
2019 MSA ENVIRONMENTAL CODE



ENVIRONMENT CREED

All sporting federations have been requested by the International Olympic Committee to adopt and endeavor to support the universal declaration printed below and the assistance of clubs, competitors and officials in complying with this request is essential:

- Every person has a right to enjoy nature while, at the same time, respecting its value to humanity.
- Practicing sports in nature is a right, which must be accompanied by ethical and moral rules, admitted and respected by all and promoted by nations.
- Nature must be protected from any form of negligence, exploitation or any practice which may cause its degradation.
- This right to nature may only be limited when the need to preserve this heritage is proven in an irrefutable manner.
- In keeping with the spirit of a universal citizenship approach, the practitioner pledges to inform him or herself to train or to promote the principles relative to conserving natural habitats.
- Thus, nature is and must remain the heritage of humanity.
- Man is, and must be, its protector. The world we live and work in, we enjoy in sport and relaxation is wondrous; let us present an even more wonderful world to the generations still to leave footprints on this world, footprints that are transient and non-destructive.

1. INTRODUCTION

- 1.1 All human activities, whether work, domestic or recreational in origin, will have some impact on the environment. The challenge of participating in Motorsport may be enjoyed at both indoor and outdoor venues and is an activity whose enjoyment is based on the generation of mechanical energy to achieve its objectives. The generation of this mechanical energy requires the use of a wide variety of chemical products, which, both in their manufactured state and in their utilization in the engine and other components of the vehicle are known toxic contaminants of the atmosphere, ground soil and water sources, flora and fauna.
- 1.2 The active participation of multiple motor vehicles and motorcycles in an event generates high levels of sound at all motorsport venues. To this level of sound must be added the extra sound generated by venue music, public address systems, traffic and people. Whilst this activity and accompanying noise may be exhilarating to motorsport enthusiasts, it may be interpreted as irritating noise when it disturbs the expected well being and life patterns of people, domestic and farm animals, resident in the vicinity of both permanent motorsport circuits and temporary venues.
- 1.3 The increasing popularity of Off Road Vehicles and motorsport events and recreational exploring in four-wheel drive vehicles is a significant threat to both established and already threatened ecosystems, particularly in beach and desert areas.
- 1.4 Motorsport is one of the three categories in which motor vehicles and motorcycles are utilised, the other two being transport and recreation. Not one of these three categories is exempt from either environmental awareness or pollution. MSA wishes to be at the forefront of environmental awareness and protection and to heighten the awareness of environmental damage by intense promotion of its own environmental protection and safety code to all motorsport competitors and their crews, officials and organisers.
- 1.5 Through its international affiliation with the environmental commission of the FIM, MSA is acutely aware of international environmental planning and legislation and the potential threats to motorsport developing out of this legislation. Elements of this legislation, which are relevant to South African Motorsport, have been incorporated in the MSA code.
- 1.6 MSA is responsible for ensuring that all event organisers as well as competitors and officials comply with government requirements in so far as the protection of our environment is concerned.
- 1.7 MSA wishes competitors in all categories of motorsport enjoyment and satisfaction in participating in their chosen sport while caring for the environment at the same time. MSA desires that motorsport should be an outstanding example to all South African motorists of the care of the environment.

2. THE ENVIRONMENTAL CODE PROTOCOLS

- 2.1 The scope and protocols of environmental protection and enhancement are documented in this code.

This is the responsibility of the following individuals, groups and organizations:

- 2.1.1 Environmental Officers and Race Officials
- 2.1.2 Promoters and Organizers
- 2.1.3 Competitors and their Service Crews
- 2.1.4 Venue Owners
- 2.1.5 The Public and Spectators

2.2 The code will stress regulations and recommendations with regard to:

- 2.2.1 Sound Measurement and Noise Control.
- 2.2.2 Fuel Composition, Storage and Disposal of fuel containers.
- 2.2.3 Protection of the Soil and Water Sources
- 2.2.4 Cleaning of Vehicles and Motorcycles
- 2.2.5 Fire Prevention and Control
- 2.2.6 Sanitation
- 2.2.7 Waste Management

2.2.8 Public and Environmental Safety Measures

3. THE ENVIRONMENTAL OFFICER

- 3.1 It is compulsory for an MSA accredited Environmental Officer, to officiate at National, Regional and Club events. The name of the Environmental Officer must be entered in the event SRs and failure to comply will result in the SR's not being approved by MSA.
- 3.2 A person who has attended and successfully completed the examination at a FIM environmental seminar or a MSA Environmental Officer's examination and has been accredited by either institution, is eligible for appointment as a MSA Environmental Officer.
- 3.3 An environmental checklist and log sheet will be distributed to organisers with the organising permit and other relevant report forms. The checklist must be completed by all Environmental Officers and returned to MSA, within 3 working days, together with the CoC's report.
- 3.4 Any serious failure of the Environmental Officer towards the obligations and due diligence mentioned towards his duties will be examined and sanctioned by MSA, with the withdrawal of the Environmental Officer's accreditation.

4. RESPONSIBILITIES OF THE ENVIRONMENTAL OFFICER

- 4.1 The Environmental Officer has the following responsibilities at each event:
- 4.1.1 To ensure that the MSA environmental code has been read and understood by the organizer and officials of the event and that the principles embodied in the code are being respected by competitors, organisers, venue owners and officials.
- 4.1.2 To have access to all information concerning the event and may be consulted about the planning of an event.
- 4.1.3 To have the opportunity prior, during and after the event to make recommendations to the organisers, Chief Steward and the Clerk of the Course or Jury President on all aspects of the event, which may have potential environmental consequences.
- 4.1.4 To carry out an inspection of the circuit or venue and all its facilities at any time before, during or after the event.
- 4.1.5 To inform the officials running the event of serious breaches of the code.
- 4.1.6 To identify areas of good practice.
- 4.1.7 To complete the required compulsory checklists for the event and to submit the report to MSA within 3 working days of the end of the event.
- 4.1.8 To initiate an environmental logbook for the circuit, permanent motor sports venue and to make entries into an existing logbook.
- 4.1.9 Where, at the sole discretion of the appointed Environmental Officer, an infringement of the MSA Environmental Code has occurred, he/she shall be obliged to report details of the infringement (race number, name/surname, time/date of offence, etc.) in writing to the Clerk of the Course, together with a recommendation as to the action to be taken against the offender/s. The Clerk of the Course shall be obliged to consider the report of the Environmental Officer and to take appropriate action in accordance with the provisions of GCR 157 (i) and/or GCR 177. Where an infringement of the MSA Environmental Code is by a circuit owner, event organiser and/or promoter, details of the infringement shall be notified to the Clerk of the Course, who shall require the offending party to take immediate remedial action, to the extent that this is possible. If the necessary remedial action cannot be taken during the event, the Clerk of the Course shall be required to report the infringement to MSA, which will decide on an appropriate course of action.

5. RESPONSIBILITIES OF PROMOTERS AND ORGANISERS

- 5.1 Particularly for off road events and multiple stage rallies and well in advance of the event, in consultation with the regional Police Department, Provincial and Metro Traffic Police, select a number of routes to and from the venue of the event which will result in no or minimal damage to the environment and minimal disruption to the daily life patterns of the surrounding area and its resident human and animal population.
- 5.2 Provide accurate and concise directions to all circuits and venues in all advertising for the event. The display of route direction and venue location signs must not damage manmade or natural structures and must be removed within a stipulated time after the event.
- 5.3 Identify areas that may be vulnerable and ensure their protection. Such areas include sacred grounds and ecologically sensitive areas.
- 5.4 At fixed circuits, ensure that the sanitary and ablution facilities are well maintained, clean and hygienic and functional for competitors, officials and spectators. From an estimate of the expected spectator attendance, determine whether extra temporary toilets will be required (See Appendix 6 - SANITARY FACILITIES)

