**Community Drinking Water Safety & Security Plan (DWSSP)**



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| **Community Details** | | | | |
| Village Name |  | | | |
| Area/Province |  | | | |
| GPS Coordinates | Lat: |  | Long: |  |
| No of Households |  | | | |
| Village Population |  | | | |
| Village Contact Person |  | | | |
| Revision No: Date: | | | | |

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| **Section 1 – Water Committee** | | | |
| **Name** | **Current Role in Water Committee / Community** | **Skills Available / Interest in the Water Supply** | **Contact Details**  **(Address/Phone/E-mail)** |
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| **Section 2 – Description of Current Supply** |
| System Map/Flow Diagram |
| Please draw a map/flow diagram of the current water and waste system  If map is attached separately, please tick here |

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| **Section 2 – Description of Current Supply** | | | | | |
| Existing Water Supply | | | | | |
| Piped Supply  (River/Spring) | Rainwater Capture | | Groundwater | Water Storage | Water Distribution |
| Measured Flow from Source (litres/min)  **2A** | No of Buildings Collecting  **2C** | Average Roof Area (m2)  **2D** | Measured Flow (litres/min)  **2F** | Amount Available (litres)  **2H** | Number of Distribution Points |
|  |  |
|  | Supply per year  (litres per year)  **2E = 2C x 2D x 0.7 x Av\_Rainfall\_per\_year x 1000**  0.7 is efficiency factor  x 1000 to convert m3 to litres | |  |  |  |
| Supply per day (litres/day)  **2B = 2A x 1440 mins** | Supply per day (litres/day)  **2G = 2F x Minutes Used/Day** | Measured Flow (litres/min) |
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| Water Quality Result | Water Quality  Result | | Water Quality Result | Water Quality Result | Water Quality Result |
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| *Uses of the system*  Drinking Food Preparation Hand Washing Bathing Toilets  Other (Please explain) ……………………………….. | | | | | |
| *Treatment Methods*  Filtration Chlorine UV Light  Other (Please explain) ……………………………….. | | | | | |
| Existing Waste System | | | | | |
| Number of Rubbish Pits …….. | | | | | |
| **Type of Toilets** | | | | **Number of Each Type** | |
| VIP (pit and bush) | | | |  | |
| Septic Tank | | | |  | |
| Pour-Flush | | | |  | |
| Other (Please list) | | | |  | |

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| **Section 3A –Assessment (Water Access/Availability)** | | | |
| Water Availability | | | |
| Number of People in Community  **3A** | Estimated Daily Usage  (litres per day)  [3B = 3A\* N litres/day]  **3B (Select value for N)** | Storage Required (litres)  [3C = 3B]  **3C** | Estimated Usage by Population per year (litres per year)  [3D = 3A\*N l/day \*365]  **3D** |
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| *Water Quantity – Piped Supply System or Groundwater Source*  Is the supply in **2B/2G** enough to meet demand **3B**? Yes No  **If NO, look to improve the system design to increase flow (Please tick)**  Is this source available at all times during the year? Yes No  **If NO, develop/strengthen Additional Water Source/s (Please tick)**  *Water Quantity – Rainwater Capture* ***(ONLY ANSWER IF RWC IS ONLY WATER SOURCE)***  Is the supply in **2E** enough to meet demand **3D**? Yes No  **If NO, develop Additional Water Source/s (Please tick)** | | | |
| *Water Storage – Piped Supply System*  Is the current storage **2H** enough to meet the required storage amount **3C**?  Yes No **(If NO, add More Storage)**  How much extra Storage is required? litres  Number of tanks required tanks | | | |
| *Water Quantity – Distribution Points*  Are flow rates **more** than 6 litres/min at the tapstand/s? Yes No  **If NO, look to improve the system design to increase distribution flow (Please tick)**  **REMEMBER: Doing this can change pressures and flows in the system. It is important to get some technical assistance when planning to change flows in the distribution system.** | | | |
| Water Access (Only Upgrade if enough water is supplied by the system) | | | |
| *Water Access*  Do more than 5 households share 1 distribution point? Yes No  Are any distribution points more than 200m away (2-3mins walk)? Yes No  **If YES to either question, then you need extra distribution points (Please Tick)**  **REMEMBER: Doing this can change pressures and flows in the system. It is important to get some technical assistance when planning to increase the distribution system.** | | | |
| How many extra points are required? ………….. **PLEASE MARK ON COMMUNITY MAP** | | | |

