

Water Incident Database Enhancement Project Report

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Introduction

About the NWSF

The National Water Safety Forum (NWSF) is a UK-focused, voluntary network, working together to reduce water-related deaths and associated harms.

Hosted by the Royal Society for the Prevention of Accidents (RoSPA), the NWSF was established in 2004 following a Government review into water safety¹. It sought to bring together several pre-existing national groups with the ambition of creating a ‘one-stop shop’ for the prevention of drowning and water safety in the UK, recognising the broad range of existing stakeholder groups, their respective contributions, and their own brands and values.

In 2016, the NWSF released the UK’s Drowning Prevention Strategy² which aims to reduce accidental drowning fatalities in the UK by 50 per cent by 2026, and reduce risk amongst the highest risk populations, groups and communities. Both Scotland and Wales have their own respective strategies^{3,4}.

These strategies, for the first time, gave the UK a unified set of drowning prevention aims and objectives. Additionally, all strategies have been underpinned by data and insights from the Water Incident Database (WAID).

The Water Incident Database

The World Health Organization’s Global report on drowning⁵ highlighted the need for all countries to have a Water Safety Plan underpinned by an accurate, timely and inclusive data collection system. Good data are essential for making informed decisions, driving change and innovation, improving decision making, and achieving better outcomes. Additionally, good data can inform stakeholders and local water safety practitioners in their decision making for prevention activities. It can be concluded that all major advances in water safety in the last 50 years have been underpinned by data.

WAID is the UK’s data collection system on drowning and was developed by the NWSF to bring together water-related incident data from a wide range of sources within the UK search and rescue region.

WAID aims to:

- provide insights into levels of risk, enabling meaningful comparisons with activities outside the water sector, and the determination of risk acceptability
- supersede the uncoordinated efforts of organisations trying to establish national trends based on limited data of uncertain quality
- produce much higher quality evidence
- maximise value and minimise aggregate cost of data collection.

The UK Drowning Prevention Strategy, along with the devolved nation strategies, used WAID data to set baselines of water-related fatalities. Each year, the NWSF publish annual reports based on the WAID data, as well as interactive reports⁶. Most recently, WAID data have been used in the Global Status Report on Drowning Prevention⁷, and has been enhanced for the review of the UK Drowning Prevention Strategy (scheduled to release March 2025).

This report details the recent enhancement project, as well as the project results that have helped improve the WAID dataset.

WAID enhancement project

The WAID enhancement project was undertaken by RoSPA, on behalf of the NWSF, to improve the WAID dataset. This was done for two primary reasons:

- the need to overturn the high number of ‘not recorded’ outcomes, giving a more robust data set (which could more accurately measure against the UK Drowning Prevention Strategy baseline)
- to match recent updates to the WAID taxonomy.

Rationale for the project

‘Not recorded’ outcomes

The NWSF publishes a version of the WAID data for each calendar year. Further data and insights are captured by RoSPA, usually from Coroner and media reports, but these remain in the unpublished version of the database.

The published data therefore provide only a first version of the data. This is largely due to the timing of the reports: WAID reports are published annually every spring, but often Coroner inquests are held the following calendar year, meaning data are not always available at the time of publication. Additionally, there are sometimes fatalities that the database has not captured until after an inquest has been held (this can be a considerable time later).

Recent annual WAID reports have shown an increasing number of ‘not recorded’ or inconclusive outcomes. These are outcomes likely to be awaiting Coroner inquests or more information. Figure 1 provides an overview of these outcomes and shows a clear increase over the years.

Figure 2 shows that over the five years, ‘not recorded’ outcomes have accounted for 24 per cent of the total number of water-related fatalities. This means that in 24 per cent of all cases (or 755 cases), it is unclear whether the fatality was due to crime, suicide or an accident*. This can make prevention efforts particularly difficult.

