children who participated in the SwimSafe programme said they were confident enough to swim after completing the swimming lessons. They also mentioned that they enjoyed learning swimming with their friends.

CIPRB implemented Project Bhasa in the Barishal division of Bangladesh and enrolled over 35 000 children in SwimSafe between 2017

and 2020, with support from the Royal National Lifeboat Institution (RNLI). Overall, 84.7% of children who enrolled during this period successfully graduated from SwimSafe, with 3.6% of children failing to graduate and 11.7% dropping out or being absent on assessment day.

Overall, there was a slightly higher enrolment of boys (58.3%) than girls (41.7%) in the SwimSafe intervention of Project Bhasa. Mothers of older girls were often unwilling to send them to male instructors, and girls were also reluctant to learn swimming in an open pond next to roads. As this was a new intervention for many communities, people came to observe the swimming sessions – which made the girl participants uncomfortable. To help address the issue, the project recruited more female swimming instructors – and by the end of the project, 85% of the CSIs were female.





4. Train bystanders in safe rescue and resuscitation

Immediate and safe rescue, followed by appropriate resuscitation, are both vital to the survival of a drowning victim and their prospects for avoiding disability. Increasing the number of people capable of responding appropriately and safely

in a drowning situation is an important priority in drowning prevention. Eight respondent countries (80%) reported available programmes to train bystanders in safe rescue and resuscitation, with differing levels of drowning-specific focus.

CASE STUDY 5. Indonesia: “Search and Rescue goes to school”

Indonesia is one of the world’s largest island countries, comprising 17 508 islands over a distance of 5150 kilometres between the Australian and Asian continental mainland, and dividing the Pacific and Indian Oceans at the Equator. With these geographical attributes, the population of Indonesia faces a high risk of drowning.

According to the Indonesian Sample Registration Survey, accidental drowning and submersion was one of the highest underlying causes of deaths in 2014. The data showed that the highest prevalence of mortality due to drowning is among children aged 5–14 years.



Implemented in 2018, “Search and Rescue goes to school” is a national programme run by Indonesia’s National Search and Rescue Agency (BASARNAS), which aimed to provide education and raise awareness on drowning prevention and early search and rescue activity through schools. The programme also delivered knowledge

and capacity on basic self-rescue skills for emergency situations such as flooding, natural disasters, earthquakes and other dangerous events associated with risk of drowning. At the end of the training, participants were able to respond in the event of a sudden disaster – either to rescue themselves or offer help to rescue others.

5. Build disaster resilience and manage flood risks

The risk of drowning is increased by flooding, tsunamis and heavy rains during typhoons and cyclones – events to which the Region is susceptible. Such events and natural hazards – and their frequency and intensity – are exacerbated by climate change. Nearly all countries reported a national disaster warning system, including advance cyclone warnings, flood warnings and tsunami warnings, with four (40%) countries having legislation that permits government authorities to use private communication channels to broadcast disaster risk-reduction warnings

or messages in the lead-up and during a natural disaster or extreme weather event. Nine (90%) countries reported building resilience and managing flood risks and other hazards both locally and nationally, with interventions including the timely and reliable delivery of essential information and safety advice to the public prior to, during and following an event via private satellite radio stations, direct broadcast satellite providers, cable television systems and wireless cable systems. Nearly all countries have a dedicated search and rescue service.



6. Set and enforce safe shipping and boating regulations

Shipping and boating regulations across the Region differ significantly between countries and – where subnational regulations exist – within countries too. Different laws and legislation are associated with different categories of watercraft depending on vessel size, function and area of operation.

People in large numbers travel on water every day using a wide range of watercraft in the countries of the Region. All water travel poses risk for drowning. Availability and enforcement of safety regulations for watercrafts is essential for all countries to reduce drowning deaths. Seven countries reported interventions on maritime regulation and five of these countries covered more than 75% of the population.

Moreover, in Sri Lanka and Thailand, this intervention was evaluated.

To prevent the sale and purchase of faulty lifejackets, standards ensure that users are buying high-quality devices that are guaranteed to increase the buoyancy of an individual when in water. Life jackets are most effective when fastened correctly and always worn while on board a watercraft. Life jacket legislation in 8 countries (80%) specified a standard that must be met, most commonly corresponding to the SOLAS requirements for lifejackets, as per the International Convention for the Safety of Life at Sea.

Seven out of 10 respondent countries had the legal means for regulating the





registration and licensing of watercraft. Detailed review of the laws in these countries revealed that:

- Rules often differ according to watercraft size. Five out of seven countries had legal means of defining and treating watercraft differently depending on vessel length or size, and four countries categorize large and small vessels. There is variation in the sizes defined by country, ranging from 7 metres in India to 24 metres in Myanmar.
- All countries have legislation classifying watercrafts by recreational use, occupational use by individuals, occupational use by larger entities and by services for a fee.
- All have legislation that regulate registration and licensing, but some countries do not have

laws to regulate travel distance from shore. India does not have legislation requiring licensing of small watercraft, and Indonesia does not have legislation requiring licensing of occupational use by individuals.

Periodic safety inspections certify that watercraft are in working order and confirm the availability, accessibility and quality of safety equipment on board. About 70% of countries had legislation for regulating the safety inspection of watercraft. Most of these had legal means of various aspects of inspection; however, small watercrafts are not inspected by law in India and Indonesia. In Indonesia, watercrafts for occupational use by individuals are not inspected.

Seven countries (70%) require the watercraft operators/skipper/master/

captain to have a specific boating licence. Seven out of 10 countries had legislation for mandating licensing for watercraft:

- In India and Indonesia licensing for the operator/skipper/master/captain of a small watercraft is not set by law. Moreover, in India, licensing of watercrafts for recreation and occupational use by individuals is not in place.
- Four countries had legislation prohibiting operation of watercraft while under the influence of alcohol or psychoactive drugs. One country legalizes operation under the influence of alcohol based on a maximum blood alcohol concentration (BAC) or breath alcohol content (BrAC) limit.

Overcrowding increases the risk of capsizing and can result in insufficient safety equipment being available on board for all passengers. Overloading occurs when a watercraft is carrying too much weight, which again increases the risk of capsizing, particularly in poor weather, and reduces the responsiveness of a vessel in emergency situations. Seven countries had legislation to prevent overcrowding and overloading:

- In Bangladesh, the law that prevents overcrowding is specified by size only.
- In Indonesia, the law does not apply to small-sized watercrafts and for occupational use by individuals.
- In India, the law that prevents overloading is not defined by the













size of the watercraft; in Indonesia, only large-sized crafts are covered by the law.

- In Thailand, the current laws that prevent overloading are available only for watercrafts in maritime zone.

Access to suitable and appropriate lifesaving equipment on board a watercraft is important for ensuring passenger safety if the vessel overturns or submerges, particularly for passengers with poor or no swimming ability. Seven out of 10 countries had legislation to mandate the availability of buoyancy devices:

- Four countries mandate personal flotation devices (PFDs). Moreover, life rafts are mandated in Bangladesh and India.
- Legislation for lifejackets stipulates a standard in all countries except Indonesia. EN ISO 12402 is applicable in Bangladesh and Thailand, SOLAS in India and Myanmar, while a national standard exists in Maldives and Sri Lanka.
- None of the countries specify that life jackets are to be worn while passengers are on board a watercraft.
- All countries except Thailand specify that life jackets must be fastened during use.
- All countries had legislation mandating that enough buoyancy devices are available on watercraft to meet the needs of all occupants.

FIG. 15. Proportion of countries reporting to implement specific drowning prevention interventions (based on 10 out of 11 Member States participating in report)

Selected drowning prevention interventions	Share of countries reporting implementation	Selected drowning prevention interventions	Share of countries reporting implementation
PHYSICAL BARRIERS  Install barriers controlling access to water (e.g. door gates, covering of wells, swimming pool fencing).	100%	PUBLIC AWARENESS ON ALCOHOL AND SWIMMING/BOATING  Raise awareness on dangers of consuming alcohol before or during swimming or boating	50%
SWIM SKILLS TRAINING  Teach school-aged children basic swimming, water safety and safe rescue skills.	70%	RESCUE AND RESUSCITATION  Train bystanders in safe rescue and resuscitation	80%
CHILD CARE  Provide safe places for pre-school children with capable child care	30%	LIFEGUARDS  Use of lifeguards at public swimming venues	70%
PUBLIC AWARENESS ON DROWNING  Strengthen awareness and highlight the vulnerability of children to drowning	70%	SEARCH AND RESCUE  Dedicated search and rescue service	100%
MANAGE FLOOD RISKS  Build resilience and manage flood risks and other hazards at the local and national level	90%	MARITIME SAFETY  Maritime safety regulations	70%
DISASTER WARNING SYSTEMS  Advance cyclone/ flood/tsunami warning systems	100%	MEDIA  Mass media communication campaigns for drowning prevention	60%





Lessons and recommendations

This first regional assessment on drowning prevention in South-East Asia is an important step in understanding why drowning occurs and what can be done to most effectively prevent it. This report celebrates the progress made across the Region, while identifying gaps and opportunities to address this avoidable public health issue.

