RESEARCH REPORT

Climate Risk and Vulnerability Assessment of School Sanitation Systems

Patongo Town Council, Agago District, Uganda

Findings and recommendations from an assessment of nine primary and nursery schools, February 2025

Network for Water and Sanitation (NETWAS) Uganda

November 2026

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About this report

This report presents the results of a climate risk and vulnerability assessment of sanitation systems in nine primary and nursery schools in Patongo Town Council, Agago District. It is intended for school leaders, Patongo Town Council, Agago District Local Government, line ministries, development partners and civil society working on water, sanitation and hygiene (WASH) and climate resilience.

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Disclaimer: The findings describe the nine schools assessed and should not be generalised to all schools in Agago District. Views expressed are those of NETWAS Uganda.

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Acronyms and abbreviations

DLG	District Local Government
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
LRA	Lord's Resistance Army
MHM	Menstrual hygiene management
MoES	Ministry of Education and Sports
MWE	Ministry of Water and Environment
NETWAS	Network for Water and Sanitation
ODF	Open defecation free
OPM	Office of the Prime Minister
SMC	School management committee
SSP	Sanitation Safety Planning
UBOS	Uganda Bureau of Statistics
UNICEF	United Nations Children's Fund
VIP	Ventilated improved pit (latrine)
WASH	Water, sanitation and hygiene
WASH-NAP	WASH National Adaptation Plan
WHO	World Health Organization
WinS	WASH in Schools

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Executive summary

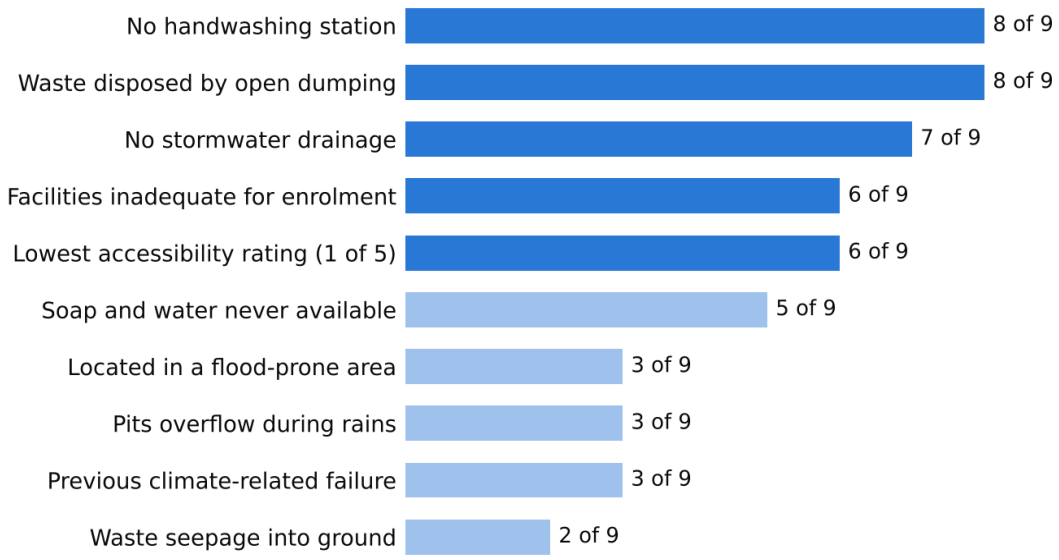
None of the nine schools assessed in Patongo Town Council has a sanitation system that is safe and climate-resilient. Two schools, Patongo Akwee and Patongo Primary School, are at very high risk. Together they hold 2,819 learners, just over half of the 5,552 learners covered.

The assessment covered nine primary and nursery schools between 3 and 5 February 2025. It used the Risk Assessment Tool for Identifying Vulnerabilities in Sanitation Systems and Climate Impact, collected on mWater. The main findings are:

- **Hygiene is the weakest link.** Only 1 of 9 schools had a handwashing station. No school always had soap and water: 5 never did and 4 only sometimes.
- **Waste is not safely managed.** In 8 of 9 schools, waste from the facilities ends up in open dumping. The ninth uses a refuse pit.
- **Too few latrines.** Six of 9 schools (67%) said their facilities are not enough for the number of learners. Long queues were reported, and in two schools children defecate in the open.
- **Flooding hits a distinct group of schools hard.** Three schools are in flood-prone areas, and all three report pits that overflow in the rains. Two also report waste seeping into the ground. At Patongo Primary School the latrine is 15 m from a water source.
- **Little protection against stormwater.** Seven of 9 schools have no drainage to divert stormwater. Two of the three flood-prone schools have none.
- **Many schools exclude learners with disabilities.** Six of 9 schools scored the lowest possible rating (1 of 5) for accessibility. The schools reported 60 learners with disabilities.
- **Climate hazards are mixed.** Drought cutting water for sanitation was cited by 4 schools, flooding by 3, high winds by 3 and soil erosion by 1. Three schools have already had a climate-related failure.