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| Community Drought Risk and Preparedness | | | |
| *Risk Factors* | *Mitigation Measures* | *Risk* | *Improvements* |
| Significant dry periods >3months  Variation in source water level/s  Significant leaks in system  *Other (Please list)* | High storage capacity  Multiple water sources  Water resource management (WRM) undertaken  HWTS prepared  *Other (Please list)* | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | Fix/optimise system  Increase storage  Develop additional source  Implement WRM  Prepare HWTS  *Other (Please list)* |
| Community Flood Risk and Preparedness | | | |
| *Risk Factors* | *Mitigation Measures* | *Risk* | *Improvements* |
| Significant periods of heavy rain causing unusable dirty river, spring or well water  Damage to intake, pipes, tanks  *Other (Please list)* | High storage capacity  Multiple water sources  Good spring or well-head protection  Water resource management (WRM) undertaken  HWTS prepared  *Other (Please list)* | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | Fix/optimise system  Increase storage  Develop additional source  Implement WRM  Prepare HWTS  *Other (Please list)* |

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| **Section 3B – Assessment (Water Safety)** |
| Water Quality Results |
| **E.Coli Results**    **Turbidity Results**    **Conductivity Results**    **pH Results** |

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| Water Safety Plan – Risk Assessment | | | | | |
| **Water Source – Surface Water Source** | | | Do you use a Surface Water Source? (Please Tick) Yes No | | |
| *Hazard* | *Contamination Source*  *(Tick if present)* | *Current Control Measures*  *(Tick if present)* | | *Risk* | *Improvements Required* |
| Bacteria in Water | Human houses upstream  Farm animals nearby/upstream  Crop farming  nearby/upstream  Toilet within 30m  *Other (Please list)* | Fencing around source  Intake screen present  Gravel or Sand Filter  Established water protection zone  *Other (Please list)* | | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | Establish a water protection  zone  Build Fence  Install screen  Install Filter  Move Source  Move Toilet  *Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Use of pesticides in area  Waste water discharge  in area  Algae present at source  *Other (Please list)* | Gravel or Sand Filter  Established water protection zone  *Other (Please list)* | | *High*  *Medium*  *Low* | Establish a water protection  zone  Install Filter  Move Source  *Other or Temporary Improvements* (Please list) |
| Bad Colour or Taste | Soil Erosion at source  *Other (Please list)* | Gravel or Sand Filter  Storage and settlement  tanks  *Other (Please list)* | | *High*  *Medium*  *Low* | Install Filter  Install Storage  *Other or Temporary Improvements* (Please list) |
| Bad Flow or Pressure | High pressure in taps  Significant leaks in pipes  *Other (Please list)* | Minimum Head Device  Pressure Box  *Other (Please list)* | | *High*  *Medium*  *Low* | Install Head Device  Install Pressure Box  *Other or Temporary Improvements* (Please list) |

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| **Water Source – Spring Source** | | | Do you use a Spring Source? (Please Tick) Yes No | | |
| *Hazard* | *Contamination Source*  *(Tick if present)* | *Current Control Measures*  *(Tick if present)* | | *Risk* | *Improvements Required* |
| Bacteria in Water | Animals can access source  Spring box/cover is dirty  Silt/soil/dirt near source  Surface water can flow  Into spring water  Toilet within 30m  *Other (Please list)* | Spring box and cover  Fencing around source  Air vent (Clean)  Diversion ditch  Established water protection  zone  *Other (Please list)* | | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | Establish a water protection  zone  Build Fence  Build spring box  Install/Clean cover, vent  Dig diversion ditch  Move Toilet  *Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Use of pesticides in area  Waste water discharge  in area  Algae present at source  *Other (Please list)* | Gravel or Sand Filter  Established water protection zone  *Other (Please list)* | | *High*  *Medium*  *Low* | Establish a water protection  zone  Install Filter  Move Source  *Other or Temporary Improvements* (Please list) |
| Bad Colour or Taste | Silt/soil/dirt near source  *Other (Please list)* | Gravel or Sand Filter  Storage and settlement  tanks  *Other (Please list)* | | *High*  *Medium*  *Low* | Install Filter  Install Storage  *Other or Temporary Improvements* (Please list) |
| Bad Flow or Pressure | High pressure in taps  Significant leaks in pipes  Overflow water at source  *Other (Please list)* | Overflow pipe (clean)  Pressure Box  *Other (Please list)* | | *High*  *Medium*  *Low* | Install Head Device  Install Pressure Box  *Other or Temporary Improvements* (Please list) |