Drowning is a largely unrecognized threat to health and well-being. This lack of awareness often translates into a lack of resources and technical capacity at the national level to roll out multisectoral drowning prevention strategies in many countries.

Reflective of the diversity of the Region, the impact of drowning and effective approaches to its prevention often differ at the national, and often subnational, level. While certain countries have well-developed water safety strategies and well-established national mechanisms for drowning prevention, other countries are in the early stages of expanding or linking smaller-scale water safety interventions at the community level. It is critical to share stories across this spectrum of experience to support progress at all levels for advancing the drowning prevention agenda.

Seven key lessons and associated recommendations have emerged as a result of this assessment:

LESSON1 **Many countries have no clear national leadership to champion action on drowning prevention:** Establishing a lead agency or coordination body for drowning prevention, with appropriate capacity and sustained funding, is critical to ensuring a clear mandate and long-term commitment. This can be an important step to overcoming institutional capacity barriers and ensuring that institutional-strengthening initiatives are tailored to country capacity.

RECOMMENDATION 1 **National governments should designate a lead agency, or support establishment of a coordination body, to drive drowning prevention efforts.**

LESSON2 **Many countries have no national water safety plans and policies:** Only 40% of the countries that participated in the current project had a national water safety plan as recommended in the WHO *Global Report on Drowning*. National plans should have appropriate targets; be coordinated and integrated with all relevant stakeholders and sectors; be evidence based and data driven, and continually monitored for evaluation. Progress indicators are important for informing the public and decision-makers about drowning, for informing actions required to address drowning, and for monitoring progress of drowning prevention efforts. If more appropriate, entry points for drowning prevention can be sought in other relevant national strategies. If led by the ministry of health, it may be convenient to include

drowning prevention within broader national injury prevention strategies.

RECOMMENDATION 2 **National governments should develop and implement a national water safety plan which contains national indicators for drowning prevention. Indicators should include outcome and performance measures, and be aligned to the SDG targets.**

LESSON3 **Strengthening multisectoral collaboration, coordination and accountability is required:** While there is some national multisectoral collaboration on drowning prevention in many countries, more substantial and in-depth efforts are needed to further strengthen these functions. Formalizing approaches may increase visibility of the issue at the national level, promote mutual learning and advance development of a national drowning prevention strategy.

RECOMMENDATION 3 **National governments and other relevant stakeholders should formalize multisectoral mechanisms to address drowning prevention and water safety through establishing partnerships across sectors and assigning clear roles and responsibilities.**

LESSON4 **Knowledge sharing is low:** Knowledge sharing is a key ingredient for innovation and action, and is vital at national, regional and global levels. The focus should be to promote the uptake and use of existing guidance and standards, build partnerships to support effective drowning prevention networks, and provide training and capacity-building. Publication

of findings through peer-reviewed articles and in international forums (concerning public health, climate change and disaster risk reduction) should be a priority.

RECOMMENDATION 4 National governments and other relevant stakeholders should document and share knowledge gained in drowning prevention efforts.

LESSON 5 **Water safety legislation**

is often difficult to interpret and poorly

enforced: Most participating countries reported having water safety legislation in place, yet the legislation was often outdated or difficult to interpret. Further, many countries also reported lacking capacity and resources to ensure effective implementation and enforcement of existing legislation.

RECOMMENDATION 5 National governments should perform a comprehensive review of drowning prevention legislation to ensure that best practice laws are developed and that appropriate resources for implementation and enforcement are available.

LESSON 6 **Evaluation of drowning**

prevention efforts is often not carried out:

Most countries participating in this status report indicated several interventions for

drowning prevention being implemented, but very few were evaluated. Evaluation can demonstrate the impact, efficacy and cost-effectiveness of interventions.

RECOMMENDATION 6 National governments and relevant stakeholders should evaluate drowning prevention intervention plans from the outset, ensuring that evaluation is adequately planned for and funded. Evaluations should be considered for publication in peer-reviewed literature.






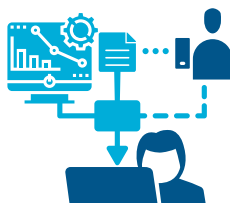
LESSON 7 **Data on drowning (fatal and non-**

fatal) often have limited coverage and

completeness: While nearly all participating countries collect data on drowning, some do not compile them into official reports, making it difficult for decision-makers to fully monitor the extent, scale and location of the drowning burden. Evidence-based data are not only crucial for understanding the numbers of deaths and injuries, but also for understanding drowning exposure risks, intermediate outcomes and socioeconomic costs.

RECOMMENDATION 7 National governments should strengthen data systems that capture drowning incidents, while strengthening the availability and quality of reporting.

KEY RECOMMENDATIONS FOR DROWNING PREVENTION IN THE SOUTH-EAST ASIA REGION

	1	Designate a lead agency, or support establishment of a coordination body, to drive drowning prevention efforts.
	2	Develop and implement a national water safety plan that has national indicators for drowning prevention.
	3	Formalize multisectoral mechanisms to address drowning prevention and water safety through establishing partnerships across sectors and assigning clear roles and responsibilities.
	4	Document and share knowledge gained in drowning prevention efforts.
	5	Perform a comprehensive review of drowning prevention legislation to ensure that best practice laws are developed and that appropriate resources for implementation and enforcement are available.
	6	Evaluate intervention plans for drowning prevention from the outset, ensuring that evaluation is adequately planned for and funded.
	7	Strengthen data systems that capture drowning incidents while improving the availability and quality of reporting.







Conclusions

This report presents findings from the first assessment of drowning prevention in the South-East Asia Region. The report is a key step in accelerating advocacy and action to minimize and avoid the 70 000 preventable deaths that occur each year in the Region due to drowning. The report also acts as a baseline to measure future regional progress in drowning prevention.

10 out of 11 SEARO countries voluntarily participated in this assessment process. This is significant, and a regional first, offering a regional lens as to the indicative scale, scope and range of drowning prevention interventions and policy taking place or present in the Region.

The consultation held for this report found that, despite many challenges and barriers, Member States across the Region continue to push the drowning prevention agenda forward through work related to recognizing the impact of drowning and the implementation actions and programmes to prevent harm. The sector is growing and, while perhaps not always formally recognized as such, drowning prevention is an endeavour resulting in emerging (and often strong) strong multisectoral collaborations and action.

Since the publication of WHO's *Global Report on Drowning* in 2014, regional work in drowning prevention has expanded. However, these efforts remain disparate across the Region, reflective of the Region's geographical and socioeconomic diversity. The regional consultation process drew together participants from many countries, in some cases for the first time. The experiences they shared with

each other from different sectors have sparked recognition and momentum among many Member States on the need for further action to reduce drowning. This is encouraging and presents an opportunity to leverage and grow existing networks to address drowning prevention among stakeholders already working together on established shared and accepted multisectoral challenges.

In line with the 2014 WHO *Preventing Drowning: an implementation guide*, interventions should be evidence based and advance drowning prevention through data collection and well-designed studies. It is crucial that programmes are evaluated and implemented based on impact and cost-effectiveness on reducing drowning.

Good coordination and collaboration, with strong leadership, is crucial. As with all injury prevention initiatives, addressing drowning requires a multisectoral approach. It is important to formalize this approach (through the development of a strategy, policy, or establishment of coordination mechanisms), assigning clear roles and responsibilities to different sectors and organizations, and developing a monitoring plan that includes quantitative indicators to ensure progress.

When developing a drowning prevention strategy, it is crucial to have a plan in place to ensure strategy endorsement. National drowning prevention strategies within the Region have stalled between development and endorsement, with their implementation blocked.

This report highlights achievements and progress to date, and aims to celebrate and champion this. Our vision is that this report provides a useful tool for Member States to further expand their own drowning prevention efforts, resulting in increased water safety and a reduction in the number of drowning deaths in the Region.

As highlighted throughout the report, drowning is preventable. The data collected in this report highlight the diversity and commitment of the drowning prevention community across the Region. We must continue to work together to strengthen this endeavour. The recommendations made in this report provide guidance on action to prevent drowning. We must continue to monitor and evaluate the implementation of this work to improve programmes, respond to emerging challenges and ultimately improve the health and well-being of our communities.







