Emergency Response Procedures for Disaster Involving Genetically Modified Organisms in Swaziland

1.0 Definitions:

" Act" means the Biosafety Act of 2012;

“Biosafety” means the mechanisms for ensuring the safe handling, transfer and use of products of biotechnology;

“Biosafety Clearing House” means the information exchange mechanisms established under article 20 of the Cartagena Protocol on Biosafety;

“Competent Authority” means the Swaziland Environment Authority as;

“Confined Use” means any operation or activity, undertaken within a facility, installation or other physical structure, which involves GMOs that are controlled by specific measures that effectively limit their contact with and their impact on the external environment and the general population;

“Damage” means an adverse effect on the conservation and sustainable use ofbiological diversity, taking also into account risks to human health, that:

a) Is measurable or otherwise observable taking into account, wherever available, scientifically-established baselines recognized by a competent authority that takes into account any other human induced variation and natural variation; and
b) Is significant;

“Genetically Modified Organisms” means any biological entity capable of replication or of transferring genetic material and includes plants, animals, micro-organisms, cell cultures and other vector systems in which the genetic material has been altered through modern biotechnology and other genetic modification which occurs through techniques such as-

a) recombinant nucleic acid techniques involving the formation of new combinations of genetic material by the insertion of nucleic acid molecules produce into a virus, bacterium, plasmid or other vector and their incorporation into host organisms in which they are capable of continued propagation;

b) the direct introduction into an organism of heritable material prepared outside the organism including microinjection, macro-injection and micro-encapsulation; and

c) cell fusion (including protoplast) or hybridisation where live cells with new combinations of heritable genetic material are formed through the fusion of two or more cells;

“Incident” an event that leads to exposure of human health and /or environment to risks associated with a GMO.

“Introduction into the Environment” means any deliberate use of GMOs, subject to this Act, that is not contained use, but does not include GMOs imported for direct use for food or feed or for processing;

"Living Modified Organisms" means any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology;

"Operator" means any person in direct or indirect control of the living modified organism as authorised in terms of this Act, including *inter alia* the permit holder, person who placed the living modified organism on the market, developer, producer, notifier, exporter, carrier or supplier;

"Placing on the Market" means making a GMO available to third parties whether there has been monetary exchange or not;

"Response measures" means reasonable actions to:

a) Prevent, minimize, contain, mitigate, or otherwise avoid damage, as appropriate;

b) Restore biological diversity through actions to be undertaken in the following order of preference:

   i. Restoration of biological diversity to the condition that existed before the damage occurred, or its nearest equivalent; and where the competent authority determines this is not possible;

   ii. Restoration by, *inter alia*, replacing the loss of biological diversity with other components of biological diversity for the same, or for another type of use either at the same or, as appropriate, at an alternative location.

A **"significant"** adverse effect is to be determined on the basis of factors, such as:

a) The long-term or permanent change, to be understood as change that will not be redressed through natural recovery within a reasonable period of time;
b) The extent of the qualitative or quantitative changes that adversely affect the components of biological diversity;
c) The reduction of the ability of components of biological diversity to provide goods and services;
d) The extent of any adverse effects on human health in the context of the Protocol

2.0 BACKGROUND

Governments and civil society are collaborating through the Convention on Biological Diversity to reverse the tide of devastation that humanity has inflicted upon the natural world. The stakes are high: although some 40% of the world economy is derived directly from biological diversity, humanity is pushing ecosystems, species and gene pools to extinction faster than at any time since the dinosaurs died out 65 million years ago.

Adopted in 1992 under the auspices of the United Nations Environment Programme, the Convention is the first global treaty to provide a comprehensive framework that addresses all aspects of biodiversity – ecosystems, species, and genetic diversity. It also introduces a new strategy for the biodiversity crisis known as the “ecosystem approach”, which aims to reconcile the need for environmental conservation with concern for economic development. By promoting “sustainable development”, the Convention seeks to ensure that the earth’s renewable resources are not consumed so intensively that they cannot replenish themselves.