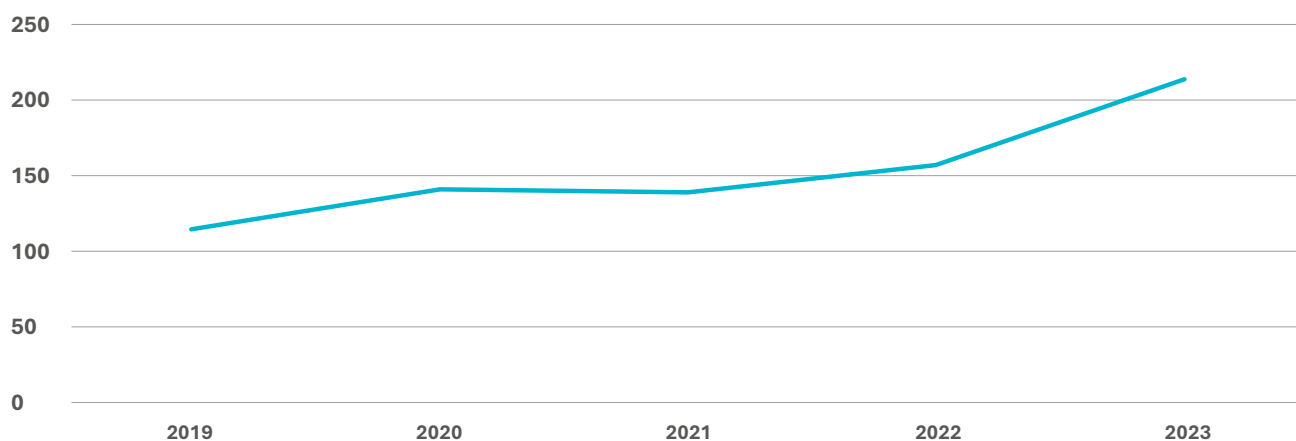


Figure 1: Not recorded outcomes, WAID 2019 – 2023

* Accidental fatalities refer to accident and natural cause outcomes. Suicide refers to suspected/confirmed suicide.

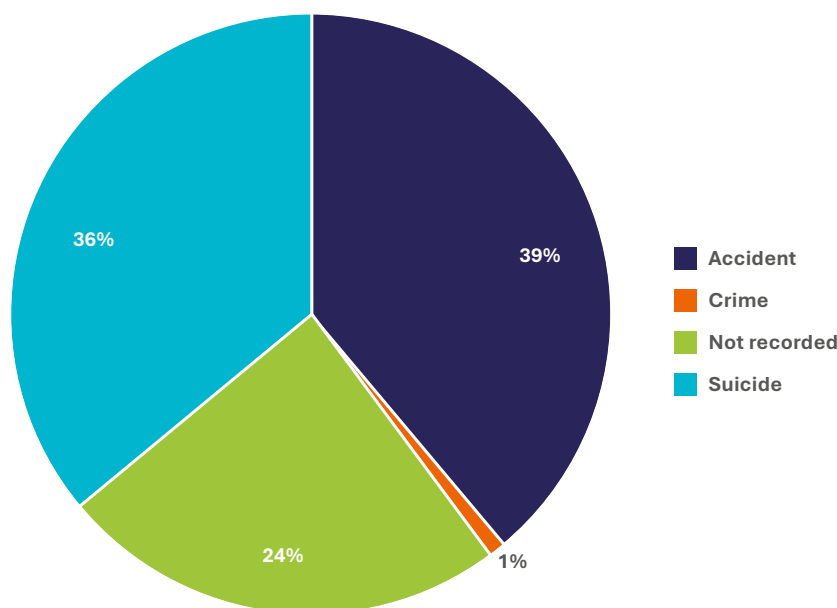


Figure 2: Outcomes by percentage, WAID 2019 – 2023

It is unclear why the 'not recorded' outcomes have increased. It is known that the COVID-19 pandemic led to inquests being delayed, which had a knock-on effect for the following years. Additionally, inquests in general seem to have been rising across England and Wales. A recent report noted that there was an increase of 582 inquests (+2 per cent) in 2023 when compared with 2022.⁸ These factors could be impacting upon the WAID 'not recorded' figures.