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| **Water Source – Rainwater Capture** | | | Do you use a Rainwater Capture? (Please Tick) Yes No | | |
| *Hazard* | *Contamination Source*  *(Tick if present)* | *Current Control Measures*  *(Tick if present)* | | *Risk* | *Improvements Required* |
| Bacteria in Water | Roof is dirty  Gutters are dirty  Open access to tank  Tank is cracked  Tap is leaking  Water collection area is  dirty / standing water  Pollution (e.g. trees,  Excreta etc) near system  Collection bucket dirty  *Other (Please list)* | Tank cover in place  Tank inlet has mesh/sieve  First flush filter  *Other (Please list)* | | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | No  Clean roof/gutters  Install covers on tank  Install inlet mesh/sieve  Install first flush filter  Repair cracks  Repair/replace tap  Add drainage/clean  collection area  Remove pollution  *Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Roof is corroded/rust  *Other (Please list)* | First flush Filter  *Other (Please list)* | | *High*  *Medium*  *Low* | Install Filter  Repair/replace/paint roof  *Other or Temporary Improvements* (Please list) |

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| **Water Source – Groundwater** | | | Do you use a Groundwater Source? (Please Tick) Yes No | | |
| *Hazard* | *Contamination Source*  *(Tick if present)* | *Current Control Measures*  *(Tick if present)* | | *Risk* | *Improvements Required* |
| Bacteria in Water | Toilet within 10m of well  Toilets above well height  Other pollution within  10m of well e.g. rubbish  Standing water within 2m  of well  Broken drainage channel  Surface water can enter  From broken wall  Cracks in concrete wall  Collection bucket dirty  *Other (Please list)* | Fence around well  Well is sealed to 3m depth  Drainage channel installed  Established water protection zone  *Other (Please list)* | | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | Establish a water protection  zone  Move toilets  Build fence around well  Repair/Install concrete  Line well to 3m depth  Repair well wall  Clean well area  Remove pollution  *Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Use of pesticides in area  Waste water discharge  in area  *Other (Please list)* | Water treatment system  Established water protection zone  *Other (Please list)* | | *High*  *Medium*  *Low* | Establish a water protection  zone  Install Treatment  Move Source  *Other or Temporary Improvements* (Please list) |

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| **Water Pump** | | | Does your system have a water pump? (Please Tick) Yes No | | |
| *Hazard* | *Contamination Source*  *(Tick if present)* | *Current Control Measures*  *(Tick if present)* | | *Risk* | *Improvements Required* |
| Bacteria in Water | Toilet near pump  Animals can access pump  Pump is dirty  Surface water can access  the pump  Standing water in pump  area  *Other (Please list)* | Protective structure for  pump  Fence around pump  Adequate drainage  around pump  Established protection zone  Diversion ditch  *Other (Please list)* | | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | Establish protection zone  Clean pump and area  Build protective structure  Build fence  Move toilet  Dig diversion ditch  *Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Pipes are corroded  *Other (Please list)* | Plastic piping  (where appropriate)  *Other (Please list)* | | *High*  *Medium*  *Low* | Replace corroded pipe  *Other or Temporary Improvements* (Please list) |
| Damaged Pump | Exposed location  Debris loose/overhanging  *Other (Please list)* | Protective structure for  pump  *Other (Please list)* | | *High*  *Medium*  *Low* | Remove debris  Build protective structure  *Other or Temporary Improvements* (Please list) |

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| **Water Storage – Storage Reservoir** | | | Do you use Water Storage? (Please Tick) Yes No | | |
| *Hazard* | *Contamination Source*  *(Tick if present)* | *Current Control Measures*  *(Tick if present)* | | *Risk* | *Improvements Required* |
| Bacteria in Water | Open access to tank  Vents/screens are dirty  Tank is cracked  Pipes are leaking  Dirty inside tank  *Other (Please list)* | Tank cover in place  Tank inlet has mesh/sieve  Tank has air vent  *Other (Please list)* | | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | Install covers on tank  Install inlet mesh/sieve  Install air vent  Repair cracks  Repair/replace pipes  Clean tank  *Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Pipes are corroded  *Other (Please list)* | Treatment Filter  *Other (Please list)* | | *High*  *Medium*  *Low* | Replace corroded pipe  Install Filter  *Other or Temporary Improvements* (Please list) |
| Bad Flow or Pressure | High pressure in taps  Low pressure in taps  Significant leaks in pipes  *Other (Please list)* | Overflow pipe (clean)  Float valve  *Other (Please list)* | | *High*  *Medium*  *Low* | Install overflow pipe  Install float valve  *Other or Temporary Improvements* (Please list) |

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| **Water Distribution – Stand Pipes** | | | Do you use a Stand Pipes? (Please Tick) Yes No | | |
| *Hazard* | *Contamination Source*  *(Tick if present)* | *Current Control Measures*  *(Tick if present)* | | *Risk* | *Improvements Required* |
| Bacteria in Water | Leaks in surrounding pipes  Animals access to area  Standing water in  collection area  Rubbish/pollution near  tap stand  Tap stand is cracked  Taps are leaking  *Other (Please list)* | Fence around stand pipe  Drainage area/channel  *Other (Please list)* | | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | No  Build fence/s  Install drainage  Repair/replace pipe/s  Repair/replace pipe stand/s  Repair/replace tap/s  Clean collection area/s  *Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Pipes are corroded  *Other (Please list)* | Plastic piping  *Other (Please list)* | | *High*  *Medium*  *Low* | No  Replace corroded pipe/s  *Other or Temporary Improvements* (Please list) |