Country profiles

BANGLADESH

Population:
163 046 000

Income group:
Lower-middle

Gross national
income per capita:
USD 5200



MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES BANGLADESH HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? NO

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health | Ministry of Education | Police | Disaster Risk Reduction | Maritime Safety | Coastguard/military | Fire service & civil defense | Bangladesh Inland Water Transport Authority | Ministry of sport & youth

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	●	LOW	NO
Swim skills training	●	LOW	YES
Child care	●	LOW	YES
Public awareness on drowning	●	MED	NO
Manage flood risks	●	MED	NO
Disaster warning systems	●	HIGH	YES
Public awareness on alcohol and swimming/boating	-	-	-
Rescue and resuscitation	●	LOW	YES
Lifeguards	●	LOW	YES
Search and rescue	●	HIGH	YES
Maritime safety	-	-	-
Media	●	LOW	YES

SOURCES OF DROWNING DATA

SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Vital registry	●	■ ■ ■ ■	N/A	-
Verbal autopsy	-	-	N/A	-
Hospital admission data	●	■ ■ ■ ■	●	■ ■ ■ ■
Hospital emergency department data	●	■ ■ ■ ■	●	■ ■ ■ ■
Police	●	■ ■ ■ ■	●	■ ■ ■ ■
Transport sector	●	■	●	■
Education sector	-	-	-	-
Maritime safety	-	-	-	-
Coast Guard	●	■	●	■
Tourism sector	-	-	-	-
Media	-	-	-	-
Community survey	-	-	●	■ ■ ■ ■ ■ ■ ■ ■

■ Age ■ Sex ■ Type of drowning event ■ Activity ■ Water body

Drowning deaths in community settings are captured: YES

Persons missing at sea are assumed to have died: NO

Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: -

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES BANGLADESH HAVE A NATIONAL WATER SAFETY STRATEGY? NO

Are measurable targets to reduce drowning included? -

If yes, please specify:

Do these strategies align with relevant SDGs? -

Are plans underway, or is there interest, to develop a national water strategy? YES

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	YES	4
Mandated licensing of watercraft	YES	3
Mandated periodic safety inspections of watercraft	YES	4
Mandated licencing of the operator	YES	4
Individuals responsible for overall safety of watercraft	Owner / Operator / Crew	
Law against alcohol consumption and boating	NO	-
If yes, specify BAC limit:		
Law against drug use and boating	-	-
Restrictions on watercraft passenger capacity	YES	2
Restrictions on watercraft load capacity	YES	2
Mandated provision of lifejackets onboard watercraft	YES	3
Specific standard of lifejacket required	EN ISO 12402	
Specific number of lifejackets required	YES	3

Watercraft often exempt from national maritime legislation:
Military watercraft/ Watercraft <16 BHP engine

CHILD SAFETY		
Fencing to exclude children from swimming pools	-	-
Swimming lessons in school curricula	-	-
Structured adult supervision of preschool children	-	-
Prosecution of neglect against children	-	-

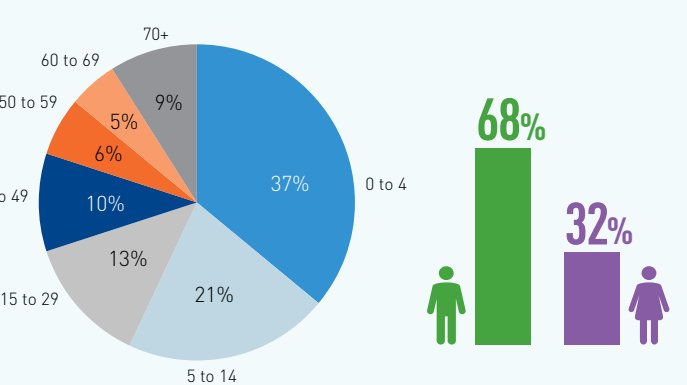
WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	-	-
Required competencies for life guards	-	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	YES	8

DROWNING DATA		
One agency maintains all vital registry statistics	YES	5

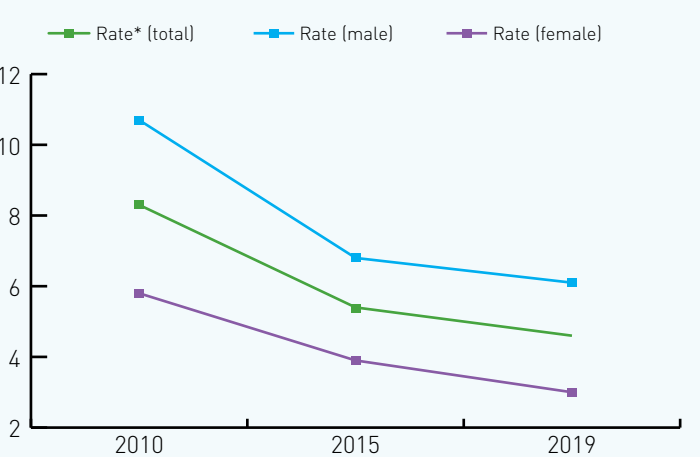
- No response or not applicable

DROWNING DEATHS BY AGE GROUP (YEARS)



* GHE data

RATE OF DROWNING DEATHS^a



* rate = age standardized death rate

Data is based on national consensus and cleared by the Ministry of Health

MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES BHUTAN HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? NO

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health | Ministry of Education | Police | Disaster Risk Reduction | Ministry of Transport | Meteorology Department | Hydropower Power Projects

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	<div></div>	LOW	NO
Swim skills training	-	-	-
Child care	-	-	-
Public awareness on drowning	<div></div>	-	NO
Manage flood risks	<div></div>	LOW	NO
Disaster warning systems	<div></div>	MED	NO
Public awareness on alcohol and swimming/boating	-	-	-
Rescue and resuscitation	<div></div>	-	-
Lifeguards	-	-	-
Search and rescue	<div></div>	MED	NO
Maritime safety	-	-	-
Media	<div></div>	-	-

SOURCES OF DROWNING DATA

SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Vital registry	<div></div>	<div></div>	N/A	-
Verbal autopsy	-	-	N/A	-
Hospital admission data	<div></div>	<div></div>	<div></div>	<div></div>
Hospital emergency department data	<div></div>	<div></div>	<div></div>	<div></div>
Police	<div></div>	<div></div>	-	-
Transport sector	-	-	-	-
Education sector	-	-	-	-
Maritime safety	-	-	-	-
Coast Guard	-	-	-	-
Tourism sector	-	-	-	-
Media	-	-	-	-
Community survey	-	-	-	-

Age Sex Type of drowning event Activity Water body

Drowning deaths in community settings are captured: YES

Persons missing at sea are assumed to have died: NO

Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: -

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES BHUTAN HAVE A NATIONAL WATER SAFETY STRATEGY? NO

Are measurable targets to reduce drowning included? -

If yes, please specify:

Do these strategies align with relevant SDGs? -

Are plans underway, or is there interest, to develop a national water strategy? NO

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	-	-
Mandated licensing of watercraft	-	-
Mandated periodic safety inspections of watercraft	-	-
Mandated licencing of the operator	-	-
Individuals responsible for overall safety of watercraft	-	-
Law against alcohol consumption and boating	-	-
If yes, specify BAC limit:	-	-
Law against drug use and boating	-	-
Restrictions on watercraft passenger capacity	-	-
Restrictions on watercraft load capacity	-	-
Mandated provision of lifejackets onboard watercraft	-	-
Specific standard of lifejacket required	-	-
Specific number of lifejackets required	-	-
Watercraft often exempt from national maritime legislation:		

CHILD SAFETY		
Fencing to exclude children from swimming pools	-	-
Swimming lessons in school curricula	-	-
Structured adult supervision of preschool children	-	-
Prosecution of neglect against children	-	-

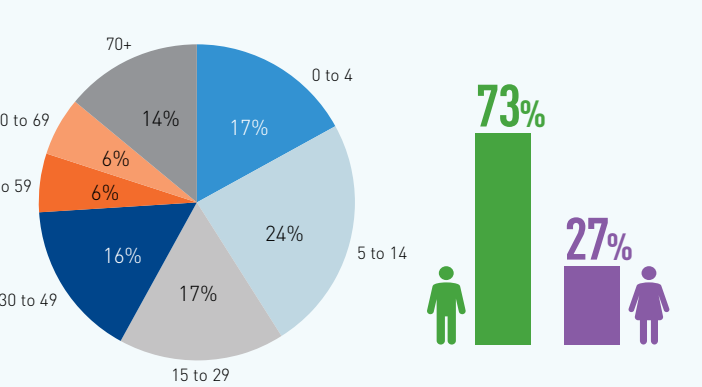
WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	-	-
Required competencies for life guards	-	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	-	-

DROWNING DATA		
One agency maintains all vital registry statistics	-	-

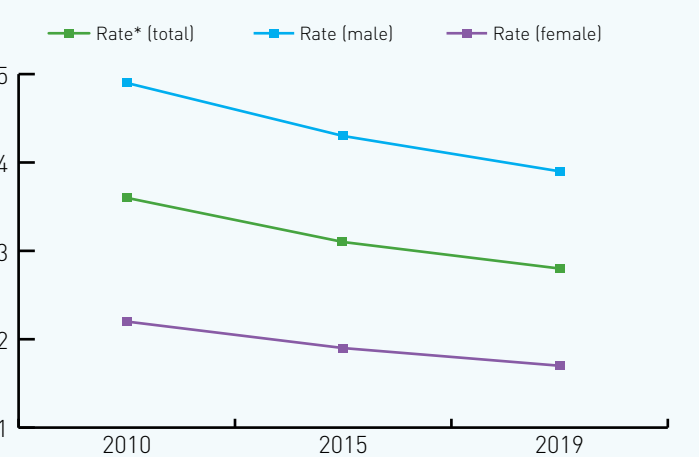
- No response or not applicable

DROWNING DEATHS BY AGE GROUP (YEARS)



* GHE data

RATE OF DROWNING DEATHS^a



* rate = age standardized death rate

MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES INDONESIA HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? NO

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health | Ministry of Education | Police | Disaster Risk Reduction | Ministry of Transport | Maritime Safety | Coastguard/Military | Non-governmental organizations | Ministry of Internal Affairs | Ministry of Environmental and Forestry | Ministry of Youth and Sport