The relatively large percentage of 'not recorded' outcomes provides little insight to help with drowning prevention work. It also does not allow for an accurate figure to benchmark against the UK Drowning Prevention Strategy baseline. The enhancement of the WAID data was therefore agreed as a priority for the NWSF to ensure a more accurate review of the strategy.

Improving the WAID data set also allows for local areas to benefit. WAID data are often provided in personalised reports to various organisations, including Search and Rescue and local authorities. By enhancing the data, local areas can get improved insights to aid in their prevention efforts.

Updates to the WAID taxonomy

In more recent years, the NWSF Advisory Groups expressed a need to see more detailed information from the WAID taxonomy, including activity and location types. Water Safety Partnerships also noted the need to see more detailed information on activities in their area.

The taxonomy was therefore updated by the NWSF WAID project group for the 2023 data, making changes to both the activity and location lists. New activities have been added, including stand up paddleboarding and canal boating (which previously would have been covered by the 'manually powered boat' and 'motor boating' categories respectively). Additionally, regional areas were reconfigured due to structural changes to local government in England⁹ (some local authorities, for example, merged).

Process of the enhancement project

Following a proposal from RoSPA, the enhancement project was signed off, agreed and funded by the NWSF. The project was led by RoSPA and ran from August 2024 to December 2024.

The process for the project is summarised in Figure 3. RoSPA reviewed the WAID data incident by incident for

the years 2019 to 2023, and updated any relevant fields with known data. Where data were unknown, Coroners were contacted to ask for further information, media links were also used where appropriate.



Figure 3: Enhancement process

Results and insights

Overall water-related fatalities

The project has found a slight increase in overall water-related fatalities in comparison to what has been previously published. This is largely due to new data

being collected from Coroner inquests and reports. The increase amounts to an additional 52 fatalities over the five-year period (2019 – 2023), see Figure 4 and Table 1.