- 5.5 Provide sufficient and adequate sanitary and ablution facilities for off-road events. If possible, attempt to locate service parks and refueling points at sites that have sanitary and or ablution facilities, whether permanent or temporary. If this is not possible, arrange for the hire of these facilities (See Appendix 6 - SANITARY FACILITIES). Ensure that the sanitary facilities available, whether permanent or temporary, will not result in the contamination of the ground, ground or underground water by human excreta, as a result of faulty or leaking effluent containers or faulty connection to existing sewage points.
- 5.6 Inform spectators about the expected responsible behavior required at the event, particularly with regard to the campsite, the activation and care of open fires, refuse and waste disposal and the consumption of alcohol. The possession, sale, distribution and consumption of all illegal substances, including recreational drugs, is illegal and will be reported to the S.A.P.S. This information should be displayed by prominent signs at the parking areas, at the entrance to the venue, at prominent points within the venue and at points within the campsite as well as a notice in the official programme, on entrance tickets and in any other documentation distributed.
- 5.7 Detailed specification for all on-site catering outlets must be documented and contracts signed by both the organiser and the individual catering outlets. The preparation and distribution of food and beverages must comply with national public health and food hygiene regulations. Food should be packed in recyclable material. Waste containers, adequate in size and numbers must be freely available in and around all catering areas. (See Appendix 4 - FOOD SAFETY)
- 5.8 Ensure detailed protocols for the prevention and control of grass fires, particularly in off-road events. Ensure that all grass in parking areas is cut very short.
- 5.9 Provide refuse containers and/or sturdy refuse bags, adequate in size and number in all competitor, official and spectator areas, suitable for the disposal of personal, catering and other refuse.
- 5.10 Specially constructed containers for the collection of all forms of medical waste, particularly blood contaminated materials, syringes and sharp consumables such as injection and intravenous needles, scalpel blades and suturing needles, must be available at all permanent, temporary or mobile medical posts. Both the presence and disposal of medical waste containers must be strictly managed according to national medical waste control regulations.
- 5.11 Sufficient and specifically labeled containers for various types of refuse: glass, plastic, paper etc, must be placed in the pit areas, the paddock, the parc ferme, the scrutineering bays, race control, administrative offices, riders briefing area and every other facility involved in the organisation of the event. The sale of advertising space on these containers or decoration of the containers may result in additional income accruing to the organisers and may encourage every person at the venue to use the containers. Refuse must not be allowed to spill over and contaminate the ground around the containers and all containers must be emptied frequently. (See Appendix 8 - WASTE MANAGEMENT)
- 5.12 Identify specific areas and facilities for the washing of motorcycles and motor vehicles, if washing is permitted in the regulations of that category of motorsport. At permanent venues, the washing facility must include properly constructed drains and oil traps connected to the main drains or storage tanks that will not allow contamination of the surrounding earth or underground water sources, or streams and rivers.
- 5.13 The washing of machines, when permitted, may only be performed using water. The addition of any other substance, including detergents, is forbidden.
- 5.14 Sturdy containers or tanks, specifically labeled in bold type and placed on a level concrete surface, must be provided for the separate collection of drained fuel, oil, degreasing, cooling and brake fluids, to prevent indiscriminate and possibly hazardous disposal or spillage of these fluids on to the ground and the escape of fluid vapors into the air. These containers should be sealed with a small entry or funnel for the pouring of the fluids into the container.
- 5.15 A company that specialises in the removal of general and chemical waste and waste water and that is registered to perform this function must be contracted to remove all waste and refuse within 3 days of the end of the event. (See Appendix 8 - WASTE MANAGEMENT) It is essential to prevent the illegal dumping of any waste, immaterial of whether it is collected at a later date or not.
- 5.16 Ensure that the fuel used complies with the regulations of this code. (See APPENDIX 3 - FUEL)
- 5.17 Ensure that the time limits arranged for venue music, the venue public address system, practice and racing are not exceeded.
- 5.18 Ensure that the maximum permissible levels for spectator and competitor sound production (See APPENDIX 1 – NOISE & also GCR 245) are not exceeded either between or during practice or racing. Ensure that excessive and inappropriate noise production is prevented at tourist rally events.
- 5.19 Recycled paper or plastic bags should be distributed to competitors and spectators at documentation or when purchasing an admission ticket. These bags are intended for the collection of small items of personal waste such as food wrapping, sweet papers, etc.
- 5.20 Dust, of necessity, occurs at all non-circuit off-road events and at many circuit events. Ensure that effective watering is available to water the track and its immediate surroundings before and between practices and races. This procedure must conform to the regulations of the

category of motorsport competing at the circuit. Dust creates potentially dangerous situations to competitors in many events and is annoying to spectators, which may affect spectator attendance. Dust may trigger breathing problems in both competitors, officials and spectators. Dust and mud covered motorcycles and motor vehicles will require washing. **Water is a scarce commodity and must be actively conserved.**

- 5.21 Specific provisions must be made for the elimination of dust and gas emissions and effective ventilation in all indoor venues used for motorsport events. Of particular concern is the use of methanol as a fuel.
- 5.22 Recyclable and re-usable materials, whenever possible, must be used for route markers for competitors and spectators and site identification. It is an unfortunate reality of South African life that such markers may be removed or altered by the indigent population and organisers are forced to utilise paint signage on rocks and trees; such paint must be water based and should be biodegradable.
- 5.23 The planning and construction of routes for non-circuit events must ensure that no part of the route crosses or impinges on sensitive areas such as ancestral burial grounds, spiritual sanctuaries, existing or potential fossil beds or areas critical to the breeding or habitat of local species of fauna and flora, particularly endangered species. As many of these locations may not previously have been identified as sensitive areas, it is vital that event organisers and planners consult with local inhabitants such as farmers, tribal councils and local authority and provincial officials to prevent the proposed route from causing any environmental damage.
- 5.24 It is compulsory for all event organisers (not only for circuit racing, but for all categories) to conduct sound level meter tests of competing vehicles and motorcycles at events. Failing to comply with this requirement will be subject to heavy penalties.
- 5.25 The infraction or inobservance by the organiser of obligations mentioned in the current MSA Environmental Code are subject to sanctions at the discretion of MSA.

6. THE RESPONSIBILITY OF THE ORGANISERS AFTER THE EVENT

- 6.1 All signage, billboards, posters, route markings, and barrier tape required for the track itself must be removed within the stipulated time, preferably immediately after the end of the event.
- 6.2 All advertising material for the event, including posters, pamphlets, leaflets, etc, must be removed from public display within 7 days of the end of the event and destroyed or recycled.
- 6.3 Ensure that all arrows, route markers and barrier tape are removed from the track immediately after that section of the route has been completed. All of these items are not only a threat to the environment but may be life threatening to wild, farm and domestic animals.
- 6.4 If temporary roads or tracks have been constructed, they should be leveled off immediately to prevent the development of soil erosion.
- 6.5 Ensure the separate removal of containers for oil, cleaning rags, filters, medical and other hazardous waste by specialist removal waste removal companies and their expert disposal.
- 6.6 Where significant damage has occurred to trees and large shrubs on private property, notify the owner immediately after the event in writing and arrange for the replacement of the damaged flora, as required by the owner. If state, provincial or local authority property is used, a similar procedure must be followed.
- 6.7 Return to the venue one-month after the event to ascertain the rate of recovery of the venue.

7. REQUIREMENTS FOR ADVERTISING AN EVENT

- 7.1 The advertising of a motorsport event should preferably be done in local and regional newspapers, trade magazines, on radio and TV, thus reducing the display of posters.
- 7.2 Permanent circuits should have large display boards at the entrance to the circuit displaying a diary of events for each month.
- 7.3 Prior to the placing of any advertising poster for a motorsport event, permission must be obtained from Government, Municipal, Business and Private Owners of any property selected for the siting of posters and the details of the positioning of posters discussed and accepted.
- 7.4 Clearly ascertain, in writing, the time limits arranged for both the setting up and removal of advertising posters and the geographical areas for display. Ensure that these time limits are observed.
- 7.5 Advertising posters must not be displayed in ecologically sensitive or wilderness areas, protected urban sites, or on private property or any other inappropriate site.
- 7.6 Ensure that posters advertising motorsport events are not attached to trees, plants, shrubs or other sensitive sites by nails, staples or other damaging methods; string or any other material that does not cause damage, must be used.

7.7 Leaflets, pamphlets, or inserts in programmes or any other form of hand delivered advertising material must not be distributed by placing the material under the windscreen wipers of cars or left on motorcycles by any person either before or during the event. If such advertising must be utilised at an event, the advertising material must only be distributed at the entrance to the venue and never as spectators or competitors leave the venue. By doing this, it is hoped that the advertising material is left in motor vehicles or motorcycling bags. Appointed Environmental Officers, who document advertising leaflets or pamphlets littering a venue, are required to retain the material and submit it to MSA for further action.

7.8 The advertising of any motorsport event must never offend or outrage the culture, morals or religious beliefs of the region or country hosting a motorsport event.

