



RISK ASSESSMENT DOCUMENT RECKITT – WWF JOURNEY OF WATER 2026

Project: WWF Journey of Water 2026

Location: South Africa
Johannesburg
Drakensberg
Winterton

Client: Reckitt
WWF South Africa
WWF United Kingdom

Operations: explore4knowledge
Logistics: Inspired Routes

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RISK SCORE EXPLAINED

Risk Key	Risk Score = S × E × F	
Severity (S) Fatal = 16 Serious = 8 Minor = 2	Exposure (E) Low exposure = 1–2 Moderate exposure = 3 High exposure = 4–5	Frequency (F) Rare = 1 Infrequent = 2 Occasional = 3 Often = 4 Daily = 5
	Interpreted from event conditions, environment, and categorisation tables:	Based on likelihood of occurrence during the 9-day field trip.

Original Raw Score Range	Risk Level	Meaning / Required Action
4 – 8	Low Risk	Acceptable. Standard controls are adequate. Monitor periodically.
9 – 13	Moderate Risk	Needs attention. Controls must be enforced. Additional mitigation recommended. Supervise activity.
14 – 18	High Risk	Serious hazard. Strong controls required, trained personnel only, strict supervision. Consider alternative controls.
19 – 22	Very High Risk	Dangerous. Only proceed with robust mitigation measures and expert oversight. Consider avoiding unless essential.
23 – 26	Extreme Risk	Unacceptable. Activity must not proceed without redesigning the work to reduce the risk.

New Risk Score Range	Risk Level	Meaning / Action Required
1 – 25	Low Risk	Acceptable. Standard controls are adequate. Monitor periodically.
26 – 75	Moderate Risk	Needs attention. Controls must be enforced. Additional mitigation recommended. Supervise activity.
76 – 150	High Risk	Serious hazard. Strong controls required, trained personnel only, strict supervision. Consider alternative methods.
151 – 250	Very High Risk	Dangerous. Only proceed with robust mitigation measures and expert oversight. Consider avoiding unless essential.
251 – 400	Extreme Risk	Unacceptable. Activity must not proceed without redesigning the work to reduce the risk.

Band	Score	Colour (optional)	Interpretation
Low	1–25	Green	Acceptable
Moderate	26–75	Yellow	Manage carefully
High	76–150	Orange	Needs major controls
Very High	151–250	Red	Only with extreme controls
Extreme	251–400	Black	Do NOT proceed

ORIGINAL VS NEW KEY SCORES

Original Raw Score ($S + F + E$) - This was the scoring system used in some of the old field-team sheets. - It is not seen to be mathematically meaningful under new methods, its just an additive “priority score.” - It does not scale correctly with hazard severity.	New Risk Score ($S \times E \times F$) - This is a new, internationally recognised method. - Used in NEBOSH / OSHA / ISO 45001 risk matrices. It scales exponentially, meaning: - severe events score much higher than minor events - frequent exposure drives the score upwards - high-impact hazards cannot appear deceptively “low-risk”
Why both appear in your tables “Original Raw Score” is kept only for legacy comparison (many of your documents historically used it). “New Risk Score” is the real measure you use for decision-making.	Raw Score vs New Score <i>Original Raw Score ($S + F + E$)</i> legacy score <i>New Risk Score ($S \times E \times F$)</i> current risk rating used for decisions

Note.

Some of these tables do not have an old and a new score, that is because they have been built and interpreted from other risk documents and the explore4knowledge team will reference these supporting and master documents when needed.

INCIDENT, RISK AND SUPPORTING DOCUMENTS

CRITICAL INCIDENT DOCUMENT

As per the contracts and previous discussions, this is an explore4knowledge® (e4k®) project managed through and in collaboration with Inspired Routes, as payments needed to be facilitated in South Africa.

Below is the Inspired Routes Critical Incident Management Plan, which will be implemented for this project alongside e4k®, our Medical Team (see linked Risk Document), and the various suppliers involved along the route.

<https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/CRITICAL-INCIDENT-MANAGEMENT-INSPIRED-ROUTES.pdf>

RISK ASSESSMENTS

The following documents are the detailed risk assessments and medical evacuation plans provided to us by the subject experts and contracted providers for this expedition.

Full Medical Risk Assessment

<https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/Medical-Operations-Plan-for-WWF-Field-Trip-March-2026.pdf>

Full Paddling Risk Assessment - 001

https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/RA_Tugela-River_Bergville-to-Spioenkop-Dam.pdf

Full Paddling Risk Assessment – 002

https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/RA_Tugela-River_Mambasa-to-Alpine-View.pdf

Full Paddling SOP

https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/SOP_Drakensberg-hiking-overall.pdf

CHECK LIST TEMPLATES

The following are check lists that all suppliers and accommodation providers have filled in and provided to us, these are kept on record as part of our due diligence for the project and are used to develop our risk assessment documents.

