



กรมควบคุมโรค
Department of Disease Control

Drowning Prevention in Thailand



Division of Injury Prevention,



Department of Disease Control,
Ministry of Public Health, Thailand



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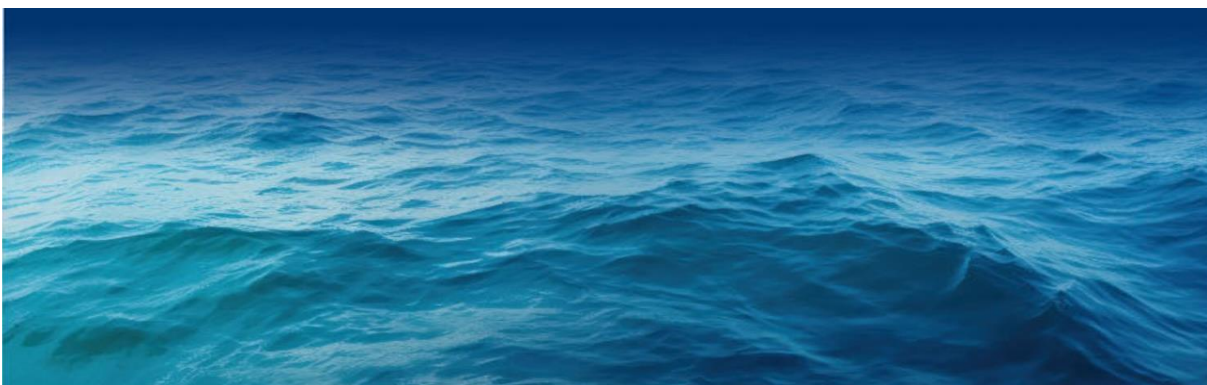
Foreword

Over the past 10 years (2013-2022), Thailand has seen an average of 3,634 drowning-related deaths annually. Among these, around 700 were children under the age of 15. Nearly two decades ago, Thailand had one of the highest rates of child drowning, with as many as 1,500 children drowning each year. However, through the concerted efforts of the Department of Disease Control and its network of partners, child drowning fatalities have decreased by an impressive 57%.

Drowning is a complex issue caused by a multitude of factors, making it impossible to address with a single solution. Thus, the Department of Disease Control and its partners have implemented various strategies, both at the policy level to drive national action, and at the community level in order to empowering local communities to independently prevent drowning without relying solely on government resources. One key strategy is the MERIT MAKER initiative, which fosters a multi-disciplinary approach and utilises local resources to combat drowning within communities.

Looking forward, the focus will remain on the MERIT MAKER strategy to strengthen community resilience. Efforts will also continue at the policy level, with emphasis on the 20-year National Strategic Plan and the implementation of the United Nations resolution on drowning prevention. These efforts will be driven through the subcommittee under the National Safety Council of Thailand, chaired by the Deputy Prime Minister.

October 2024



Section 1

Introduction

Globally. In 2021, an estimated 300,250 people died from drowning. Over 50% of drowning deaths occur in South-East Asia Region, the highest drowning rates are among under 5 years, followed by children 5-14 years.^{1, 2}

In the last decade (2013-2022), Thailand has seen a total of 36,342 drowning-related deaths. Among these, 6,998 were children under the age of 15. The age group with the highest number of drowning fatalities was those aged 45-59 years, followed by those over 60, 30-44, 0-14, and 15-29 years, respectively (Figure 1). Among children aged 0-14, two-year-old accounted for the highest number of drowning deaths (Figure 2).

Drowning is the second leading cause of death among children under 15 years old.³ Over the past 10 years (2013-2022), 6,998 Thai children have died from drowning, averaging 700 deaths per year or approximately 2 per day. The number of child-drowning deaths had been steadily declining until the COVID-19 pandemic during 2020–2022, when an upward trend was observed.

Prior to 2006, the situation was even more alarming, with an average of 1,500 children drowning annually. Drowning was the leading cause of death in children, surpassing deaths from both communicable and non-communicable diseases.⁴ When the Department of Disease Control, Ministry of Public Health and its network members began implementing various drowning prevention measures, drowning-related deaths in children under 15 decreased by 57% (As of 2022, this number has decreased to 666 deaths.) (Figure 3).⁵

Drowning deaths among children under 15 years is a leading cause of disability-adjusted life years (DALYs), ranked seventh for boys at 17,000 and ninth for girls at 15,000.⁶ The case-fatality rate due to drowning is 81.8%; 38.9% occurred among under-15-year-olds.

The highest mortality rate is in children under 5 age groups, followed by the 5-9 and 10-14 age groups, with rates per 100,000 children population of 7.1, 7.0, and 4.6, respectively (Figure 3).⁵

Drowning deaths in boys were about 2.3 times higher than in girls (Figure 4). March and April had the highest number of child drownings at 22.1%, coinciding with the summer school break (Figure 5). The highest number of drowning deaths occurred on Saturdays and Sundays, accounting for 38%. The Northeast had the highest mortality rate at 41.2 per 100,000 children, followed by the Centre, South and North, with rates of 29.0, 16.4, and 13.4 per 100,000, respectively (Figure 6).⁵ The water bodies or sources with highest drownings were natural water bodies (58.6%), followed by bathtubs (12.0%) and swimming pools (10.5%).⁶⁻⁸

Figure 1:
Number of deaths from drowning in Thailand
by age group, 2022

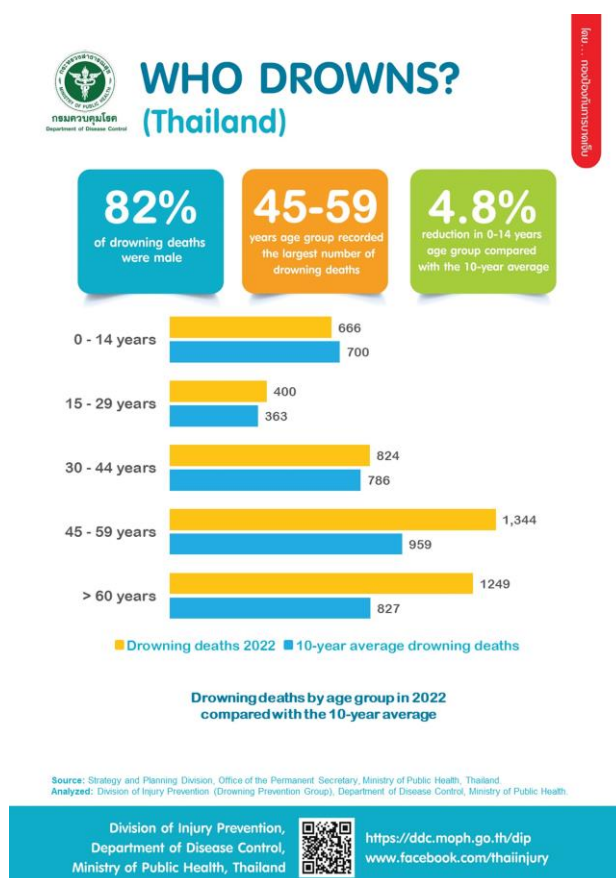


Figure 2:
Number of children under 15 years old from
drowning in Thailand by age, 2022

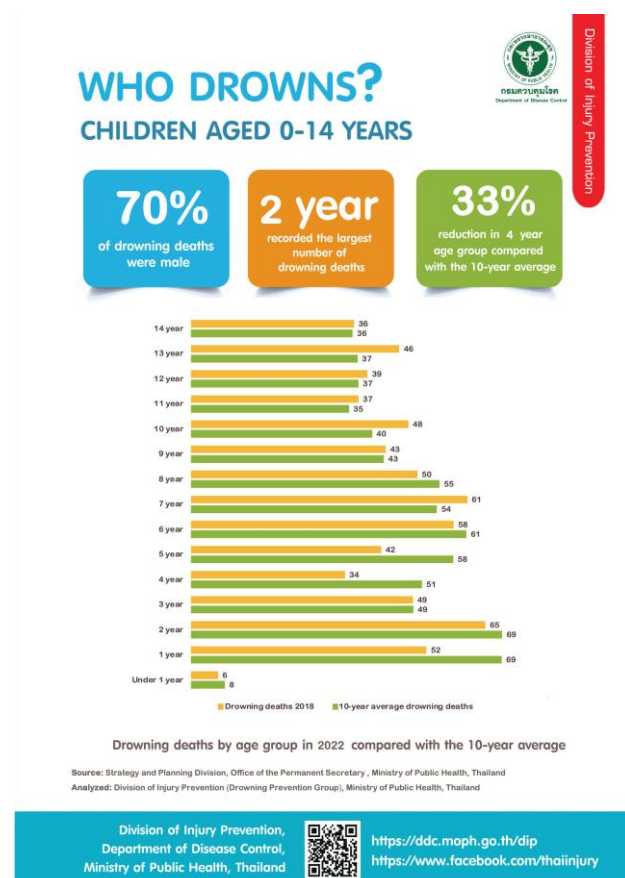


Figure 3:
Mortality rate per 100,000 children under 15 years old from child drowning in Thailand by age group, 2013-2022