8. THE RESPONSIBILITIES OF PERMANENT VENUE OWNERS

It is compulsory for all permanent circuit owners to conduct and submit an environmental audit to MSA prior to the start of each racing season.

In accordance with the Environmental Legislation of the Republic of South Africa, an Environmental Impact Assessment must be performed prior to the commencement of construction of any new motorsport venue and prior to alterations being conducted at any existing motorsport venue.

8.1 The owner of a permanent venue should appoint a permanent Environmental Officer or committee who must start an environmental logbook for the venue and ensure that it is updated regularly. The Environmental Officer should attend all planning meetings for events.

8.2 All permanent venue buildings, especially sanitary facilities, must be inspected regularly and routine maintenance and repair work completed timeously and professionally. They must be kept clean at all times.

8.3 All parking areas must be maintained. All grass areas, including surrounding areas, must be cut short to prevent fire hazards.

8.4 Unsightly structures or operational areas such as workshops should be screened from general public view by concealing walls or by planting a barrier of trees or shrubs or by painting the structures in colors that would assist in camouflaging them.

8.5 Ecologically sensitive areas, natural or man-made ditches and water features such as dams, reservoirs and water courses within the perimeter fencing of the venue must be cordoned off from the general public to prevent pollution and destruction.

8.6 The construction of new structures or alterations to existing structures with specialised functions such as medical centers, wash bays, pits must comply with the regulations of both MSA, FIA and the FIM and plans for such structures must be assessed and signed off by MSA prior to the start of construction. The necessary signed permission for construction must be obtained from all the relevant local authority departments.

8.7 The use of building waste and rubble in any form of construction, including noise barriers, is prohibited.

8.8 Materials required for maintenance and construction at the venue, particularly sand, soil and grass, must be inspected to prevent the introduction of polluting and toxic agents into the venue.

8.9 Repair all defects on building exteriors, roofing, guttering and fencing.

8.10 If washing is allowed at the venue, provide washing bays with concrete surfaces and proper drainage, preferably with an oil separator.

8.11 Ensure that all sanitary waste disposals are free of defect and correctly connected to main sewage or removed from the venue. (See Appendix 6 - SANITARY FACILITIES and Appendix 8 - WASTE REMOVAL)

8.12 In planning alterations to layout and contours of the venue, ensure that soil erosion will not occur with the run-off of water after heavy rainstorms.

8.13 The sound levels of Public Address Systems must be controlled according to the criteria for Venue Sound (see APPENDIX 1 - NOISE)

8.14 Permanent catering facilities must be inspected regularly and must be scrupulously clean. Of particular importance is the extractor ducting system over cooking facilities, which, if not regularly cleaned and maintained, may be a potent source of fire ignition. All facilities must comply with local authority, public health regulations. (See Appendix 4 - FOOD SAFETY)

8.15 Ensure that there are no leaking taps, hydrants, or hoses, blocked drains or low-lying areas where rainwater may collect which will result in stagnant pools of water or mud. This is a waste of water and a health hazard. The introduction of mud from vehicles and humans and the presence of humans in wilderness areas have been associated with the introduction of human diseases into animal colonies, often with catastrophic results.

- 8.16 The design and placing of the start area should be made in a manner that will have the least noise effect on the venue and the surrounding, particularly, residential areas.
- 8.17 Remove vegetation, especially trees, only when absolutely necessary. If this is to be done on private property, ensure that written permission has been obtained from the owner of the property. Ensure that all removed vegetation is completely cleared from the venue.
- 8.18 The replanting of vegetation, particularly trees and shrubs, should be done in such a manner that their sound absorbing capabilities are fully utilised.
- 8.19 Damaged or discarded tyres must not be burnt or left in an uncontrolled dumpsite area. Provided there is no possibility of ground pollution, discarded tyres may be used as safety barriers, in the leveling of terraces when filled with sand or as containers for shrubs and flowering plants, particularly at unsightly areas of the venue.
- 8.20 Provide clear signage with information on circuit facilities and spectator areas.
- 8.21 At permanent circuits and venues, where the preparation of food is allowed on open fires, level concrete surfaces should be provided on which cooking fires must be placed. This will reduce the risk of fire and prevent cooking fat, etc from spilling on the ground. If open fires are prohibited, this must be clearly identified to competitors and their service crews, officials and spectators. Where open fires are permitted, functional fire extinguishers must be immediately available should a fire ignite.
- 8.22 Managers and owners of venues must ensure the best possible environmental management of their venues. To this end, it is essential that, at the conclusion of every event and also at regular intervals between events, the impact of the event as well as the effects of the venue and its activities on the surrounding environment must be assessed and recorded in the environmental logbooks. Shortcomings must be addressed and improvements implemented.
- 8.23 Where possible, but especially at permanent venues, separate sanitary facilities must be provided for male and female competitors, service crew members and officials. This includes ablution facilities.
- 8.24 Adequate provision of potable drinking water must be provided. Dirty or contaminated water must not be allowed to contaminate the ground and must be disposed of in marked containers or into the mains drainage/sewer system.
- 8.25 The infraction or inobservance by venue owners of obligations mentioned in the current MSA Environmental Code are subject to sanctions at the discretion of MSA.

9. **RESPONSIBILITIES OF COMPETITORS AND SERVICE CREWS**

If we continue to participate in motorsport with little or no regard to its effect on the environment, we will find that in 10 years' time there is no motorsport.

- 9.1 Every competitor, member of a service crew and official must be aware of the contents of the MSA environmental protection and safety code. Highlights of the code that have special reference to the current event should be addressed at the pre-race briefing.
- 9.2 Unnecessary and prolonged running and revving of engines must be avoided to prevent noise pollution. Ascertain whether there are time restrictions for running vehicle engines and remain within the stipulated times.
- 9.3 Ensure that the motorcycle or motor vehicle complies with the maximum sound level allowed for the motorsport discipline to be competed in. (See Appendix 1 – NOISE)
- 9.4 The leakage and spillage of fuel, oil, cleaning, degreasing, cooling and brake fluids and any other additive or cleaning agent on to the unprotected ground must be prevented. It is the responsibility of the organiser of the event to provide suitable containers for this type of waste. If the organiser has not provided containers, it is the responsibility of the competitor and their service crews to provide their own containers and to remove the containers at the end of the event. Containers for the collection of used or contaminated oil must have fixed funnel inlets. Separate and clearly marked containers for the collection of oil filters and cleaning rags must be provided.
- 9.5 The use of an environmental mat (or other effective ground protecting devices/systems) is compulsory at ALL motorsport events to prevent soil and water contamination. (For specifications see APPENDIX 11 – ENVIRONMENTAL MATS)
- 9.6 After the use of an environment mat, it must be rinsed with water ONLY in a place with a proper drain and oil-divider. Mats must be considered as hazardous waste and disposed of accordingly.
- 9.7 Competitors and their service crews should be issued with paper or plastic refuse bags for the disposal of personal waste. These personal containers must be disposed of both during and after the event in designated refuse containers. Pit and surrounding areas must be kept clean at all times.

- 9.8 In off-road events where competitors are required to cross-riverbeds, whether dry or at low water, the competitors must avoid damaging natural embankments, which, if significantly damaged, could eventually alter the flow of the river after heavy rains. This applies equally to recreational riders and drivers; especially four-wheel drive vehicles, and quads.
- 9.9 All farm and residential gates that are encountered along the route of an event must be firmly re-closed and secured after the vehicle has passed through the gate. Gates that have been left open or unsecured may result in the escape or loss of livestock, the destruction of planted crops and wild flora by both domestic and wild animals. Respecting the private property of landowners can help in ensuring permission of the landowner to use routes through his property for future events.
- 9.10 Only designated washing areas may be used for the washing of vehicles. Only water may be used.
- 9.11 Negligent or intentional pollution of the paddock or other restricted areas will not be tolerated.
- 9.12 Avoid intentionally driving through pools of water, small streams and muddy areas with the aim of splashing water or mud over officials, spectators and fellow-competitors. Furthermore, it is a proven fact that mud on vehicles, tyres and shoes introduced into wilderness areas has decimated colonies of wild animals, due to the introduction of human diseases.
- 9.13 Avoid parking on grass verges, plants and shrubs. Avoid driving over small plants and shrubs in parking areas.
- 9.14 Punctured or damaged tyres may not, under any circumstance whatsoever, be left along the route of an off-road event. The discarded tyre must be removed either immediately by the competitor or the competitor's service crew or by advising a marshal to arrange for later collection.
- 9.15 The starting of any type of fire along the route or at service parks during off-road events is prohibited under adverse weather conditions, particularly wind. Such fires may become runaway fires which could destroy residential property, forested areas and livestock, as well as destroying small animals and insects vital to the ecological balance of a region. An explosion hazard would exist around fuel stores at service parks.
- 9.16 Plastic bags and barrier tape negligently left along the route of an event are a cause of pollution but pose serious threats to the lives of children, domestic, farm and wild animals. These products must be disposed of at appropriate sites identified for refuse collection.
- 9.17 Competitors in off-road events must endeavor to follow the route designated by route markers and not to create new routes or short cuts in attempts to improve their times.
- 9.18 Travel to and from events must be done using legally available and designated routes, thus preventing irreversible damage to other routes.
- 9.19 Respect and preserve the environment through which you travel, especially in off-road events. Do not maliciously or intentionally damage trees, the branches of trees, shrubs or plants. Do not kill or maim any species of fauna. No long-term evidence of the running of a motorsport event, especially off-road events, must be left to scar the environment.
- 9.20 Any infringement by the participant or a service crew member of any of the above mentioned requirements, can result in actions being taken against the competitor and/or team in accordance with the provisions of GCR 157 (i) and/or GCR 177.

