**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 systemIf 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 |
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|  | Supply per year(litres per year)**2E = 2C x 2D x 0.7 x Av\_Rainfall\_per\_year x 1000**0.7 is efficiency factorx 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 QualityResult | 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** |
|  |  |  |  |
| *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? litresNumber of tanks required $\left[\frac{Storage Required}{5000 OR 10000}\right]$ 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 >3monthsVariation in source water level/sSignificant leaks in system*Other (Please list)* | High storage capacityMultiple water sourcesWater resource management (WRM) undertakenHWTS prepared*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) | Fix/optimise systemIncrease storageDevelop additional sourceImplement WRMPrepare 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 waterDamage to intake, pipes, tanks*Other (Please list)* | High storage capacityMultiple water sourcesGood spring or well-head protectionWater resource management (WRM) undertakenHWTS prepared*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) | Fix/optimise systemIncrease storageDevelop additional sourceImplement WRMPrepare 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 upstreamFarm animals nearby/upstreamCrop farming nearby/upstreamToilet within 30m*Other (Please list)* | Fencing around sourceIntake screen presentGravel or Sand FilterEstablished water protection zone*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) | Establish a water protectionzoneBuild FenceInstall screenInstall FilterMove SourceMove Toilet*Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Use of pesticides in areaWaste water dischargein areaAlgae present at source*Other (Please list)* | Gravel or Sand FilterEstablished water protection zone*Other (Please list)* | *High**Medium**Low* | Establish a water protectionzoneInstall FilterMove Source*Other or Temporary Improvements* (Please list) |
| Bad Colour or Taste | Soil Erosion at source*Other (Please list)* | Gravel or Sand FilterStorage and settlementtanks*Other (Please list)* | *High**Medium**Low* | Install FilterInstall Storage*Other or Temporary Improvements* (Please list) |
| Bad Flow or Pressure | High pressure in tapsSignificant leaks in pipes*Other (Please list)* | Minimum Head DevicePressure Box*Other (Please list)* | *High**Medium**Low* | Install Head DeviceInstall 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 sourceSpring box/cover is dirtySilt/soil/dirt near sourceSurface water can flowInto spring waterToilet within 30m*Other (Please list)* | Spring box and coverFencing around sourceAir vent (Clean)Diversion ditchEstablished water protectionzone*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) | Establish a water protectionzoneBuild FenceBuild spring boxInstall/Clean cover, ventDig diversion ditchMove Toilet*Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Use of pesticides in areaWaste water dischargein areaAlgae present at source*Other (Please list)* | Gravel or Sand FilterEstablished water protection zone*Other (Please list)* | *High**Medium**Low* | Establish a water protectionzoneInstall FilterMove Source*Other or Temporary Improvements* (Please list) |
| Bad Colour or Taste | Silt/soil/dirt near source*Other (Please list)* | Gravel or Sand FilterStorage and settlementtanks*Other (Please list)* | *High**Medium**Low* | Install FilterInstall Storage*Other or Temporary Improvements* (Please list) |
| Bad Flow or Pressure | High pressure in tapsSignificant leaks in pipesOverflow water at source*Other (Please list)* | Overflow pipe (clean)Pressure Box*Other (Please list)* | *High**Medium**Low* | Install Head DeviceInstall 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 dirtyGutters are dirtyOpen access to tankTank is crackedTap is leakingWater collection area isdirty / standing waterPollution (e.g. trees,Excreta etc) near systemCollection bucket dirty*Other (Please list)* | Tank cover in placeTank inlet has mesh/sieveFirst flush filter*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) |  NoClean roof/guttersInstall covers on tankInstall inlet mesh/sieveInstall first flush filterRepair cracksRepair/replace tapAdd drainage/cleancollection areaRemove 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 FilterRepair/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 wellToilets above well heightOther pollution within10m of well e.g. rubbishStanding water within 2mof wellBroken drainage channelSurface water can enterFrom broken wallCracks in concrete wallCollection bucket dirty*Other (Please list)* | Fence around wellWell is sealed to 3m depthDrainage channel installedEstablished water protection zone*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) | Establish a water protectionzoneMove toiletsBuild fence around wellRepair/Install concreteLine well to 3m depthRepair well wallClean well areaRemove pollution*Other or Temporary Improvements* (Please list) |
