

ENGAGE SDG · THE UNIVERSITY OF ZAMBIA

Flood Impact Assessment

Safe Urban Schools through Community-Led Greening

A study of flood risk to learners in Kanyama & Kalikiliki, Lusaka

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BACKGROUND

Why this study matters

1

Recurrent flooding

Flooding is a recurring problem across both study areas — Kanyama and Kalikiliki.

2

Risk to children

Learners face real danger as they commute to school during the rainy season.

3

Learners as messengers

Raising flood-risk awareness in pupils ripples outward — they relay it to their families.



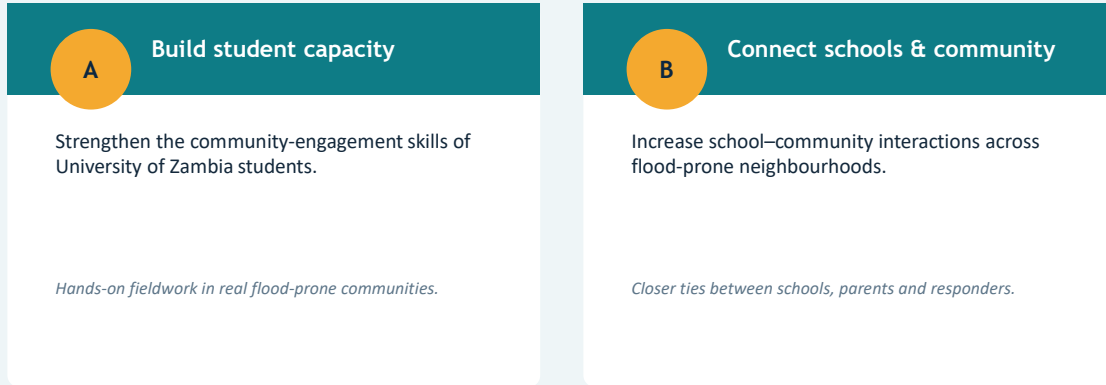
Wading to school through floodwater, Lusaka

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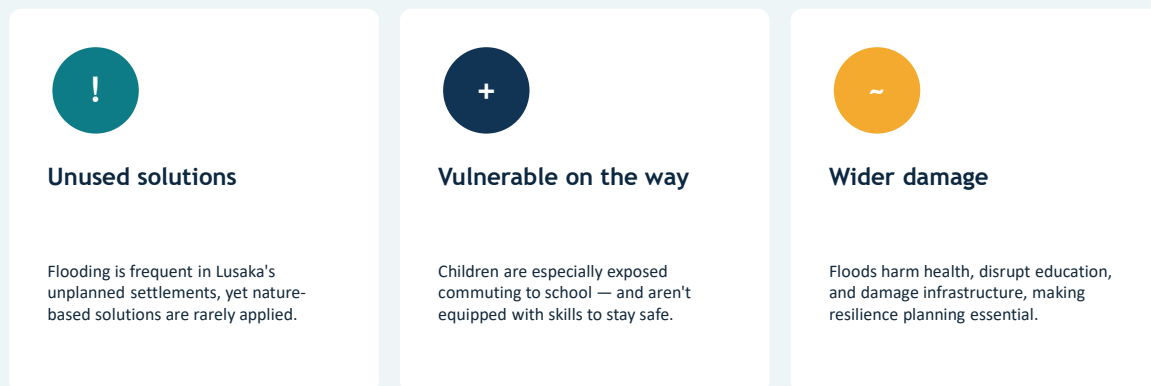
OBJECTIVES

What the project did so far in the two communities



THE PROBLEM

A risk that hits learners hardest



SPECIFIC OBJECTIVES

Four targeted goals

1

Identify the risks flooding causes to learners

2

Draft emergency-preparedness guidelines for schools

3

Create a flood risk map around selected schools

4

Propose nature-based solutions to mitigate flood risk

Linked to the SDGs

SDG 11

Sustainable Cities

SDG 6

Clean Water & Sanitation

SDG 13

Climate Action

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METHODOLOGY

How the data was gathered

100

respondents surveyed

Who

Parents, teachers, Pupils & community members

Sampling

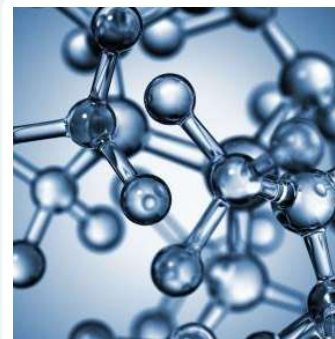
Simple random, snowball & purposive

Schools

Twashuka Primary (Kanyama) · Golden Gates (Kalikiliki)