Figure 1 shows how common each gap is across the nine schools.

Figure 1. Number of schools with each sanitation and climate gap (n = 9)



Source: NETWAS Uganda analysis of the Patongo sanitation and climate risk assessment, 3–5 February 2025 (n = 9 schools).

The composite risk index in Section 8 ranks two schools very high, four high and three moderate. No school scores low.

The most urgent actions are cheap and quick. Every school needs handwashing stations with a reliable supply of soap and water. Drainage channels should be opened at the three flood-prone schools before the next rainy season. Squat holes, doors and cracked walls need repair. Over the medium term, the town council, the district and partners should add latrine stances, build accessible stances and MHM rooms, and replace open dumping with managed waste disposal. In flood-prone sites, they should move to raised, lined or drainable latrines. School sanitation should also be built into Agago's district contingency planning and post-ODF Sanitation Safety Planning, in line with Uganda's WASH National Adaptation Plan (2026–2030).

1. Introduction and background

1.1 Agago District and Patongo Town Council

Agago District is in the Acholi sub-region of Northern Uganda. It was created from Pader District in July 2010. The 2024 census counted 307,235 people in the district, up from 227,792 in 2014 (UBOS via City Population). That is about 35% growth in ten years, and it adds pressure on schools and their sanitation facilities.

Patongo Town Council had 12,604 residents in 2024 (UBOS via City Population). It is one of the district's main trading centres. The town grew from a large camp for people displaced by the LRA insurgency and became a town council in July 2010 (Patongo, Uganda). Its schools serve both the town and the rural parishes around it.

1.2 Climate hazards in Agago

Agago has two climate extremes every year: long dry spells and heavy rains that cause floods. In November 2024 the district chairperson reported that 24 of its 26 sub-counties were affected by floods, and that more than 1,000 farmers had lost crops (The Independent, Nov 2024). Heavy flooding came back in late 2025, and the district chairperson took it to the Office of the Prime Minister (Rapa FM, Nov 2025). The Office of the Prime Minister's district profile also lists floods, waterlogging and bush fires among Agago's main hazards (Agago HRV Profile).

Patongo already has a history of climate damage to sanitation. In 2023, residents and the assistant district water officer said latrines built in the dry season often collapse when the rains come. The WASH Alliance introduced drainable latrines in parts of Agago, including Patongo, in response (New Vision, 24 Apr 2023). The same report put Agago's sanitation coverage at about 56%, up from 47.8%.

Urban drainage and waste are getting worse. In April 2025 residents raised concerns that the old Patongo market floods whenever it rains (Radio Wang Ooh, Apr 2025). In September 2025, plastic waste was blocking drains in the town council. The mayor said the council has no garbage trucks or bins (Radio Wang Ooh, Sep 2025). These town-wide problems put schools at risk: stormwater flows through school compounds, and town services do not collect school waste.

1.3 National standards and evidence on WASH in schools

Uganda's national norm is one latrine stance for every 40 learners, with separate stances for girls and boys. The 2016 national School WASH mapping found an average of 73 pupils per stance. It also found handwashing facilities in only 40% of schools and basic hygiene services in 37% (MoES WinS User Guide, 2020). UNICEF reported a national average of about 71 learners per stance in 2020 (UNICEF Uganda).

The WASH National Adaptation Plan (2026–2030) estimates that 74.75% of schools have basic sanitation. Basic hygiene is far lower: only 12% of rural schools have it, against 44.64% of urban schools (MWE, WASH-NAP 2026–2030). Worldwide, one school in three lacks a basic hygiene service (WHO/UNICEF JMP 2024).

1.4 Policy context: climate-resilient sanitation

Uganda launched the world's first WASH-specific National Adaptation Plan (UNICEF Uganda). The plan notes that floodwater often flushes out latrines and contaminates water sources. It also says resilient WASH in schools supports attendance and retention, especially for girls. It calls for climate-resilient WASH standards and designs, stronger district contingency plans, and better community knowledge and practice.