| Chemicals in Water | Use of pesticides in areaWaste water dischargein area*Other (Please list)* | Water treatment systemEstablished water protection zone*Other (Please list)* | *High**Medium**Low* | Establish a water protectionzoneInstall TreatmentMove 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 pumpAnimals can access pumpPump is dirtySurface water can accessthe pumpStanding water in pumparea*Other (Please list)* | Protective structure forpumpFence around pumpAdequate drainagearound pumpEstablished protection zoneDiversion ditch*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) | Establish protection zoneClean pump and areaBuild protective structureBuild fenceMove toiletDig 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 locationDebris loose/overhanging*Other (Please list)* | Protective structure forpump*Other (Please list)* | *High**Medium**Low* | Remove debrisBuild 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 tankVents/screens are dirtyTank is crackedPipes are leakingDirty inside tank*Other (Please list)* | Tank cover in placeTank inlet has mesh/sieveTank has air vent*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) | Install covers on tankInstall inlet mesh/sieveInstall air ventRepair cracksRepair/replace pipesClean 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 pipeInstall Filter*Other or Temporary Improvements* (Please list) |
| Bad Flow or Pressure | High pressure in tapsLow pressure in tapsSignificant leaks in pipes*Other (Please list)* | Overflow pipe (clean)Float valve*Other (Please list)* | *High**Medium**Low* | Install overflow pipeInstall 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 pipesAnimals access to areaStanding water incollection areaRubbish/pollution neartap standTap stand is crackedTaps are leaking*Other (Please list)* | Fence around stand pipeDrainage area/channel*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) |  NoBuild fence/sInstall drainageRepair/replace pipe/sRepair/replace pipe stand/sRepair/replace tap/sClean 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* |  NoReplace 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 storageContainers are dirtyHousehold RainwaterDirty buckets for collection*Other (Please list)* | HH Chlorine tabletsUV treatmentBoil waterSealed storage containersFirst Flush on Rainwater*Other (Please list)* | *High***(Action Needed Now)***Medium*(Upgrades Needed)*Low*(No Action Required) | Obtain sealed storagecontainersClean/disinfect storageContainers & bucketsBegin boiling waterBegin UV treatmentInstall first flushObtain chlorine tablets*Other or Temporary Improvements* (Please list) |
| Chemicals in Water | House pipes/storageis corroded*Other (Please list)* | Treatment to removechemicals*Other (Please list)* | *High**Medium**Low* | Replace corroded pipeInstall 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 ToiletNumber Required……… | Pour Flush ToiletNumber Required……… | Septic Tank ToiletNumber Required………Has soil permeability test been performed?Yes No |
| Upgrade Existing Toilets |
| Do existing toilets require upgrading? (Please tick) Yes NoWhat 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) |
|  |  |  |  |  | Implemented |
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| **Section 5 – Community Management** |
| Monitoring Schedule |
| System Component (Tick if present) | What? | How Often? | Who? |
| **5A** Primary Water SourceType…………………….. |  |  |  |
| **5B** Secondary Water SourceType…………………….. |  |  |  |
| **5C** WaterStorageType…………………….. |  |  |  |
| **5D** Water TreatmentType…………………….. |  |  |  |
| **5E** Water DistributionType…………………….. |  |  |  |
| **5F** Primary Toilet TypeType…………………….. |  |  |  |
| **5G** Secondary Toilet TypeType…………………….. |  |  |  |

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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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| **System Part** | **Position and Time** | **Temp** **(°C)** | **pH** | **TDS****(mg/L)** | **Conductivity****(μs/cm)** | **Turbidity****(NTU)** | **Res Chlorine [if used]****(mg/L)** | **E.Coli****(#/100ml)** | **Total Coli****(#/100ml)** |
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