Tools

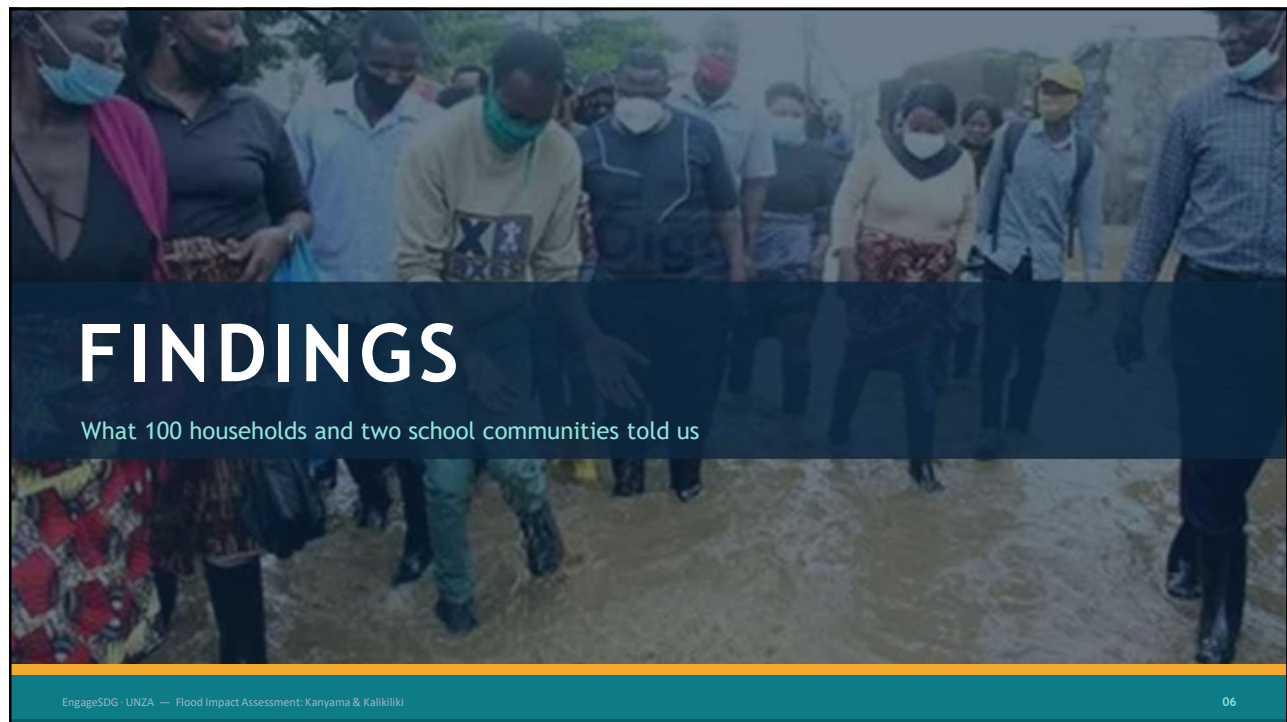
Questionnaire & interview guide via Kobo Collect



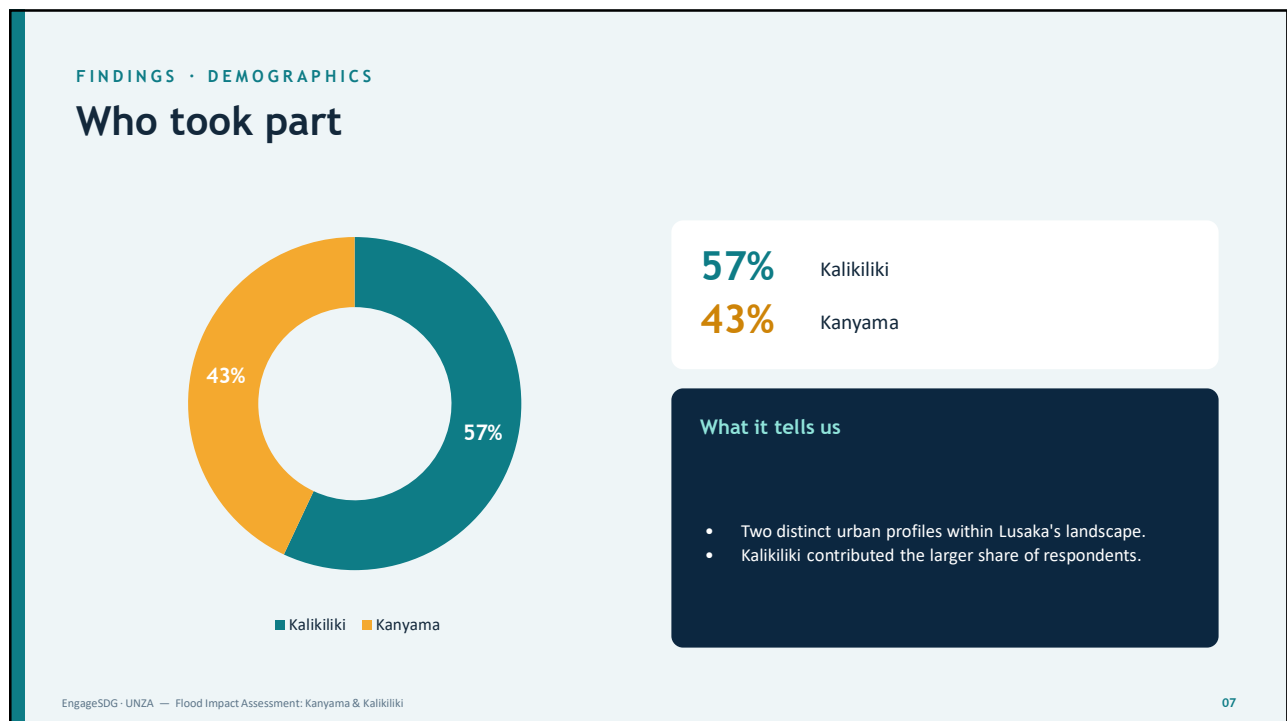
Clean-water & sanitation lens (SDG 6)

