

RNLI | Research Project ID: INT18.1

Evidence, Perceptions and Knowledge of drowning risk in Zanzibar

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Contractor: Ipsos, Tanzania
Principal researchers: Samuel Muthoka and Deogratius Rwisuka

Summary

The RNLI has supported the implementation of survival swimming and water safety education in Zanzibar since 2013. This work is carried out by a local partner, The Panje Project, and targets children aged 7–14.

Throughout the African continent, extending to Tanzania and Zanzibar, there is very little data exploring the drowning risk. Therefore, this research has been commissioned to collect evidence on perceptions of the risk of drowning in Zanzibar.

This is the first ever household survey carried out on drowning in Zanzibar. Overall, the research suggests a high drowning risk, caused by some knowledge gaps, partially driven by lack of access to information and lack of skills.

Research also indicates that people perceive risks to be linked to poor governance, economic marginalisation, 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 has three overarching objectives:

- Summarise any existing evidence of drowning risk in the survey area, through identifying and liaising with local data/knowledge holders.
- Identify communities' perceptions of drowning risk in the survey area, 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.



Method and approach

This study uses a series of different methods to collect data. The approach includes desk research, focus groups, in-depth interviews with individuals, and a household survey (500 households). The reason for this mixed approach is to have a step by step approach to gathering data: firstly, identifying the issues, then basing the questions for the household survey on the outcome of those interviews.

- **Desk research / document review.**

The team reviewed the project documents from the 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 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 (the two islands that comprise Zanzibar) as well as interviews with key informants who were recognised to already have some understanding of the drowning issue. This included interviews with RNLI's local partners, The Panje Project, government policy makers, community leaders and other key stakeholders

- **Quantitative household survey.**

The fieldwork for this data collection took place from 14th September to 5th October 2018. The target population was Zanzibaris aged 18+ years, male and female living in Pemba and Unguja, urban and rural areas. The focus goes beyond the specific locations of the Panje Project intervention, to incorporate a wider range of perspectives.

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). 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, a semi-autonomous region of Tanzania, is made up of two islands: Unguja and Pemba, 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.

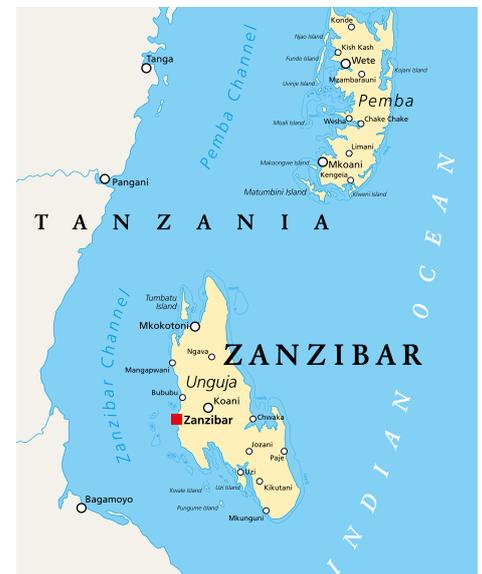
These islands have previously experienced well-documented drowning cases. In 2011 and 2013, there were two cases of ferries sinking between Tanzania, Unguja and Pemba, with multiple deaths caused. This is the first in-depth study in the area since the ferry disasters.

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 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 Pemba¹.

The *survival swimming* component is taught in the ocean by locally recruited trainers. Children are recruited through community networks, government and Madrassa schools². They attend 1.5 hours of training daily over a period of 15 days, with approx. 90% of the children graduating successfully³.

The *water safety education* component is delivered through government schools and Madrassas, with logistical support provided by the Zanzibar Ministry of Education.



Over 1,000 schoolteachers have been trained to deliver water safety messaging. Teachers are also trained in resuscitation for drowning victims.

¹ Unguja: Nungwi, Matemwe, Paje, Stonetown. Pemba: Chake Chake district, Micheweni

² Madrassa: a school linked to a mosque

³ 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

Risky behaviours:

A significant proportion of respondents depend on the sea directly and indirectly for their livelihoods. Drowning risk in Zanzibar is primarily connected to the ocean (reflecting the reliance on the sea, more so on Pemba than Unguja). Nearly everyone in the survey uses the ocean, whether for transport, or economic or recreational activities. Travelling is the main reason for entering the ocean, 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 the sea for fishing 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 than other groups.

Knowledge gaps / risks:

Nearly all of those interviewed have experience of entering the sea, using transport, or for economic or recreational activities. Half of the adults surveyed do not know how to swim. This is lower for females, of whom only 13% report they can swim. Nine out of ten 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 reported incidences of children drowning than there are of adults, the research identified some gaps in supervision of children by adults. Parents / caregivers rarely accompany their children into the sea, and when mothers are with children in the sea (for example, when cultivating seaweed), it was found that they generally do not supervise the activities of their children. However, nearly three-quarters of adult females and just under half 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 those children frequent the sea, mainly for recreational activities. A significant proportion also travel by sea, especially in Pemba.

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 research does not provide 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 presents the challenge of attempting to carry out survey work in Zanzibar by an organisation based on the Tanzanian mainland, where cultural assumptions might affect the way that the questions are designed, and the way that people respond to them.

This research could also be used as a means of identifying opportunities for further research, as well as providing useful reference points for discussion around wider drowning prevention issues.

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.

For example, whilst our interventions are mostly with children, this research shows that there are higher rates of drowning in adults than children, and this is often linked to occupational risk, so this challenges us to re-examine and adjust our approach.