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	●	LOW	NO
Swim skills training	●	LOW	NO
Child care	●	LOW	NO
Public awareness on drowning	●	LOW	NO
Manage flood risks	●	MED	NO
Disaster warning systems	●	MED	NO
Public awareness on alcohol and swimming/boating	●	MED	NO
Rescue and resuscitation	●	MED	NO
Lifeguards	●	MED	NO
Search and rescue	●	MED	NO
Maritime safety	●	MED	NO
Media	●	LOW	NO

SOURCES OF DROWNING DATA

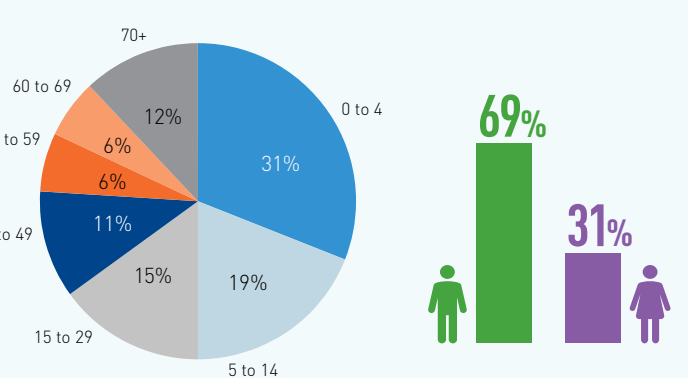
SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Vital registry	-	-	N/A	-
Verbal autopsy	-	-	N/A	-
Hospital admission data	●	■ ■	●	■ ■
Hospital emergency department data	-	-	-	-
Police	●	■ ■	-	-
Transport sector	-	-	-	-
Education sector	-	-	-	-
Maritime safety	-	-	-	-
Coast Guard	-	-	-	-
Tourism sector	-	-	-	-
Media	●	■ ■ ■ ■ ■	●	■ ■ ■ ■ ■
Community survey	●	■ ■	-	-

■ Age ■ Sex ■ Type of drowning event ■ Activity ■ Water body

Drowning deaths in community settings are captured: NO
Persons missing at sea are assumed to have died: NO
Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: -

DROWNING DEATHS BY AGE GROUP (YEARS)



* GHE data

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES INDONESIA HAVE A NATIONAL WATER SAFETY STRATEGY? NO

Are measurable targets to reduce drowning included? -

If yes, please specify:

Do these strategies align with relevant SDGs? -

Are plans underway, or is there interest, to develop a national water strategy? YES

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	YES	8
Mandated licensing of watercraft	YES	8
Mandated periodic safety inspections of watercraft	YES	7
Mandated licencing of the operator	YES	7
Individuals responsible for overall safety of watercraft	Owner/operator/crew	
Law against alcohol consumption and boating	YES	8
If yes, specify BAC limit:	-	
Law against drug use and boating	YES	8
Restrictions on watercraft passenger capacity	YES	8
Restrictions on watercraft load capacity	YES	7
Mandated provision of lifejackets onboard watercraft	YES	7
Specific standard of lifejacket required	NO	
Specific number of lifejackets required	YES	6

Watercraft often exempt from national maritime legislation:

CHILD SAFETY		
Fencing to exclude children from swimming pools	YES	5
Swimming lessons in school curricula	YES	6
Structured adult supervision of preschool children	YES	6
Prosecution of neglect against children	YES	5

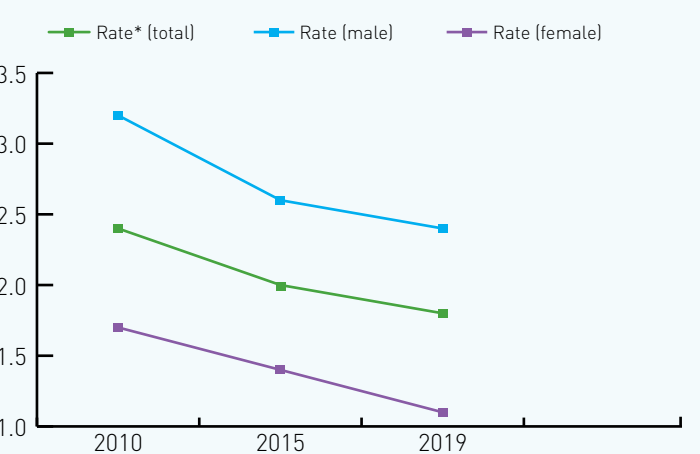
WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	YES	7
Required competencies for life guards	NO	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	YES	7

DROWNING DATA		
One agency maintains all vital registry statistics	NO	-

- No response or not applicable

RATE OF DROWNING DEATHS^a



* rate = age standardized death rate

MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES INDIA HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? NO

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health | Ministry of Education | Police | Disaster Risk Reduction | Ministry of Transport | Maritime Safety | Coastguard/Military | Ministry of Defence | Central Water Commission | Ministry of water resource | Ministry of Shipping | Ministry of Tourism | Ministry of Information & Broadcasting | Ministry of Law & Justice | Ministry of Skill Development & Entrepreneurship | Ministry of Women and Child Development | Ministry of Revenue department | Urban Development Ministry | Ministry of Home Affairs

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	-	-	-
Swim skills training	-	-	-
Child care	●	MED	NO
Public awareness on drowning	-	-	-
Manage flood risks	●	MED	NO
Disaster warning systems	●	HIGH	NO
Public awareness on alcohol and swimming/boating	-	-	-
Rescue and resuscitation	●	LOW	NO
Lifeguards	●	HIGH	NO
Search and rescue	●	HIGH	NO
Maritime safety	●	HIGH	NO
Media	-	-	-

SOURCES OF DROWNING DATA

SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Vital registry	●	■ ■ ■ ■	N/A	-
Verbal autopsy	●	■ ■ ■ ■	N/A	-
Hospital admission data	●	■ ■ ■ ■	-	-
Hospital emergency department data	●	■ ■ ■ ■	●	■ ■ ■ ■ ■ ■
Police	●	■ ■ ■ ■	●	■
Transport sector	●	■ ■ ■ ■	-	-
Education sector	●	■ ■ ■ ■	-	-
Maritime safety	●	■ ■ ■ ■	-	-
Coast Guard	●	■ ■ ■ ■	-	-
Tourism sector	●	■ ■ ■ ■ ■ ■	-	-
Media	-	-	-	-
Community survey	●	■ ■ ■ ■	-	-

■ Age ■ Sex ■ Type of drowning event ■ Activity ■ Water body

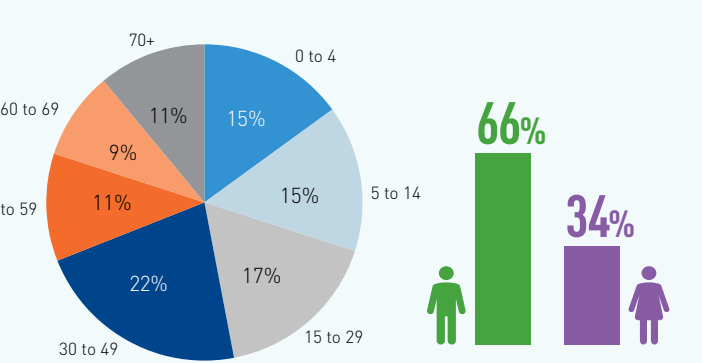
Drowning deaths in community settings are captured: NO

Persons missing at sea are assumed to have died: NO

Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: -

DROWNING DEATHS BY AGE GROUP (YEARS)



^a GHE data

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES INDIA HAVE A NATIONAL WATER SAFETY STRATEGY? Yes, ministry-specific for all injuries that specifies drowning

Are measurable targets to reduce drowning included? -

If yes, please specify: -

Do these strategies align with relevant SDGs? -

Are plans underway, or is there interest, to develop a national water strategy? YES

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	YES	-
Mandated licensing of watercraft	YES	-
Mandated periodic safety inspections of watercraft	YES	-
Mandated licencing of the operator	YES	-
Individuals responsible for overall safety of watercraft	Owner/operator/skipper/master/captain	
Law against alcohol consumption and boating	YES	-
If yes, specify BAC limit:	-	-
Law against drug use and boating	YES	-
Restrictions on watercraft passenger capacity	YES	-
Restrictions on watercraft load capacity	YES	-
Mandated provision of lifejackets onboard watercraft	YES	-
Specific standard of lifejacket required	SOLAS	
Specific number of lifejackets required	YES	-

Watercraft often exempt from national maritime legislation: Small Traditional Crafts

CHILD SAFETY		
Fencing to exclude children from swimming pools	NO	-
Swimming lessons in school curricula	NO	-
Structured adult supervision of preschool children	NO	-
Prosecution of neglect against children	NO	-