The Convention has three goals: the conservation of biodiversity, the sustainable use of the components of biodiversity, and the fair and equitable sharing of the benefits arising from the use of genetic resources. When crafting the Convention, governments recognized that modern biotechnology has the potential to contribute to achieving these three goals – as long as it is developed and used with adequate safety measures for the environment and human health. These governments put this conviction into action a few years later by establishing the Cartagena Protocol within the framework of the Convention.

The Protocol, a supplementary international agreement to the Convention on Biological Diversity, entered into force on 11 September 2003. It aims to ensure the safe handling, transfer and use of living modified organisms (LMOs) resulting from modern biotechnology. Over the years, many Parties have taken the necessary steps to establish legal, administrative and other measures to implement their obligations under the Protocol.

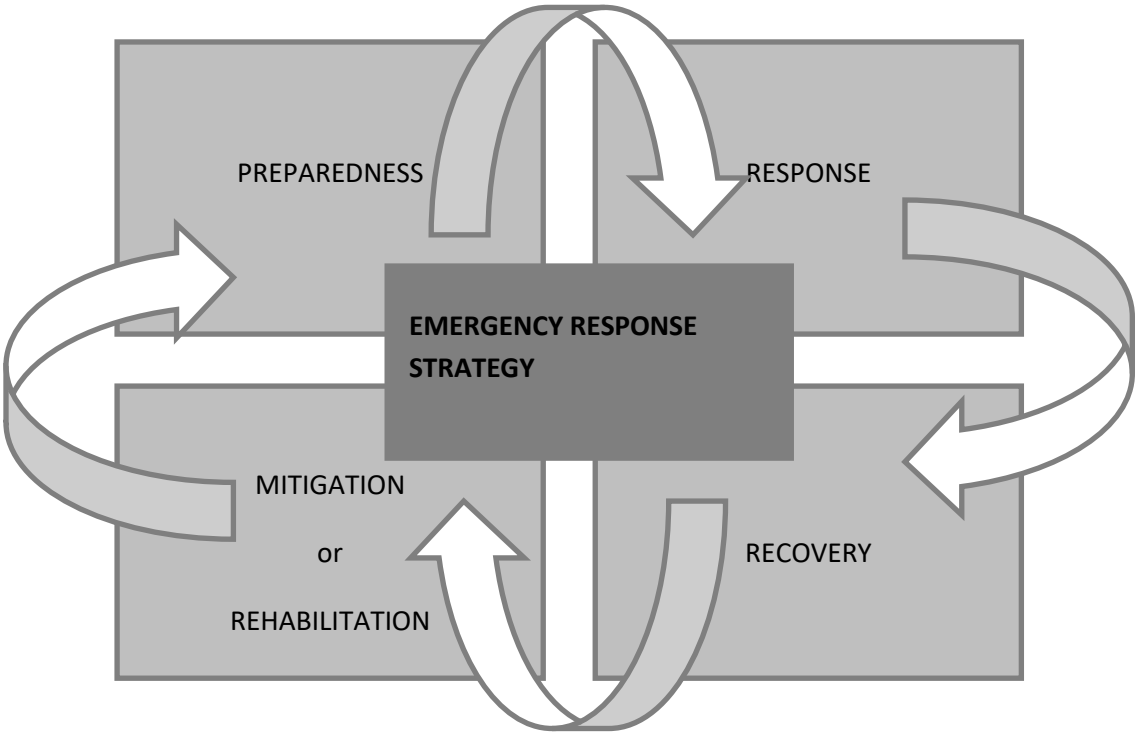
Swaziland as a member to the Convention is also a Party to the Cartagena Protocol and is therefore obligated to implement the Protocol. To effectively implement the Protocol, the country enacted the Biosafety Act of 2012 and draft Regulations under the Act are in place. The enactment of the Act allows any operator to conduct his business in the country as long as it is within the provisions of the law. The law emphasises on risk management and protection of human health and the environment from risks associated with LMOs. However accidents are inevitable. It is therefore critical that the country should have clear guidelines on how to deal with accidents that involve LMOs.