Check List For Accommodation

<https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/e4k-Accommodation-Safety-Check-list-Dec-2025.pdf>

Check List For Suppliers

<https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/Activities-Supplier-Check-List.pdf>

Check List For Transport Suppliers

<https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/Transportation-Supplier-Check-List.pdf>

ACCOMMODATION

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	S	F	E	Original Raw Score (S+F+E)	New Risk Score (S×F×E)
Moving around in general	Slips & trips	Tripping over objects, slipping on wet/uneven surfaces	Good housekeeping; strategic lighting; clear walkways; maintain dry surfaces	Coordinator	2	1	2	5	4
Stairs	Steep steps	Falling	Warning given of steep steps; lighting maintained	Coordinator	2	3	1	6	6
In camp / At Accommodation	Dangerous animals	Mauling, trampling, bites	Maintain distance; avoid feeding; guides monitor behavior; briefings on animal safety	Guide / Coordinator	6	1	3	10	18
In camp / At Accommodation	Venomous scorpions	Stings / allergic reaction	Shake out shoes; avoid debris; monitor at night; educate participants;	Guides / Camp staff / Medic	4	2	1	7	8
In camp / At Accommodation	Venomous snakes	Bites, allergic reactions	Stay on paths; wear closed shoes; night torch use; avoid thick vegetation	Guides / Camp staff / Medic	4	2	1	7	8
In camp / At Accommodation	Venomous spiders	Bites, necrosis	Avoid woodpiles; shake clothing; avoid placing hands blindly	Guides / Camp staff / Medic	4	2	1	7	8
In camp / At Accommodation	Trees	Falling branches	Remove dead branches; inspect routinely	Camp staff	3	1	3	7	9
In camp / At Accommodation	Insects	Stings / allergic reactions	Encourage use of repellent; remove nests; treatment supplies available	Guides / Camp manager / Medic	2	2	2	6	8
In camp / At Accommodation	Contact with plant matter	Allergic reaction / dermatitis	Avoid unknown plants; maintain clear walkways	Guides / Camp manager / Medic	2	2	1	5	4
In camp / At Accommodation	Electric outlets	Electric shock	Outlets professionally installed; regular inspections	Camp manager	4	2	1	7	8

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	S	F	E	Original Raw Score (S+F+E)	New Risk Score (S×F×E)
In camp / At Accommodation	Fireplace	Burns	Warnings provided; maintain safe distance; fire monitored	Camp manager / Medic	2	1	2	5	4
In camp / At Accommodation	Showers	Slips, burns	Warn about slippery floors; maintain water temp controls	Camp manager / Medic	2	1	2	5	4
In camp / At Accommodation	Sharp kitchen utensils	Cuts, puncture wounds	Store knives safely; training for staff	Camp manager / Kitchen staff	2	1	2	5	4
In camp / At Accommodation	Games & activities	Falls, physical injury	Activities supervised; equipment checked; safety briefings	Activity leaders / Medic	2	2	2	6	8
In camp / At Accommodation	Slippery surfaces	Slips	Floors mopped quickly after rain/spills	Camp manager	2	1	4	7	8
In camp / At Accommodation	Lightning	Electrocution (rainy season)	Avoid open areas; suspend activities; seek shelter	Camp manager	8	1	1	10	8
In camp / At Accommodation	Flooding	Injury, drowning	Move to higher ground; avoid riverbanks; monitor rainfall	Camp manager	2	3	1	6	6
In camp / At Accommodation	Heat effects	Heat exhaustion / dehydration	Hydration encouraged; adjust activities; supply shade	Guides / Staff / Medic	2	1	3	6	6
In camp / At Accommodation	Thorns	Puncture wounds	Encourage closed footwear; maintain pathways	Guides / Staff / Medic	2	1	2	5	4
In camp / At Accommodation	Meals	Food poisoning	Food stored correctly; staff trained; hygiene monitored	Kitchen staff	6	1	1	8	6
In camp / At Accommodation	Rabid animals	Bites, rabies risk	Report animals; guides intervene; awareness briefings	Guides / Staff / Medic	8	1	1	10	8
In camp / At Accommodation	Vehicle movement	Collision	Only trained drivers; speed restrictions; controlled movement zones	Drivers / Specialists	2	3	2	7	12
Johannesburg	Criminal activity	Attack, robbery, hijacking	Secure accommodation; alarms; travel in groups; security briefings	Guides	8	2	2	12	32

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	S	F	E	Original Raw Score (S+F+E)	New Risk Score (S×F×E)
Johannesburg	Accommodation	Break-in, attack	Secure property; CCTVs; perimeter check; staff guidance	Staff	6	1	2	9	12

VEHICLE AND ROAD TRANSFERS

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score(S+F+E)	New Risk Score(S×E×F)
Transfers	Vehicles	Unicorn vehicles (unknown / unauthorised vehicles on route)	Pre-trip briefings on hazards; high vigilance by drivers; convoy spacing and comms; radios/phones in all vehicles; safe passing/avoidance strategies.	Drivers / Guides	8	1	1	10	8
Transfers	Vehicles	Vehicle accident	Vehicles roadworthy and legally compliant; regular checks; speed limited to ±80 km/h; experienced licensed drivers; med kits and evac gear in vehicles; weather and road conditions monitored; delays in severe weather.	Drivers / Guides	8	1	1	10	8
Transfers	Vehicles	Vehicle breakdown	Regular servicing to SA standards; pre-trip inspections; spares and tools carried; recovery equipment and support vehicle; convoy spacing for safe pull-over; communication maintained.	Drivers / Guides	2	3	1	6	6
Transfers	Weather	Lightning (rainy season only)	Lightning-safety briefing; activities paused when lightning present; participants avoid open/high/metal areas; vehicles used as safe shelter; conditions monitored.	Drivers / Guides	8	1	1	10	8
Transfers	Weather	Flooding (rainy season only)	Avoid low crossings and obviously flooded areas; monitor river levels and weather; choose	Drivers / Guides	2	3	1	6	6