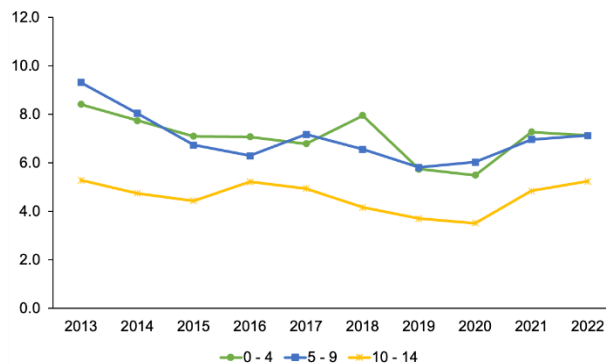


Figure 4:
Mortality rate per 100,000 children under 15 years old from child drowning in Thailand by age sex, 2013-2022

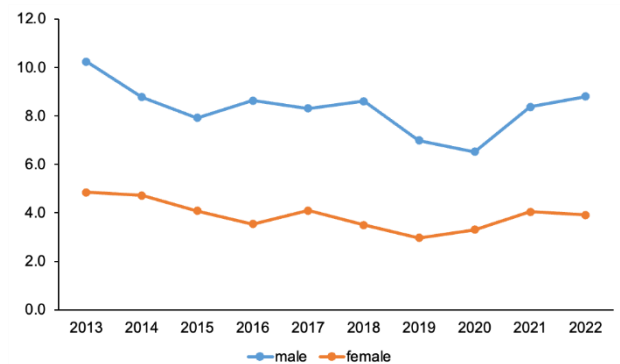


Figure 5:
Number of drowning deaths in children under 15 years old in Thailand by month (10-year average: 2013-2022)

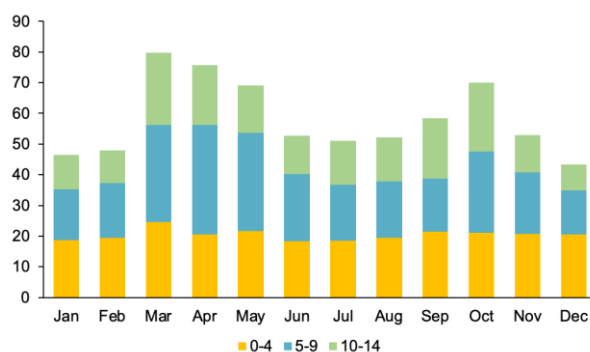
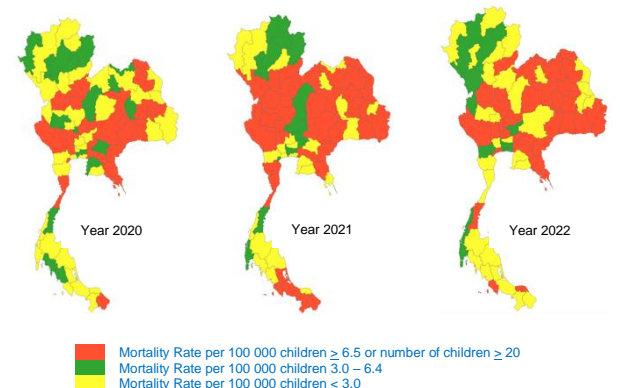


Figure 6:
Deaths due to drowning in children under 15 years old in Thailand by risky areas, 2020-2022



Source: Data from death certificates, Strategy and Planning Division, Office of the Permanent Secretary, Ministry of Public Health.
Analyzed: Drowning Prevention Group, Division of Injury Prevention, Department of Disease Control, Ministry of Public Health.

Children of different age groups have different risk factors. Drowning in under-5 children tends to occur due to negligence of parents or guardians, whereas in older children it occurs while they are playing in the water. Several of them tend to drown in the same incident as they lack the knowledge of water safety and not knowing about water survival and correct rescue procedures. So they usually jump into the water to help a drowning person.

An evaluation conducted in 2013 by the Bureau of Non-Communicable Diseases (Division of Injury Prevention), Department of Disease Control, found that 23.7% of Thai children (aged 5–14) were able to swim and 4.4% could swim for survival (knowing about water safety, swim/survival skills and water rescue skills).⁹ The children who had taken the Survival Swimming Course would be more knowledgeable about water safety, swimming/surviving and water rescue skills than non-course-takers by 7.4-fold, 20.7-fold and 2.7-fold, respectively.¹⁰ In 2019, the Division of Injury Prevention conducted a survey, assessing the swimming ability of children. It was found that only 28.4% of children could swim, and only 9.4% could swim for survival.¹¹

Another survey by the Bureau of Non-Communicable Diseases (Division of Injury Prevention) in 2015 on lifejacket use showed that Thailand had a rather low rate of lifejacket use. Only 6.0% of child respondents could demonstrate correct use while it was only 4.2% for all age groups.¹² Further, in the year 2000, an online survey was conducted to assess lifejacket usage among individuals aged 15 and above. The results revealed that 92.7% of respondents reported using lifejackets while traveling by boat or participating in water-related activities. However, it is important to note that more than half of the respondents held a bachelor's degree or higher, and many were employed as government officials or public servants, indicating that education and professional background played a role in safety awareness and practices.¹³

Drowning can be attributable to two major groups of factors: (1) personal factors or vulnerability of the child such as physical condition, development, behaviours and chronic illnesses and (2) environmental (physical and social) factors. The physical environments include not having a fence around the water source to prevent children from entering the water, and designating a suitable playpen (water-playing area) for children. The social environments that affect drowning include family's economic status, children/caretakers or community not being aware of child-drowning risk, nearby helpers not knowing of water rescue or using a wrong first-aid procedure, and a medical facility near the community not being ready to assist during emergency.¹⁴

Previously, many local agencies undertook only one drowning prevention measure, i.e. survival swimming training for children, especially for grown-up children. So young children missed the chance to be protected; and no actions were taken to tackle environmental factors. Actually, drowning prevention measures should cover risk factors related to both personal and environmental aspects, not only one measure as such one action could not properly deal with the problem. Thus, in fiscal year 2015, MOPH's Department of Disease Control established a "MERIT MAKER" strategy to push for the implementation of all measures, in collaboration with all relevant agencies and communities, using local resources, rather than always relying on government support ¹⁵ (further detailed in Section 3).







In 2017, the World Health Organization (WHO) launched a guidebook "Preventing drowning: an implementation guide" that covers 6 measures and 4 strategies on drowning prevention for interested agencies to review and implement.¹⁶ In comparison with Thailand's "MERIT MAKER" approach, it has been found that the Thai principles are in line with those of the WHO guidelines as shown in the figure 7.








For drowning prevention purposes in Thailand, in 2018, MOPH's Department of Disease Control has prepared and published a manual in the Thai language titled, "Preventing drowning: an implementation guide" with funding from WHO for the English-Thai translation.¹⁷

As mentioned earlier, the Department of Disease Control, under the Ministry of Public Health (MOPH), along with its partner organisations, has employed various measures to prevent drowning. Beyond the MERIT MAKER strategy, Thailand has continuously pushed for and supported drowning prevention efforts at both the policy and local levels (further detailed in Section 2). By 2022, the country successfully reduced drowning-related fatalities among children by 57% compared to 2006.

However, despite this progress, Thailand is still working to meet the target outlined in its 20-year National Strategic Plan which aims to reduce drowning-related deaths among children under 15 to fewer than 2.5 per 100,000 children, or no more than 290 deaths annually, by 2037. As of now, the number of drowning fatalities remains above this target, highlighting the ongoing challenge.

