

## RNLI | Research Project ID: INT18.1

# Evidence, Perceptions and Knowledge of drowning risk in Zanzibar

**Sponsor:** International  
**Department:** Evidence, Insights and Technology  
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## Summary

The RNLI has proudly supported the implementation of survival swimming and water safety education in Zanzibar since 2013. The project supports the age group most vulnerable to drowning in the region – children aged 7–14.

Throughout the African continent, extending to Tanzania and Zanzibar,

there is very little data exploring into the drowning risk. Therefore, this research has been commissioned to collect evidence on perceptions of the risk of drowning in Zanzibar. Overall, the research suggests a high drowning risk is caused by some knowledge gaps (partially driven by lack of access to information).

Research also indicates the risks are perceived to be caused by poor governance, the economy and the increasing effects of climate change on oceans.

## Research aims and objectives

It is recognised that there is very little data available on drowning figures, risks and perception of risk throughout the African continent. This same situation applies in Tanzania and the Zanzibar archipelago.

This study had three overarching objectives:

- Summarise any existing evidence of drowning risk in the project localities,

where possible, through identifying and liaising with local data/knowledge holders.

- Identify communities' perceptions of drowning risk in the project localities, through interviews with key community stakeholders (village leaders, parents, youth groups, occupational groups) to explore perceptions of drowning risk within the

community, including identification of high-risk behaviours and sub-populations.

- Explore communities' knowledge and attitudes towards drowning prevention practices including perceived barriers to their effectiveness.



**Lifeboats**

## Method and approach

This study applied a series of different methods to collect data. The approach included desk research, focus groups, in-depth interviews with individuals, and a household survey (500 households). The reason for this mixed approach was to have a step by step approach to gathering data: first, identify the issues, then base the questions for the household survey on the outcome of those interviews.

Volunteers for the study are asked to:

- **Desk research / document review.** The team reviewed the project documents from the RNLI/ Panje project and undertook a search for any existing data on the issue of drowning.
- **Qualitative approach.** Qualitative methods (interviews and focus groups)

were used to identify the key themes in order to develop the questions for the household survey (quantitative data collection). This included focus group discussions with selected community members in Unguja and Pemba as well as interviews with key informants who were recognised to already have some understanding of the drowning issue. This included interviews with Panje Project programme officers, government policy makers, Community leaders and influential persons.

- **Quantitative household survey.** The fieldwork for this data collection took place from 14<sup>th</sup> September to 5<sup>th</sup> October 2018. The target population for this survey was Zanzibaris aged 18+ years, male and female living in Pemba and Unguja, urban

and rural areas. The focus was not limited to specific locations of Panje project intervention, to strengthen the possibility of generalising and scaling the findings.

A sample of 500 randomly selected respondents was surveyed, from a total population of 1.5 million (0.4 million in Pemba and 1.1 Million in Unguja)<sup>1</sup>. A stratified multi-stage random sampling approach was used to determine the study respondents. In each selected ward, only one village (shehia) was randomly selected for interviews. Shehias were the Primary Sampling Unit (PSU) for this survey.

## Research location

The Zanzibar archipelago is made up of two islands: Unguja and Pemba, a semi-autonomous region of Tanzania. Unguja, the southernmost island, is a trade hub, with high frequency passenger ferry services to and from Dar es Salaam, in mainland Tanzania, and a daily passenger ship service to Pemba. It also has recreational beaches and a thriving tourism industry. Pemba island has expansive farms, agrarian communities and plantations of rice and bananas and is less economically developed than Unguja.

Both Unguja and Pemba have large fishing communities, and most of the inhabitants have frequent contact with the sea for transport and economic activities. Pemba has a large community of seaweed farmers who also make their living from coastal waters.

These islands have previously experienced well-documented drowning cases. In 2011 and 2013, there were two cases of ferries sinking between Tanzania, Unguja and Pemba, with multiple deaths caused.



## Background to RNLI work in Zanzibar:

Since 2013, RNLI have been working with the Panje Project- a local NGO, based in the northern village of Nungwi in Zanzibar- to test and develop an Aquatic Survival Programme. The programme is targeted at children aged 7-14 years and comprises of two modules; survival swimming skills and classroom- based water safety education. The programme started in Nungwi and has gradually expanded to six cluster areas on Unguja and Pemba<sup>2</sup>.