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score(S+F+E)	New Risk Score(S×E×F)
			alternative routes; avoid gravel/erosion-prone roads when heavy rain expected.						
Transfers	Criminals	Conflict / injury (crime / civil unrest)	Briefings on situational awareness; avoid known hotspots; coordinate with SAPS/local intel; maintain convoy integrity; minimise stopping in isolated/high-risk areas; emergency contacts ready.	Drivers / Guides	8	3	1	12	24
Transfers	Logistics	Towing trailers	Trailers rated for towing vehicle; pre-trip checks on tyres, lights, hitches, safety chains; drivers trained in towing, reversing and braking distances; reduce speed on wet/gravel/steep sections; extra caution on narrow or winding roads.	Drivers / Guides	8	3	1	12	24
Transfers	Driving	Driving in convoy	Lead/sweep vehicles; spacing and speed protocols; radio comms between vehicles; planned safe stopping points; convoy travels at speed of slowest vehicle; no overtaking in unsafe areas.	Drivers / Guides	8	3	1	12	24

OFFROAD DRIVING

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (Summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score (S+F+E)	New Risk Score (S×E×F)
Game Drive	Climbing onto/off vehicle	Tripping & falling	Guides assist participants; verbal warnings; steps provided for ease of entry/exit.	Guides / Coordinators	1	3	3	7	9
Game Drive	Rough vehicle movements	Injuries from sudden movements	Guides know tracks & terrain; coordinators warn of hazards; handholds available.	Guides	1	3	3	7	9
Game Drive	Jacking, wheel changing, vehicle recoveries	Injury from falling jacks, ropes/cables snapping	Only guides/coordinators change wheels; participants moved to safe distance; correct tools used.	Guides	2	1	1	4	2
Game Drive	Muddy roads	Vehicle slipping; unexpected movements causing injury	Guides alert participants to hold handholds; trained in wet-condition driving.	Guides	2	2	1	5	4
Game Drive	Trees & thorns	Collision; penetration injuries	Roads cut back; verbal warnings; sunglasses encouraged for eye protection.	Guides / Reserve Manager	2	2	1	5	4
Game Drive	Body parts outside vehicle	Crushing / scraping injuries	Instruct participants to keep limbs inside; visual checks by guides.	Guides	2	2	1	5	4

Additional Risks to consider:	9 – Tripping/falling when climbing on/off vehicle 9 – Rough vehicle movements 4 – Muddy roads	4 – Trees & thorns 4 – Body parts outside vehicle 2 – Wheel changing/jack failure
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MEDICAL RISK ASSESSMENT

Please access the full detailed Medical risk assessment at the following link:

<https://reckitt2026sa.explore4knowledge.com/wp-content/uploads/2025/12/Medical-Operations-Plan-for-WWF-Field-Trip-March-2026.pdf>

Medical & Health Hazards	Operational Hazards	Highest Risk	NAME CONTACT NUMBER
- Medical emergency in remote terrain - Delayed access to definitive care - Hypothermia / exposure - Dehydration / heat illness - Pre-existing medical condition deterioration - Snakebite / allergic reactions - Major trauma (falls, vehicle accident)	- Difficult patient access (terrain, weather) - Communication failure - Road travel incidents - Helicopter landing zone hazards - Mass-casualty / major incident - Criminal / security incident - Night-time navigation / low visibility (we will not actively be doing night-time activities).	Remote-area medical emergency — 256 Road travel incident — 192 Major incident / mass casualty — 144 Delayed evacuation / long distance to A&E — 144 Hypo/hyper-thermia — 64 Risk Mitigation - driving long distances in remote areas which has been mitigated by adding a “ambulance off road vehicle” to our convoy - As well as the chain ladders, where the mountain operator will be rigging rope access to support individuals climbing the ladders. - All other activities have their set assessments.	Stephen Richert +27 082 459 0279 Medic Incident Commander SAPS Bergville 036 448 1095 Private Emergency Department La Verna Hospital 036 631 0065 Busamed Hospital 058 624 3000 State Emergency Department Emmaus Hospital Winterton 036 488 1570 Private ambulance service ER 24 084 124 State ambulance service EMRS 10177 Additional info: GPS CO-ORDINATES FOR THE SITE: S 28 38'35.7 E 29 00'59.9 LOCATION OF HELIPAD: S 28 38'33.3 E 29 01'04.9

Hazard	Severity (S)	Exposure (E)	Frequency (F)	Score (S×E×F)	Justification (with PDF refs to the link mentioned above)
Medical emergency in remote terrain	16	4	4	256	High-severity emergencies + remote access delays; plan emphasises need for stretcher teams, on-foot access, helicopter fallback (pp.1–3).
Road travel incident (vehicle crash)	16	4	3	192	Road travel identified as elevated risk even though the event is “low risk” overall; mentioned explicitly in overview (p.1–2).
Major incident / mass-casualty scenario	16	3	3	144	Dedicated major-incident plan (pp.3–4): helicopter staging, triage stations, risk of multiple casualties.
Delayed evacuation to definitive care	16	3	3	144	Page 7 shows “more than 30 min to A&E” = increased risk; terrain restricts access (pp.2–3).
Hypothermia / exposure	16	2	2	64	Outdoor and remote hiking in March; weather variability; requires protective gear & monitoring (p.1–2).
Dehydration / hyperthermia	16	2	2	64	Daytime heat, long walks; event duration is >4h/12h (page 7 table); water intake is essential.
Communication failure	8	4	2	64	Page 3 specifies need for radio & cell tests, charging stations, coverage issues.
Helicopter landing-zone hazard	8	3	2	48	Page 4–5 details danger zones, rotor wash, debris hazards, aircraft approach rules.
Falls / slips / minor trauma during hiking	8	2	3	48	Outdoor uneven terrain; walking access required; responders equipped for foot access (p.2).
Snakebite / allergic reaction	8	2	2	32	Implied under wilderness medical planning; medic carries equipment; exposure moderate in this region.
Criminal/security incident	8	1	2	16	SAPS contact listed; event acknowledges possibility (p.3).
Night-time movement / low visibility	2	2	2	8	Night helicopter landings require 60×60m zone; safety hazards noted on p.5.