3.0 OBJECTIVES

The Biosafety Emergency Response Procedures serve as guidelines for responding to LMO related disasters in Swaziland. They are aimed at directing Operators in the event of an unintended occurrence that could be harmful to the environment or human health during the handling of a Genetically Modified Organisms (GMOs) or/and Genetically Modified Organisms (LMOs). It further elaborates on preparedness for different scenarios including an emergency response strategy

4.0 THE EMERGENCY RESPONSE STRATEGY

The strategy should consist of preparedness, response, recovery and mitigation or rehabilitation plans. The figure below illustrates the sequence in the implementation of the strategy.



4.1 Preparedness

It is not possible to completely eliminate the possibility of an accident arising, but careful planning for eventuality will help minimize the negative consequences of such incidents. Readiness for emergencies entails:

a) Identifying high risk or critical hazard points in the movement of the LMO and compiling possible incidents that can occur.
b) Outlining response actions per incidence
c) Defining roles of relevant players for each possible incident
d) Availing all necessary equipment/facilities and periodically inspect them to ensure that they are in good condition to respond to emergencies.
e) Clearly outlining the objectives to be achieved

f) Compiling a full list of relevant agencies to be notified in case of an incident and their contact details.

4.2 Response

In the event of an incident, the response procedure to follow should comprise of:

a) Immediate notification of relevant stakeholders.
b) Protection of life and property including records
c) Cordoning off the incident area.
d) Assessing of the site where the incident/damage has occurred immediately and over time and compile report for submission to relevant authorities.

4.3 Recovery

It is critical that in the event of an incident all material that could be of risk be reclaimed. This entails:

a) Establishing the extent of spread.
b) Mapping the affected area.
c) Salvaging as much material as possible.
d) Handle salvage material in line with risk management plan.
e) Compiling and submitting report to relevant authorities.

4.4 Rehabilitation

Depending on the nature of the incident, the mitigation process may be quick or it long-term requiring planning and substantial resources.. It may also involve a number of stakeholders. The actions to be taken should be informed by findings from earlier stages i.e response and recovery. Upon completion of this stage a comprehensive report should be compiled and submitted accordingly. This report should be used to inform and where necessary review the preparedness plan.

5.0 PROCEDURES

These Emergency Response Procedures should be followed as per the Biosafety Act, 2012 and its Regulations. These procedures are applicable but not limited to the following cases involving a GMO in Swaziland:

a) GMOs for confined field trials (CFTs)
b) GMOs for release into the environment
c) GMOs for import, export and transit
d) GMO intended for food, feed and for processing
e) Marketing of GMOs
f) Unintentional release into the environment

5.1 Emergency Response Strategy for Confined Field Trials

Every biosafety stakeholder in Swaziland (operator) shall before the commencement of a confined field trial activity, have in place an emergency response strategy.

5.1.1 Preparedness Plan

The preparedness plan should cover:

a) Staff training/ capacity building**:** The operator should train all staff members on the unique characteristics of the GMO. This would enable them to easily identify it from others. They should also be trained on the response procedures including the use of relevant equipment where applicable. It is recommended that during the training practical sessions should be conducted.
b) Identification and storage of equipment: Identify all equipment to be used in case of emergency and ensure proper storage such that it is easily accessible.
c) Standard Operating Procedures (SOPs): SOPs should be in place and all staff should be familiar with them. These should include induction of visitors.
d) Security: Ensure that there is proper security (fencing, security personnel, restrictions of access and buffer zones depending on crop or environment)
e) Storage of seed and/or harvest or quarantined products: The operator should designate a secured storage.
f) Transportation: The shortest route for transportation should be identified.
g) Personnel: Identify role players and define their roles.
h) Regular risk assessment: Identify and monitor critical high risk points.

5.1.2 Response Plan

In the event of an accident, the operator shall:

a) Immediately assess the site and notify the office of the Biosafety Registrar at the Swaziland Environment Authority within 1 hour and provide:
    i. Full and detailed information on the circumstances of the accident;
    ii. Full and detailed information on the identity and quantities of the genetically modified organism or micro-organism concerned;
    iii. Any information necessary to assess the effects of the accident on the health of the general public or on the environment;
    iv. Full and detailed information on the measures to be taken.
b) Cordon off the area of release immediately;
c) Ensure that relevant emergency services (if any) are informed of the accident;
d) Inform persons likely to be affected by the accident;
e) Evacuate everyone in the vicinity where necessary
f) Activate other relevant provisions of the emergency plan.
g) After implementing all the necessary immediate measures the operator shall compile and submit a detailed report to the Competent Authority.