RNLI/Mike Lavis

Some specific findings

1. Demographics:

Unguja and Pemba share a similar demographic profile. Unguja has higher education levels and lower levels of deprivation. The survey showed that nearly a quarter of adults on both islands have no formal education, and a third have secondary level education and above. However, official statistics in Zanzibar show that the overall literacy rate is 84%. 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. 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.

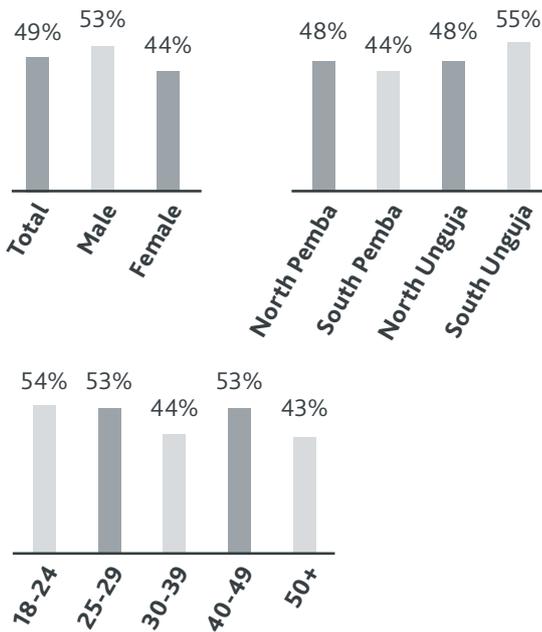
Reason	NO. OF PEOPLE INTERVIEWED			AGE					LOCATION	
	Total (526)	Male (258)	Female (268)	18 - 24	25 - 29	30 - 39	40 - 49	50 +	Unguja	Pemba
Travel (by boat/ship/ferry)	59%	56%	62%	62%	60%	62%	55%	56%	44%	76%
Fishing	41%	60%	24%	33%	36%	44%	52%	62%	44%	39%
Recreational purposes (swimming, sightseeing, games)	29%	35%	22%	47%	35%	22%	26%	62%	35%	21%
Seaweed farming	10%	3%	16%	9%	3%	13%	11%	62%	6%	14%
Non-boat-based fishing activity (collecting shellfish)	4%	1%	6%	4%	1%	3%	3%	62%	4%	3%
Bathing (washing)	3%	4%	3%	3%	8%	4%	1%	62%	3%	4%
Collecting water for other activities	1%	-	2%	3%	-	1%	1%	62%	1%	1%

Some specific findings (continued)

3. There is little availability of water safety equipment:

The study revealed that over half of boats do not have safety equipment such as life-jackets and phones. South Unguja is the only place where half of those interviewed have 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



NO. OF PEOPLE INTERVIEWED (526)

4. Adult supervision of children is inadequate.

More than 66% of parents with children do not accompany them when they go into the sea. Parents 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 entering the sea alone is higher in Unguja (39%) than in Pemba (24%). Parental supervision is identified as a key issue for parents who take their children with them when they are working in the sea:

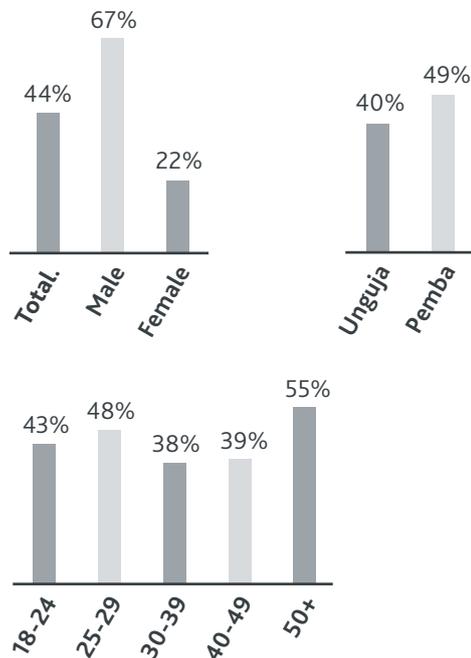
“... If we go with children, we become occupied with our stuff and let children play with water only to realize they have been taken with the waters and drowned.”

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 say that they have higher levels of knowledge of rescue techniques. Less than half (44%) of people know how to give first aid to someone who has drowned. Knowledge of first aid is more common among males (67%) compared to females (22%).

% of people who say they know how to administer first aid to someone drowning



NO. OF PEOPLE INTERVIEWED (526)



RNLI/Mike Lavis

Some specific findings (continued)



RNLI/Mike Lavis

5. People currently feel powerless to prevent 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.

Other responses that rank highly are: the provision of life-saving equipment such as life jackets/floats/swimming shoes, avoiding overloading boats, provision of better-quality boats, and education to increase understanding 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 be due to cultural issues (it is more acceptable for men to swim) and economic issues (men have more access to funds than women).

Survey question: Would you be willing to engage in drowning prevention interventions?	GENDER		AGE RANGE					LOCATION	
	Male	Female	18-24	25-29	30-39	40-49	50+	Unguja	Pemba
Yes Volunteer for search and rescue operation	76%	40%	62%	66%	58%	64%	44%	60%	55%
Yes Swimming lessons if at small price	63%	48%	61%	70%	55%	53%	46%	61%	49%
Yes Swimming lessons if free of charge	84%	61%	82%	81%	73%	73%	57%	71%	72%

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

A discussion with a focus group (in Tumbe, Pemba) showed a perception that there are decreased numbers of cases of drowning as a result of the Panje Project 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 Project 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 is being 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.

For example, the RNLI Tanzania country strategy currently being developed will have a strong focus on occupational hazards, including safe transport.



Acknowledgement and thanks

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