WHO's Sanitation Safety Planning manual, updated in 2022, gives step-by-step guidance on finding and managing climate risks along the sanitation chain (WHO). Research in Ugandan small towns found a 'drought–flood paradox': communities give priority to drought measures even where flood risk is just as high (Eawag, 2026). That framing helps explain parts of the Patongo results.

This assessment adds school-level evidence to that picture. It also supports NETWAS Uganda's work in Agago to build Sanitation Safety Planning into routine post-ODF monitoring.

2. Objectives, scope and methodology

2.1 Objectives

The assessment set out to:

1. Find structural and service weaknesses in school sanitation facilities in Patongo Town Council.
2. Measure how exposed those facilities are to floods, drought, high winds and erosion.
3. Record what users see as concerns and how resilient they think their facilities are.
4. Identify short- and long-term actions to make the facilities safer and more resilient.

2.2 Scope and sample

The assessment covered nine primary and nursery schools in three villages of Patongo Town Council: Pece (5 schools), Forest (2) and Oporot (2). Data were collected between 3 and 5 February 2025, during the dry season. One or two assessors visited each school. All nine records were submitted as final, with GPS coordinates and photographs.

2.3 Tool

The tool was administered on mWater. It has six parts:

1. School profile: enrolment by sex and the number of learners with disabilities.
2. Facility type.
3. Physical condition, rated 1–5 for structural integrity, roofing, foundation stability and accessibility for persons with disabilities. This report reads 5 as best and 1 as worst; Section 11 explains why.
4. Climate exposure: flood-prone location, nearness to water sources, overflow, seepage, seasonal usability, drainage and weather impacts.
5. Hygiene and waste: handwashing stations, soap and water, waste disposal and related illness.
6. User views and recommended interventions.

2.4 Analysis

The closed questions were tabulated as counts and shares of the nine schools. The open answers were coded by theme. To rank the schools, the analysis built a composite Climate–Sanitation Risk Index (0–100, higher means more risk) from four parts:

Table 1. Components and weights of the Climate–Sanitation Risk Index

Component	Weight	Indicators (each scored 0 = no risk, 1 = risk)
Climate exposure	35%	Flood-prone site; pits overflow in rains; seepage into ground; less usable in some seasons; near a water source that may be contaminated; no stormwater drainage
Service gaps	25%	Facility inadequate for population; no handwashing station; soap and water never (1) or sometimes (0.5) available; open dumping of waste
Physical condition	25%	Average of the structural, roofing and foundation ratings, rescaled so 5 = 0 and 1 = 1
Accessibility	15%	Accessibility rating, rescaled the same way

Climate exposure has the largest weight because it is the focus of the tool. Schools were placed in bands: very high (55 or more), high (40 to under 55) and moderate (under 40). The index is a way to set priorities, not an absolute measure of risk. The ranking does not change much if the weights change, because the two highest-scoring schools stand well above the rest.

3. Profile of the assessed schools

The nine schools have 5,552 learners: 2,887 boys (52%) and 2,665 girls (48%). They reported 60 learners with disabilities (1.1%); Maraty did not report a figure. The schools range from 103 to 1,419 learners. VIP latrines are the main technology, used in 7 of the 9 schools.

Table 2. Enrolment, learners with disabilities and sanitation facility type by school

School	Village	Boys	Girls	Total	Learners with disabilities	Facility type
Patongo Akwee	Pece	701	718	1,419	28	VIP latrines
Patongo Primary School	Forest	714	686	1,400	3	VIP latrines
Moodege Primary School	Oporot	336	292	628	12	Ecosan toilets
Paorhina Primary School	Forest	305	266	571	0	VIP latrines
Christ Hand Nursery and Primary School	Pece	266	211	477	4	Pit latrines
Patongo Integrated Nursery and Primary School	Oporot	244	206	450	2	VIP latrines, flush toilets
Maraty Primary and Nursery School	Pece	141	143	284	not recorded	VIP latrines
St. Joseph Primary and Nursery School	Pece	120	100	220	10	Pit and VIP latrines
Fildamay Nursery and Primary School	Pece	60	43	103	1	VIP and drainable latrines
Total		**2,887**	**2,665**	**5,552**	**60**	

The two largest schools, Patongo Akwee and Patongo Primary, hold 51% of all learners assessed. They are also the two schools at highest risk (Section 8).

4. Findings: physical condition, adequacy and inclusion

Most structures stand up, but walls are the weak point, and access for learners with disabilities is poor. Average ratings out of 5 were 3.9 for roofing, 3.9 for foundations and 3.4 for walls (structural integrity). Accessibility averaged 2.2.