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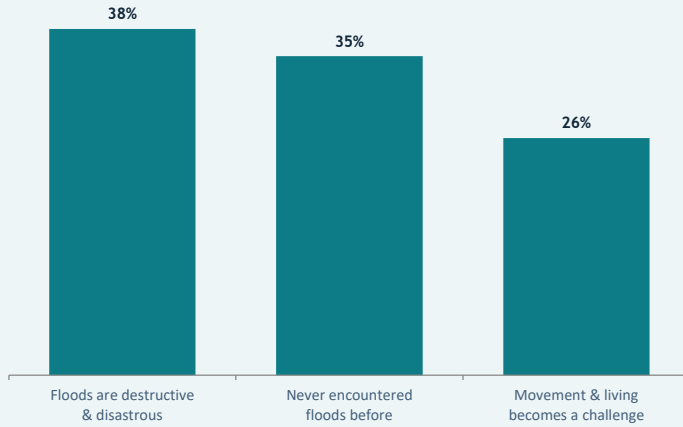


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FINDINGS • LIVED EXPERIENCE

How residents experience floods



Floodwater around homes in the settlement

The largest group sees floods as highly destructive — while some have never been exposed, showing uneven risk.

FINDINGS • CHILDREN

Impact of floods on school children

80%

of school children are affected after floods

20% report no direct impact — safer locations or greater resilience



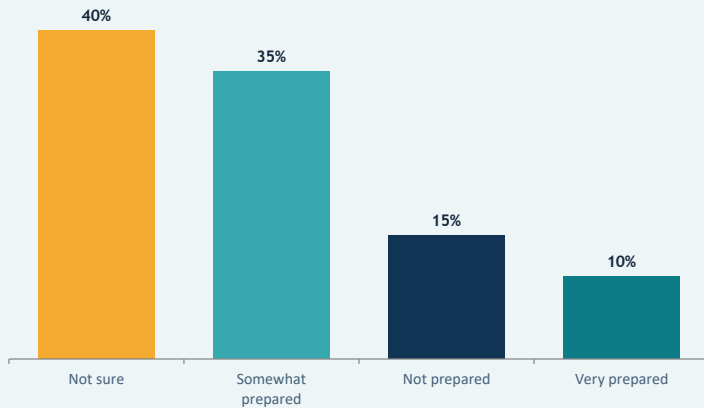
Carried to safety through the water

TAKEAWAY

- Floods are not only a housing and health issue — they directly undermine children's education and future.
- Stronger school infrastructure, safe routes and community preparedness are critical to protect learning.

FINDINGS • READINESS

Preparedness of individuals



TAKEAWAY

- Most residents are uncertain or only partially prepared.
- Very few households have strong resilience measures in place.
- Community education, early-warning systems and household plans are urgently needed.