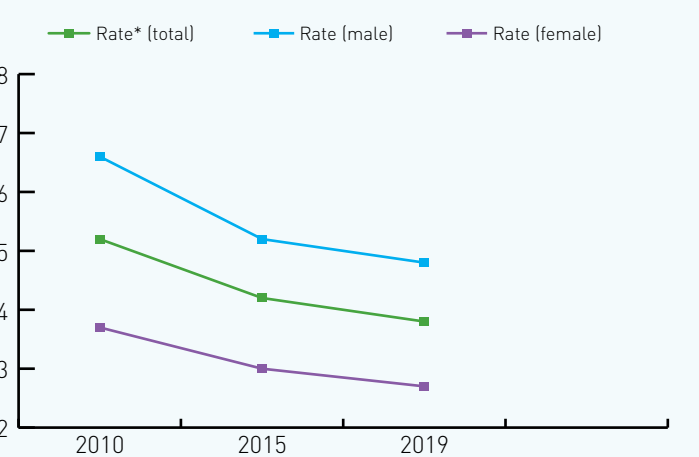
WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	NO	-
Required competencies for life guards	NO	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	NO	-

DROWNING DATA		
One agency maintains all vital registry statistics	NO	-

- No response or not applicable

RATE OF DROWNING DEATHS^a



^a rate = age standardized death rate

MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES MALDIVES HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? NO

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health | Ministry of Education | Police | Meteorology department | Ministry of Transport | Maritime Safety | Coastguard/Military | Non-governmental organizations | Local Government Authority | Ministry of Tourism

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	●	MED	-
Swim skills training	●	MED	-
Child care	●	MED	-
Public awareness on drowning	●	MED	-
Manage flood risks	●	MED	-
Disaster warning systems	●	HIGH	-
Public awareness on alcohol and swimming/boating	-	-	-
Rescue and resuscitation	●	MED	-
Lifeguards	-	-	-
Search and rescue	●	HIGH	-
Maritime safety	●	HIGH	-
Media	-	-	-

SOURCES OF DROWNING DATA

SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Vital registry	-	-	N/A	-
Verbal autopsy	-	-	N/A	-
Hospital admission data	●	■ ■	●	■ ■
Hospital emergency department data	●	■ ■	●	■ ■
Police	●	■ ■	-	-
Transport sector	-	-	-	-
Education sector	-	-	-	-
Maritime safety	-	-	-	-
Coast Guard	●	■	-	-
Tourism sector	●	■ ■ ■	-	-
Media	-	-	-	-
Community survey	-	-	-	-

■ Age ■ Sex ■ Type of drowning event ■ Activity ■ Water body

Drowning deaths in community settings are captured: NO

Persons missing at sea are assumed to have died: NO

Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: -

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES MALDIVES HAVE A NATIONAL WATER SAFETY STRATEGY? NO

Are measurable targets to reduce drowning included? -

If yes, please specify:

Do these strategies align with relevant SDGs? -

Are plans underway, or is there interest, to develop a national water strategy? YES

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	YES	<div><div></div>6</div>
Mandated licensing of watercraft	YES	<div><div></div>6</div>
Mandated periodic safety inspections of watercraft	YES	<div><div></div>7</div>
Mandated licencing of the operator	YES	<div><div></div>7</div>
Individuals responsible for overall safety of watercraft	Owner/operator/crew	
Law against alcohol consumption and boating	NO	-
If yes, specify BAC limit:	-	
Law against drug use and boating	NO	-
Restrictions on watercraft passenger capacity	YES	<div><div></div>8</div>
Restrictions on watercraft load capacity	YES	<div><div></div>8</div>
Mandated provision of lifejackets onboard watercraft	YES	<div><div></div>8</div>
Specific standard of lifejacket required: National standard based on IMO		
Specific number of lifejackets required	YES	<div><div></div>8</div>
Watercraft often exempt from national maritime legislation:		

CHILD SAFETY		
Fencing to exclude children from swimming pools	NO	-
Swimming lessons in school curricula	NO	-
Structured adult supervision of preschool children	NO	-
Prosecution of neglect against children	YES	8

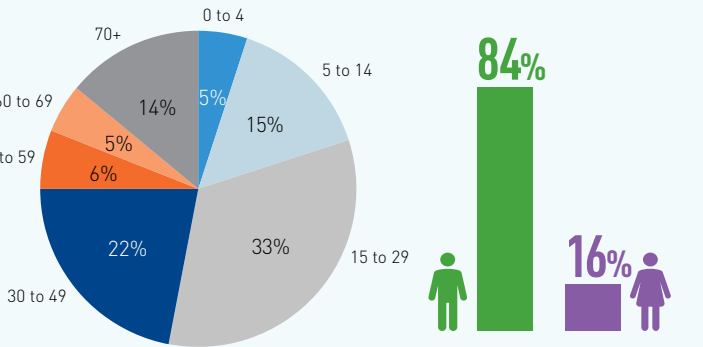
WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	NO	-
Required competencies for life guards	NO	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	NO	-

DROWNING DATA		
One agency maintains all vital registry statistics	NO	-

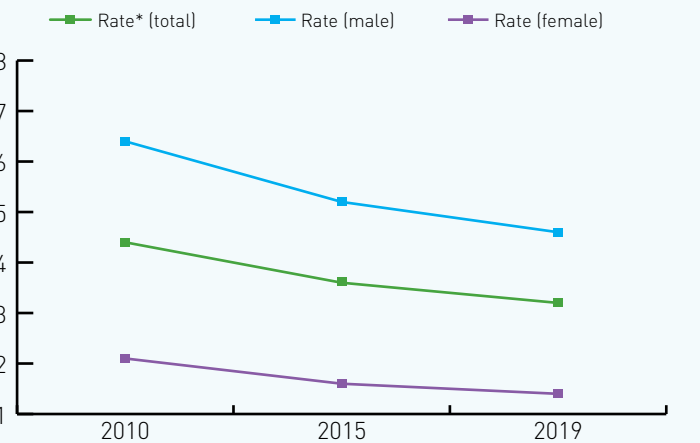
- No response or not applicable

DROWNING DEATHS BY AGE GROUP (YEARS)



* GHE data

RATE OF DROWNING DEATHS^a



* rate = age standardized death rate

MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES MYANMAR HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? NO

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health and Sports | Ministry of Education | Ministry of Home Affair | Ministry of Social Welfare | Ministry of Information | Ministry of Transport and Commination | Maritime Safety | Coastguard/Military | Red Cross Society | Ministry of Planning and Finance | Ministry of Agriculture and Irrigation

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	<div></div>	MED	NO
Swim skills training	<div></div>	LOW	NO
Child care	<div></div>	MED	NO
Public awareness on drowning	<div></div>	LOW	NO
Manage flood risks	<div></div>	MED	NO
Disaster warning systems	<div></div>	MED	YES
Public awareness on alcohol and swimming/boating	<div></div>	LOW	NO
Rescue and resuscitation	<div></div>	MED	NO
Lifeguards	<div></div>	LOW	NO
Search and rescue	<div></div>	MED	NO
Maritime safety	<div></div>	HIGH	YES
Media	-	-	-

SOURCES OF DROWNING DATA

SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Vital registry	<div></div>	<div></div>	N/A	-
Verbal autopsy	<div></div>	<div></div>	N/A	-
Hospital admission data	<div></div>	<div></div>	<div></div>	<div></div>
Hospital emergency department data	<div></div>	<div></div>	<div></div>	<div></div>
Police	<div></div>	<div></div>	<div></div>	<div></div>
Transport sector	-	-	-	-
Education sector	-	-	-	-
Maritime safety	-	-	-	-
Coast Guard	-	-	-	-
Tourism sector	-	-	-	-
Media	-	-	-	-
Injury surveillance system	<div></div>	<div></div>	-	-

Age Sex Type of drowning event Activity Water body

Drowning deaths in community settings are captured: NO

Persons missing at sea are assumed to have died: NO

Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: -

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES MYANMAR HAVE A NATIONAL WATER SAFETY STRATEGY? NO

Are measurable targets to reduce drowning included? -

If yes, please specify:

Do these strategies align with relevant SDGs? -

Are plans underway, or is there interest, to develop a national water strategy? YES

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	YES	<div></div>
Mandated licensing of watercraft	YES	<div></div>
Mandated periodic safety inspections of watercraft	YES	<div></div>
Mandated licencing of the operator	YES	<div></div>
Individuals responsible for overall safety of watercraft	Owner/operator/crew	
Law against alcohol consumption and boating	YES	<div></div>
If yes, specify BAC limit: 0.0025 mg		
Law against drug use and boating	YES	<div></div>
Restrictions on watercraft passenger capacity	YES	<div></div>
Restrictions on watercraft load capacity	YES	<div></div>
Mandated provision of lifejackets onboard watercraft	YES	<div></div>
Specific standard of lifejacket required	SOLAS	
Specific number of lifejackets required	YES	<div></div>
Watercraft often exempt from national maritime legislation:		

CHILD SAFETY		
Fencing to exclude children from swimming pools	NO	-
Swimming lessons in school curricula	NO	-
Structured adult supervision of preschool children	NO	-
Prosecution of neglect against children	YES	<div></div>