COMMUNITY WORK AND ACTIVITIES / ACTIVATIONS

GENERAL

Hazard (from Palmiet guidelines)	Main impact type	Severity (1–16)	Exposure (1–5)	Frequency (1–5)	Score	Justification (linked to guidelines)
Machinery injuries (chainsaws, brushcutters, etc.)	Safety/health	8 – Major(potential fatality or disabling injury)	3 – Local(part of camp/worksite at any one time)	4 – Often(used regularly in clearing)	96	Safety section calls for safe distances between machine operators and workers, PPE (helmets, ear muffs, safety pants/boots, eye protection), and avoiding machines on hot, high fire-risk days – indicating recognised serious injury risk.
Erosion & bank collapse from biomass removal, access tracks, poor stacking	Environmental	4 – Moderate(ecological disturbance, can be rehabilitated)	4 – Widespread	4 – Often	64	Guidelines stress not stacking in floodplain, removing biomass before flood events, limiting access points, avoiding new tracks and trampling in wet/steep areas, and planning rehabilitation where erosion risk exists.
Drowning or injury from working in channel / high flows / floods	Safety/health	8 – Major	2 – Restricted(workers close to water, not whole group)	3 – Frequent(riparian work is core activity)	48	Planning section advises not to work in riparian/wetland areas during rainy season because high water tables and floods are hazardous.
Herbicide exposure to workers (skin, eye, inhalation)	Safety/health	4 – Moderate(disabling illness possible)	3 – Local	4 – Often	48	Herbicide sections specify mixing, application, PPE, clearly labelled containers, storage areas, and in-field safety precautions, indicating significant but controllable health risk.
Vehicle accidents on rough / steep access tracks	Safety/health	8 – Major	2 – Restricted	2 – Infrequent	32	Document recommends using established roads and avoiding new tracks, especially on steep slopes and wet areas – partly due to both erosion and access hazards.

Hazard (from Palmiet guidelines)	Main impact type	Severity (1–16)	Exposure (1–5)	Frequency (1–5)	Score	Justification (linked to guidelines)
Slips, trips & falls on steep / wet slopes and rough terrain	Safety/health	2 – Minor(usually minor injuries needing medical attention)	3 – Local	5 – Consistent	30	Guidelines point out hazards of steep slopes and wet areas and recommend limiting trampling and choosing suitable access routes.

ALIEN CLEARING

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score	New Risk Score
Alien clearing	Machinery (chainsaws, brushcutters)	Lacerations, amputations, eye & hearing damage	Only trained & certified operators; pre-start checks; full PPE (helmet, visor, ear protection, chainsaw pants, gloves, boots); exclusion zones around operators; refuelling and maintenance in safe areas; no use in extreme fire-danger conditions.	Team leader / Chainsaw operators	8	4	3	15	96
Alien clearing	Manual tools (slashers, pangas)	Deep cuts, puncture wounds	Tool use training; sharp tools stored safely when not in use; safe working distances; cut away from body; gloves and boots worn; first-aid kit on site.	Team leader	8	3	3	14	72
Alien clearing	Falling branches / hung-up trees	Crush injuries, head injuries	Pre-felling assessment; escape routes cleared; no one under suspended branches; only competent fellers drop large limbs; helmets mandatory; danger zones flagged.	Team leader / Fellers	8	3	3	14	72
Alien clearing	Steep/unstable slopes	Slips, trips, falls, sprains	Work lines planned along contours; use of trekking poles where helpful; limit loads carried on steep ground; no work on slopes during heavy rain; boots with good grip.	Team leader	2	5	3	10	30

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score	New Risk Score
Alien clearing	Heat stress / dehydration	Heat exhaustion, heat stroke	Start early, rest in shade at midday; mandatory water per person; electrolyte use on hot days; hats and lightweight PPE; supervisors monitor for early signs of heat illness.	Team leader	8	3	3	14	72
Alien clearing	Wildlife encounters	Snakebite, stings, mammal encounters	Area briefing; no reaching into holes/rock piles; long pants & boots; first-aid protocols and snakebite kit; work in pairs; rapid evacuation plan.	Team leader	8	2	2	12	32
Alien clearing	Herbicide exposure (workers)	Skin/eye irritation, inhalation injury	Only approved herbicides; labelled containers; measuring & mixing at designated area; gloves, eye protection, masks as needed; no spraying in high wind or rain; wash facilities and spill kit available.	Spray supervisor	4	4	3	11	48
Alien clearing	Herbicide spill to watercourse	Pollution of streams/wetlands	No mixing/cleaning in riparian zone; buffer zones along streams; spill kits carried; immediate containment & reporting of any spill; training on Palmiet guidelines.	Spray supervisor / Environmental officer	8	4	4	16	128
Alien clearing	Team transport to sites	Vehicle accident on rough/steep tracks	Use only suitable 4x4 vehicles; trained drivers; speed limits; pre-trip vehicle checks; passengers seat-belted; avoid driving in heavy rain or at night where possible.	Drivers / Team leader	8	2	2	12	32