Table 3. Physical condition ratings across the nine schools

Rating (1 = worst, 5 = best)	Average	Lowest	Schools rated 1–2
Structural integrity (walls)	3.4	2	2 (Patongo Akwee, Patongo Primary)
Roofing	3.9	3	0
Foundation stability	3.9	3	0
Accessibility for persons with disabilities	2.2	1	6

4.1 Structural condition

The two largest schools have the weakest walls. Both scored 2 for structural integrity and 3 for foundations. Assessors recorded cracked walls and missing door shutters on the girls' block at Patongo Akwee, and roofs to replace at Patongo Primary. Smaller faults came up in other schools too. Squat holes were too small, so urine and faeces fall outside them (St. Joseph, Paorhina). Doors were missing (St. Joseph). At St. Joseph, one latrine block seemed loose on its base. A storm had also blown the roof off a classroom block there, which shows that wind is a real threat to light structures.

4.2 Adequacy for the school population

Six of 9 schools (67%) said their facilities are not enough for their learners. The problems reported were long queues (Patongo Akwee, Patongo Primary, Maraty), overcrowding (Paorhina) and too few stances for the number of pupils (Patongo Integrated, Moodege). At Maraty, children defecate outside because of the queues. At Christ Hand, which rated its facilities as adequate, open defecation still happens, mainly in the nursery section.

The tool did not count stances, so pupil-per-stance ratios cannot be worked out against the national norm of 40 (Section 11). Even so, the queues and open defecation point to ratios well above the norm.

4.3 Inclusion: disability and gender

Six of 9 schools scored 1, the lowest rating, for accessibility. These six schools enrol 2,953 learners and reported 45 of the 60 learners with disabilities, plus an unrecorded number at Maraty. Patongo Akwee has the most learners with disabilities (28) and an accessibility score of 1. Only Moodege and Paorhina scored 5.

Gender needs came up again and again. Schools asked for a changing room for girls (St. Joseph), sanitary pads (Patongo Integrated, Fildamay) and an incinerator for menstrual waste (St. Joseph, Christ Hand). They also asked for labelled latrine blocks for girls and boys (Christ Hand) and doors on the girls' block (Patongo Akwee). The tool did not ask about menstrual hygiene facilities directly, and no school mentioned having one.

5. Findings: climate hazard exposure and system failures

Flooding is the hazard that most directly breaks sanitation systems in Patongo, and it falls on three schools. All three flood-prone schools report pits that overflow in the rains. None of the six schools on

higher ground does. Drought was named more often (4 schools), but it mainly cuts the water available for cleaning and handwashing rather than damaging the facilities.

5.1 Exposure by school

Table 4. Climate exposure indicators by school

School	Flood-prone	Pits overflow in rains	Seepage into ground	Less usable in some seasons	Stormwater drainage	Distance to water source (m)	Hazards reported
Patongo Primary School	Yes	Yes	Yes	Yes	None	15	Flooding
Patongo Akwee	Yes	Yes	Yes	Yes	None	200	Flooding
Moodege Primary School	Yes	Yes	No	No	Working	200	Flooding, erosion, high winds
Patongo Integrated	No	No	No	No	Working	100	Drought
St. Joseph	No	No	No	No	None	50	Drought
Fildamay	No	No	No	No	None	50	Drought
Paorhina	No	No	No	No	None	200	Drought
Maraty	No	No	No	No	None	400	High winds
Christ Hand	No	No	No	No	None	200	High winds

5.2 What the pattern shows

- **Flooding and overflow go together exactly.** The three flood-prone schools are also the three with overflowing pits. A flood-prone location is the clearest warning sign that a latrine will fail.
- **Pits fill from below, not just from rain falling on them.** At Patongo Akwee, water rises to about three-quarters of the pit depth in the rains and the area turns swampy. At Patongo Primary, the pits fill with water. This points to a high water table, so groundwater is directly exposed to faecal contamination.
- **The worst case is Patongo Primary School.** It is flood-prone, its pits overflow and seep, and it is only 15 m from a water source, the one school recorded as at risk of contaminating one. Ugandan latrine guidance puts pit latrines at least 30 m from any water source (school latrine guide), so 15 m is half the minimum.
- **Drainage is mostly missing.** Seven of 9 schools have no stormwater drainage. Only Moodege and Patongo Integrated have working drains. Patongo Akwee and Patongo Primary are flood-prone and have none. Both named opening drainage channels as a priority.
- **Ecosan toilets are not immune.** Moodege's raised Ecosan toilets scored well for structure (foundation 5), but floods still carried waste out of the collection chambers into the open.