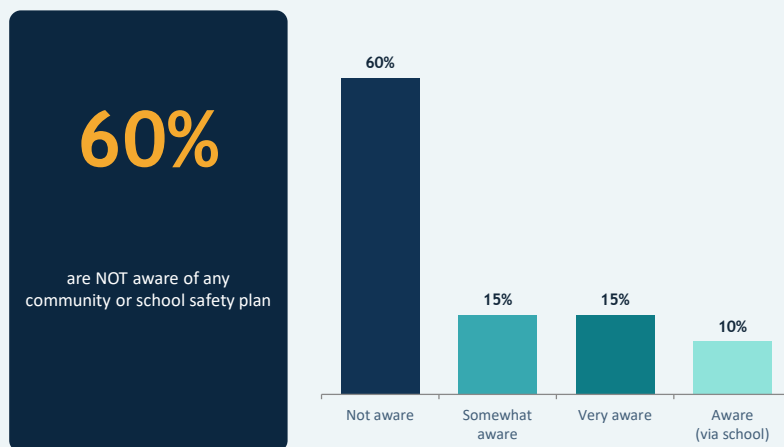
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FINDINGS • AWARENESS

Awareness of safety plans



TAKEAWAY

- Most households are unaware of safety plans, leaving them exposed during floods.
- Schools help, but coverage is limited.
- Awareness campaigns and school-community partnerships are essential.

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FINDINGS • CONSENSUS

Safety recommendations for children

100%

community agreement that child-safety measures are needed

1

Clear priority

Child safety is a unanimous community priority.

2

Unique risks

Floods pose distinct dangers to children — measures must be tailored.

3

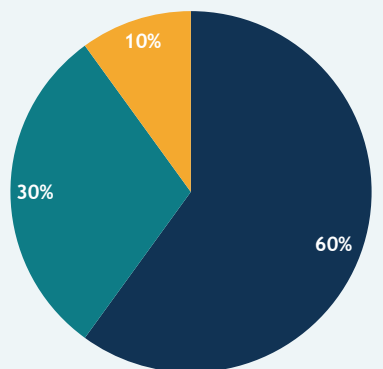
Strong demand

Practical guidelines, safe routes and child-focused awareness programs.

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FINDINGS • WELLBEING

How floods change children's moods



■ Fear, stress & sickness ■ No change (used to floods)
 ■ Children feel nice (play in water)

60%

Fear, stress and sickness — the dominant response

30%

No change; children have normalised the floods

10%

Some enjoy playing in the water

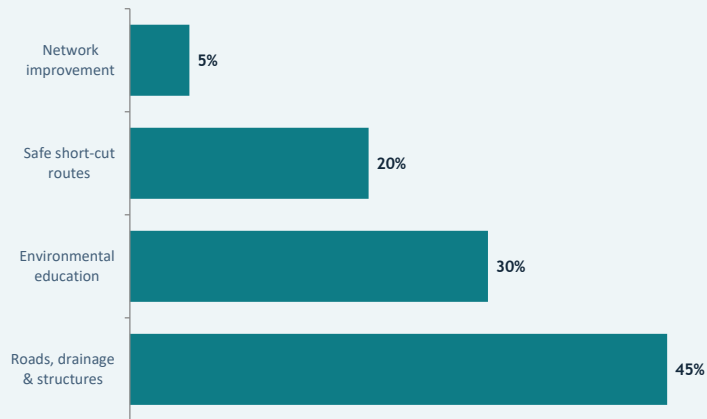
Floods deeply affect children's mental health — psychosocial support and safe spaces are needed.

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FINDINGS • PRIORITIES

Support needed in both compounds



Where investment matters most

- Infrastructure (roads & drainage) is the most urgent need.
- Education and safe routes are critical for long-term resilience.
- Even lower-priority network upgrades aid disaster response.

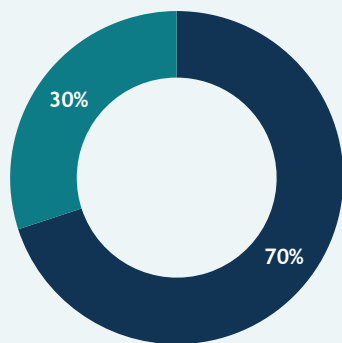
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FINDINGS • RELIEF

Resources received during floods



■ Received nothing at all ■ Received some support

70% of households received no relief at all during floods

What reached people

- 30% received blankets, chlorine, food, mattresses & lollipops via community workshops and schools.
- Distribution is uneven and insufficient — stronger coordination and equitable support are needed.