BRUSH PACKING AND EROSION CONTROL

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score	New Risk Score
Brush packing / erosion control	Manual handling	Back strain, muscle injuries from heavy lifting	Use team lifts and correct lifting technique; limit load size; rotate tasks; provide rest breaks; encourage early reporting of strain.	Team leader	2	4	3	9	24
Brush packing / erosion control	Working near watercourses	Drowning, being swept off feet	Avoid work in high flows or flood forecasts; use buddy system; PFDs where depth/flow warrant; safe access & egress points identified.	Team leader	8	3	2	13	48
Brush packing / erosion control	Slippery/unstable ground	Slips, sprains, minor fractures	Non-slip boots; work paths defined; avoid steep saturated banks; extra care when carrying loads; no work in severe rain.	Team leader	2	4	3	9	24
Brush packing / erosion control	Tool-related injuries	Cuts, punctures, bruising from hand tools	Training on correct use; PPE (gloves, boots, eye protection); tools kept sharp and in good repair; clear storage area.	Team leader	2	3	3	8	18
Brush packing / erosion control	Vehicle access to remote sites	Vehicle collision / rollover	Route reconnaissance; only competent 4x4 drivers; speed limits; no overloading; radio/phone communication; avoid unsafe weather.	Drivers / Team leader	8	2	2	12	32
Brush packing / erosion control	Fire hazard (burning slash in dry season)	Uncontrolled wildfire, injury, property damage	Burning only under permit and favourable conditions; firebreaks and water on hand; supervision by experienced person; no burning in high fire-danger or strong winds; liaison with fire services.	Fire boss / Team leader	16	2	4	22	128

AGRO FARMING

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score	New Risk Score
Agro-farming / community	Manual handling	Back strain, sprains from lifting produce, soil, tools	Training on lifting technique; use of wheelbarrows/trolleys; task rotation; enforce sensible load limits.	Community team leader	2	4	3	9	24
Agro-farming / community	Basic tool use (hoes, rakes, spades)	Cuts, blisters, impact injuries	Induction on safe tool use; gloves provided; tools stored safely; keep work spacing to avoid striking others.	Community team leader	2	3	3	8	18
Agro-farming / community	Sun exposure & heat	Sunburn, dehydration, heat exhaustion	Work early/late where possible; hats, long sleeves, sunscreen; drink-water plan; shade breaks; monitor for heat illness.	Community team leader	8	3	3	14	72
Agro-farming / community	Livestock interaction	Kicks, trampling, bites	Only experienced handlers work close to livestock; keep visitors behind fences; do not approach animals with young; escape routes identified.	Farming coordinator	8	2	2	12	32
Agro-farming / community	Fertiliser handling	Skin/eye irritation, respiratory issues	Use appropriate PPE (gloves, mask, goggles); mix in ventilated areas; follow manufacturer instructions; wash hands after use; safe storage.	Farming coordinator	4	2	2	8	16
Agro-farming / community	Community engagement risks	Conflict, crime, reputational harm	Pre-engagement briefing on local dynamics; work through community leadership; clear code of conduct; avoid sensitive topics; incident reporting pathway.	Programme manager	8	2	2	12	32

STREAM PROTECTION

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score	New Risk Score
Stream protection	Waterborne illness	GI illness from contaminated water	Hand-washing and sanitiser; avoid ingesting stream water; use treated/drinking water; vaccinations where indicated; briefings on hygiene.	Stream team leader	4	3	3	10	36
Stream protection	Working in / near flowing water	Drowning, entrapment, impact with rocks	Risk assessment of depth/flow; throw-lines and PFDs where needed; buddy system; work from banks where possible; no work in flood or heavy rain.	Stream team leader	8	3	2	13	48
Stream protection	Slippery rocks	Slips, sprains, fractures	Non-slip footwear; move slowly; defined access routes; limit loads while on rocks; staff assist participants at tricky crossings.	Stream team leader	2	4	3	9	24
Stream protection	Manual labour	Musculoskeletal strain	Rotate tasks; encourage warm-up stretches; keep tools sharp; enforce sensible lifting limits; scheduled breaks.	Stream team leader	2	4	3	9	24
Stream protection	Hand tools	Cuts, eye injuries, bruising	Training on correct use; PPE (gloves, eye protection); maintain tools; clear communication when swinging tools; storage racks.	Stream team leader	2	3	3	8	18
Stream protection	Weather exposure	Hypothermia, heat exhaustion, storms	Check forecast; carry rain & warm layers; sun protection; suspend work in lightning or severe weather; shelter plans identified.	Stream team leader	8	2	3	13	48
Stream protection	Wildlife (snakes, insects, etc.)	Bites, stings, allergic reactions	Briefing on local species; long pants/boots; no reaching into holes/under rocks; first-aid kit and allergy meds as required; evacuation plan.	Stream team leader	8	2	2	12	32

MINI SASS AND IHAS

MiniSASS is managed by field guides and WWF Staff.