5.3 Past failures caused by climate events

Three schools (33%) have already had a failure linked to the weather:

- **Patongo Akwee:** pit latrines filled up during floods.
- **Moodege:** floodwater carried human waste out of the Ecosan chambers and spread it in the open.

- **St. Joseph:** strong wind blew the roof off a classroom block. This was not a latrine, but it shows how exposed school buildings are to wind.

Two more schools named high winds as a hazard (Maraty, Christ Hand), and Moodege named soil erosion. High temperatures and lack of shade were raised at Maraty and Christ Hand. These are heat-stress concerns that affect learning more than they affect sanitation.

6. Findings: hygiene, waste management and health

Hygiene and waste management are failing in almost every school, whatever the climate. This is the most common gap in the data, and the cheapest to fix.

6.1 Handwashing

Only St. Joseph had a handwashing station when the assessors visited. That means 8 of 9 schools (89%) and 5,332 of the 5,552 learners (96%) had none. No school always has soap and water. Five schools never do, and four have them only sometimes.

These figures are well below both the national average of 40% of schools with handwashing facilities in 2016 and the WASH-NAP figure of 12% of rural schools with basic hygiene. In practice, none of the nine schools meets the JMP definition of a basic hygiene service: a handwashing facility with water and soap available.

Drought makes this worse. Four schools named lack of water during drought as their main climate impact. Paorhina named an inadequate water supply as its main concern, and Patongo Integrated asked for a borehole on the school compound.

6.2 Waste disposal

Eight of 9 schools dispose of waste from their facilities by open dumping. Moodege uses a refuse pit. Several schools asked for waste bins, an incinerator for menstrual waste, or a proper solid waste system. Open dumping matters for climate resilience because rain washes the waste into drains and water sources. Patongo Integrated, Fildamay and Moodege all named human waste contaminating the environment or water as a key concern. It also links to the town-wide problem of plastic waste blocking drains (Section 1.2).

6.3 Cleanliness and operation

Assessors found soiled, uncleaned stances at Patongo Akwee and Maraty. Maraty also lacked cleaning materials and equipment. Six schools proposed regular cleaning, sensitising learners, or forming and training school health clubs as short-term actions. These answers show that day-to-day operation and maintenance, not only infrastructure, is a gap.

6.4 Health

Two schools, Patongo Integrated and Moodege, reported recurring skin infections that they link to sanitation. No school reported diarrhoea. This is self-reported by school staff and was not checked against health facility records, so it may undercount illness.

7. Findings: user perceptions of resilience

Users in five schools think their sanitation system can cope with climate impacts, but this view does not match the risks the data show. Five of 9 schools said yes. Four said no: Patongo Akwee, Patongo Primary, Maraty and Christ Hand.

7.1 Why some users think their systems are not resilient

- **Floods are not dealt with:** flood damage is not repaired properly (Patongo Akwee). There is no climate response plan, and blocks keep filling up with no action taken (Patongo Primary).
- **Heat and lack of shade:** high daytime temperatures affect learning (Maraty), and the compound has too little shade (Christ Hand).

7.2 Where perception and evidence disagree

Moodege is flood-prone, has seen floods carry waste out of its chambers, and reports skin infections. Yet its users rated the system resilient. Paorhina, Fildamay and Patongo Integrated also said yes, although none of them had a working handwashing station.

This gap fits the 'drought–flood paradox' seen elsewhere in Ugandan small towns, where people focus on more visible, slow problems and underrate floods (Section 1.4). It matters for planning. Where people do not see a risk, demand for action will be low, so awareness work has to come with any investment.

7.3 Main concerns raised by users

The open answers were coded into five themes:

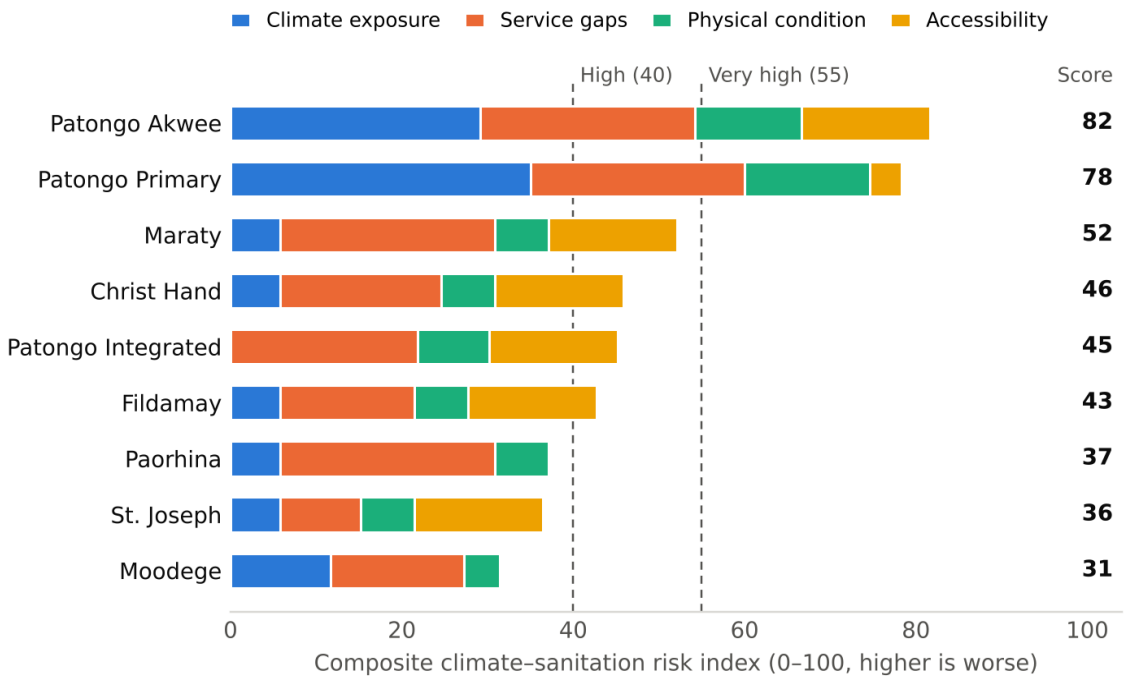
Table 5. Main concerns raised by users

Theme	Schools raising it	Examples
Too few or poorly designed stances	4	Not enough stances; small squat holes; missing doors on the girls' block; blocks not labelled by sex; no teachers' block
Flooding and overfilling of pits	3	Pits fill in the rainy season; floods spread waste
Hygiene facilities and water	3	Few or no handwashing facilities; not enough water
Contamination of environment and water	3	Waste reaching water resources; bursting latrines
Cleaning and maintenance	1 (assessors also saw soiled stances at Patongo Akwee)	No regular cleaning; not enough cleaning materials (Maraty)

8. Composite climate–sanitation risk ranking

Patongo Akwee (82) and Patongo Primary (78) are in the very high band. Four schools are high and three are moderate, and none is low (Figure 2).

Figure 2. Composite climate–sanitation risk index by school, split by weighted component



Source: NETWAS Uganda analysis of the Patongo sanitation and climate risk assessment, 3–5 February 2025 (n = 9 schools).

The two leading schools are driven by climate exposure: flooding, overflow, seepage and no drainage. Further down the ranking, the scores come mainly from service gaps and poor accessibility. Maraty, for example, ranks third with almost no flood exposure. Every school picks up at least 9 points from service gaps, which shows that hygiene and waste failures are universal.

The ranking suggests two investment paths. **Flood-proofing** (drainage, raised or lined pits) should be targeted at Patongo Akwee, Patongo Primary and Moodege. **Service and inclusion upgrades** (handwashing, waste, accessible stances, MHM) are needed in all nine schools.

9. Discussion

Patongo's school sanitation faces two kinds of risk at once. Every school has a chronic service gap, and a smaller group of schools also has an acute flood risk. Plans have to deal with both, in different ways.

1. Service gaps are found in every school, and they cost little to fix. Handwashing, soap and water, waste disposal and cleaning are inadequate almost everywhere, whatever the school's climate exposure. These gaps are worse than the national figures for rural schools. They also take away the main protection against the faecal–oral disease that floods spread. A school with good handwashing can absorb a flood event better than one without it. This is the fastest way to build resilience.

2. Flood risk is concentrated, and it follows where schools are sited. Overflow happens only in flood-prone schools, so this risk can be predicted from location. That supports targeting investment on site: drainage, raised or lined pits and drainable designs, starting with Patongo Akwee and Patongo Primary. The pits fill from below, which matches the 2023 reports of Patongo latrines collapsing in the rainy season. It suggests that ordinary unlined pits are the wrong technology on these sites.