The Survival Swimming component is taught in the ocean by locally recruited trainers. Children are recruited through community networks, government and Madrassa schools. They attend daily 1.5 hours of training daily over a period of 15 days, with approx. 90% of the children graduating successfully<sup>3</sup>.

The Water Safety Education component is delivered through government schools and Madrassas, with logistical support provided by the Ministry of Education. Over 1,000 schoolteachers have been trained to deliver water safety messaging. Teachers are also trained in resuscitation for drowning victims.

<sup>1</sup> Unguja: Nungwi, Matemwe, Paje, Stonetown. Pemba: Chake Chake district, Micheweni

<sup>3</sup> Graduation criteria: Moving confidently through the water for 15m, floating for 30 seconds, rolling from front to back, back to front, demonstration of a safe rescue

## Key findings

### Demographics:

A high proportion of respondents have no formal education. This has implications for adapting communication and messaging for low-literacy audiences, and using non-written communication (radio, audio-visuals and pictures). A significant proportion of respondents depend on the sea directly (and indirectly) for their livelihoods.

### Risky behaviours:

Drowning risk in Zanzibar is primarily connected to the ocean (reflecting the reliance on the sea, more so on Pemba than Zanzibar). Nearly everyone in the survey uses the ocean, whether for transport, economic or recreational activities. Travelling is the main reason for use, and half of the respondents reported that most sea vessels lack adequate safety measures such as lifejackets and phones. Men enter the sea more frequently than women, and men make up the majority of fatal drowning victims. Nearly 30% of men entering into the sea do so at night, and there is evidence that some do not carry lights with them, sometimes resulting in boat collisions. Youths have higher exposure to risk due to recreational use of the sea.

### Knowledge gaps / risks:

Nearly all of those interviewed have experience of entering the sea, whether when using transport, or for economic or recreational activities. Half of the adults surveyed do not know how to swim. This is lowest amongst females, of whom only 13% report they can swim. 90% of the adults surveyed said that they have never used life-jackets when travelling by sea, or when

fishing. A quarter of the adults surveyed in Pemba indicated that they would risk entering the sea in bad weather

### Supervision for safety in the water:

Although there are less incidences reported of children drowning than of adults, the research identified a surveillance gap by adults/ parents. Parents / caregivers rarely accompany their children into the sea, and when mothers are with children in the sea (eg. when cultivating seaweed) in general, they do not supervise the activities of their children. Nearly three quarters of adult females and 42% of rural dwellers would not be able to give first aid to a child rescued from drowning. Over 70% of the households have children. A quarter of these children frequent the sea, mainly for recreational activities. A significant proportion also travel by sea, especially in Pemba. Most of the time, children are unaccompanied by their parents.

A significant number of children venture alone into the sea, or in the care of another child. Over 60% of children have little or no swimming skills.

### Limitations and challenges of the research:

The qualitative and quantitative responses provided us with a mixture of signposts for future work, some data to be further investigated, some indications and some of the key issues that concern the communities. What it does not provide is significant representative data to be able to draw broader conclusions on the numbers of drowning deaths in the area.

There have been efforts to design this research in a 'low-cost' way: using a Tanzanian market research organisation (Ipsos) rather than an academic institution, and keeping a small sample size with some assumptions that the population on the small islands of Zanzibar and Pemba are not so diverse as to yield different results with a larger sample size. However, this approach also comes with the challenge of attempting to carry out survey work in Zanzibar by an organisation based on the Tanzanian mainland (where cultural assumptions and potential historical antipathies can affect the way that the questions are designed, and the way that people respond to them)

The research provides us with some opportunities: that is, any findings will be opening up new understanding and signposting possible routes for analysis by RNLI responses in the form of more research, programme and policy design. However, it also throws up some challenges, such as how we triangulate the findings of one small piece of research, what inferences we can make from a small sample size, and how we incorporate those findings into strategic responses in the developing RNLI Tanzania country strategy. It should be noted that this research could also be used as a means of identifying opportunities for further research, as well as for providing a starting point for conversations with potential new partners.