Activity / Task	Hazard / Risk	Key Control Measures	S	E	F	Risk Score (S×E×F)
Walking to river sampling site / entering / exiting stream	Slips, trips, falls on wet/uneven ground or banks → sprains, fractures, drowning risk	Wear sturdy boots; use walking sticks; assess bank stability; avoid slippery banks; use spotters when entering/exiting water; plan safe entry/exit points	8	3	3	72
Sampling in water (kick-sampling / disturbing substrate)	Drowning, foot entrapment, strong currents, hypothermia	Perform risk assessment of flow / water depth before sampling; use life jackets if water deep/fast; use buddy system; avoid sampling in hazardous flow/after heavy rain; communicate water conditions; limit sampling duration; monitor for signs of cold stress	16	2	2	64
Handling nets, trays, sample containers — collecting macroinvertebrates	Cuts / scrapes from rocks, sharp objects; contamination from waterborne pathogens (faecal bacteria, parasites, chemicals)	Use gloves; avoid disturbing sediment excessively; wash hands after sampling; disinfect equipment; avoid ingestion/contact with mouth/eyes; have water-safety / hygiene protocols; first-aid kit on site	8	3	3	72
Sun exposure during fieldwork (walking, sampling, handling gear)	Sunburn, heat exhaustion, dehydration	Provide training on sun-safety; wear hats, long sleeves, sunscreen; ensure drinking water availability; schedule sampling in cooler times; enforce hydration and rest breaks	8)	4	4	128
Weather changes / storms / flash floods	Sudden flooding, strong currents, dangerous conditions for sampling	Check weather forecasts before fieldwork; avoid sampling during or right after heavy rain; establish cut-off procedures; monitor water level; keep group together; have evacuation/escape plan; avoid deep or fast-flowing water	16	3	2	96
Wildlife / animal risk (snakes, insects, aquatic animals)	Stings, bites, allergic reaction, envenomation	Provide training on local fauna; wear protective clothing / boots; carry first-aid kit with snakebite / allergic reaction capacity; have evacuation plan; avoid disturbing deep cover, use caution in water/vegetation; ensure awareness / signage of hazard zones	8	3)	3	72
Transport to & from river / remote sites (driving 4x4 / vans)	Vehicle accident, rough roads, breakdown, remote access delays	Use roadworthy vehicles; experienced drivers; maintain convoy protocols; seat-belts on; have spare parts and recovery gear;	8	2	2	32

Activity / Task	Hazard / Risk	Key Control Measures	S	E	F	Risk Score (S×E×F)
		communicate routes; avoid driving at night / bad weather; first-aid & evacuation planning				
Data recording / handling samples / using shared equipment	Cross-contamination, data loss, misidentification of taxa → misleading water quality results, potential community mistrust	Provide training and supervision; use clean equipment; sanitise nets/trays between sites; double-check ID; appoint experienced supervisor per team; store data carefully; backup records; follow protocols strictly	4	2	2	24

HIKING

CHAIN LADDER SPECIAL RULES

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score (S+F+E)	New Risk Score (S×E×F)
Hiking – Chain Ladders	Heights / Falls from height	Fall from ladders (uncontrolled fall)	- Fixed handlines / dynamic ropes rigged above ladders; participants attached with harness, cowstail or lanyard at all times on ladder section. - Qualified leader controls belay from secure anchor; second guide positioned at ladder base/top to supervise clipping and movement. - Pre-climb briefing on ladder technique, three points of contact, and no passing on ladders. - Helmets to be used where possible; packs clipped to rope or carried so as not to destabilise climber. - Strict one-at-a-time policy on each ladder; weight and spacing	Lead guide / rope supervisor	16	2	2	20	64

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score (S+F+E)	New Risk Score (S×E×F)
			managed. • Clear “no climb” rule if participant refuses rope / harness or if anchors cannot be safely rigged.						
Hiking – Chain Ladders	Weather / Terrain	Slips on wet/icy ladders & rock ledges	• Weather forecast checked pre-trip; clear turn-around criteria for thunderstorms, heavy rain, snow or ice on ladders. • Visual inspection of rungs and ledges for ice/flowing water before committing group. • Group issued with appropriate footwear (good tread) and, in winter, micro-spikes where necessary. • Extra belay / tight rope used on the most exposed slick sections; only one person on a rung at a time. • Option to abort or reroute if ladders judged unsafe.	Lead guide	8	3	3	14	72
Hiking – Chain Ladders	Rockfall / Objects from above	Injury from rock or gear dropped by people above	• Everyone wears helmets in ladder zone. • Group briefed not to dislodge rocks; no standing directly above ladders; gear leashed or secured before climbing. • Ladders managed in “blocks” – one group on system at a time where possible; safe waiting zones away from fall line. • Leaders choose belay stances outside obvious rockfall channels.	Guides	8	2	2	12	32
Hiking – Chain Ladders	Equipment / Systems	Equipment or anchor failure (ropes, harness, anchors)	• All technical gear UIAA/CE approved, inspected before and after use; retirement criteria followed. • Anchors backed-up where possible; rigging checked by second competent person before use. • Only qualified rope leaders rig and operate belays; no client-rigging. • Pre-use function checks: knot checks, belay device orientation, harness fit, carabiner locked. • Written kit log and periodic full inspection of ropes, slings and hardware.	Rope leader / safety officer	16	1	1	18	16