10. RECOMMENDATION FOR THE RECREATIONAL AND TRANSPORT MOTORIST AND MOTORCYCLIST

Every motorist and motorcyclist is encouraged to enjoy, to the fullest extent, their travels through this country without leaving damaging footprint of their journey. Respect road use regulations through your motoring conduct, thus reducing road traffic injuries and deaths. Such rules of conduct should include:

- 10.1 The development of driving habits which will ensure the orderly integration of all types of motor transport and the respect of the individual for all other road users.
- 10.2 Never dispose of waste on to the roads from either stationary or moving vehicles, especially fliers distributed at intersections. All waste must be disposed of at an appropriate refuse container at service stations or at the destination.
- 10.3 Rest areas on national roads, picnic, camping and caravan sites must be left with no evidence of waste being evident. Contamination of these areas by human excreta must be prevented by the use of sanitary facilities at service stations.
- 10.4 Flamboyant, aggressive and competitive driving and riding must be avoided, as the performance of any action unrelated to driving, could result in the causation of accidents.
- 10.5 Excessively loud sound systems are an irritation to other road users and will detract the attention of the driver from the act of driving.
- 10.6 Road traffic accidents can result in the destruction of property and the contamination of the immediate vicinity with blood, fuel and other automotive components and hazardous chemicals being transported. Washing away of these substances may result in pollution of the

ground and possibly water sources. Broken glass, from windscreens and windows are a hazard to other vehicles, pedestrians and animals. The potential for the ignition of fires and explosions exists.

- 10.7 Never drive or ride under the influence of alcohol, prohibited substances or recreational drugs.
- 10.8 To avoid noise pollution by eliminating unnecessary running of engines, by fitting excessively loud exhaust systems, or by the excessive use of hooters or horns.
- 10.9 Use only routes that are legally available.
- 10.10 When travelling in-groups, to proceed at a quiet, unobtrusive and legal speed and in a professional manner which does not obstruct other road users. This is of particular importance in "Breakfast Runs" and tourist rallies.
- 10.11 Respect the environment by avoiding routes, particularly off-road and wilderness routes that have been damaged beyond a point of natural recovery.
- 10.12 At all times, to protect wildlife and the natural habit and breeding grounds of all animals, birds, reptiles and insects. Similarly, to protect the flora and not to remove endangered or protected species.
- 10.13 To ensure, at all times, the correct disposal of all used or damaged oil, tyres, batteries, containers, etc whether recyclable or not.
- 10.14 To encourage fuel economy and the economy of space by riding motorcycles instead of driving cars. This is a long-term objective.

11. THE ENVIRONMENT LOGBOOK AND CHECKLIST

- 11.1 Owners of motorsport circuits and permanent motor sports venues are required to open and maintain an environmental logbook. The logbook must be kept at the venue/circuit and completed for each event by the Environmental Officer. Copies of ALL log sheet entries must accompany the annual environmental audit that has to be submitted to MSA.

The log sheet entry must detail the following information:

- 11.1.1 All activities occurring at the event.
- 11.1.2 All measures taken at the event to ensure environmental protection and prevent pollution.
- 11.1.3 Details of all meetings held, with an attendance register of participants at the meeting.
- 11.1.4 Written confirmation of permission sought and granted for the use of the facility.
- 11.1.5 All time constraints must be identified and documented.
- 11.1.6 All infringements of the environmental protection and safety code must be documented.
- 11.1.7 All penalties imposed for code infringements must be documented.

12. MSA ENVIRONMENTAL AWARD

- 12.1 MSA will initiate an annual environmental award for which organisers, officials and competitors will be requested to submit nominations.
- 12.2 Such award will be presented to the circuit, organiser, club or individual, who is assessed to have taken the most care of the environment during the course of the calendar year - either at motorsport events, or general environmental protection.
- 12.3 The winner will be selected based on written, photographic and other proof submitted with the nomination.
- 12.4 Candidatures for the MSA Environmental Award must be submitted to MSA by 31 October at the latest.
- 12.5 The MSA Environment Panel may also propose a candidate.

13. MSA ENVIRONMENTAL LOGO

MSA has created an environmental Logo that will head all Environmental actions taken within motorsport. The logo can be used by affiliated clubs, promoters, organizers, sponsors, teams, competitors and other partners following approval by MSA. The logo cannot be modified.

APPENDICES

Potential Environmental risks associated with motorsport activities are being addressed in the following Appendices in order to assist with identification, evaluation and control measures:

- 1. Noise**
- 2. Protection of the Soil and Water Sources**
- 3. Fuel Storage & Safety**
- 4. Food Safety**
- 5. Drinking Water**
- 6. Sanitary Facilities**
- 7. Camping**
- 8. Waste Management**
- 9. Facilities for People with Special Needs**
- 10. Child Safety**
- 11. Environmental Mats**

APPENDIX 1 - NOISE

1. SOUND vs NOISE

- 1.1 Sound is a physical phenomenon, capable of measurement, originating from a vibrating source.
- 1.2 In contrast, noise is the individual's interpretation of a sound and the impact that the particular sound makes on that individual's lifestyle. Noise is also defined as any unwanted sound.
- 1.3 Sound is generated at various sources at motorsport events, in addition to the obvious noise generated by running motorcycle and motor vehicle engines that is expected at any motorsport event. The Environmental Officer and organiser of the event must be aware of the magnitude and diversity of sound emanating from public address system, public music, possibly originating from different sources, public entertainment, crowd noise, traffic congestion and other sources of sound associated with the event. Reducing excessive noise associated with all motorsport activities, which should be expanded to include recreational and transport motoring, and taking the public's reaction to noise into consideration, is the responsibility of every competitor, club, official, and organiser.
- 1.4 A sound enjoyed by a single individual may be extremely irritating to a second individual. The individual appreciation of sound is dependent on the psychological interpretation of the sound by that individual. When sound is perceived as irritating, persistent or affecting normal life patterns such as conversation or sleep, etc, sound is then interpreted as noise. Motorcycles produce high sound levels and are almost always considered as noisy, a fact that Environmental Officers must always bear in mind.

2. SOUND PRODUCTION AND MEASUREMENT

- 2.1 Sound is produced when an object is caused to vibrate; this vibration initiates vibration in the surrounding environment. The vibrating object comes into contact with minute particles in the surrounding air which are set in motion and collide with other particles thus initiating the process of sound radiation away from the vibrating object.
- 2.2 The initiated vibrations radiate easily and rapidly in metals and water, but less easily in air. This propagation of sound is defined as the propagation speed or the speed of sound, which is measured at 765 miles/hour (1122 feet per second) or 1224 km/hour (340m/second) at sea level. This is the sound barrier.
- 2.3 The unit of measurement of sound pressure is the decibel (dB) which is measured on various scales. Motor vehicle and motorcycle sound is measured on the A-weighted scale dB(A). This is a physical phenomenon characterised by successive fluctuations of pressure in relation to atmospheric pressure. These differences vary in intensity and frequency. The time between 2 fluctuations determines the frequency of sound or the pitch and is measured in hertz.
- 2.4 Sound originating from a specific source is usually composed of a multitude of sounds vibrating at different frequencies. This constitutes the spectrum of sound.
- 2.5 Sound pressure levels increase very rapidly. The human ear is not capable of interpreting the increase as rapidly, as a protective mechanism. As a consequence of this lag period of interpretation, each time the number of identical sound sources is doubled (trumpets,

violins, motorcycles at a start line) The sound pressure level measurement is augmented by 3 dB(A) only and not by a doubling of the sound.