## Some specific findings

### 1 Demographics:

Unguja and Pemba share a similar demographic profile. Unguja has higher education levels and lower levels of deprivation. Nearly a quarter of adults on both islands have no formal education, and only a third have secondary level education and above. Fishing is one of the main occupations in both Unguja and Pemba, mainly carried out by males (27%). Seaweed cultivation is practised by 3% of the population but is more common among females (5%). 24% of the respondents report that often they lack access to a livelihood

**2. People enter the sea for a range of reasons**, with variation between age groups and gender. While travel is the most common reason, more men than women engage in fishing. Older males most frequently enter the sea, and more so in Pemba than in Unguja.

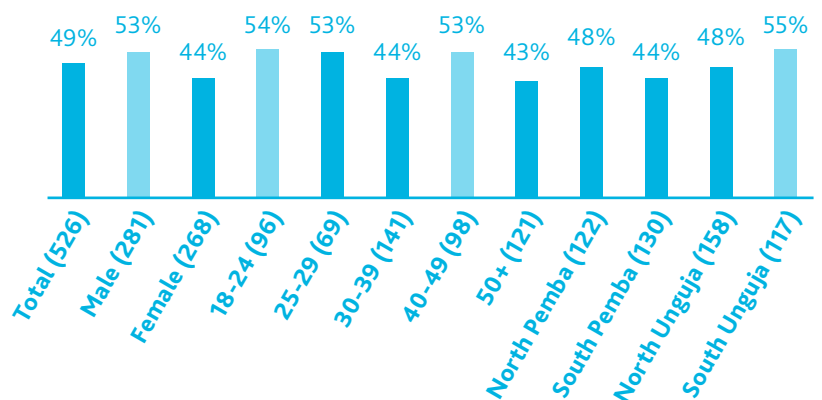
**Table 1: Reason for entering the sea**

Reason	Total (526)	Male (258)	Female (268)	AGE					Unguja (275)	Pemba (251)
				18 - 24 (96)	25 - 29 (69)	30 - 39 (141)	40 - 49 (98)	50 + (121)		
Travel (by boat/ship/Ferry)	59%	56%	62%	62%	60%	62%	55%	56%	44%	76%
Fishing	41%	60%	24%	62%	36%	44%	52%	62%	44%	39%
recreational purposes (swimming, sightseeing, games)	29%	35%	22%	62%	35%	22%	26%	62%	35%	21%
Seaweed farming	10%	3%	16%	62%	3%	13%	11%	62%	6%	14%
Non-boat-based fishing activity (collecting shellfish)	4%	1%	6%	62%	1%	3%	3%	62%	4%	3%
Bathing (Washing)	3%	4%	3%	62%	8%	4%	1%	62%	3%	4%
Collecting water for other activities	1%	-	2%	62%	-	1%	1%	62%	1%	1%

### 3. There is little availability of water safety equipment:

The study revealed that over half of the vessels do not have safety equipment such as life-jackets and phones. Only in South Unguja is the only place where over half (55%) has safety equipment on board.

**If you use boats for fishing or travelling, is there safety equipment like life-jackets, phones etc. on board? % responding Yes**



**4. Adult supervision of children is low.** More than 66% of parents with children do not accompany them when they go into the sea. Parents also responded that children are often in the care of another adult (37%), or another child (20%). In 32% of the cases, the child or children are alone. The prevalence of children going out alone is higher in Unguja (39%) than in Pemba (24%). Parental supervision was identified as a key issue for parents who take their children with them when they are working in the sea:

"... If we go with children, we become occupied with our stuff and let children play with water only to realize they have been taken with the waters and drowned."

**Women seaweed farmers (Occupational group)-Nungwi**

**4. The majority of people do not have the skills to rescue someone who is drowning and to administer first aid:**

Overall, a minority (45%) feel they knew how to rescue someone. This is higher amongst males (73%) and quite low amongst females (17%). Older respondents have more knowledge of rescue. A minority (44%) of people know how to give first aid to someone who has drowned. Knowledge is much more common among males (67%) compared to females (22%). Older people have more knowledge of first aid.