Activity	Hazard Category	Risk / Hazard	Control Measures in Place (summary)	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score (S+F+E)	New Risk Score (S×E×F)
Hiking – Chain Ladders	Human factors	Panic, vertigo, or participant “freezing” on ladder	• Pre-trip screening for severe height phobia; option to opt-out or remain at contour path. • Clear explanation of exposure and rope safety before committing to ladders. • Guides positioned to give calm verbal coaching; backup cowstail or tag-line to assist movement if someone freezes. • Ability to lower climber back down to safe ledge if they cannot continue. • Group size per rope leader limited to maintain close supervision.	Guides	8	3	3	14	72
Hiking – Chain Ladders	Other users / Congestion	Crowding on ladders; being bumped or rushed by other parties	• Start times chosen to avoid peak ladder traffic as far as possible. • Briefing at base on yielding protocol; one party on ladder at a time where feasible. • Guide controls entry/exit to ladders; waits in safe zone if large groups from other operators present. • Communication with other guides; if crowding becomes unsafe, group waits away from fall line or retreats.	Lead guide	8	3	2	13	48

GENERAL HIKING AND CLIMBING

Activity	Hazard Category	Risk / Hazard	Control Measures	Responsible Person	S	F	E	Raw	New Risk Score
Guided Hiking	Terrain	Tripping on uneven ground	Professional guide leads; avoids uneven surfaces; single-file walking	Guides	1	5	1	7	5
Guided Hiking	Dangerous Game	Mauling/trampling/goring	Pre-walk safety briefing; guides between wildlife & guests; armed guides; avoid danger zones	Guides / Coordinators	8	4	3	15	96
Guided Hiking	Venomous Scorpions	Stings / envenomation	Do not pick up objects blindly; avoid high-risk areas; guide oversight	Guides	4	3	1	8	12
Guided Hiking	Venomous Snakes	Bites / envenomation	Visibility checks; guides familiar with species; avoid snake habitat; no close inspection	Guides	4	3	1	8	12
Guided Hiking	Venomous Spiders	Tissue damage, necrosis	Avoid blind hand placements; stay on trail	Guides	4	3	1	8	12
Guided Hiking	Insects	Stings / bites / allergic reactions	Insect repellent encouraged; allergy declaration; route selection	Guides	2	3	1	6	6
Guided Hiking	Plant Matter	Scratches / irritation	Protective clothing; avoid irritating plants; route planning	Guides	2	3	1	6	6
Guided Hiking	Water Bodies	Drowning / crocodile / hippo	Safe distance; warnings at rest stops; avoidance of unsafe waters	Guides	8	4	1	13	32
Guided Hiking	Bushfire	Burns	Fire-fighting equipment nearby; guides trained; evacuation plan	Guides	8	2	4	14	64
Guided Hiking	Branches	Penetration injury	Verbal warnings; route selection	Guides	1	3	1	5	3
Guided Hiking	Human Conflict	Conflict between participants	Staff monitoring; enforce behaviour rules	Guides	1	1	1	3	1
Guided Hiking	Muddy Surfaces	Slips due to mud	Verbal warnings; avoid muddy areas	Guides	1	3	1	5	3

Activity	Hazard Category	Risk / Hazard	Control Measures	Responsible Person	S	F	E	Raw	New Risk Score
Guided Hiking	Lightning	Lightning strike risk	Avoid open areas; no walks during lightning	Guides	8	1	1	10	8
Guided Hiking	Flooding	Rising water / drowning	Move to higher ground; cancel walks	Guides	2	2	3	7	12
Guided Hiking	Heat	Dehydration / heat exhaustion	Shade breaks; hydration; guide monitoring	Guides	2	3	2	7	12
Guided Hiking	Rabid Animals	Bite / disease	Armed guide response; staff trained in recognition	Guides	4	1	1	6	4
Guided Hiking	Thorns	Puncture wounds	Wear robust shoes	Guides	1	2	1	4	2
Guided Hiking	Animal Burrows	Falls / animal encounter	Warn group; avoid burrows; armed guide if needed	Guides	2	1	1	4	2

PADDLING AND WATER ACTIVITY

Tugela River and Bergville to Spioenkop Dam

The following link will open the main risk assessment for this section, below is a tabulated summary ([LINK](#))

Hazard	Notes / Justification	Severity (S)	Exposure (E)	Frequency (F)	Score (S×E×F)
Strainers	Fatal if entrapped; mentioned multiple times as needing “avoid and stay clear”; severe river hazard.	16	2	4	128
Siphons	One of the deadliest whitewater hazards; briefed as “avoid and stay clear”.	16	2	4	128
Foot entrapment	Fatal potential; emphasises swift-water swimming position; medium residual risk.	16	2	3	96
Hypothermia	Fatal potential in long swims/winter; risk increased in wet cold days.	16	2	2	64
Hyperthermia	Fatal if unmanaged; shade, rest, fluid intake listed as controls.	16	2	2	64
Hide & Seek Rapid	“Likely / Serious”; high-energy rapid with stopper waves on bend.	8	4	2	64
Kleine Waterval Weir / Waterfall	Serious injuries possible; scouting mandatory; medium residual risk.	8	2	4	64
On-board boat injuries	Serious injuries but well-controlled through briefing.	8	2	3	48
Equipment absent (safety gear missing)	Serious consequences if rescue gear unavailable.	8	2	3	48
Sunburn	Frequent exposure but injury level = serious (skin damage/heat stress).	8	4	1	32
Boat wrapping	Serious equipment + injury hazard, but less frequent.	8	2	2	32
Wave House Rapid	Not serious; standard rapid swim procedures.	2	2	4	16
Inyoka Rapid	Not serious; clear instructions to swim to eddy, boater support.	2	2	4	16
Look Left Rapid	Not serious except at higher flows; risk reduced with options.	2	2	3	12
The “Less Serious Rapids”	Managing basic paddling skills; minor impacts.	2	2	3	12
Portaging	Not serious but present risk (slips, minor injury).	2	2	2	8
Capsizing / falling out	Standard expected event; well-managed through swift-water swimming.	2	2	2	8