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| **Water Consumers – Households** | | | Was this assessed during the visit? (Please Tick) Yes No | | |
| *Hazard* | *Contamination Source*  *(Tick if present)* | *Current Control Measures*  *(Tick if present)* | | *Risk* | *Improvements Required* |
| Bacteria in Water | Non-covered storage  Containers are dirty  Household Rainwater  Dirty buckets for collection  *Other (Please list)* | HH Chlorine tablets  UV treatment  Boil water  Sealed storage containers  First Flush on Rainwater  *Other (Please list)* | | *High*  **(Action Needed Now)**  *Medium*  (Upgrades Needed)  *Low*  (No Action Required) | Obtain sealed storage  containers  Clean/disinfect storage  Containers & buckets  Begin boiling water  Begin UV treatment  Install first flush  Obtain chlorine tablets  *Other or Temporary Improvements* (Please list) |
| Chemicals in Water | House pipes/storage  is corroded  *Other (Please list)* | Treatment to remove  chemicals  *Other (Please list)* | | *High*  *Medium*  *Low* | Replace corroded pipe  Install Treatment  *Other or Temporary Improvements* (Please list) |

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| **Section 3C – Assessment (Sanitation System)** | | |
| *Toilet Sanitary Survey Result*  How many toilets need **replacing**? …………  How many toilets need **upgrading**? ………… | | |
| Replace/Install New Toilets | | |
| Are you replacing or installing new toilets? (Please tick) Yes No | | |
| Toilet Options (Please indicate the type and amount of toilets required) | | |
| VIP Toilet  Number Required  ……… | Pour Flush Toilet  Number Required  ……… | Septic Tank Toilet  Number Required  ………  Has soil permeability test been performed?  Yes No |
| Upgrade Existing Toilets | | |
| Do existing toilets require upgrading? (Please tick) Yes No  What toilet type/s do you want to upgrade? (Please tick all relevant ones)  VIP Toilet Pour Flush Toilet Septic Tank Toilet | | |
| *VIP Toilet – Number requiring upgrade………….*  Number requiring repairs to structure …………..  Number requiring vent in super structure …………..  Number requiring a vent with flywire …………..  Number requiring upgrade of slab/riser …………..  Number that would require lining of pit …………..  Number requiring collection pit at adequate depth ………….. | | |
| *Pour Flush Toilet – Number requiring upgrade………….*  Number requiring repairs to structure …………..  Number requiring venting in the super structure …………..  Number requiring upgrade of slab/riser …………..  Number of collection pits requiring a cover for access …………..  Number of collection pits requiring a vent …………..  Number that would require lining of pit ………….. | | |
| *Septic Tank Toilet – Number requiring upgrade………….*  Number requiring repairs to structure …………..  Number requiring vents …………..  Number with drainpipes requiring a vent …………..  Number with drainpipes requiring inspection access …………..  Number requiring a new septic tank …………..  Number requiring a drainage trench ………….. | | |

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| **Section 4 – Improvement Plan** | | | | | |
| Problem/Hazard | Improvement Required | Who | Timeframe | Cost | Status  (Tick when complete) |
|  |  |  |  |  | Implemented |
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|  |  |  |  |  | Implemented |
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| Problem/Hazard | Improvement Required | Who | Timeframe | Cost | Status  (Tick when complete) |
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| **Section 5 – Community Management** | | | |
| Monitoring Schedule | | | |
| System Component  (Tick if present) | What? | How Often? | Who? |
| **5A** Primary Water Source  Type…………………….. |  |  |  |
| **5B** Secondary Water Source  Type…………………….. |  |  |  |
| **5C** Water  Storage  Type…………………….. |  |  |  |
| **5D** Water Treatment  Type…………………….. |  |  |  |
| **5E** Water Distribution  Type…………………….. |  |  |  |
| **5F** Primary Toilet Type  Type…………………….. |  |  |  |
| **5G** Secondary Toilet Type  Type…………………….. |  |  |  |

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| Maintenance – What actions are needed if something is broken? | | | |
| Activity | How Often? | Who? | What is needed? |
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| Community Training – What do you need to teach the community? | | | |
| Activity | How Often? | Who? | What is needed? |
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| Emergency – What will you do in an emergency? | | | |
| Activity | How Often? | Who? | What is needed? |
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| **Appendix 1** |
| Water Quality Results |
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