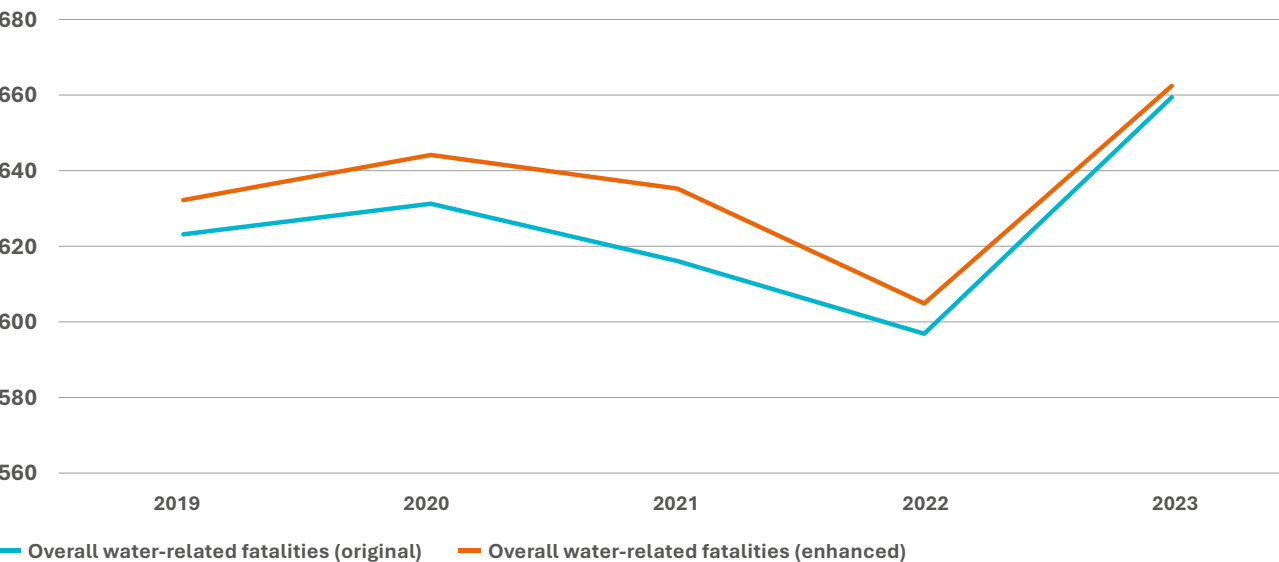


Figure 4: Overall water-related fatalities, 2019 – 2023: original published data vs enhanced data

	2019	2020	2021	2022	2023
Overall water-related fatalities (original)	623	631	616	597	659
Overall water-related fatalities (enhanced)	632	644	635	605	662
% change	1	2	3	1	0.5

Table 1: Overall water-related fatalities, 2019 to 2023 - original published data vs enhanced data

Reduction of 'not recorded' outcomes

As expected, the number of 'not recorded' outcomes has reduced from 755 to 533 incidents. Table 2 and Figure 5 provides an overview of these changes by year.

It has not been possible to reduce this number further for several reasons, including:

- Coroner Courts in England and Wales and the Coroners Service for Northern Ireland all work independently with their own processes, limiting the information that is provided to WAID. Scotland differs in that it uses the Drowning and Incident Review (DIR) process¹⁰, which is already tied into the Crown Office and Procurator Fiscal Service, meaning 'not recorded' outcomes are much lower
- some Coroners may only provide limited information due to data protection
- some Coroners do not respond
- inquests into the incident are still ongoing
- there is not enough information for the Coroner to reach a conclusion or outcome.

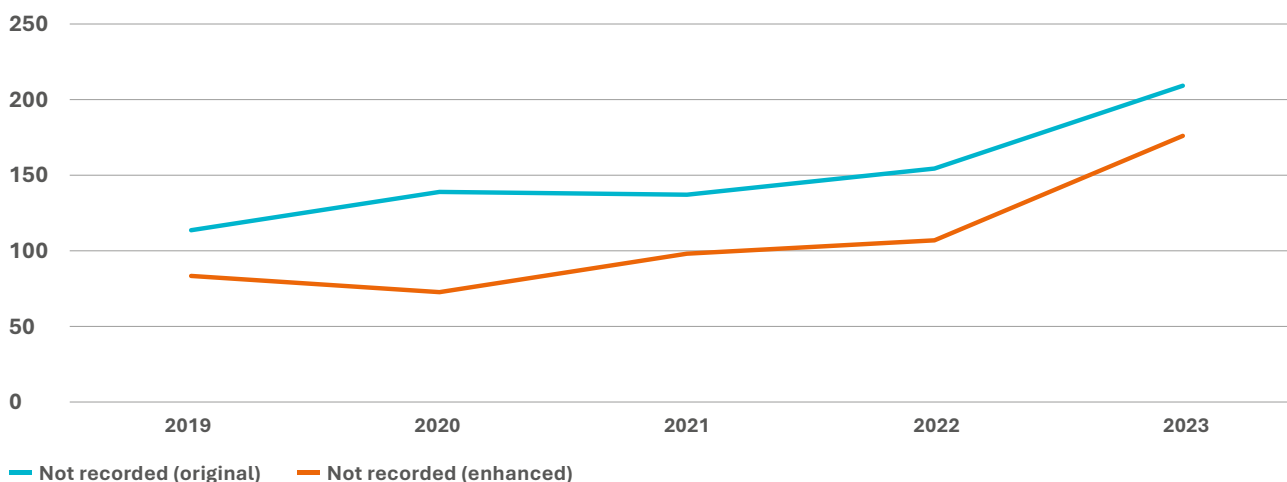


Figure 5: 'Not recorded' outcomes, 2019 – 2023: original published data vs enhanced data

Not recorded (original)	113	139	137	155	211
Not recorded (enhanced)	82	71	97	106	177
% change	-27	-49	-29	-32	-16

Table 2: 'Not recorded' outcomes, 2019 to 2023 - original published data vs enhanced data

Accidental outcomes

As expected, due to previously ‘not recorded’ outcomes being reclassified as well as other other enhancements, accidental fatalities have increased (as shown in Table 3). Completed inquests, new fatalities and additional

media updates contributed to this. According to the enhanced data, across the years the number of accidental fatalities has remained relatively constant, although 2021 saw a sharp increase.