Figure 7:
MERIT MAKER and WHO Recommendations

6 key Drowning Prevention Interventions			
WHO	MERIT MAKER		
Provide safe places away from water for pre-school children		Kindergarten/Day care	
Install barriers controlling access to water		Environment Education	
Teach school-age children (aged over 6 years) swimming and water safety skills		Training (Survival Swimming)	
WHO	MERIT MAKER		
Build resilience and manage flood risks and other hazards locally and nationally		Advocacy/Policy Drowning Prevention Plan	
Train bystanders in safe rescue and resuscitation		Resuscitation	
Set and enforce safe boating, shipping and ferry regulations		Advocacy/Policy Drowning Prevention Plan	

Strategies to Support Drowning Prevention Interventions			
WHO	MERIT MAKER		
Strengthen public awareness of drowning through strategic communications		Education Media	
Promote multisectoral collaboration		Management	
WHO	MERIT MAKER		
Develop a national water safety plan	 	 	Advocacy/Policy Drowning Prevention Plan
Advance drowning prevention through data collection and well-designed studies		Information Research/Evaluation	

Section 2

Important Measures for Child Drowning Prevention in Thailand

Drowning as a Major Global and National Public Health Issue

Drowning has long been recognised as a critical public health issue, both globally and in Thailand. Nineteen years ago, drowning was identified as the leading cause of death among Thai children, surpassing all other causes. Each year, approximately 1,500 children under the age of 15 succumb to drowning, accounting for 35% of all drowning incidents across all age groups. The gravity of this issue has demanded continuous attention and action from health authorities and various organisations.

Early Responses to the Drowning Crisis

In response to the alarming drowning statistics, the Department of Disease Control in Thailand began collaborating with other agencies in 2006 to develop and implement drowning prevention strategies. The primary aim was to address the high fatality rate among children. Several key strategies and measures were introduced to tackle this issue, such as:

- [Risk Communication for Stakeholders](#): Engaging administrative leaders, network partners, and the media to raise awareness of the risks associated with drowning.
- [Public Policy Forums on Drowning Prevention](#): Organising forums to discuss drowning prevention strategies and integrate them into national public health policies.
- [Establishment of the National Committee for Child Drowning Prevention](#): In 2007, a national committee was formed under the leadership of the Deputy Minister of Public Health, with representation from relevant organisations to coordinate and drive national efforts.
- [National Drowning Prevention Day](#): In 2008, the first Saturday of March was designated as Thailand's National Child Drowning Prevention Day. Annual campaigns have since been held to raise awareness. In 2021, the date was shifted to July 25 to align with the United Nations' resolution on drowning prevention.

Major Initiatives in Drowning Prevention

To further intensify the efforts, a range of initiatives and programs were launched:

- [Drowning Vaccine Program \(2009\)](#): A project designed to protect children from drowning by equipping them with essential water safety knowledge and skills (Survival Swimming and Rescue).
- [Life-Saving Program](#): A nationwide initiative focused on teaching children how to swim, ensuring that they have the necessary skills to prevent drowning.
- [Parental Education Measures](#): Programmes were developed to educate parents and caregivers about drowning prevention, especially during child development check-ups or vaccinations, to reinforce safety awareness.
- [Drowning Surveillance and Investigation](#): A surveillance system was put in place to monitor and investigate drowning incidents, providing critical data for further prevention efforts.
- [Legislation on Child Bathtub Safety](#): A law was introduced requiring safety labels on children's bathtubs to warn caregivers of drowning risks.
- [Life Jacket](#): The development and enforcement of life jacket standards were crucial to ensuring the safety of children and adults in water-related activities.
- [Lifeguard Standards](#): Specific guidelines were created to standardise the role of lifeguards in pools, inland waterways, and beaches, enhancing overall water safety infrastructure.

Technological and Educational Advancements

Innovations in technology and education have played a significant role in improving public awareness and knowledge about drowning prevention. These include:

- [Development of e-learning courses](#): Online platforms were created to educate children, parents, and community leaders about water safety.
- [Virtual Reality \(VR\) and Augmented Reality \(AR\)](#): Interactive digital tools were employed to simulate drowning risks and teach preventive measures in engaging and immersive ways.
- [Online Games and Drowning Reporting Systems](#): Educational games and a comprehensive drowning reporting system (Drowning Report) were developed to help citizens and officials track incidents and preventive actions.

Policy and Strategy Integration

Drowning prevention has also been incorporated into Thailand's broader public health strategies:

- [Inclusion in the 20-Year National Strategic Plan](#)

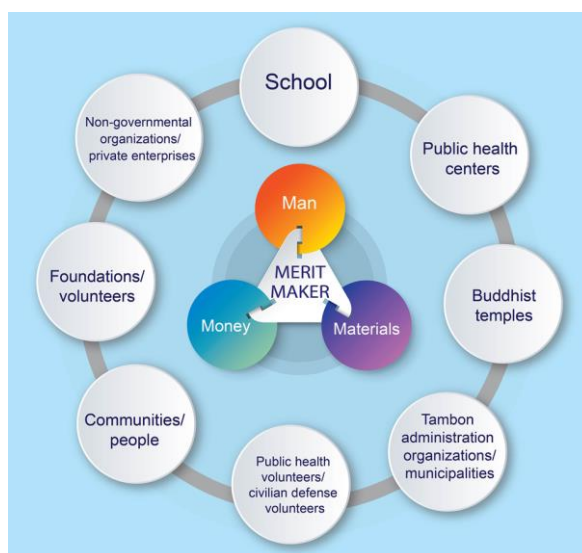
Drowning prevention became one of the key indicators in the long-term public health strategy, ensuring sustained focus and commitment from various sectors.

- [United Nations Resolution](#)

Thailand's commitment to drowning prevention was solidified by its support for the United Nations' resolution on the issue. This led to the creation of a Subcommittee to drive policy and program implementation in alignment with international standards.

The MERIT MAKER Strategy

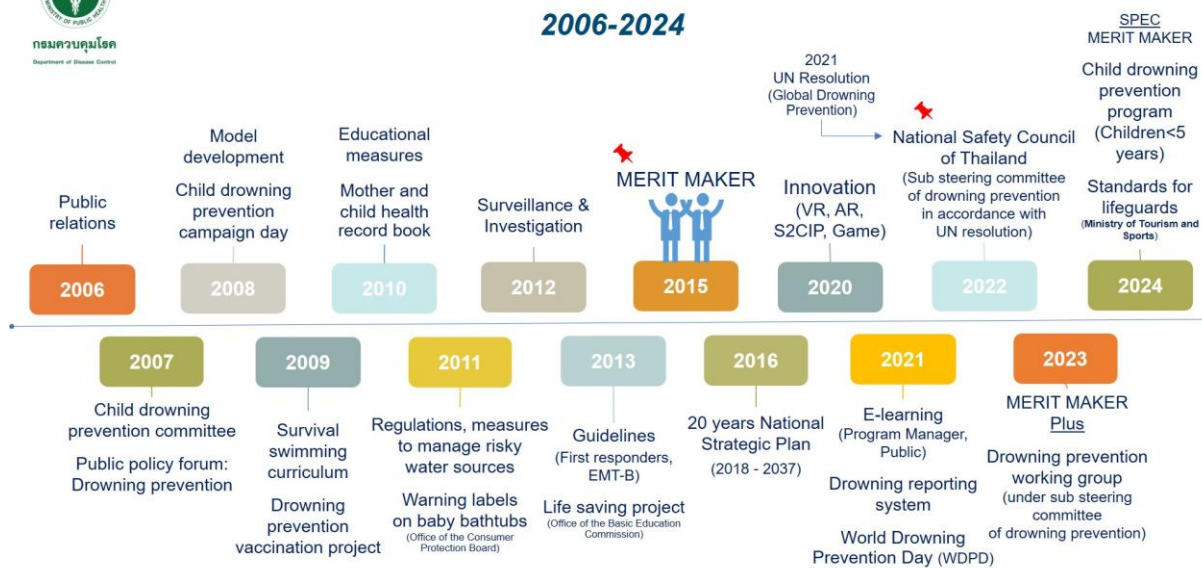
One of the most significant and impactful strategies introduced was the MERIT MAKER initiative. This approach mobilised community-level efforts, encouraging local organisations, volunteers, and stakeholders to take active roles in drowning prevention. Through the MERIT MAKER model, the community itself became a driving force in reducing drowning incidents, supported by national policies and guidelines.



The synergy between local efforts and national strategies has proven essential to the progress made over the past two decades. By integrating these measures, Thailand has made significant strides in drowning prevention, particularly among children. However, continued efforts and innovations are necessary to further reduce the toll of drowning and achieve the goals outlined in the national strategic plan.