5.1.3 Recovery Plan

The recovery plan should consist of:

a) Establishment of the extent of spread of the GMO from the trial site.
b) Salvaging as much material as possible and engaging law enforcement agencies where necessary
c) Storage of salvaged material in a secured facility while arranging for appropriate disposal.

5.1.4 Mitigation Plan

The mitigation plan should cover the following:

a) Strengthening security in the event the incidence was caused by inefficiency of the security system.
b) Quarantining of any suspected persons or animals until they are certified safe and free from the contaminant GM material
c) Compilation and analysis of the incidence report in order to inform the review of the emergency response strategy.

Upon being notified the Swaziland Environment Authority shall collect, information necessary for a full analysis of the accident from the operator and site and, where appropriate, make recommendations to avoid a similar accident in the future and to limit the effects of any such future accident, and ensure that any measures necessary are taken.

In the event of an accident, the Swaziland Environment Authority may require the operator to defray or contribute towards any or all of the costs incurred by it arising from such accident.

5.2 Emergency Response Strategy for GMOS/LMOS for Release into The Environment

Every operator shall before release of a GMO to the environment, have in place an emergency response strategy.

5.2.1 Preparedness Plan

The preparedness plan should cover:

a) Stakeholder awareness: Capacitate stakeholders on the unique characteristics of the GMO. This would enable the stakeholders to easily identify the GOM from other plants. . Of particular importance are the local authorities and farmers
b) Containment facilities: Ensure that there are proper facilities in the event the GMO that has been released to the environment is to be contained. This should also include identification of all equipment to be used and ensure proper storage such that it is easily accessible.

c) Identification of emergency response agencies: List all relevant stakeholders to be contacted in case of emergency and their contacts.
d) Prevention of contamination: Ensure that there is adequate distance between GMO and non GMO fields or farms to prevent contamination. Prevention of contamination will also be achieved through staggered planting between GMO and non-GMO fields.
e) Record keeping and maintenance: Ensure that there is proper record keeping.

5.2.2 Response Plan

In the event of an accident, the operator shall:

a) Immediately (within 1 hour) notify the office of the Biosafety Registrar at the Swaziland Environment Authority and provide:
   i. Full and detailed information on the circumstances of the accident;
   ii. Full and detailed information on the identity and quantities of the genetically modified organism or micro-organism concerned;
   iii. Any information necessary to assess the effects of the accident on the health of the general public or on the environment;
   iv. Full and detailed information on the to be measures taken.
b) Cordon off the area of release immediately;
c) Ensure that the relevant emergency services (if any) are informed of the accident;
d) Inform persons likely to be affected by the accident; and
e) Activate other relevant provisions of the emergency plan.
f) After implementing all the necessary immediate measures the operator shall compile and submit a detailed report to the Competent Authority.

5.2.3 Recovery Plan

During the recovery process, the operator shall:

a) Establish the extent of spread and determine the coverage of the contamination.
b) Partner with local and other authorities (including the RSP) in the process of recovery
c) Ensure containment to restrict further spread of the GMO.
d) Ensure safe storage prior to disposal of recovered GMO.

5.2.4 Mitigation Plan

To rehabilitate environment exposed to the GMO the operator shall:

a) Conduct health screening of all affected beings
b) Ensure proper disposal of the recovered GMO.
c) Monitoring the affected area for at least three months after the incidence.

d) Compile a comprehensive report on the whole incidence. This report should be used to inform the preparedness plan.

Where the Swaziland Environment Authority (SEA) is notified of an accident, it shall collect, where possible, the information necessary for a full analysis of the accident and, where appropriate, make recommendations to avoid a similar accident in the future and to limit the effects of any such future accident, and ensure that any measures necessary are taken.

In the event of an accident, the competent authority may require the operator to defray or contribute towards any or all of the costs incurred by it arising from such accident.