Tugela River and Mambasa to Alpine View

The following link will open the main risk assessment for this section, below is a tabulated summary. ([LINK](#))

Hazard	Notes / justification	Severity (S)	Exposure (E)	Frequency (F)	Score (S×E×F)
Strainers	Fatal if entrapped; document highlights avoiding them and strong rescue readiness.	16	2	4	128
Foot Entrapment	Also fatal; emphasised strongly in safety brief and rescue techniques.	16	2	4	128
Hypothermia	Cold, winter, wet days; can be fatal.	16	2	3	96
Hyperthermia	Heat exhaustion can escalate to fatal without management.	16	2	3	96
Mambo Number 5 Rapid	Serious rapid; portaging recommended; high-water risks.	8	2	4	64
On-board boat injuries	Serious injury possible; briefing mitigates but frequent exposure.	8	2	4	64
Sunburn	Likely + serious; long exposure outdoors.	8	4	2	64
Boat wrapping	Serious equipment + possible injury hazard.	8	2	3	48
Equipment absent (safety gear missing)	Equipment absence increases severity of incidents.	8	2	3	48
Pin Ball Alley Rapid	Not serious; strong controls provided.	2	2	4	16
Fun Rapid	Minor injuries expected if any.	2	2	4	16
The “Less Serious Rapids”	Standard risk level for minor rapids.	2	2	4	16
Capsizing / Falling out	Expected event in paddling; minor injuries.	2	2	3	12
Portaging	Minor slips/strains.	2	2	2	8

GENERAL SECURITY RISK

Activity	Hazard Category	Risk / Hazard	Control Measures	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score (S+F+E)	New Risk Score (S×E×F)
Tourist Travel (Johannesburg)	Crime – Street Level	Mugging / armed robbery / pick-pocketing in public places	Avoid high-risk zones; travel with guides; use private transport; conceal valuables; no walking at night; situational awareness training; secure documents & cash	Tour Leader / Security Officer	8	4	4	16	128
Tourist Transfer (JHB airports, hotels)	Crime – Organised	Hijacking / vehicle stoppage	Only use vetted transport; pre-planned routes; lock doors & windows; avoid stopping on shoulders; convoy driving where needed; situational awareness briefing	Transport Manager	16	2	3	21	96
Tourist Travel (Johannesburg CBD / malls)	Crime – Theft/Fraud	Theft, credit card cloning, distraction theft	Use chip-and-PIN only; avoid ATMs in exposed areas; travel in groups; bags always on body; avoid displaying phones/cameras	Tour Leader	2	4	4	10	32
Accommodation (Johannesburg hotels / lodges)	Crime – Burglary	Hotel room intrusion / luggage theft	Stay only in reputable hotels; security access control; room safes; never open door to unknown persons; front-desk verification	Hotel Management / Tour Leader	8	2	2	12	32

Activity	Hazard Category	Risk / Hazard	Control Measures	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score (S+F+E)	New Risk Score (S×E×F)
Tourist Travel (Drakensberg)	Crime – Opportunistic	Theft at trailheads / vehicles broken into	Park vehicles in secure lots; leave no valuables in cars; guide supervision; lock vehicle and hide gear	Guides	2	3	2	7	12
Hiking (Drakensberg)	Crime – Wilderness Assistance	Encounter with criminals in remote areas (rare but possible)	Use registered guides; travel in groups; maintain communication devices; emergency plan with SAPS Mountain Unit	Guides	8	1	2	11	16
Tourist Movement (JHB + KZN)	Civil Unrest	Exposure to strikes, protests, road blockades	Monitor news & alerts; avoid unrest areas; alternate routes; coordination with local security networks; tour halt procedures	Security Officer	8	2	3	13	48
Tourist Road Transfers (JHB–KZN)	Vehicle Crime	Smash-and-grab	Keep windows closed; travel highways; avoid slow-moving traffic hotspots; tinting/film on windows; remove valuables from view	Drivers	8	3	2	13	48
Tourist Locations (Both Regions)	Scams / Fraud	Overcharging, fake guides, transaction scams	Verified, licensed tour operators only; pre-booked tours; strict no-engagement with informal “guides”	Tour Leader	2	3	2	7	12
Hiking / Rural Travel (KZN)	Dangerous Wildlife	Baboon aggression / theft	Avoid feeding wildlife; secure food; maintain distance; follow park guidelines; guide supervision	Guides	2	2	2	6	8

Activity	Hazard Category	Risk / Hazard	Control Measures	Responsible Person	Severity (S)	Frequency (F)	Exposure (E)	Original Raw Score (S+F+E)	New Risk Score (S×E×F)
Hiking / Rural	Human-Wildlife Interface	Livestock/dogs aggression	Guides brief guests; avoid kraal areas; carry deterrents if necessary; stay in group	Guides	2	2	2	6	8
Tourist Sites (Both Regions)	Lost Tourist	Getting separated, lost or stranded	Buddy system; check-in schedule; communication devices; clear rendezvous points	Tour Leader	2	2	2	6	8