Important Measures for Child Drowning Prevention in Thailand,

2006-2024



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Child Drowning Prevention Campaign Day/World Drowning Prevention Day



e-learning

<https://e-learningdrowning.com/>



Drowning Report (online)

<http://dip.ddc.moph.go.th/satdrowning/#/login>



Game (online)

<https://mosu.fun/waterhelp/>

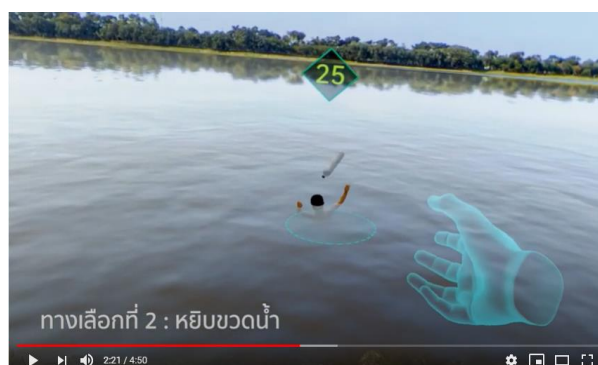
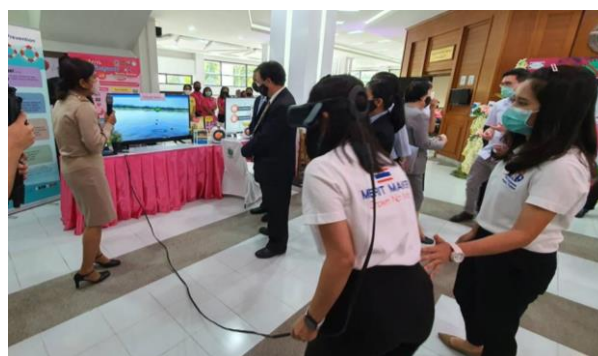


Interactive Multimedia (online)

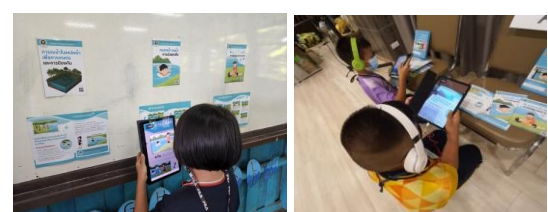
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Virtual Reality



Augmented Reality

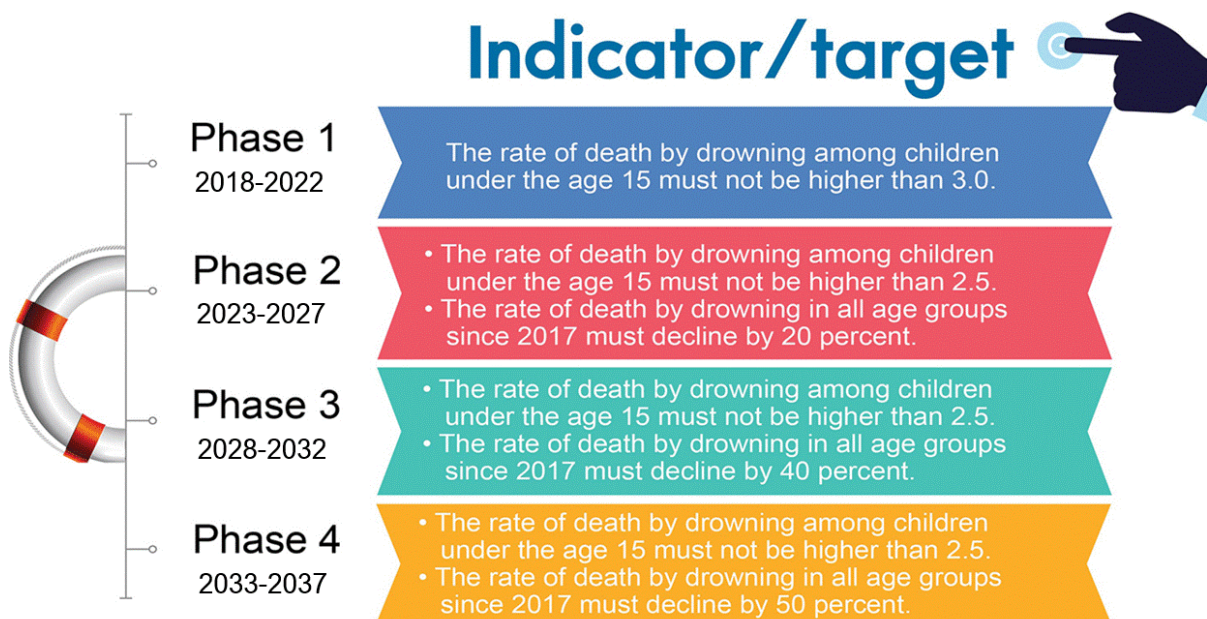


The 20-Year National Health Strategy and Indicators

The initial phase of the Department of Disease Control's operations began with communication through various media channels, in conjunction with significant events and situations that captured public interest, such as the Songkran Festival, Loy Krathong Festival, and flood situations. In the subsequent phase, efforts were made to raise awareness among relevant agencies about the issue of child drowning by organising public policy forums. This led to policy advocacy, including the establishment of a Child Drowning Prevention Committee to drive network operations for drowning prevention. Ultimately, these efforts successfully resulted in drowning being included as one of the indicators in the 20-Year National Health Strategy (Figure 8).

Figure 8:

Target to Reduce Drowning-Related Deaths Under the 20-Year National Strategic Plan for Public Health



Subcommittee for Advancing Drowning Prevention Efforts According to United Nations Resolutions

Following the United Nations resolution on Global Drowning Prevention on April 28, 2021, the Department of Disease Control organised a meeting to inform relevant network agencies. The meeting collectively resolved to implement drowning prevention initiatives based on the UN resolution in 10 key areas, with monitoring facilitated through a committee mechanism.

As a result, a subcommittee was established to advance drowning prevention efforts in accordance with the UN resolution. This subcommittee operates under the National Safety Council of Thailand, chaired by the Deputy Prime Minister. Furthermore, the subcommittee has convened and has assigned various agencies to participate as primary and secondary agencies in implementing drowning prevention initiatives based on the recommendations of the UN resolution in the following 10 areas:

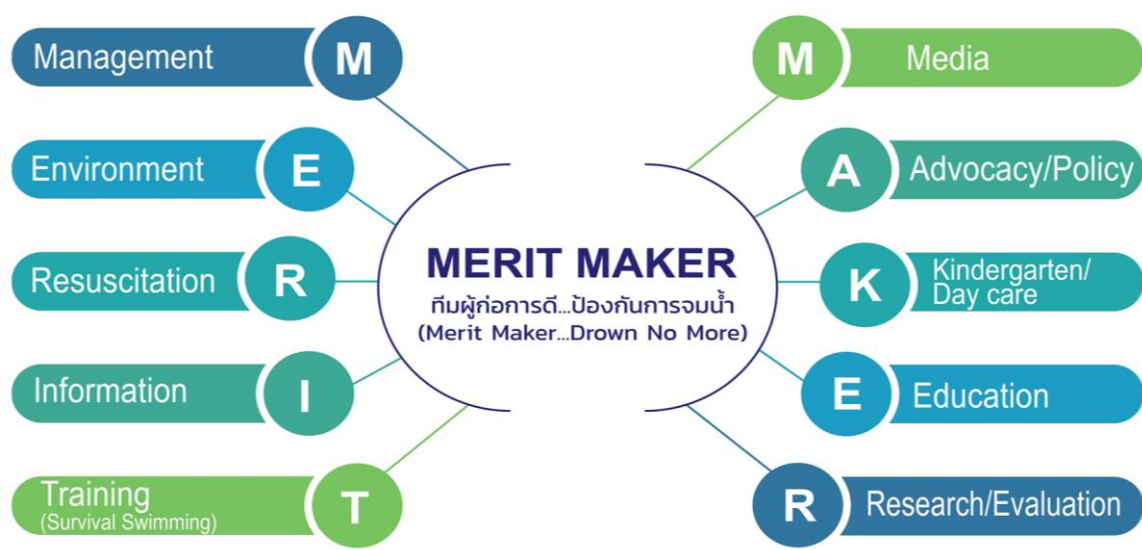
Issue	Primary Agency (Agencies)
Issue 1: Establishing a National Drowning Prevention Coordination Center	Department of Disaster Prevention and Mitigation (DDPM) Department of Disease Control (DDC)
Issue 2: Developing a National Water Safety Plan	Department of Disaster Prevention and Mitigation (DDPM)
Issue 3: Developing Drowning Prevention Projects in Line with WHO Recommendations 1) Care for preschool children. 2) Installing barriers to limit access to water sources. 3) Teaching survival swimming skills and water safety. 4) Assisting water accident victims and performing resuscitation. 5) Managing flood risk. 6) Establishing and enforcing regulations regarding navigation/water transport.	- Department of Local Administration (DLA) - Office of the Basic Education Commission (OBEC) - Office of the Private Education Commission (OPEC) - Thailand National Sports University - Department of Physical Education (DPE) - The National Institute for Emergency Medicine (NIEM) - Department of Disaster Prevention and Mitigation (DDPM) - Marine Department (MD)
Issue 4: Laws on Water Safety and Enforcement 1) Boats/water transportation 2) Standards for tourism guides 3) Lifeguards 4) Swimming instructors 5) Swimming pools 6) Water attractions	- Marine Department (MD) - Ministry of Tourism and Sports (MoTS) - Naval Medical Department (NMD) - The National Institute for Emergency Medicine (NIEM) - Sports Authority of Thailand (SAT) - Department of Health (DoH) - Department of Local Administration (DLA) - Department of Tourism (DoT)
Issue 5: National Drowning Data	- Department of Disaster Prevention and Mitigation (DDPM) - Department of Disease Control (DDC)
Issue 6: Promoting Public Awareness and Drowning Prevention Campaigns	- Department of Disease Control (DDC)
Issue 7: Integrating Drowning Prevention into Disaster Risk Reduction Projects	- Department of Disaster Prevention and Mitigation (DDPM)
Issue 8: Supporting International Cooperation	- Department of Disease Control (DDC)
Issue 9: Promoting Research and Development in Drowning Prevention	- Thailand Science Research and Innovation (TSRI)
Issue 10: Integrating Water Safety, Swimming Skills, and First Aid into School Curricula	- Office of the Basic Education Commission (OBEC)