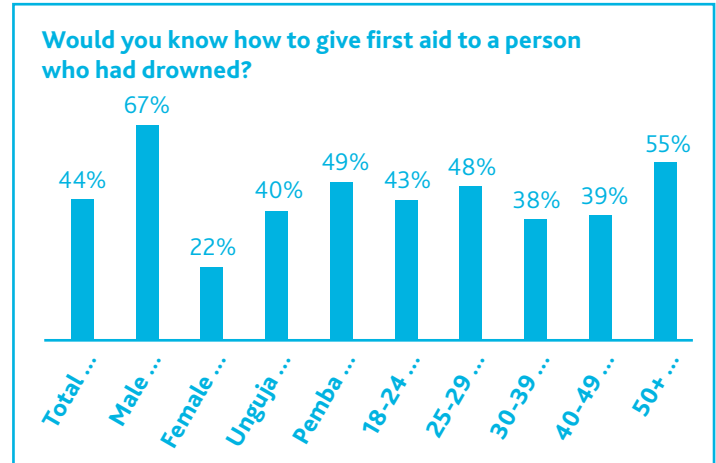
**5. People currently feel powerless to mitigate drowning:**

Respondents in the quantitative study perceive the leading cause of drowning to be 'an act of God' (41%), which implies that they do not have control over the outcome and shows a high level of fatalism. Other causes given are: lack of swimming skills (36%), extreme weather conditions (34%), sudden weather changes (27%) and poor knowledge or experience of the sea (14%). Also identified are: the use of outdated vessels, small dhows or dug-out canoes, vessels that cannot withstand strong winds, the need to fish in deeper waters due to dwindling fish stocks.

The impact of climate change and changing weather patterns was highlighted in interviews. Weather changes are seen as an important factor in increasing drowning risk. For example, one respondent answered:

*"In the past, we used to study the weather before going into the ocean for fishing activities. Now, the weather patterns have changed; you might not have all the signs we used to have back then that the ocean is not favourable for fishing activities. Then, later on, the weather can change and become unfavourable."*

**Respondent, Occupational Group, Pemba**



**6. More than half of the respondents (58%) feel that they need swimming training, amongst other solutions.**

Respondents in both Unguja and Pemba were asked to outline their thoughts on the most needed responses to drowning. Other responses that ranked highly are: Provision of life-saving equipment such as life jackets/floats/swimming shoes, avoiding overloading boats, provision of better-quality boats, and education for increased knowledge of the sea.

**7. People are willing to engage in various drowning prevention interventions:**

Among respondents, 76% are willing to volunteer for search and rescue operations, while 84% are willing to engage in swimming lessons if offered for free. 63% of the respondents are also willing to pay a small amount (unspecified) to receive swimming lessons. There is more interest from men in these proposals, which could indicate cultural issues (it is more acceptable for men to swim) and economic issues (men have more access to funds than women)

	GENDER		AGE RANGE					LOCATION	
<b>Yes</b> Volunteer for search and rescue operation	76%	40%	62%	66%	58%	64%	44%	60%	55%
<b>Yes</b> Swimming lessons if at small price	63%	48%	61%	70%	55%	53%	46%	61%	49%
<b>Yes</b> Swimming lessons if free of charges	84%	61%	82%	81%	73%	73%	57%	71%	72%
	Male	Female	18-24	25-29	30-39	40-49	50+	Unguja	Pemba

**8. Some interventions are perceived to have led to reduced drowning:**

A discussion with a focus group (in Tumbé, Pemba) showed a perception that there are decreased numbers of cases of drowning as a result of the Panje and Red Cross campaigns on drowning risk:

*"At least the community now has some knowledge of water safety following previously high numbers of fatal drownings, and campaigns run by different organizations such as the Panje and the Red Cross. However, we want to see more campaigns and trainings done with the community regarding drowning risks since the communities rely on activities that involve use of the ocean."*

## How the RNLI is using the evidence



To date, the RNLI international programme has used this research to understand more about the context in which they are currently supporting work through partners in Zanzibar. Whilst many of the findings did not come as a surprise to RNLI and its local partner, the Panje Project, we found that some of the information helped corroborate factors already included in the project, and in other cases, to provide signposts for project adaptation and development.

Evidence from this report was used to support an appraisal of options for longer-term RNLI involvement in Tanzania, which will be used in the development of the Tanzania country strategy.

The research also provides some key areas for potential development of further research, to understand more about certain sectors and drowning risk, as well as providing some resources for scoping and discussions with stakeholders in the region.

## Acknowledgement and thanks

Thanks to the Panje project for supporting the research with advice and input on contacts, logistics and survey areas.