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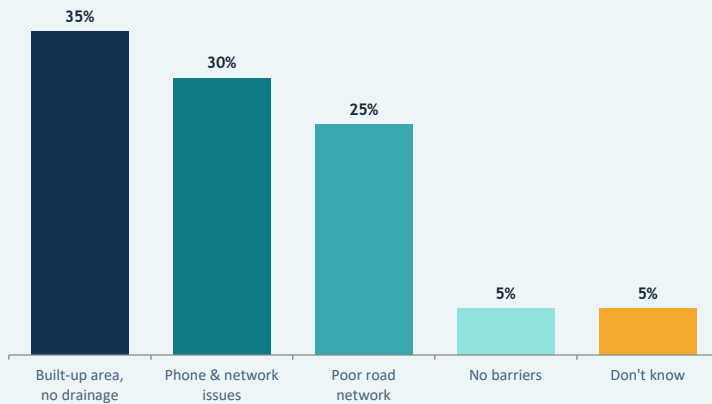
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FINDINGS • BARRIERS

Barriers to flood resilience



TAKEAWAY

- Infrastructure gaps — drainage and roads — are the biggest obstacles.
- Communication challenges weaken early-warning systems.
- Limited awareness signals the need for community education.

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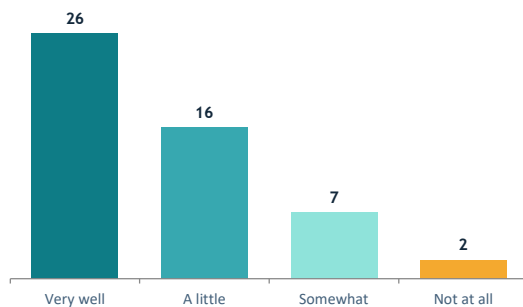
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FINDINGS • PUPILS' VOICE

What pupils told us — knowing what to do

Do you understand what to do if there's a flood at school?



If told to evacuate, what should you do?

73%

Follow the teacher · 15%

Stay in class · 12%

would go straight to a designated safe area

Most pupils know the safe response — a strong base to build drills on.

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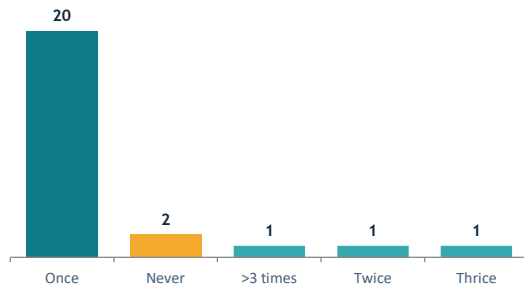
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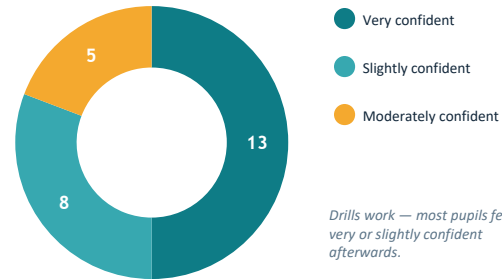
FINDINGS · PUPILS' VOICE

What pupils told us — drills & confidence

How often does your class practise flood drills each year?



After a drill, how confident do you feel about staying safe?



RECOMMENDATION

Draft school flood-safety guidelines

BEFORE

Planning & preparedness

- School emergency & evacuation plan
- Disaster kits: gum boots, raincoats, umbrellas
- Map hazardous areas on & around school
- Repair footbridges, improve drainage
- Awareness for parents, teachers & learners

DURING

Response to flood threats

- Monitor weather updates & forecasts
- Share warnings via radio, TV, SMS, WhatsApp
- Enforce safety rules — no playing in floodwater
- Release learners before heavy rainfall
- Direct Met-Department link to schools

AFTER

Recovery after floods

- Unblock drainage, maintain roads
- Rehabilitate buildings & replace materials
- Disinfect affected areas such as toilets
- Counselling for flood-related trauma
- Temporary classrooms keep learning going

ON THE GROUND

Community engagement in action



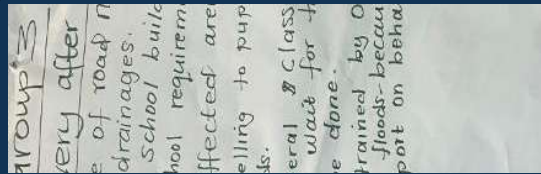
The research & community team



Workshop group discussions



Co-creating flood responses



Recovery actions, in pupils' words

CONCLUSION

What the evidence tells us

1 Lives disrupted

Floods hit housing, health, education and safety across Kanyama & Kalikiliki.

2 Children most at risk

Schooling is disrupted and stress levels rise during floods.

3 Low preparedness

Awareness and readiness are low, leaving households exposed.

4 Clear community demand

Better drainage, infrastructure, child safety and fair relief.

5 Tackle root barriers

Poor roads, weak communication and missing drainage must be fixed for resilience.

THANK YOU

Safe Urban Schools through Community-Led
Greening

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