Section 3

MERIT MAKER strategy

The “MERIT MAKER” or *Phu Ko-kahn-dee* strategy is intended for drowning prevention; it urges all local agencies to carry out all relevant measures with local resources in a multi-sectoral and continuous basis.¹⁸

The MERIT MAKER strategy has ten elements: policy, management, situation and data, risky water-body management, child development centre operation, knowledge dissemination, survival swimming training, cardiopulmonary resuscitation (CPR) training, public communications and research/evaluation.



Objectives

- 1) To stimulate the creation of a drowning prevention programme at local communities.
- 2) To encourage the continual operation of drowning prevention efforts.
- 3) To encourage the implementation of all measures for drowning prevention.
- 4) To ensure that drowning prevention activities are undertaken with multi-sectoral collaboration and local resources.

Definitions

- **MERIT MAKER** team means a team that implements various measures for drowning prevention
- **Certified MERIT MAKER team** means the team that has implemented various measures and met the specified criteria in 7-10 elements.
- **MERIT MAKER Diamond-Level Team**: A team that has consistently excelled in drowning prevention efforts, having achieved Gold-level recognition for at least three years within a five-year span.
- **Resource sharing in a locality** means any local actions related to the sharing of resources including manpower, money and materials for drowning prevention efforts.
- **Support for operations in other localities** means a MERIT MAKER team's provision of support to other localities or communities in their drowning prevention efforts at the district, provincial, regional and national levels, which are not in the team's own area.
- **Innovations for drowning prevention operations** means any new thing or action that has been devised or different from an old one, not duplication with other person's; it may be a procedure or equipment that is useful for drowning prevention.
- **Drowning Incident Investigation Report**: A detailed report on the investigation of drowning incidents—both fatal and non-fatal—occurring in a particular area. This report includes recommendations for preventing future incidents.
- **High-risk water body in community** means an agricultural water body, a dug well, a swamp, a marsh, a canal, a river, a reservoir, a swimming pool, etc. commonly deemed by the community as a risky location, including a water body within a household's compound, such as a water body into which humans can go down and play, a waterway for transport, a water source for aquatic activities (fishing, vegetable collection, or water sports).
- **Environmental management in a high-risk water body** means a high-risk water body that has (1) installed a fence and/or a warning signboard and (2) put in place water safety/rescue equipment such as a rescue wooden pole, plastic gallon-tanks with rope, and plastic water-bottles with rope. In case of a large water body, the supplies must be placed at several places, a certain distance apart depending on suitability and risks.
- **For children aged 0–2 years, using a child safety fence or a playpen** means the family or community having a safe fenced area a playpen for infants and children up to 2 years old.

- **Teaching children at a child development centre about risky water bodies** means teaching such children to know about the water bodies with high risks and focus on “Never Pass By; Never Pick Up; Never Bend Down” and shouting for help.
 - Never Pass By – teaching children not to walk near the water body, and not to follow any animal into the water.
 - Never Pick Up – teaching children not to get into the water body to collect a ball, a doll or any other toys.
 - Never Bend Down – teaching children not to stoop down to see anything in any water container or water body.
- **Environmental management within and outside the child development centre** means the centre (1) has made arrangements for all risky water bodies within or around the building and the toilets to ensure safety, for example, covering up all unused water bodies, pouring away the water from all unused containers, placing lids on all water containers (in such a way that children are unable to open them), putting up a fence around the water body or to prevent children from entering the water body, closing the door of the toilet every time after use and installing the bolt at a higher spot so that children will not unbolt it by themselves, taking away a water container from the toilet and changing to the flush-tank system for children (if feasible financially and mechanically) and (2) has a playpen for children in a fenced area to keep the children away from the water body or to reduce the risk of children easily accessing the water body.
- **Public education at health-care facilities, communities or schools** means disseminating the knowledge of drowning prevention in all relevant aspects, emphasizing health-care settings such as hospitals, subdistrict (tambon) health promoting hospitals (THPHs); in case of operational constraints, such activity can be carried out in the communities or schools.
- **Survival Swimming Curriculum** means a curriculum aimed at providing learners with the knowledge of water safety, swimming and survival, and water rescue skills.
- **Teaching the Survival Swimming Curriculum to have local resource persons** means the personnel or local residents aged 20 years or over have attended the course to become trainers in such a programme.
- **Teaching the Survival Swimming Curriculum for children and the people** means children aged 6–14 years and adults have attended the curriculum, covering both theoretical and practical aspects.

- **Practical training on CPR** means CPR practical training for the target group – local residents aged over 20 years.
- **Drowning Prevention Campaigns:** Activities organised to raise awareness or prevent drowning, either as independent events or as part of broader campaigns. These may also be integrated with other local awareness efforts.
- **Public communications** via various channels on a wider scale means organizing public education or communications on a wider scale for the general public, especially those in the target communities or areas, via television, radio, and newspaper, community public address systems, and mobile broadcast vehicles.
- **Research and Evaluation:** This refers to studies and evaluations conducted on the effectiveness of drowning prevention measures within a community. Such evaluations can cover the overall strategy or focus on specific projects or interventions.
- **Drowning Prevention in Local Plans:** Local government bodies that incorporate drowning prevention measures into their operational plans, including budgeting for both short- and long-term initiatives.
- **Local Legislation and Regulations:** Local authorities in areas implementing drowning prevention initiatives may establish laws, regulations, or guidelines specifically related to drowning prevention, ensuring these are officially enacted and enforced.

Characteristics of the team applying for certification as a MERIT MAKER team and conditions

1. Sending performance reports and asking for certification only on behalf of the team.
2. The implementation area must be the subdistrict (tambon) level or above.
3. The performance or achievements submitted for recognition:
 - must have been undertaken for 1 year;
 - must have been made by themselves or with their collaboration;
 - must not be repetitive with those submitted by other teams;
 - must not be repetitive, for each element, with those of other elements.
4. In case of two teams submitting repetitive achievements, the provincial public health office has the right to make final decision to which team the achievements will belong.

Elements of the MERIT MAKER strategy

The MERIT MAKER strategy includes 10 elements: policy, management, situation and data, risky water-body management, child development centre operations, knowledge dissemination, survival swimming training, cardiopulmonary resuscitation (CPR) training, public communications and research/evaluation. To be certified at the Gold and Silver levels, a MERIT MAKER team has to cover all 10 elements, while for the Bronze level, a MERIT MAKER team has to cover at least 7 elements.

M Management*

E Environment

R Resuscitation

I Information

T Training (Survival Swimming) **

M Media

A Advocacy/Policy*

K Kindergarten/Day-care center

E Education

R Research*

Note: * Not required for the Bronze level.

**The Survival Swimming Curriculum emphasizes the training approach for the learner is be able to have (1) knowledge about water safety; (2) swimming and survival skills; and (3) water rescue skills.

Levels of MERIT MAKER teams and elements implemented

- **Levels of certification:** 3 levels – Bronze, covering 7 elements, and Silver & Gold, covering 10 elements.
- **National-level contesting teams:** Silver, Gold and Diamond
 - MERIT MAKER teams that have been certified at the silver and gold levels from each province will be selected to take part in the national-level contest.
 - Teams that have been certified as Gold-Level for three consecutive years become eligible for Diamond-Level selection.



The MERIT MAKER Diamond-Level Team

The MERIT MAKER Diamond-Level Team represents a group that has demonstrated exceptional performance in drowning prevention efforts. To qualify as a Diamond-Level team, the group must have been recognised as a MERIT MAKER Gold-Level Team at the national level for at least three out of the previous five years. This status reflects their consistency in achieving and maintaining high standards in their efforts to prevent drowning incidents.