3. Technology alone is not resilience. Moodege's Ecosan toilets are structurally the strongest in the sample, yet floodwater still carried waste out of them. Fildamay's drainable latrine only works if it is emptied safely. Resilience depends on how a facility is sited, drained, emptied and used, not just on what is built. This is the logic of Sanitation Safety Planning, which follows risk along the whole chain from the toilet to final disposal.

4. Users underrate the risk. Several schools that are exposed rated themselves resilient. When asked for long-term solutions, schools most often proposed planting trees (St. Joseph, Paorhina, Maraty) and building more latrines. Few proposed flood-proofing. This matches the 'drought–flood paradox' found in other Ugandan small towns. Without targeted awareness, schools are unlikely to ask for, or maintain, flood-resilient designs.

5. Inclusion is a resilience issue. In six schools, learners with disabilities have no accessible stance, and girls have no MHM facilities. These learners are the first to lose access when facilities fail or queues grow. The WASH-NAP links resilient school WASH to attendance and retention, especially for girls. Accessible stances and MHM rooms should be designed into any new block, not added later.

6. The school compound is linked to the town. Stormwater, blocked drains and the lack of waste collection in Patongo Town Council feed directly into the risks found in schools. Fixing schools one by one, without town-level drainage and waste services, will only go so far. That makes the town council a key actor.

10. Recommendations

Start with hygiene in every school and drainage at the three flood-prone schools before the next rains. Then invest in resilient latrine designs where the risk is highest. The actions build on what the schools proposed themselves.

10.1 Immediate (0–3 months, low cost)

Table 6. Immediate actions (0–3 months)

Action	Schools	Lead
Install handwashing stations (tippy-taps or tanks with taps) at every latrine block, with a soap budget line	All 8 without one; add more at St. Joseph	School management committees (SMCs), head teachers, partners
Dig and clear stormwater drainage channels around latrine blocks	Patongo Akwee, Patongo Primary, then the other schools without drainage	SMCs, Town Council works
Repair squat holes, fit missing doors, seal wall cracks, replace damaged iron sheets	St. Joseph, Patongo Akwee, Patongo Primary, Paorhina	SMCs, parents
Set cleaning rotas; give cleaning materials; form or revive school health clubs	All, especially Maraty and Patongo Akwee	Head teachers, senior women and men teachers
Label blocks by sex; stop open defecation in nursery sections	Christ Hand, Maraty	Head teachers
Put waste bins in classrooms and close open dumps	All	SMCs, Town Council

10.2 Medium term (3–12 months)

- **Flood-proof latrines on exposed sites.** At Patongo Akwee and Patongo Primary, build raised or lined pits, or drainable latrines, for new and rehabilitated stances, and plan safe emptying. Patongo Primary's latrines should be moved or lined because of the water source 15 m away.
- **Add stances to meet the 40:1 norm.** The six schools that reported inadequate facilities need more stances. Count the existing stances first, so the number of new ones can be calculated (Section 11).
- **Make facilities accessible and gender-responsive.** Every new block should include at least one accessible stance with a ramp and rails. Girls need an MHM changing room, with a pad supply and an incinerator or safe disposal (St. Joseph, Christ Hand, Patongo Integrated, Fildamay).

- **Secure water during droughts.** Fit rainwater harvesting on classroom roofs. Assess options for a borehole or connection to the piped supply (Patongo Integrated, Paorhina).
- **Manage solid waste.** Build lined refuse pits or incinerators at each school, and bring schools into the Town Council's waste collection and its planned by-law on dumping.

10.3 Long term (1–3 years)

- **Build school sanitation into district and town planning.** Add school sanitation risks to the Agago District and Patongo Town Council contingency plans, in line with the WASH-NAP call for stronger district plans.
- **Use Sanitation Safety Planning in schools.** Extend NETWAS Uganda's work to build SSP into post-ODF monitoring so that it covers schools. Train District Health Inspectors and school health clubs to check risks every year, before each rainy season.
- **Plant trees and create shade** for heat and wind protection, as several schools proposed. Keep the trees away from latrine pits.
- **Find land for expansion** where compounds are too small (Fildamay), and avoid siting new blocks too close to classrooms (Christ Hand).
- **Repeat the assessment in the rainy season,** using a revised tool (Section 11), to confirm the flood findings and track progress.