3. THE DAMAGE POTENTIAL OF SOUND

- 3.1 The human ear registers differences in frequency. These differing frequencies are processed by different anatomical structures of the auditory organs. An overload of a certain frequency will, ultimately, either partially or totally, damage that part of the auditory apparatus responsible for the processing of that frequency. This will result in initial hearing impairment and eventual hearing loss, should the exposure to the sound continue. This situation will be aggravated by exposure to noise in other pursuits and in everydaylife or employment.
- 3.2 It is vital to remember that this hearing impairment and loss is irreversible. Each motorsport event, whether practice or competition, will result in exposure to a regularly recurring noise caused by multiple sound sources of different sound pressures and frequencies. The susceptibility of the ear to overload damage is not only related to the severity of the sound pressure but also to the frequency of the sound and the length of time that the ear is exposed to the noise.
- 3.3 Occupational safety acts recommend that an average exposure to noise of 80 dB(A) experienced for 8 hours a day and 5 days a week for 42 weeks of one year is the maximum sound exposure at which no hearing loss will occur. If the exposure to noise rises to 83 dB(A), the exposure time should not exceed 4 hours a day and noise exposure of 110 dB(A) lasting 30 seconds is as damaging as exposure to 80 dB (A) continuously.
- 3.4 **It must be clearly and repeatedly documented to all motorsport competitors, their service crews and families and officials that participation in or at motorsport events regularly, may result in hearing loss if protective devices are not utilised.**
- 3.5 The vibrations that are present with the production of noise must not be disregarded as they may cause significant structural damage to both temporary and permanent structures.
- 3.6 Research has shown that, apart from hearing damage, prolonged exposure to a high noise level may also result in physical tiredness, irritability and loss of concentration.

4. THE MEASUREMENT OF SOUND LEVELS AT MOTORSPORT EVENTS

It is compulsory for event organisers (regardless of the category of motorsport) to conduct sound level tests of competing vehicles and motorcycles. The driver/rider of any vehicle that fails a sound level test shall render himself/herself liable for the imposition of a penalty as provided for in GCRs 157 (i) and 177.

- 4.1 **Each sporting commission is duty bound to set upper limits of sound production for that category of motorsport. Where no limits are specified, use TABLE 1 (below) as guideline for maximum sound levels.**
- 4.2 The calculation of total sound produced at the start line of a motorsport event is done as follows:

A single motorcycle or motor vehicle will produce a dB(A) reading. Each time the number of motorcycles or vehicles is doubled, the sound pressure measurement only increases by 3 dB(A).

EXAMPLE: 64 Motorcycles are drawn up at the start line of an event. The sound measurement of one motorcycle is 80 dB(A). What is the total sound measurement for all 64 motorcycles?

The first motorcycle produces 80 dB (A)
The first 2 motorcycles produce 83 dB (A).
The first 4 motorcycles produce 86 dB (A).
The first 8 motorcycles produce 89 dB (A).
The first 16 motorcycles produce 92 dB (A).
The first 32 motorcycles produce 95 dB (A).
The first 64 motorcycles produce 98 dB (A).

- 4.3 The calculation for determining the reduction in sound pressure as one moves away from the sound source is defined as follows: Doubling of the distance from the source of the sound to the ear of the observer will result in a reduction of the sound pressure of 6 dB(A)

EXAMPLE:

Sound measured at 8m registers 95 dB(A).
Sound measured at 16m registers 89 dB(A).
Sound measured at 32m registers 83 dB(A).
Sound measured at 64m registers 77 dB(A).
Sound measured at 128m register 71 dB(A).

5. SOUND ENERGY LOSS

- 5.1 There are various factors which will increase the rate at which sound energy is lost, thus reducing noise. They include:
- 5.1.1 Raised environmental temperature.
- 5.1.2 Altitude
- 5.1.3 Increased atmospheric humidity.
- 5.1.4 Trees and foliage surrounding the venue.
- 5.1.5 Uneven ground such as terraces, embankments or hills, which will deflect sound.
- 5.1.6 Large obstacle such as walls, buildings or full parking areas of motor vehicles, which again will deflect sound.
- 5.1.7 Sound loss is reduced in cold weather. Add 1 dB(A) for temperature under 10 °C and 2 dB(A) for temperatures under 0 °C.

6. VENUE SOUND

- 6.1 Sound systems utilised at venues may cause more irritation and inconvenience in the area surrounding a venue than the actual noise produced by the motorsport event. The following services must be monitored repeatedly by the Environmental Officer:
- 6.2 The public address system for the competitor's paddock should be separate to that of the public areas. The sound produced should never exceed the hearing damage threshold level of 85 dB(A) when the sound is measured in a public area. The sound of the public address system should not exceed 3 dB(A), above the background sound levels, when measured at the closest residential property.
- 6.3 Ensure that the sound volume is reduced between practice sessions and races;
- 6.4 All loudspeakers and sound systems must be positioned in such a way that they are directed towards the ground and towards the center of the venue or inside of the circuit.
- 6.5 Ensure that the sound level of the public address system is kept as low as possible;
- 6.6 Ensure that sound and public address systems are not utilised before or after times stipulated for the event;
- 6.7 The sound system must be tested and ready 30 minutes before the start of the first practice;
- 6.8 Should other entertainment be provided at the venue, ensure that the organisers adhere to this protocol.

7. CONCLUSION

- 7.1 The production of sound is inherent in competitive motorsport as well as in the recreational and transport use of motorcycles and motor vehicles.
- 7.2 The control of noise production is essential to not only prevent irritation in residential areas surrounding circuits and venues but also to prevent hearing loss in competitors and their service crews and families, officials and spectators.

8. SOUND MEASUREMENT PROCEDURES

- 8.1 The measurement of sound levels will be made by placing the microphone at a distance of 50cm from the end of the exhaust pipe at a 45° angle and at the level of the exhaust outlet.
- 8.2 Where more than one exhaust outlet is present on the machine, the test must be repeated for each exhaust outlet and the highest reading will be the representative reading.
- 8.3 In circumstances where the exhaust outlet is not immediately available or accessible, the test may be conducted at a distance of 2 meters from the centerline of the vehicle with the microphone 1.2 meters above the ground.
- 8.4 Measurements should be made outdoors with no large reflecting objects e.g. walls or buildings within 3 meters for the 50cm test or within 10 meters in the 2 meter test.
- 8.5 Background noise should be at least 10 dB(A) below the measured level with distances from 2-8 meters. It is necessary that there is a minimum of 20 meters radius open flat space around the vehicle. Where possible, measurements must be taken as close as possible to the vehicle, at the defined distance to avoid background noise.
- 8.6 It is generally impractical to take measurements over 8 meters as the background noise creates problems with accurate and consistent readings.

9. TABLE 1

SOUND LEVELS:

CATEGORY	50cms	2 Meters	8 Meters
Car Races: Saloon and sports 75% maximum R.P.M.	105dB(A)	93 dB(A)	81 dB(A)
Car Races: Single-Seater and sports racing cars 75% maximum R.P.M	108dB(A)	96 dB(A)	84 dB(A)
Stage Rally, Auto-test, Trials, CCV maximum at 4 500 R.P.M.	100dB(A)	88 dB(A)	76 dB(A)
Road Rally: Maximum at 4 500 R.P.M	98dB(A)	86 dB(A)	74 dB(A)
O.R.V 66% Maximum R.P.M.	100dB(A)	88 dB(A)	76 dB(A)
Autocross and Rally Cross 75% maximum R.P.M. Hill-climb 75% maximum R.P.M	108dB(A)	96 dB(A)	84 dB(A)
Racing and Sport Libre Cars	110dB(A)	98 dB(A)	86 dB(A)
All Other Categories	108dB(A)	96 dB(A)	84 dB(A)

Note that Motocross and Supermoto are currently specified at 94dB(A).