Achieving Diamond-Level status not only marks the team's excellence in preventing drowning but also serves as a model for other communities to follow. These teams demonstrate leadership, commitment, and innovation in public health, contributing significantly to national goals in reducing drowning incidents, especially among children and vulnerable populations.

Assessment method

- Check the data to verify that they are actually correct.
- Assess from the facts that really occur while the assessment is underway.
- Examine and interpret with no bias, and make decisions not based on personal opinions.
- Make evidence-based conclusions according to technical principles.

Roles of MERIT MAKER assessment teams

The teams include those at the provincial, regional and central levels.

- **The provincial assessment team** is a group of people appointed by the provincial authorities comprising representatives from the Provincial Public Health Office, the Education Service Area Office, local agencies and other relevant agencies numbering no fewer than 3 persons.
- **The regional assessment team** is a group of people appointed by the regional offices comprising representatives from the regional Office of Disease Prevention and Control, the Regional Education Service Office, and other relevant agencies numbering no fewer than 3 persons.
- **The central assessment team** is a group of people comprising representatives from the Department of Disease Control, government agencies, academic agencies/universities, private sector agencies and other relevant agencies.

Assessment steps

For Bronze-level “MERIT MAKER” team

The assessment team:

1. Reviews documents/evidence of MERIT MAKER teams as per the elements and indicators for Bronze-level certification.
2. Holds a meeting to seek opinions and makes suggestions for making decisions.
3. Makes conclusions on each of the elements and indicators, makes an overall summary, and makes suggestions for improvements for the contesting teams that do not meet the established criteria.

For Silver- and Gold-level “MERIT MAKER” teams and random assessments

The assessment team:

1. Reviews documents/evidence of MERIT MAKER teams according to the elements and indicators for the Silver- and Gold-level “MERIT MAKER” teams.
2. Reviews/assesses all elements and indicators by collecting empirical information from relevant evidence/documents, interviewing relevant persons, and conducts actual site surveys and quality testing.
3. Analyzes the data collected from documents or empirical evidence, interviews, actual site visits/surveys and quality testing.
4. Holds a meeting to express opinions and makes suggestions for making decisions.
5. Makes overall conclusions and makes suggestions of improvements.
6. Gives an opportunity to “MERIT MAKER” teams to ask questions and for all parties to give opinions and suggestions for further improvements.

Steps of contest consideration

For Silver- and Gold-level “MERIT MAKER” teams

The assessment team:

1. Reviews documents/evidence of MERIT MAKER teams according to the elements and indicators for each level of contest.
2. Teams that pass the document review are then required to present their results and achievements. This presentation demonstrates the impact and effectiveness of their drowning prevention efforts at the community level.

3. Reviews/assesses all elements and indicators by collecting empirical information from relevant evidence/documents, interviewing relevant persons, and conducting actual site surveys and quality testing.
4. Analyzes the data collected from documents or empirical evidence, interviews, actual site visits/surveys and quality testing according to the assigned elements and indicators.
5. Holds a meeting to express opinions and makes suggestions for making decisions.
6. Makes overall conclusions and makes suggestions of improvements.
7. Gives an opportunity to “MERIT MAKER” teams to ask questions and for all parties to give opinions and suggestions for further improvements.

For Diamond-level “MERIT MAKER” teams

The assessment team:

1. The first step involves a thorough review of the team's documentation and evidence against the criteria for Gold-Level MERIT MAKER teams, focusing on their performance in the year they are submitting for Diamond-Level consideration.
2. The second step assesses the team's evidence of achieving Gold-Level recognition for at least three of the past five years, ensuring they meet the consistent performance requirement.
3. Teams that pass the document review are then required to present their results and achievements. This presentation demonstrates the impact and effectiveness of their drowning prevention efforts at the community level.
4. Reviews/assesses all elements and indicators by collecting empirical information from relevant evidence/documents, interviewing relevant persons, and conducting actual site surveys and quality testing.
5. Analyzes the data collected from documents or empirical evidence, interviews, actual site visits/surveys and quality testing according to the assigned elements and indicators.
6. Holds a meeting to express opinions and makes suggestions for making decisions.
7. Makes overall conclusions and makes suggestions of improvements.
8. Gives an opportunity to “MERIT MAKER” teams to ask questions and for all parties to give opinions and suggestions for further improvements.

Steps for making conclusions

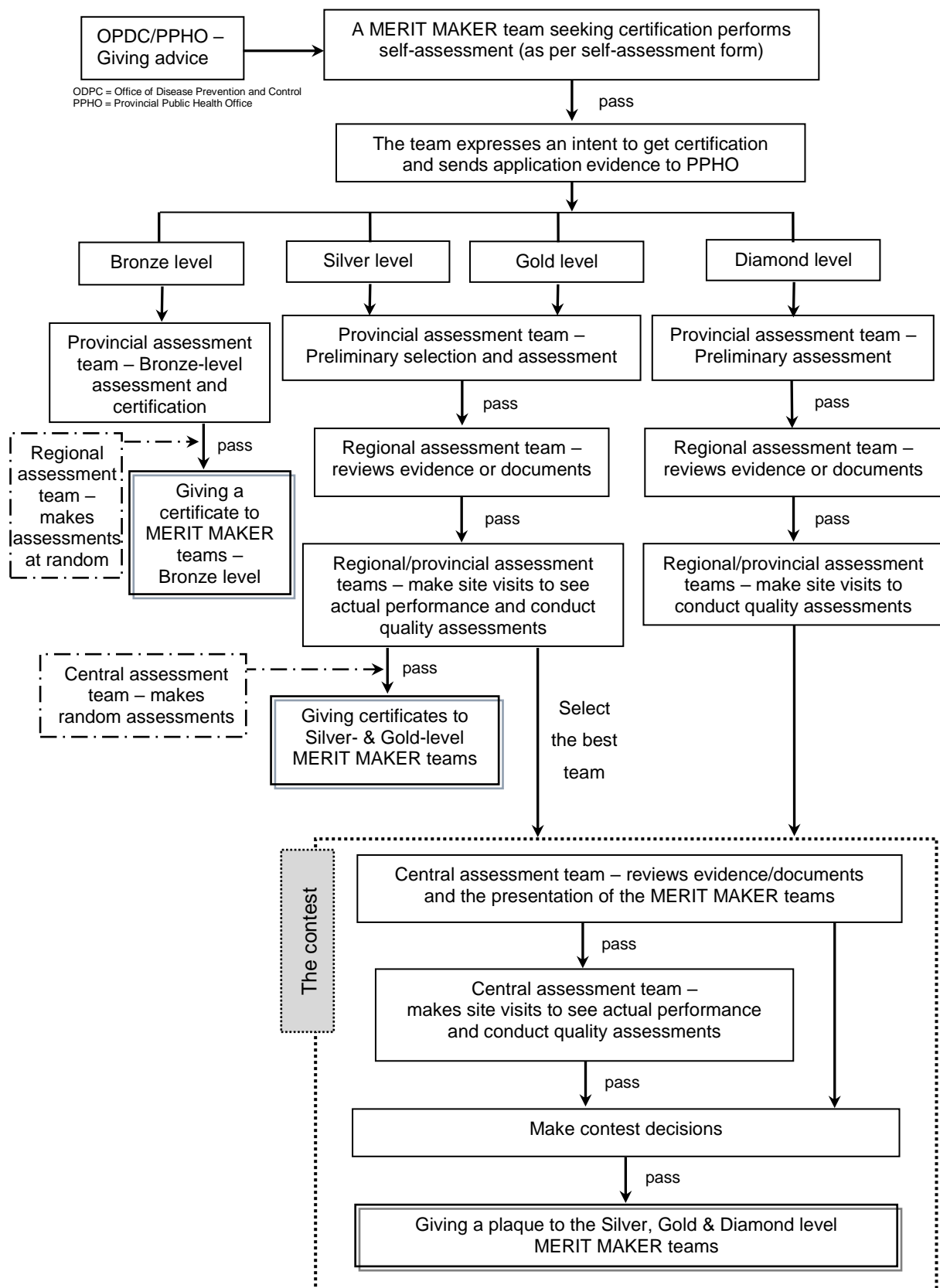
Assessment steps

- Bronze-level assessment: The provincial assessment team makes an official conclusion of the assessment.
- Silver- and Gold-level assessments: The provincial assessment team makes a preliminary conclusion of the assessment; and the regional assessment team makes an official conclusion of the assessment.

The contest

- Silver- and Gold-levels: The central assessment team makes the official conclusion of the assessment.
- Diamond-level: The central assessment team makes the official conclusion of the assessment.