	2019	2020	2021	2022	2023
Accident (original)	223	254	277	226	236
Accident (enhanced)	268	288	315	265	273
% change	20	13	14	17	16
	▲	▲	▲	▲	▲

Table 3: Accidental outcomes, 2019 to 2023 - original published data vs enhanced data

Suicide outcomes

Similar to accidental fatalities, suicide outcomes increased as a result of the enhancement project. However, on average, this was a much smaller change

compared to accidental outcomes (see Table 4). According to the enhanced data, suicide outcomes have generally decreased across the last few years.

	2019	2020	2021	2022	2023
Suicide (original)	279	232	195	212	208
Suicide (enhanced)	277	278	215	225	209
% change	-1	20	10	6	0.5
	▼	▲	▲	▲	▲

Table 4: Suicide outcomes, 2019 to 2023 - original published data vs enhanced data

Crime outcomes

Water-related crime figures are generally low, but the enhancement project has produced changes to the published dataset (see Table 5). This is due to some

incidents been further investigated and subsequently reclassified after the investigation has closed.

	2019	2020	2021	2022	2023
Crime (original)	8	6	7	4	4
Crime (enhanced)	5	7	8	9	3
% change	-37.5	17	14	125	-25
	▼	▲	▲	▲	▼

Table 5: Crime outcomes, 2019 to 2023 - original published data vs enhanced data

Taxonomy and regional changes

Taxonomy

All WAID data in years 2019 to 2022 were reclassified and aligned to the 2023 WAID taxonomy. This has resulted in some changes to locations and activity at time of death. Impact to the overall figures has been minimal, but this enhancement does provide more accurate insights for the UK Drowning Prevention Strategy review and for local areas that may wish to use the dataset.

As an example, 'manual boating' has now been reclassified into several categories. The 2019 to 2023 original data classified 32 fatalities as 'manually powered boats'. These have subsequently been reclassified along with additional fatalities in this category (as shown in Table 6)

Activity (enhanced dataset 2019 – 2023)	Fatality number
Canoeing – Paddle Sport	5
Kayaking - Paddle Sport	22
Rowing (Leisure)	1
Stand Up Paddleboarding	12
Total	41

Table 6: Activity reclassifications 2019 – 2023

Regional change

Each data year reviewed was initially configured against the ONS Regional areas that were live at the time of publication.

Since 2019, there have been several changes to the structure and number of council authority areas (made up of local authority districts, counties and unitary authorities) as shown in Table 7 below.

The reconfiguration of the data to fit current mapping brings the system in line with current ONS geographies. This has resulted in minor changes, but does not affect the overall dataset. Mapping, however, will be more streamlined and current.

Year	Number of authorities
December 2019	382
April 2023	361

Table 7: Number of authority areas in the UK^{11,12}

Conclusion

The WAID enhancement project aimed to improve the WAID dataset in order to get a clearer and more robust view of the water-related fatality picture in the UK.

The enhanced data have been used in the review of the UK Drowning Prevention Strategy to track against the original strategy baselines and to provide a more accurate update on the 50 per cent reduction target. The data will also be used in the planning stages of the next iteration of the UK Drowning Prevention Strategy.

The enhanced data will also assist local organisations and water prevention practitioners in their local prevention work.

Further information on the project or WAID can be found by contacting info@nationalwatersafety.org.uk

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accidents don't have to happen

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