APPENDIX 2 - PROTECTION OF THE SOIL AND WATER SOURCES

1. **At any location where motorcycles or motor vehicles participating in motorsport events have running engines, whether this is at a permanent circuit or temporary off - road venue, there is a risk of polluting substances being spilled and contaminating the atmosphere, the earth, ground water and possibly, ground water sources. This includes areas for servicing and cleaning the machines.**
2. **The substances which are hazardous to the environment fall into 2 major groups:**
- 2.1 Natural or indigenous substances.
- 2.2 Artificial or manmade substances.
3. **The hazardous manmade substances fall into 3 major groups:**
- 3.1 The Heavy Metals - lead, cadmium, mercury, and their compounds.
- 3.2 The Chlorinated Hydrocarbons, including
- Crop protection chemicals - D.D.T, Dieldrin and Aldrin.
 - Solvents - Tri and Perchloro - Ethane.
 - Polychlorinated Biphenyls.
- 3.3 The Aromatic Hydrocarbons, including:
- Solvents - Benzene, Toluene, Xylene.
- Polycyclic Aromatics - Naphthalene, Benzopyrene, Phenanthrene.

- 4 The toxic potential of a substance depends on:**
- 4.1 The natural toxicity inherent in the substance.
 - 4.2 The build up or accumulation of the substance in the environment.
 - 4.3 The persistence or permanence of the substance in the environment.
 - 4.4 The quantity or the concentration of the substance to which flora and fauna and man is exposed.
 - 4.5 The length of time and recurrence of exposure during which absorption may occur.
- 5 Every attempt must be made to prevent the leakage of oil, fuel, cooling fluids, lubricants, etc from escaping as spillage on to and in to the earth at ALL motorsport events.**
- 6. The following facilities must be available and must be used by all competitors, service crews and officials:**
- 6.1 Clearly identified and different containers or facilities must be available and used for the recovery of general rubbish, oil, detergents, water, cleaning rags, automotive liquid product containers.
 - 6..2 Ensure that such containers are placed on a level concrete surface and avoid spillage and contamination of the surrounding areas.
 - 6..3 The organiser must make arrangements for the detection, removal and disposal of contaminated soil, water or other materials to an approved and acceptable site.
 - 6.4 Waste water collected from vehicles in the paddock, wash bays or any other site on the circuit or venue as well as sites utilised for camping, ablution and sanitary facilities and catering must never be emptied on to the ground, on to roads, tracks or pathways in and around the venue or into temporary or permanent watercourses such as rivers, dams or streams in or around the venue. Wastewater may only be disposed of at the venue if the organiser has provided either a permanent or temporary facility for this purpose.
 - 6.5 The cleaning of motor vehicles and motorcycles, if permitted by the regulations for that category and event, may only be conducted at locations with designated cleaning facilities. Water, without the addition of any chemicals or detergents, only may be used for the cleaning of motor vehicles and motorcycles, when permitted.
 - 6.6 The ash or partially or unburned coals or wood of cooking fires must not be left on the ground but either removed or buried.

APPENDIX 3 - FUEL STORAGE & SAFETY

1. FUEL STORAGE

- 1.1 Regulations regarding fuel storage, as defined in the regulations of all categories of motorsport, must be enforced to ensure environmental protection.
- 1.2 Containers used for the storage and transport of fuel, whether manufactured of plastic or metal, may not be left at the circuit or venue and may not be sold or given away to the local population. They must be retained and removed by competitors and their service crews. Apart from the fire hazard, ingested petrol can produce a severe chemical pneumonia, which may be fatal in children.
- 1.3 The use of an environmental mat or ground cover protecting is compulsory at all refueling points.

2. FUEL SAFETY

- 2.1 Fuel in containers at refueling points at off road events must be kept in the shade and not left standing in direct sunlight.
- 2.2 The refueling of motorcycles requires the engine to have been switched off and the rider to have dismounted.
- 2.3 Open fires for cooking must not be lit in the proximity of fuel containers. No smoking in refueling zone or within 10m of refueling cars.

APPENDIX 4 - FOOD SAFETY

1. CATERING REQUIREMENTS

- 1.1 Ensure that ALL food handling premises, caterers and food vendors will comply with National Food Hygiene Regulations and Standards with regards to the delivery, storage, hygienic handling and sale of food. This includes mobile catering units, catering stalls and marquees, staff catering, hospitality catering, bars and mobile vendors. National legislation addresses both permanent and temporary food handling facilities.
- 1.2 A person shall only be allowed to sell and handle food, if they are in possession of a valid Certificate of Acceptability, issued by the local public health authority. Venue owners/Organisers have to ensure that all food handling premises, caterers and food vendors are in possession of these certificates before they are allowed to do business on site.
2. Catering outlets MUST carry out their businesses in a safe and hygienic way at ALL times.
3. Catering outlets must, as far as possible, be positioned in such a way that:
 - 3.1 They do not cause any obstruction that may adversely affect the health and safety of people attending or working at the event.
 - 3.2 Access to the rear of catering outlets is denied.
 - 3.3 Free access for all emergency vehicles is allowed, this includes fire appliances.
 - 3.4 There is adequate and suitable spacing between individual catering outlets.
 - 3.5 There is easy access to lockable facilities for the storage and disposal of liquid and solid waste.
 - 3.6 It allows for the easy and efficient removal of all forms of waste.
 - 3.7 Catering outlet is in close proximity to a supply of fresh drinking water, but separated from any form of drainage or possible contamination by fuel, waste or refuse storage.
 - 3.8 There is easy access and designated parking for catering support vehicles.
- 3.9 Overnight mobile or temporary sleeping accommodation is away from all catering outlets
4. Liquefied Petroleum Gas (LPG) is the main fuel for outside catering outlets. It presents a substantial fire and explosion hazard. It is important to ensure appropriate safety measures at all times.
5. Fire Extinguishers must be provided at all time (5kg min.)

APPENDIX 5 - DRINKING WATER

1. The provision of potable drinking water is essential. The volume required depends on the volume of people, the duration of the event and prevailing weather conditions.
2. Ideally, water for drinking purposes should be provided from a tested municipal source. If this is not possible, clean drinking water has to be provided in suitable containers.
3. All water dispensing equipment must be clean and well maintained. It is considered good practice to sample and test temporary water supplies for bacteriological and chemical safety, especially those provided at outdoor events.
4. At outdoor one-day events, a general guideline is one water outlet per 3000 spectators and one water outlet per 10 caterers in the same area.
5. All water points must:
 - (1) Have unobstructed access
 - (2) Be clearly identified.
 - (3) Be clearly lit at night.
 - (4) Have self closing taps

(5) The ground surrounding all water points should be well drained or provision made to bridge all flooded areas.

APPENDIX 6 - SANITARY FACILITIES

1. To ensure that adequate sanitary provisions are made for the estimated number of spectators attending the event. Consideration must be given to the location, access, construction, temporary facilities, lighting and signage.

2. TOILETS

- 2.1 Toilets should be constructed and located in such a way that spectators are protected from bad weather and trip hazards. The floors, ramps and steps of all units must be stable and constructed with a non-slip surface: connecting pipes must be protected.
- 2.2 Toilets must be readily visible, lit and clearly identified at all parts of the venue.
- 2.3 Toilets must be regularly maintained, serviced and repaired, by competent workers throughout the event to ensure that the toilets are safe, clean and hygienic.
- 2.4 Toilets must be supplied regularly with toilet paper, which must be kept in a dispenser, or holder at all times.
- 2.5 All blocked toilets must be cleared urgently.

3. TOILET LOCATION

- 3.1 Toilets must be located at different points around the venue and not concentrated in specific areas, this will reduce crowding and queuing.
- 3.2 Consideration should be given to placing toilets outside the perimeter fenced venue area e.g. car parks, ticket office queuing areas, event campsites etc.
- 3.3 Provision must be made for access to toilets for servicing and sewage removal.

4. TOILET TYPE

- 4.1 If temporary toilets are to be utilised, the different toilet types must be assessed as to their suitability for the type and duration of the event.
- 4.2 Peak toilet usage time should be assessed, rapid and constant use of any toilet may result in blockages and the toilet bowls may become unsanitary.
- 4.3 Temporary mains units can be used if a sewer, drain, septic tank, is available provided there is an adequate water supply and water pressure.
- 4.4 Single self-contained units are acceptable and easily relocated. They have a maximum number of uses before requiring servicing or emptying.
- 4.5 When non-mains units are used, provision for safe and hygienic removal of waste must be arranged, if necessary with a holding tank.