Steps for certification and contest of MERIT MAKER teams in the drowning prevention programme



Notes: The regional assessment team assesses and certifies "MERIT MAKER" teams at the Bronze level in case the contesting teams are located in Bangkok.

Criteria for assessing MERIT MAKER team's performance on drowning prevention

The MERIT MAKER team must have implemented drowning prevention activities according to the specified criteria. The team applying for Bronze-level certification must have covered at least 7 elements, namely situation and data, risky water-body management, child development center operation, knowledge dissemination, survival swimming training, CPR training, and public communications, whereas the team applying for Silver- Gold-and Diamond-level certification must have covered all 10 elements.

Element	Indicators
1. Policy	<ul style="list-style-type: none"> Plans/projects Operational continuity Local Legislation and Regulations
2. Management	<ul style="list-style-type: none"> Multi-disciplinary operations Local resource sharing Expansion of operations and innovations
3. Situation and data*	<ul style="list-style-type: none"> Data collection and usage When a case occurs, there are investigations and problem-solving Number of child drowning deaths
4. Management of risky water bodies*	<ul style="list-style-type: none"> Surveys of risky water bodies Environmental management at/around risky water bodies
5. Operations at a child development centre and Kindergarten*	<ul style="list-style-type: none"> Teaching and giving advice to child-care teachers Teaching children about risky water bodies Environmental management in and outside the centre and Kindergarten
6. Knowledge dissemination*	<ul style="list-style-type: none"> Giving knowledge about drowning prevention at health-care facilities, or in communities or schools Using a child safety fence or playpen
7. Using the Survival Swimming Curriculum*	<ul style="list-style-type: none"> Offering the Survival Swimming Curriculum to train more trainers or resource persons at the community level Offering the Survival Swimming Curriculum to train children and the general public
8. Training CPR*	<ul style="list-style-type: none"> Offering CPR training for community residents and children
9. Public relations or communications*	<ul style="list-style-type: none"> Campaigns on child-drowning prevention Public relations via various channels
10. Research and monitoring/evaluation	<ul style="list-style-type: none"> Results of research or monitoring/evaluation of programme implementation at the local level

Note: * The Merit Maker team at the Bronze level must have implemented at least 7 elements, CPR: cardiopulmonary resuscitation

Section 4

Conclusions

The MERIT MAKER team approach for drowning prevention is a strategy to stimulate local authorities to implement the drowning prevention programme on a multi-disciplinary and continual basis, covering all measures and using locally available resources.

The MERIT MAKER strategy for drowning prevention was launched in 2015 by MOPH's Department of Disease Control. Its aim is to resolve the operational problem in the localities that used only one measure for drowning prevention, which was carried out by only one agency, and there was no visible picture of its operations as it was a new issue. Thus, the MERIT MAKER strategy was devised as a mechanism that would strengthen local agencies to design a clear operational guideline through community strengthening. That is because the programme success is attributable to multi-sectoral cooperation of public and private sector networks, voluntary networks and community participation.

The MERIT MAKER teams for drowning prevention are classified into four levels: Diamond, Gold, Silver and Bronze. To become a MERIT MAKER team, the application has to be sent to the provincial public health office, which will assign a provincial assessment team to review and make a decision on the team at the Bronze level; while the regional disease prevention and control office and the regional assessment team will review and make a decision for the Silver and Gold levels. Then the team with the best performance in each province will be sent for contesting at the national level.

The criteria for assessing MERIT MAKER teams on drowning prevention are to cover all 10 elements that are important measures for preventing drowning, including policy, management, situation and data, risky water-body management, child development centre operations, knowledge dissemination, survival swimming training, cardiopulmonary resuscitation (CPR) training, public communications and research/evaluation. The assessments of Gold-level and Silver-level teams will cover all 10 elements, but only at least 7 elements for Bronze-level teams.

However, the assessment criteria for each of the 10 elements of a MERIT MAKER team are just basic operational guidelines. If any local agency has got enough capacity, it may implement other activities beyond the specified criteria or elements.

Since the implementation of the MERIT MAKER strategy in 2015, it has been continuously developed and refined to adapt to the evolving needs of different regions and changing circumstances. By 2023, the strategy evolved into MERIT MAKER Plus¹⁹, focusing on qualitative outcomes and raising the standards of working teams to achieve the diamond level, which was previously limited to bronze, silver, and gold. In 2024, the development of SPEC MERIT MAKER teams began, formed by a network of volunteer groups.²⁰

Based on the implementation of the MERIT MAKER strategy for drowning prevention in fiscal years 2015 through 2023, the numbers of MERIT MAKER teams for drowning prevention that have passed the criteria at various levels in each fiscal year are as follows:

Fiscal year	MERIT MAKER teams
2015	335
2016	749
2017	1,093
2018	1,307
2019 - 2020	861
2021	586
2022	488
2023	419

Overall, by level of MERIT MAKER teams, for the past eight years there have been 4,643 Bronze-level teams, 600 Silver-level teams, 591 Gold-level teams and 4 Diamond-level teams.

Between 2015 and 2023, MERIT MAKER teams have grown significantly, with 5,838 teams established across all provinces of Thailand. These teams have directly benefited the population such as

- The management of 34,560 risky water bodies – installing fences or warning signboards and having in place water-rescue equipment to prevent drowning.
- 75,200 children aged 0-2 years having access to safer play areas or the use of child barriers and playpens.
- 48,401 local trainers or resource persons have been trained in the Survival Swimming Curriculum.
- 1,312,387 children aged 6–14 years have been trained in the Survival Swimming Curriculum.
- 142,276 people or children at the community level have been trained in cardiopulmonary resuscitation (CPR).
- 1,457 campaigns have been organized on child drowning prevention.
- 25,947 events related to public communications have been held via various media channels.
- 1,457 research studies or monitoring/evaluation actions have been undertaken at the local level.

With such efforts, local residents and children have gained not only knowledge about drowning prevention and got safe water bodies, but also essential life skills on water survival, water rescue and CPR. Such skills are useful for drowning victims and other people with cardiac arrest due to other causes.

The MERIT MAKER strategy is the process for implementing a drowning prevention programme at the local level on a sustainable basis. The strategy encourages all community members to realize the common problem, implement the programme through multi-sectoral cooperation with local resources. That is different from other programmes that are carried out with funding from international organizations or government agencies, resulting in their unsustainability – programmes ending when no additional funding is available.

As a developing country, Thailand has limited resources; many good measures cannot be undertaken in a short period of time. For instance, the survival swimming course cannot be included in the compulsory education system. As a result of such constraints, the programme operations cannot proceed rapidly; and if no efforts are made for the people to realize the importance of this programme, despite passing so many laws, they will not cooperate or follow such rules. Therefore, the focus is on urging as many people as possible to actively participate in programme operations through community's self-reliance.

The MERIT MAKER mechanism is in line with the government's *pracharat* or civil-state policy as it is implemented through multi-sectoral and community collaboration with the people playing a key role. All the achievements are really beneficial to the people. A programme evaluation has revealed that the numbers of drowning deaths in the provinces with MERIT MAKER teams are twofold lower than in those without such teams

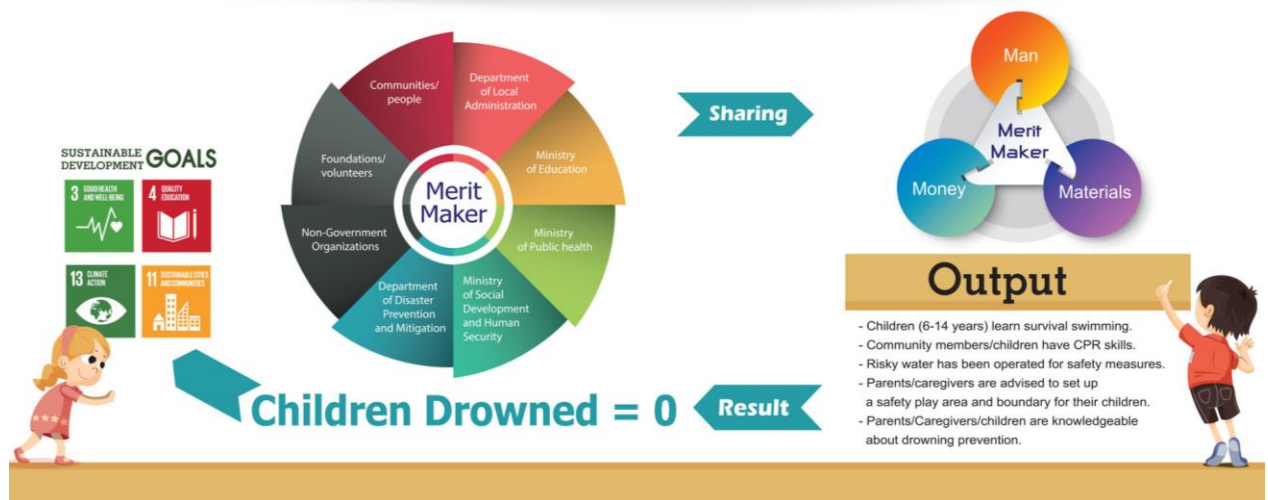
The Department of Disease Control has collaborated with various agencies since 2006 to prevent drowning among children. This collaboration has employed multiple strategies, including policy advocacy, programme development, legislation, enforcement, academic research, risk communication, public relations, and awareness campaigns. The key focus has been on building strength at the grassroots level, particularly within communities, through the MERIT MAKER strategy. Additionally, drowning prevention has been integrated with other public health efforts, and national-level operations have been driven by mechanisms such as the 20-Year National Strategic Plan, the United Nations Resolutions, and the World Health Assembly's decisions.