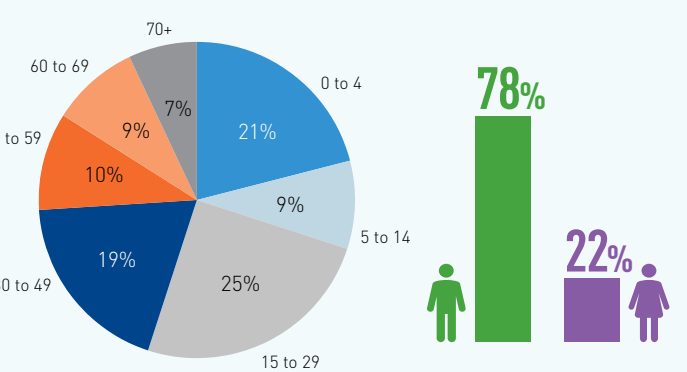
WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	NO	-
Required competencies for life guards	NO	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	NO	-

DROWNING DATA		
One agency maintains all vital registry statistics	NO	-

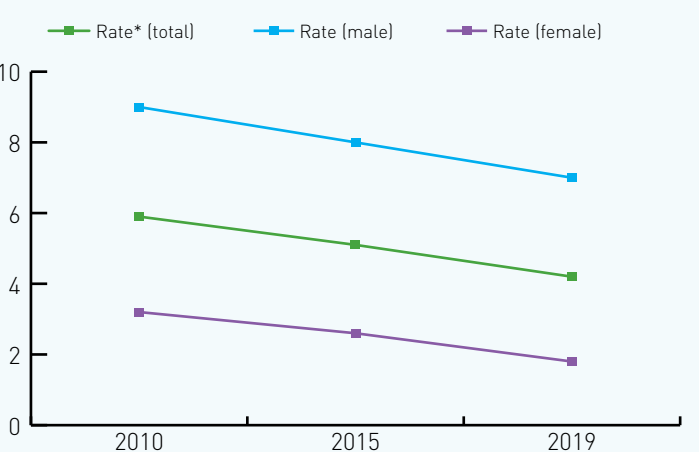
- No response or not applicable

DROWNING DEATHS BY AGE GROUP (YEARS)



^a GHE data

RATE OF DROWNING DEATHS^a



^a rate = age standardized death rate

MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES NEPAL HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? NO

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health | Ministry of Education | Police | Meteorology Department | Home Ministry | Armed police force

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	<div></div>	LOW	NO
Swim skills training	<div></div>	LOW	NO
Child care	<div></div>	MED	NO
Public awareness on drowning	<div></div>	LOW	NO
Manage flood risks	<div></div>	MED	NO
Disaster warning systems	<div></div>	MED	YES
Public awareness on alcohol and swimming/boating	<div></div>	LOW	NO
Rescue and resuscitation	<div></div>	LOW	NO
Lifeguards	<div></div>	MED	NO
Search and rescue	<div></div>	MED	NO
Maritime safety	<div></div>	-	NO
Media	<div></div>	LOW	NO

SOURCES OF DROWNING DATA

SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Vital registry	-	-	N/A	-
Verbal autopsy	-	-	N/A	-
Hospital admission data	-	-	<div></div>	<div></div>
Hospital emergency department data	-	-	<div></div>	<div></div>
Police	<div></div>	<div></div>	<div></div>	<div></div>
Transport sector	-	-	-	-
Education sector	-	-	-	-
Maritime safety	-	-	-	-
Coast Guard	-	-	-	-
Tourism sector	-	-	-	-
Media	-	-	-	-
Other	-	-	-	-

Age Sex Type of drowning event Activity Water body

Drowning deaths in community settings are captured: YES

Persons missing at sea are assumed to have died: NO

Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: 21.9%

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES NEPAL HAVE A NATIONAL WATER SAFETY STRATEGY? NO

Are measurable targets to reduce drowning included? -

If yes, please specify:

Do these strategies align with relevant SDGs? -

Are plans underway, or is there interest, to develop a national water strategy? YES

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	NO	-
Mandated licensing of watercraft	NO	-
Mandated periodic safety inspections of watercraft	NO	-
Mandated licencing of the operator	NO	-
Individuals responsible for overall safety of watercraft	-	-
Law against alcohol consumption and boating	NO	-
If yes, specify BAC limit:	-	-
Law against drug use and boating	NO	-
Restrictions on watercraft passenger capacity	NO	-
Restrictions on watercraft load capacity	NO	-
Mandated provision of lifejackets onboard watercraft	NO	-
Specific standard of lifejacket required	-	-
Specific number of lifejackets required	NO	-
Watercraft often exempt from national maritime legislation:		

CHILD SAFETY		
Fencing to exclude children from swimming pools	NO	-
Swimming lessons in school curricula	NO	-
Structured adult supervision of preschool children	NO	-
Prosecution of neglect against children	YES	<div>9</div>

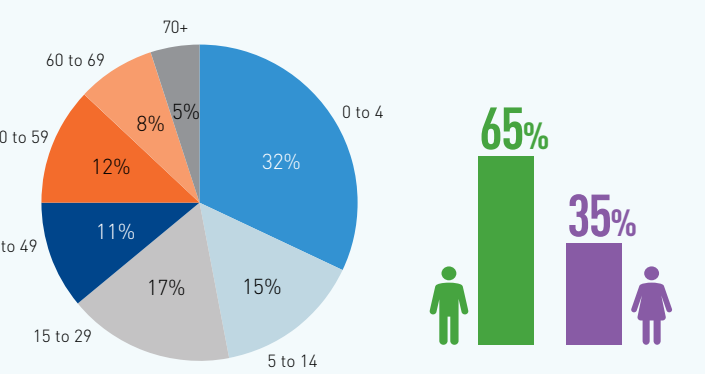
WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	NO	-
Required competencies for life guards	NO	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	NO	-

DROWNING DATA		
One agency maintains all vital registry statistics	YES	<div>10</div>

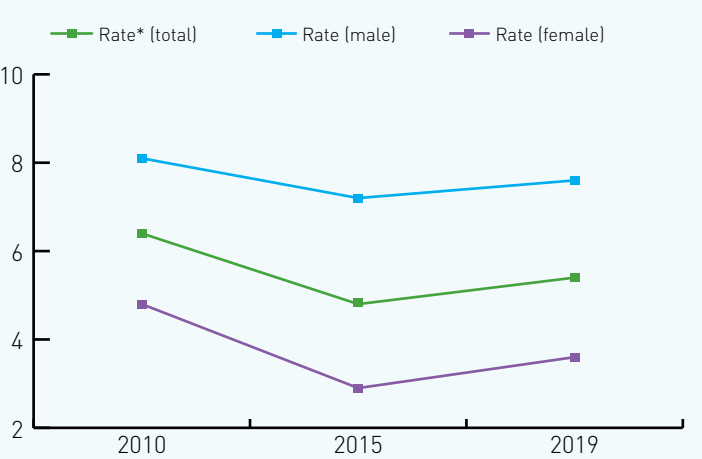
- No response or not applicable

DROWNING DEATHS BY AGE GROUP (YEARS)



*GHE data

RATE OF DROWNING DEATHS^a



* rate = age standardized death rate



MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES SRI LANKA HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? YES

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health | Ministry of Education | Police | Disaster Risk Reduction | Maritime Safety | Coastguard/Military | Ministry of Tourism | Life Saving Association of Sri Lanka | Academia

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	●	-	NO
Swim skills training	●	-	NO
Child care	●	-	NO
Public awareness on drowning	●	-	NO
Manage flood risks	●	-	NO
Disaster warning systems	●	-	NO
Public awareness on alcohol and swimming/boating	●	-	NO
Rescue and resuscitation	●	-	NO
Lifeguards	●	-	NO
Search and rescue	●	-	NO
Maritime safety	●	HIGH	NO
Media	●	-	NO

SOURCES OF DROWNING DATA

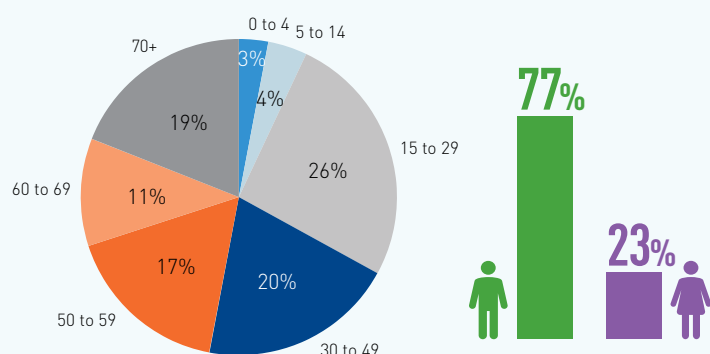
SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Vital registry	●	■ ■ ■	N/A	-
Verbal autopsy	-	-	N/A	-
Hospital admission data	●	■ ■ ■ ■ ■	●	■ ■ ■ ■ ■
Hospital emergency department data	●	■ ■ ■ ■ ■	●	■ ■ ■ ■ ■
Police	●	■ ■ ■ ■ ■	●	■ ■ ■ ■ ■
Transport sector	-	-	-	-
Education sector	-	-	-	-
Maritime safety	●	■ ■ ■ ■ ■	●	■ ■ ■ ■ ■
Coast Guard	●	■ ■ ■ ■ ■	●	■ ■ ■ ■ ■
Tourism sector	-	-	-	-
Media	-	-	-	-
Injury surveillance system	●	■ ■ ■ ■ ■	●	■ ■ ■ ■ ■

■ Age ■ Sex ■ Type of drowning event ■ Activity ■ Water body

Drowning deaths in community settings are captured: YES
Persons missing at sea are assumed to have died: NO
Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: -