5. TOILET NUMBERS

- 5.1 The number of toilets required for an event will depend on the nature and duration of the event, the audience profile and the venue of the event.
- 5.2 The calculation of toilet numbers requires an estimation of participant and spectator numbers and the anticipated male: female ratio. When this ratio cannot be estimated, it is acceptable to work on a ratio (male to female) of 50:50.
- 5.3 The following factors must be considered in attempting to estimate the minimum number of toilets required:
 - (1) The duration of the event.
 - (2) Perceived spectator food and fluid consumption.
 - (3) Estimated toilet usage during breaks in the programme of events.
 - (4) Usage of temporary campsites.
 - (5) The provision of suitable facilities for children, the elderly and the infirm or disabled attending the event who may take longer to use the facility.
 - (6) Toilet inside a fenced venue with a no re-admission policy.

(7) Weather conditions and temperature.

EVENTS LONGER THAN 6 HOURS		EVENTS SHORTER THAN 6 HOURS	
FEMALE	MALE	FEMALE	MALE
1 Toilet per 100 females	1 Toilet per 500 males	1 toilet per 120 females	1 Toilet per 100 males
	1 Urinal per 150 males		1 Urinal per 75 males

6. WASHING FACILITIES

- 6.1 Hand washing facilities should be provided in the ratio of one basin to 5 toilets and certainly not less than one basin per 10 toilets.
- 6.2 Hand drying facilities must be provided. If paper towels are to be used regular disposal and restocking must occur.
- 6.3 Where warm water hand washing facilities are available, adequate supplies of suitable soap must be supplied. Where warm water is not available, either antiseptic hand wipes or bactericidal soap should be provided.
- 6.4 If hand washing facilities are in the open, ensure that the surrounding ground does not become water logged and finally, flooded.
- 6.5 In events lasting longer than one day, consideration must be given to the provision of showers.

7. SANITARY PROVISION FOR PEOPLE WITH SPECIAL NEEDS

- 7.1 Appropriate sanitary accommodation must be provided for wheelchair users and other people with special needs.
- 7.2 Access to toilets must be considered. Supply fixed and stable ramps where appropriate.
- 7.3 Toilet facilities must be provided adjacent to areas set aside for spectators with special needs.
- 7.4 As a general rule, one toilet with hand washing facilities should be provided for every 75 people with special needs.

8. DISPOSAL OF SANITARY TOWELS AND NAPPIES

- 8.1 Sanitary towels or nappies may block sanitary facilities, therefore; clearly designated containers must be supplied for these articles. Arrangement must be made for the regular emptying of these containers.
- 8.2 If infants are expected, consideration must be given to providing baby changing facilities including receptacles for the hygienic disposal of nappies.

APPENDIX 7 - CAMPING

1. GENERAL

- 1.1 Camping may be an integral part of an event.
- 1.2 The camping area should be located within the area defined for the event.
- 1.3 The camping area must be incorporated in all event planning.
- 1.4 The camping site must be fully functional with all facilities at all times.
- 1.5 Camping sites must accommodate spectators, competitors and their crews, officials and service crews.
- 1.6 The opening and the closing time of the campsite must be stipulated.

2. CAMPSITE DESIGN

- 2.1 The camping area must be reasonably well drained and level.
- 2.2 Grass must be cut short to minimise any possibility of fire spread.
- 2.3 The campsite should be broken up into smaller discrete areas thus:

- 2.4 Providing an identifiable site for camper's location.
- 2.5 Allowing for easy management of each area.
- 2.6 Allowing control of camping density in each area.
- 2.7 Providing ease of communication and dissemination of information in each area.
- 2.8 Consider providing a dedicated area for family camping.
- 2.9 The designation of separate camping areas can be achieved by the use of poles and barrier tape.
- 2.10 If possible, the layout of the camping site should provide for a catering and an entertainment area in the middle of the campsite with camping on the periphery of this area. Parking of motor vehicles should be beyond the camping area.
- 2.11 Safety at campsites must include the creation of barriers around ponds, ditches, rivers and electricity pylons.
- 2.12 Accidental contact between kites flown by spectators and tethered commercial balloons, with electricity pylons and high-tension wires must be prevented.
- 3. SITE DENSITIES**
- 3.1 Experience at rock/pop events has revealed tent densities of up to 430 tents per hectare as a realistic standard.
- 3.2 At more family orientated events, utilising larger tents with more occupants, this density of 430 tents must be reduced by as much as 50%.
- 3.3 Separation distances must be provided between individual tents to prevent trip hazards and fire spread.
- 4. SEGREGATION OF TRANSPORT AND LIVE-IN VEHICLES**
- 4.1 Camping areas must be separated from vehicle transport areas. This is to be done to reduce the risk of injury and property damage from:
 - 1. Cruising and joyriding.
 - 2. Vehicle fires
 - 3. Runaway vehicles.
- 4.2 The distance between vehicle parking areas and the campsite should be as short as possible. In the event that this is not possible, consideration must be given to providing internal transport services.
- 4.3 If vehicle parking is allowed within the confines of the campsite, tent density must be reduced to allow for access roads within the campsite.
- 4.4 Specific areas should be set aside for people with special needs who may utilise the campsite.
- 4.5 Specific areas should be set aside for live-in vehicles-caravans, camper vans, etc. These vehicles must not be allowed to be utilised for camping in vehicle parking areas.
- 5. INFORMATION AND LOGISTICS**
- 5.1 Clear information on site regulations must be provided e.g. no unauthorised persons, no campfires, no music after midnight, etc, Displayed on tickets, on signboards, in brochures, etc.
- 5.2 Maps must be displayed around the campsite indicating the current location of the individual and the location of key facilities such as toilets, water points, ablution facilities, medical services, fire points, evacuation route, etc.
- 5.3 By breaking the full campsite into smaller, discrete areas, individual campers may be given notification of their camping area, improving access and movements around the campsite.
- 5.4 Supervisors must be available in the campsite from its opening. They are required to monitor the build up in the campsite and key facilities, such as toilets, fire prevention, water supply, alcohol and drug abuse.

6. CONTINGENCY PLANNING

6.1 Contingency planning should be in place to deal with:

1. Adverse weather conditions.
2. Failure of water supply
3. Fire.
4. Epidemic illness such as food poisoning.
5. Any other condition that may require the site to be evacuated.

6.2 Campers with no or inadequate camping equipment may be refused entry to the campsite.

7. PUBLIC HEALTH

7.1 It is essential to ensure that food outlets and personal hygiene is satisfactory within a campsite to prevent outbreaks of food poisoning and other potentially dangerous diseases like cholera and meningitis.

7.2 Adequate catering and vending services should be provided for the sale of basic provisions such as bread, fresh milk and vegetables etc.

7.3 Sites that have been used for animal grazing should be avoided as campsites. The bacteria *E. coli* is present in all animal droppings and can survive for long periods in the environment.

7.4 Dogs must be prohibited from the campsite. Dogs might produce unnecessary health risks from fouling of the site and dog-bites. Furthermore, many dogs are scared of noise, which can result in aggressive behavior.

8. CRIME

8.1 Campsites are ideal sites for theft.

8.2 Campsites should be adequately lit.

8.3 Campsites should be patrolled regularly to prevent both isolated petty and organised crime. Such patrols would also detect early outbreaks of fire and other hazardous occurrences.

9. FIRE SAFETY

9.1 Campfires are sources of human burns, tent fires and smoke pollution.

9.2 Communal fires may be a safer option.

9.3 If campfires are allowed, provide, on site, the sale of chopped wood and charcoal. This could prevent the destruction of surrounding natural vegetation.

9.4 The burning of substances that produce noxious fumes e.g. plastic must be prevented.

9.5 Fire services at campsites must include:

1. The presence of trained fire marshals.
2. Fire points where a fire alarm may be initiated. The availability of buckets and water at this point must be considered.
3. An adequate provision of fire extinguishers.
4. For large events, the provision of fire trucks.

10. SANITARY FACILITIES

10.1 Assess peak utilisation of sanitary facilities. This will usually be evening and early morning.

10.2 It is suggested that sanitary facilities, drinking water supplies, washing facilities and showers should be clustered together thus creating an easily identifiable location for all facilities.

10.3 Frequent monitoring, cleaning and re supplying of sanitary facilities must be carried out.

11. REFUSE

11.1 Refuse receptacles must be provided along walkways and access roads for vehicles, as well as at sanitary facilities, catering and cooking areas, etc.

11.2 Receptacles must be emptied frequently to prevent ground contamination and fire hazards.

11.3 Recycling points should be provided.

12. CAMPSITE LIGHTING

12.1 Adequate lighting must be provided to enable orientation at night.

12.2 Higher levels of lighting should be in place at toilet and catering areas, fire points etc.

12.3 The size and nature of the terrain must determine the type of lighting required.

13. ACCESS

13.1 Both vehicular and pedestrian roadways and walkways must be provided to and through campsites to ensure immediate access to emergency vehicles.