Despite the progress made, which resulted in a 57% reduction in drowning deaths among children under 15, the overall decrease in drowning incidents across all age groups has been minimal. Drowning-related deaths remain alarmingly high compared to the targets set in the 20-Year National Strategic Plan.

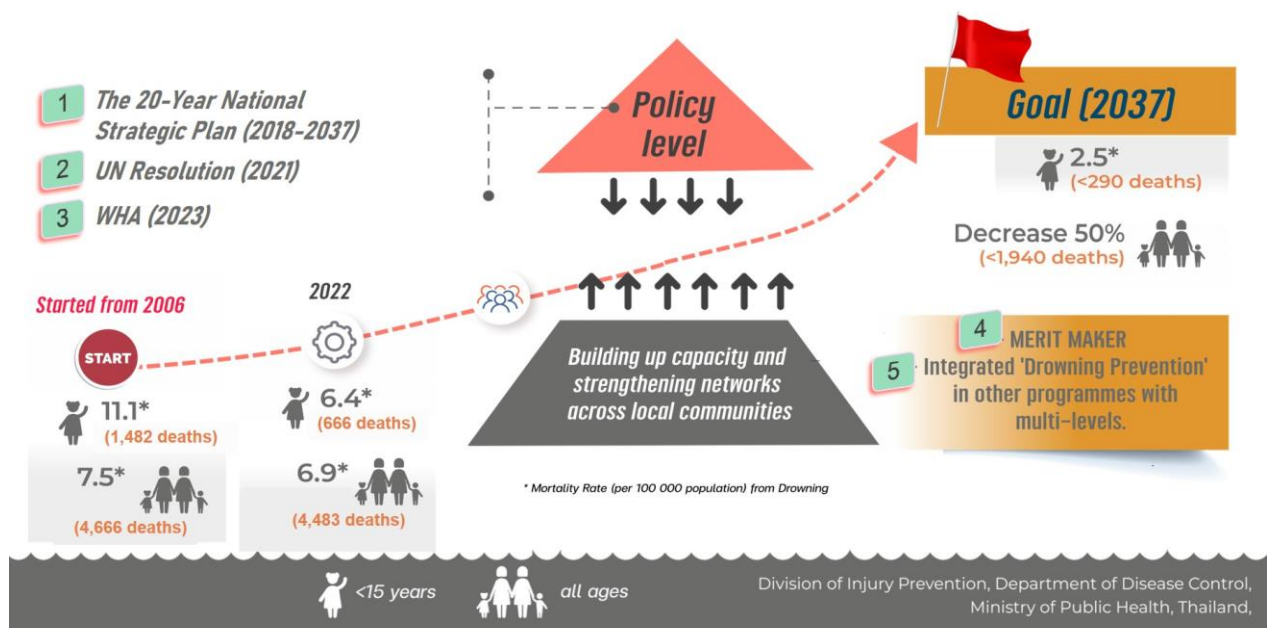
In the future, the focus will remain on the MERIT MAKER strategy to further strengthen communities. However, there will be an increased emphasis on volunteer networks and foundations, which play a vital role in driving local initiatives.

On the policy level, the plan is to continue advancing work in alignment with United Nations resolutions through the mechanisms of the Subcommittee on Drowning Prevention, under the National Safety Council of Thailand, chaired by the Deputy Prime Minister. Additionally, research and the use of new technologies will be prioritised to enhance the overall efforts.

Public-private sector cooperation and outcomes of the operations



Direction of Drowning Prevention in Thailand



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Example photos of MERIT MAKER operations in local communities (risky water-body management)



Example photos of MERIT MAKER operations in local communities (child development centre operations)



San Karn, Chiang Mai Province



Nok Mueang, Surin Province



Phon Ngam, Mahasarakham Province



Example photos of MERIT MAKER operations in local communities (knowledge dissemination)





Example photos of MERIT MAKER operations in local communities (survival swimming training)



Nok Mueang, Surin Province



KWANGJHONE, Chayaphum Province



Surin Province

Example photos of MERIT MAKER operations in local communities (public communications)



Report on Death by Drowning, Thailand

A. The Detailed Accounts of the Case of Death by Drowning

- 1) Date of the drowning)Date/Month/Year:(.....Time: Date of the death by drowning)Date/Month/Year:(.....
- 2) The scene of the drowning:District:Province:
- 3) Drowning victim's Name:His / Her relative's phone number:
- 4) Gender: ☐ male ☐ female 5) Age:.....Year(s)
- 6) Swimming ability: ☐ able to swim ☐ unable to swim ☐ skilled at survival swimming
Remark: Survival swimming refers to 1) the ability of floating in the water for more than 3 minutes, and 2) the ability of moving as far as 25 metres in the water.
- 7) The number of the people having this accident: The number of the dead:
- 8) While sinking into the water, the drowning victim was with his / her ☐ friend(s) ☐ guardian ☐ others:
- 9) The drowning victim was usually looked after by his / her ☐ parent(s) ☐ grandparent(s) ☐ others:
- 10) The water source with the risk of drowning : The depth of the water source:
Remark: The water sources with the risk of drowning refer to bathtub, water jar, bucket, wash basin, inflatable pool, fishpond, artesian well, hollow filled with water, drainage pipe, swimming pool, pool for agricultural use, canal, river, waterfall, dam, reservoir, sea etc.
- 11) Were there any precautions against drowning at the water source? ☐ No ☐ Yes (Identify):.....
Remark: Precautions against drowning include fencing in a water source, erecting some warning signs of drowning, and providing swimmers with some float equipment (lifebuoy, long wooden staff, rope, plastic keg tied to rope, plastic bottle of drinking water etc.).
- 12) The drowning victim's house is..... metre(s) far from the scene of the drowning.
 (In case the scene of the drowning is in the compound of the victim's house, specifying the distance from the house to the water source is not needed.)
- 13) While sinking into the water, the victim was ☐ rescued from drowning by float equipment.
 In case the victim was rescued from drowning by float equipment, please specify
- 14) While sinking into the water, the drowning victim ☐ was / ☐ was not wearing a life jacket.
- 15) The victim's risk factor(s) that contribute(s) drowning include(s)
☐ getting drunk ☐ taking narcotics ☐ taking medicines ☐ being disabled ☐ other (Identify):.....
- 16) After sinking into the water, the drowning victim
☐ died at the scene of the drowning ☐ died while being taken to the hospital ☐ died at the hospital. ☐ survived
- 17) To rescue the victim from drowning, the witness to this accident
☐ dived into the water
☐ reached(float equipment) to the victim.
☐ threw(float equipment) to the victim.
 In case the drowning victim died, the witness ☐ took / ☐ did not take the dead body out of the water source.
- 18) After being rescued from drowning, the victim
☐ was given first aid by
☐ was not given first aid because
- 19) After being given first aid, the drowning victim
☐ was taken to(the infirmary's name) by
☐ was not sent for a doctor.
- 20) The detailed accounts of the event:

- 21) Following this event, some precautions against drowning ☐ were taken ☐ were not taken
 Such precautions against the drowning include
Remark: Precautions against drowning include fencing in a water source, erecting some warning signs of drowning, and providing swimmers with some float equipment (lifebuoy, long wooden staff, rope, plastic keg tied to rope, plastic bottle of drinking water etc.).

B. Report Producer

- 1) Report Producer: ☐ Mr. ☐ Mrs. ☐ Ms.Position:
- 2) Organization: Province:
- 3) Telephone: Fax:4) Date of submitting:

Drowning Prevention in THAILAND



Division of Injury Prevention,



Department of Disease Control,
Ministry of Public Health, Thailand



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