DROWNING DEATHS BY AGE GROUP (YEARS)



* GHE data

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES SRI LANKA HAVE A NATIONAL WATER SAFETY STRATEGY? YES, overall national strategy/policy for injury that includes drowning

Are measurable targets to reduce drowning included? NO
If yes, please specify:

Do these strategies align with relevant SDGs? YES

Are plans underway, or is there interest, to develop a national water strategy? YES

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	YES	9
Mandated licensing of watercraft	YES	9
Mandated periodic safety inspections of watercraft	YES	8
Mandated licencing of the operator	YES	10
Individuals responsible for overall safety of watercraft	Owner	
Law against alcohol consumption and boating	NO	-
If yes, specify BAC limit:		
Law against drug use and boating	NO	-
Restrictions on watercraft passenger capacity	YES	8
Restrictions on watercraft load capacity	YES	9
Mandated provision of lifejackets onboard watercraft	NO	8
Specific standard of lifejacket required	1570/32. A 9th October- 2008	
Specific number of lifejackets required	YES	8

Watercraft often exempt from national maritime legislation:

CHILD SAFETY

Fencing to exclude children from swimming pools	NO	-
Swimming lessons in school curricula	NO	-
Structured adult supervision of preschool children	NO	-
Prosecution of neglect against children	YES	5

WATER SAFETY COMPETENCIES

Required competencies for swimming instructors	NO	-
Required competencies for life guards	NO	-

DISASTER RISK REDUCTION

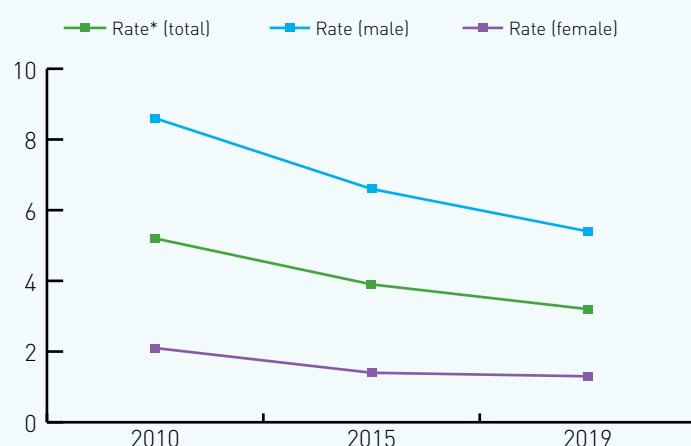
Private communication channels broadcast disaster warnings	YES	5
--	-----	---

DROWNING DATA

One agency maintains all vital registry statistics	YES	9
--	-----	---

- No response or not applicable

RATE OF DROWNING DEATHS^a



* rate = age standardized death rate

MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES THAILAND HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION?	YES
SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:	

Ministry of Health | Ministry of Education | Police | Disaster Risk Reduction | Maritime Safety | Coastguard/Military | Non-governmental organizations | Ministry of Interior | Ministry of Tourism and Sports | National Institute for Emergency Medicine

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	●	LOW	YES
Swim skills training	●	MED	YES
Child care	●	HIGH	YES
Public awareness on drowning	●	MED	YES
Manage flood risks	●	MED	YES
Disaster warning systems	●	HIGH	YES
Public awareness on alcohol and swimming/boating	●	HIGH	YES
Rescue and resuscitation	●	HIGH	YES
Lifeguards	●	LOW	YES
Search and rescue	●	HIGH	YES
Maritime safety	●	HIGH	YES
Media	●	HIGH	YES

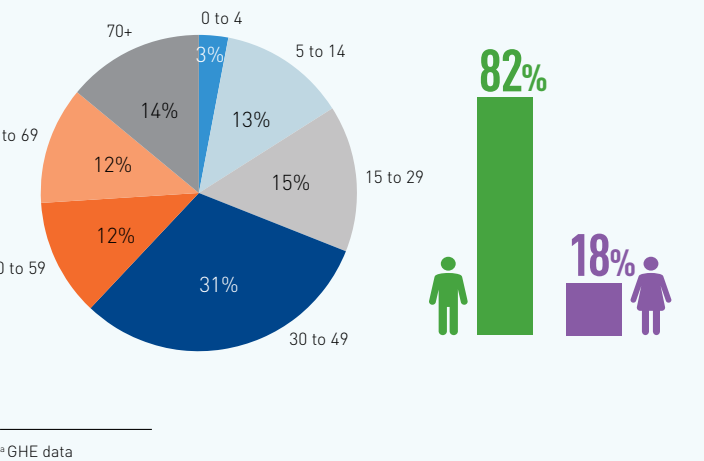
SOURCES OF DROWNING DATA

SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Death certificates	●	■ ■ ■ ■	N/A	-
Verbal autopsy	-	-	N/A	-
Hospital admission data	-	-	●	■ ■ ■ ■
Hospital emergency department data	-	-	●	■ ■ ■ ■
Police	-	-	-	-
Transport sector	-	-	-	-
Education sector	-	-	-	-
Maritime safety	●	■	-	-
Coast Guard	-	-	-	-
Tourism sector	-	-	-	-
Media	●	■ ■ ■ ■ ■ ■ ■ ■	●	■ ■ ■ ■ ■ ■ ■ ■
Sentinel and event based Injury surveillance system	●	■ ■ ■ ■ ■ ■ ■ ■	●	■ ■ ■ ■ ■ ■ ■ ■

■ Age ■ Sex ■ Type of drowning event ■ Activity ■ Water body

Drowning deaths in community settings are captured:	YES
Persons missing at sea are assumed to have died:	NO
Persons missing at sea are assumed to have drowned:	NO
PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL:	10.86%

DROWNING DEATHS BY AGE GROUP (YEARS)



STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES THAILAND HAVE A NATIONAL WATER SAFETY STRATEGY?	YES, overall national strategy/policy and ministry-specific for injury that includes drowning
--	---

Are measurable targets to reduce drowning included?	YES
If yes, please specify: Mortality rate from drowning among children age<15 years is <2.5 Mortality rate from drowning in all age group decrease by at least 50 percent	
Do these strategies align with relevant SDGs?	YES
Are plans underway, or is there interest, to develop a national water strategy?	-

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	YES	8
Mandated licensing of watercraft	YES	8
Mandated periodic safety inspections of watercraft	YES	8
Mandated licencing of the operator	YES	8
Individuals responsible for overall safety of watercraft	Owner/Operator/Crew	
Law against alcohol consumption and boating	YES	8
If yes, specify BAC limit:		
Law against drug use and boating	YES	8
Restrictions on watercraft passenger capacity	YES	7
Restrictions on watercraft load capacity	YES	8
Mandated provision of lifejackets onboard watercraft	NO	8
Specific standard of lifejacket required	EN ISO 12402 and IMO	
Specific number of lifejackets required	YES	8
Watercraft often exempt from national maritime legislation:		

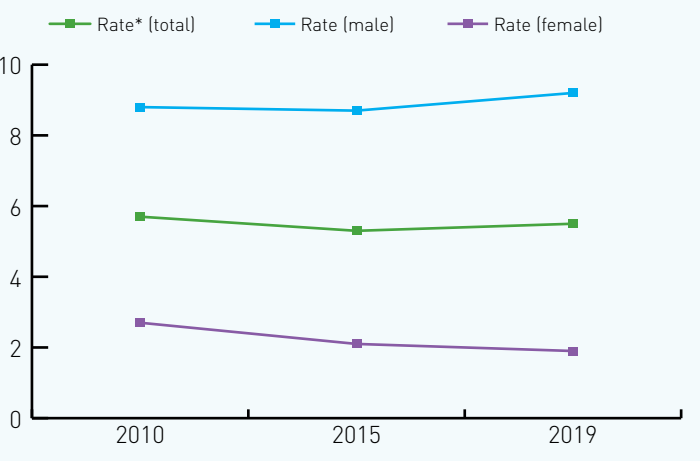
CHILD SAFETY		
Fencing to exclude children from swimming pools	YES	7
Swimming lessons in school curricula	NO	-
Structured adult supervision of preschool children	YES	8
Prosecution of neglect against children	YES	8

WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	NO	-
Required competencies for life guards	NO	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	YES	8

DROWNING DATA		
One agency maintains all vital registry statistics	YES	8
- No response or not applicable		

RATE OF DROWNING DEATHS^a



MANAGEMENT AND COORDINATION OF DROWNING PREVENTION

DOES TIMOR LESTE HAVE A NATIONAL COORDINATION MECHANISM FOR DROWNING PREVENTION? NO

SELECTED SECTORS AND AGENCIES INVOLVED IN DROWNING PREVENTION:

Ministry of Health | Ministry of Education | Police | Disaster Risk Reduction | Meteorology Department | Ministry of Transport | Maritime Safety | Coastguard/Military | Non-governmental organizations | Fire Brigade, Ministry of Interior | Ministry of Agriculture and Fisheries | Conflict Prevention, Ministry of Interior