13.2 Pedestrian walkways must provide safe routes free of trip hazards, etc.

14. NOISE

Ensure that noise production is limited and does not disturb surrounding residents.

APPENDIX 8 - WASTE MANAGEMENT

1. Large quantities of waste will be generated at any event. Waste must be managed carefully to decrease the risk associated with its accumulation, collection and final disposal.

The following waste will be generated:

- 1.1 Food and drink containers and wrapping. Paper and Cardboard
- 1.2 Leftover Food Debris, Waste Food from Catering Outlets.
- 1.3 Glass
- 1.4 Plastics
- 1.5 Metal Cans and other Metal Waste
- 1.6 Human Waste products
- 1.7 Medical Waste
- 1.8 Remains of cooking and campfires.
- 1.9 Waste water from toilets, showers, hand basins and food catering outlets.
- 1.10 Automotive Products like used tyres, used oil, empty fuel containers, cleaning rags.

2. WASTE HAZARDS

- 2.1 Injuries sustained by workers during collection and removal of waste.
- 2.2 Accumulations of waste, which may block emergency access routes or access routes around the venue.
- 2.3 Accidentally or purposely ignited waste creating a fire hazard to the entire venue.
- 2.4 The abuse of solid waste by spectators e.g. throwing of cans and bottles.
- 2.5 Vehicle movements on access roads within the venue collecting waste.
- 2.6 Waste attracting and breeding of insects and vermin.

3. WASTE GENERATION: AREAS AND TYPE

Waste generated and the type of waste generated will vary at different sites at the venue location. The build-up of waste will similarly vary. This is of significance to the waste removal contractor as to scheduling times of waste removal

3.1 Special attention must be paid to the following areas:

3.1.1 Surrounding land and streets

3.1.2 Entrance and exists

3.1.3 Sanitary areas

3.1.4 Temporary or permanent medical centers

3.1.5 Catering areas

3.1.6 Campsite areas

3.1.7 Parking areas

3.1.8 Entertainment areas

3.1.9 Pits

3.1.10 Paddock

4. METHODS OF COLLECTION

4.1. Waste collection from the venue may require a combination of the following processes:

4.1.1. The picking up of the litter and the emptying of receptacles.

4.1.2. The use of sweeper vehicles.

4.1.3. The use of vacuum suction vehicles.

4.1.4. The use of vacuum tankers for the collection of waste water.

4.1.5. Other lorries, towing vehicles and trailers.

4.2. Special requirements such as access routes, vehicle height restrictions, vehicle parking and storage space must be discussed with venue management and the waste removal contractors.

5. WASTE RECEPTACLES

5.1 Waste receptacles may be placed around the periphery of the venue or site, within the venue or in other appropriate areas.

5.2 Care must be exercised in the choice, size and location of receptacles.

5.3 Wheeled or similar containers are currently the most versatile. They are equipped with lids. They are easily positioned and maneuvered.

5.4 Steel drums, when full, are difficult to empty and maneuver. They serve as an attraction for bees and flies.

5.5 Skips may be utilised but correct site planning is important for delivery and collection access, particularly in bad weather. They should be located distant to spectators. They are a fire hazard and require frequent monitoring.

5.6 On site compactors may be utilised to reduce waste bulk.

5.7 Front-end loaders may be required.

6. COLLECTION TIMES

Collection times must be scheduled with the waste contractor for before, during and after the event.

7. RECYCLING

Recycling of waste can be undertaken on site by the provision of different containers for specific waste e.g. glass, cans, plastic. The effectiveness of such schemes is dependent on the willingness of competitors and spectators to use the available containers for their waste.

APPENDIX 9 - FACILITIES FOR PEOPLE WITH SPECIAL NEEDS

1. Consider service provision for people with:

- 1.1 Mobility problems including wheelchair users, Difficulty in walking, Impaired vision or hearing. Event publicity should provide an event contact number where people with special needs can obtain information on site arrangements.
- 1.2 The design of a site or venue should provide for the accommodation of people with special needs. This must include easy access and easy means of escape in an emergency.
- 1.3 The number of wheelchairs that may be safely admitted depends on many factors including the structural and internal layout of the venue.
- 1.4 Wheelchair viewing areas in a seated area must allow for easy maneuvering of a wheelchair. A manual wheelchair requires 0.9m width and 1.4m depth. An electric wheelchair requires more space.

2. ACCESS

- 2.1 Parking areas for people with special needs should be at the most directly accessible point to the areas set aside for wheelchair users.
- 2.2 Flat surfaces and ramps must be used to provide access from parking or drop of areas to viewing areas.

3. RAMPS

- 3.1 Ramps should have an easy gradient, not steeper than 1:12.
- 3.2 Ramps should have a level resting-place every 10m.
- 3.3 Ramps should have raised safety edges and handrails.

4. VIEWING AREAS

- 4.1 All persons with any form of mobility problem should be located in an area where no standing spectators can obstruct their view or possibly, through crowd surges, overturn them.
- 4.2 A clear viewing area for disabled person should be established, using non-slip materials and with direct access to an exit.
- 4.3 Wheelchair users could be accommodated on an open area or raised terrace, with direct access to disabled toilets and catering and vending outlets.
- 4.4 The eye level of a wheelchair user is estimated as being between 1.1m and 1.25m.
- 4.5 Ensure that there is sufficient space for able-bodied persons accompanying wheelchair users.

5. FACILITIES

- 5.1 Catering and vending outlets must provide easy access to wheelchair users e.g. ramps, lower serving counters, etc.
- 5.2 It is suggested that one unisex toilet should be provided for every 75 wheelchair users.

6. PEOPLE WITH IMPAIRED VISION

- 6.1 People with impaired vision or colour perception may experience difficulty in recognising information signs, including fire safety signs.

6.2 Signs must be constructed and positioned in such a way that they are distinguishable and easily seen.

6.3 The admission of guide dogs should be allowed.

7. EVACUATION PROTOCOLS

7.1 Members of any spectator grouping may suffer from a range of disabilities which could include immobility or restricted mobility, epilepsy, impaired vision or hearing, mental health problems, etc. All of these conditions must be considered in drawing up disaster plans.

7.2 Both public address and electronic displays must be considered for the provision of information, including evacuation procedures in the event of a disaster.

APPENDIX 10 - CHILD SAFETY

1. GENERAL

The presence of children at the event must be included in all contingency and disaster planning.

2. DEDICATED PLAY AREAS

If provided, ensure that these areas are managed by experienced and qualified personnel.

3. CHILD PROTECTION AT DEDICATED AREAS

Children under the age of 8 years **must never be left unattended**.

4. RIDES, AMUSEMENT AND OUTDOORS PLAY EQUIPMENT

1. Site rides and amusements are situated in a child friendly area.
2. Rides must be appropriate to the age and size of the user.
3. Jumping castles must be supervised at all times.

5. LOST CHILDREN

Prepare a protocol for the receipt and safe keeping of lost children until re-united with parents or guardians.

APPENDIX 11 – ENVIRONMENTAL MATS

1. Environmental mats must be composed of an absorbent upper part (top) and an impermeable part underside (bottom). Use of mats (or other effective ground protecting devices/systems) is compulsory wherever work on vehicles (motorcycles, quads, cars, karts, etc) is allowed by the organisers.
2. For Cars, Karts and Quads the whole area underneath the vehicle, where there is the prime probability of fluid spills, must be covered with a ground protecting sheet or environmental mat.
3. In combination with the Environmental Mats or ground sheets, other ground protecting systems like fluid absorbent material, oil spill kits, etc. can be used to clear spillages. These materials must be disposed of in a hazardous waste container.
4. The key-elements to consider, when deciding on an environmental mat, are the following:
 - The **absorption** capacity of the mat (or ground protecting device) so that no puddles are formed on top.
 - Under no circumstances must it allow vehicle fluids to seep through onto the soil, thus having to consist of an **impermeable** (liquid proof) base.
5. Under no circumstances may these mats be disposed of in a standard refuse bin. A hazardous waste container must be available at a designated point within the DSP (Designated Service Point). Any damaged mats **MUST** be disposed off in this container. Alternatively, the soiled mats can be placed in a sealed plastic container for disposal by a hazardous waste disposal company