10.4 Roles

Table 7. Roles of key actors

Actor	Main role
School management committees and head teachers	Operation and maintenance, cleaning, soap budget, health clubs
Patongo Town Council	Drainage, waste collection, by-laws, budgeting for school WASH
Agago District Local Government (Education, Health, Water offices)	Standards, inspection, capital investment, contingency planning
NETWAS Uganda and WASH partners	Technical support, SSP roll-out, resilient designs, advocacy, monitoring
Ministry of Education and Sports, Ministry of Water and Environment	WinS standards, WASH-NAP rollout, school facilities grants

11. Limitations and data quality

The data are good enough to set priorities in these nine schools, but not to make claims about Patongo or Agago as a whole.

- **Small, purposive sample.** Nine schools in three villages of one town council. Percentages describe these schools only.
- **Assessed in the dry season.** Flood exposure, overflow and seasonal usability were reported from memory, not seen. The flood findings are probably conservative.
- **No stance count.** The tool records enrolment but not the number of stances by sex, so the pupil-to-stance ratio, the main national WinS indicator, cannot be calculated. Adding stance counts for girls, boys, teachers and accessible stances is the most important change to make to the tool.
- **Rating scale not defined in the export.** This report reads the 1–5 ratings as 5 = best. The comments back this up: schools rated 5 for access are described positively, and schools rated 2 for walls are described with cracks.

- **Inconsistent answers.** Four schools said soap and water were available 'sometimes', yet only one had a handwashing station. The answer probably refers to soap and water anywhere at the school. One school (Maraty) did not record learners with disabilities. The GPS altitude for St. Joseph (549 m, against about 1,020 m elsewhere) is a device error and was not used.
- **Self-reported health data.** Illness linked to sanitation was reported by school staff and not checked against health facility records.
- **One or two assessors per school, with no second check of ratings.** Some subjectivity is likely.

12. Conclusion

The school sanitation systems assessed in Patongo Town Council are not yet climate-resilient. In most schools, the reason is not that structures are collapsing. It is that basic hygiene and waste services are missing everywhere, and that latrines on flood-prone sites are being overwhelmed. Two large schools, holding half the learners assessed, combine both problems and need action first.

Much of the solution is cheap and in the hands of schools and the town council: handwashing stations with soap, drainage channels, repairs, cleaning routines and closing open dumps. Lasting resilience needs more. Flood-appropriate latrine designs, accessible and MHM-friendly facilities, and reliable water in droughts all require district and partner investment. Building school sanitation into Agago's contingency planning and post-ODF Sanitation Safety Planning would turn these findings into the routine practice the WASH National Adaptation Plan calls for.

Annex A. School-by-school summary

Schools are listed from highest to lowest risk score.

Table 8. School-by-school summary of risk, main problems and priority actions

School	Risk score (band)	Main problems	Priority action proposed by school
Patongo Akwee	82 (very high)	Flood-prone; pits fill to 3/4 in rains; seepage; cracked walls; no handwashing; inaccessible; queues; soiled stances	Open drainage channel; handwashing; doors; new roof on girls' block; more blocks
Patongo Primary School	78 (very high)	Flood-prone; pits fill with water; seepage; 15 m from water source; cracked walls; no handwashing; queues	Clean stances; drainage across compound; different latrine technology; replace iron sheets
Maraty Primary and Nursery	52 (high)	Queues lead to open defecation; soiled stances; no handwashing; no cleaning materials; inaccessible; high winds and heat	Health club; regular cleaning; more stances; trees
Christ Hand Nursery and Primary	46 (high)	No handwashing; blocks not labelled; no teachers' block; open defecation in nursery; block near classes; inaccessible	Handwashing; shade trees; incinerator for MHM
Patongo Integrated Nursery and Primary	45 (high)	Not enough stances; no handwashing; skin infections; inaccessible; drought	Sensitisation; pads; handwashing; borehole
Fildamay Nursery and Primary	43 (high)	No handwashing; inaccessible; small compound; risk of drainable latrine bursting	Sensitisation; pads; bins; more land
Paorhina Primary School	37 (moderate)	Overcrowding; small squat holes; cracked walls; no handwashing; water shortage	Cleaning; handwashing; trees; more blocks
St. Joseph Primary and Nursery	36 (moderate)	Small squat holes; doors missing; unstable block; few handwashing points; inaccessible; wind damage	Handwashing; repair squat holes and doors; girls' changing room; trees
Moodege Primary School	31 (moderate)	Flood-prone; floods carry waste out of Ecosan chambers; skin infections; not enough stances; no handwashing	Solid waste management; sensitisation; handwashing; more Ecosan toilets

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