INTERVENTIONS FOR DROWNING PREVENTION

	AVAILABLE	COVERAGE	EVALUATED
Physical barriers	-	-	-
Swim skills training	-	-	-
Child care	-	-	-
Public awareness on drowning	-	-	-
Manage flood risks	-	-	-
Disaster warning systems	-	-	-
Public awareness on alcohol and swimming/boating	-	-	-
Rescue and resuscitation	-	-	-
Lifeguards	-	-	-
Search and rescue	-	-	-
Maritime safety	-	-	-
Media	-	-	-

SOURCES OF DROWNING DATA

SOURCE OF DATA	TYPE OF DROWNING CAPTURED			
	FATAL	INFORMATION COLLECTED*	NON-FATAL	INFORMATION COLLECTED*
Death certificates	-	-	N/A	-
Verbal autopsy	-	-	N/A	-
Hospital admission data	-	-	●	■ ■ ■
Hospital emergency department data	-	-	●	■ ■ ■
Police	-	-	-	-
Transport sector	-	-	-	-
Education sector	-	-	-	-
Maritime safety	●	■ ■ ■	-	-
Coast Guard	-	-	-	-
Tourism sector	-	-	-	-
Media	-	-	-	-
Fire Brigade	●	■ ■ ■	-	-

■ Age ■ Sex ■ Type of drowning event ■ Activity ■ Water body

Drowning deaths in community settings are captured: YES

Persons missing at sea are assumed to have died: NO

Persons missing at sea are assumed to have drowned: NO

PROPORTION OF DROWNING DEATHS ASSOCIATED WITH ALCOHOL: -

STRATEGY AND TARGETS FOR DROWNING PREVENTION

DOES TIMOR LESTE HAVE A NATIONAL WATER SAFETY STRATEGY? YES

Are measurable targets to reduce drowning included? NO

If yes, please specify:

Do these strategies align with relevant SDGs? NO

Are plans underway, or is there interest, to develop a national water strategy? NO

LEGISLATION AND REGULATION FOR DROWNING PREVENTION

MARITIME SAFETY	ENFORCEMENT	
	LIMITED	MAXIMUM
Mandated registration of watercraft	-	-
Mandated licensing of watercraft	-	-
Mandated periodic safety inspections of watercraft	-	-
Mandated licencing of the operator	-	-
Individuals responsible for overall safety of watercraft	-	-
Law against alcohol consumption and boating	-	-
If yes, specify BAC limit:	-	-
Law against drug use and boating	-	-
Restrictions on watercraft passenger capacity	-	-
Restrictions on watercraft load capacity	-	-
Mandated provision of lifejackets onboard watercraft	-	-
Specific standard of lifejacket required	-	-
Specific number of lifejackets required	-	-

Watercraft often exempt from national maritime legislation:

CHILD SAFETY		
Fencing to exclude children from swimming pools	-	-
Swimming lessons in school curricula	-	-
Structured adult supervision of preschool children	-	-
Prosecution of neglect against children	-	-

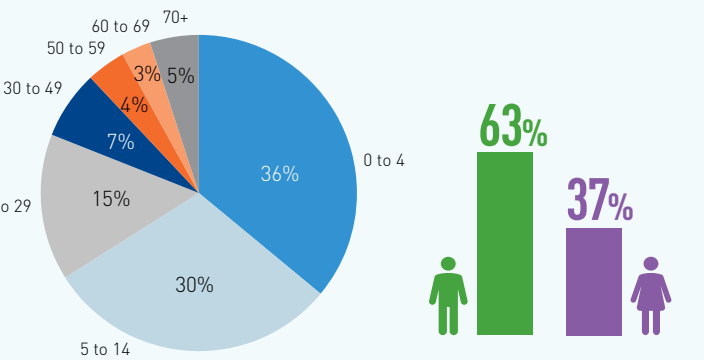
WATER SAFETY COMPETENCIES		
Required competencies for swimming instructors	-	-
Required competencies for life guards	-	-

DISASTER RISK REDUCTION		
Private communication channels broadcast disaster warnings	-	-

DROWNING DATA		
One agency maintains all vital registry statistics	-	-

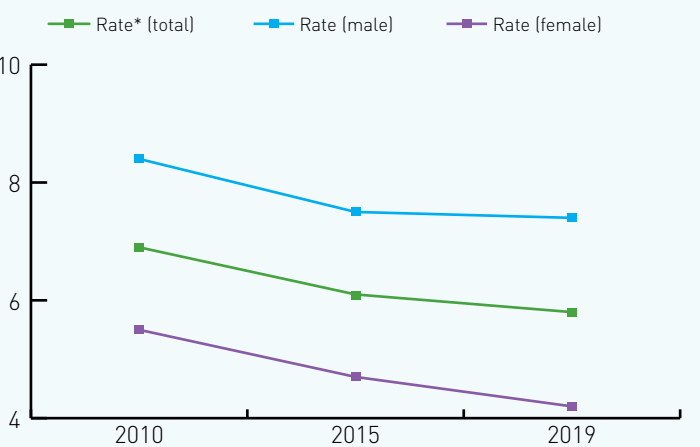
- No response or not applicable

DROWNING DEATHS BY AGE GROUP (YEARS)



^aGHE data

RATE OF DROWNING DEATHS^a



^a rate = age standardized death rate

Annex 1. List of National Data Coordinators

Country	National Data Coordinator	Sector	Position
Bangladesh	Rajib Al-amin	Ministry of Health	Deputy Injury Prevention, Programme Manager
Bhutan	Sonam Wangdi	HMIS Unit, Policy and Planning Division, Ministry of Health	Senior Planning Officer
India	Tanu Jain	Ministry of Health	Assistant Director General
Indonesia	dr. Dyah Erti Mustikawati	Occupational Health and Surveillance, Ministry of Health	Deputy Director
Maldives	Mariyam Seeza	Health Protection Agency, Ministry of Health	Public Health Programme Manager
Myanmar	Htoo Lwin	Red Cross Society	Program Manager
Nepal	Mukti Nath Khanal	Ministry of Health	Under Secretary
Sri Lanka	Samitha Sirithunge	Non-Communicable Disease Unit - Ministry of Health	Consultant Community Physician
Thailand	Suchada Gerdmongkolkarn	Bureau of Non-Communicable Diseases, Department of Disease Control, Ministry of Public Health	Public Health Technical Officer, Senior Professional Level
Timor-Leste	Helder Juvinal Neto da Silva	Non-Communicable Disease Unit - Ministry of Health	Head of Department
	Frederico Bosco Alves Dos Santos	Non-Communicable Disease Unit - Ministry of Health	Head of NCD Department

Annex 2. List of Focal persons, WHO country offices

Country	WHO focal point
Bangladesh	Hasina Momotaz
Bhutan	Kencho Wangdi
India	Gaurav Gupta
Indonesia	Farrukh Qureshi
Maldives	Fathimath Hudha
Myanmar	Aye Moe Moe Lwin
Nepal	Khurshid Alam Hyder Kedar Marahatta
Sri Lanka	Dona Mallawaarachchi
Thailand	Rattanaorn Tangthanaseth
Timor-Leste	Jermias Da Cruz Leoneto Soares Pinto

REFERENCES

1. Potentials of data linkages from civil registration and vital statistics and other systems in advancing the Sustainable Development Goals: the case of road safety; Fifth Conference of African Ministers Responsible for Civil Registration; Lusaka, Zambia; 14–18 October 2019
2. Global Health Estimates 2019 (GHE); World Health Organization; available at: <https://www.who.int/data/global-health-estimates>
3. Global Report on Drowning; World Health Organization; available at: https://www.who.int/violence_injury_prevention/publications/drowning_global_report/Final_report_full_web.pdf
4. Country Classifications by Income Level matrix 2020–2021; World Bank; available at: <https://datacatalog.worldbank.org/>
5. Preventing drowning: an implementation guide; World Health Organization; available at: <https://www.who.int/publications/i/item/preventing-drowning-an-implementation-guide>
6. Context of water transport related drownings in Bangladesh: a qualitative study ; Jagnoor et al. ; BMC Public Health. 19.1 (2019): 1–10.
7. UN Water. Water and Disasters; available at: <https://www.unwater.org/water-facts/disasters/>
8. Drowning factsheet2020; World Health Organization; available at: <https://www.who.int/news-room/fact-sheets/detail/drowning>
9. International Life Saving Federation. Drowning Facts and Figures. <https://www.ilsf.org/drowning-facts-and-figures/>
10. Unintentional drowning mortality, by age and body of water: an analysis of 60 countries; Lin et al; Injury Prevention. 2015;21(e1), pp.e43–e50.
11. Floods; World Health Organization; available at: https://www.who.int/health-topics/floods#tab=tab_1
12. Drowning- Key Facts 2021; World Health Organization; available at: <https://www.who.int/news-room/fact-sheets/detail/drowning#:~:text=Gender,overall%20mortality%20rate%20of%20females.&text=Studies%20suggest%20that%20the%20higher,before%20swimming%20alone%20and%20boating>
13. Merit maker: child drowning prevention program in Thailand; Som Ekchaloermkiat, Suchada Gerdmongkolgan; available at: https://injuryprevention.bmj.com/content/24/Suppl_2/A150.2
14. UN Resolution on Global Drowning Prevention (A/RES/75/273) ; <https://undocs.org/en/A/RES/75/273>