5.3 Emergency Response Strategy for Import, Export and Transit of GMOS

Every operator shall before shipping a consignment of GMOs, have in place an emergency response strategy.

5.3.1 Preparedness Plan

The preparedness plan should cover:

a) Planning of route: The shortest low risk route for transportation should be identified.
b) Vehicle condition: All vehicles to be used should be roadworthy, insured, with a traceable maintenance record.
c) Labelling of vehicles: Vehicles transporting GMOs must be labelled
d) Documentation: Identify and avail relevant documents accompany the consignment including the import permit.
e) Sensitization of drivers: Drivers of vehicles transporting GMOs should be sensitised on the risk associated with the consignment.
f) Tracking of vehicle: There should be a system of monitoring the movement of the vehicle from point of departure to destination.
g) Identification of emergency response agencies (SEA, RSP, EMS): List all relevant stakeholders to be contacted in case of emergency and their contacts.
h) Training of Drivers: the operator should ensure that the drivers are aware of the risk associated with the consignment and trained on how to respond in case of an accident.

5.3.2 Response Plan

In the event of an accident involving a genetically modified organism on transit, it shall be the responsibility of the person transiting, the exporter or the importer to:

a) Notify the Swaziland Environment Authority immediately within 1 hour both verbally and in writing of the accident;

b) Ensure that the relevant emergency services (if any) are informed of the accident, and called to the scene (these include the RSP);
c) Cordon off the area of release immediately;
d) Provide the Swaziland Environment Authority, as soon as possible, with information regarding:
   i. The circumstances of the accident;
   ii. The identity and the quantity of genetically modified organism released;
   iii. The type of accident; and
   iv. Any emergency measures taken or that ought to be taken to avoid any adverse effects of the accident.
e) Take all appropriate short term, medium term and long term measures to avoid any adverse effects of the accident.
f) Compile and submit a detailed report to the SEA on the immediate response measures undertaken within 2 days..
g) Follow up plan on missing consignment/product

5.3.3 Recovery Plan

During the recovery process, the operator shall:

a) Establish the extent of spread and determine the coverage of the contamination.
b) Partner with local and other authorities in the process of recovery
c) Ensure containment to restrict further spread of the GMO.
d) Ensure safe storage prior to disposal of recovered GMO.

5.3.4 Mitigation Plan

The mitigation plan should cover the following:

a) Clean –up / site remediation
b) Appropriate handling / treatment / final disposal of salvaged material
c) Compensation of any affected Party
d) Compile a comprehensive report on the whole incidence. This report should be used to inform the preparedness plan

The Swaziland Environment Authority shall inform and advise the public of the accident and also, in consultation with the relevant regulatory agency, shall undertake necessary action to minimize risk to human health and environment.

5.4 Emergency Response Strategy for GMOS Intended for Food, Feed and for Processing

Every operator shall before the commencement of activities relating to importation of GOMs intended for food, feed and processing, have in place an emergency response strategy.

5.4.1 Preparedness Plan

The preparedness plan should consist of:

a) Traceability: A clear record of the dispatched GMO that will enable traceability of the product.
b) Prevention of contamination: A system that will ensure separation of GMOs and non-GMOs during but not limited to processing, packaging, transportation and storage.
c) Withdrawal measures: Identification of personnel, equipment and other resources necessary for withdrawal of dispatched GMO.
d) Identification of emergency response agencies: List all relevant stakeholders to be contacted in case of emergency and their contacts.
e) Procedures for handling of GMO waste and by products: There has to be a clear guide on disposal of waste and by products emanating from GMO processing.
f) Information dissemination: there should be clear channels through which emergency information to stakeholders is communicated.
g) Storage of recalled consignment: Identify facilities for storage of recalled GMO consignment while awaiting disposal.

5.4.2 Response Plan

Where it is evident that the food or feed imported into Swaziland is likely to constitute a serious risk to human health, animal health or the environment, and that such risk cannot be contained adequately by means of measures taken by the operator, the Swaziland Environment Authority, shall immediately adopt one or more of the following measures, depending on the gravity of the situation:

a) Suspension of the placing on the market or use of the food in question;
b) Suspension of the placing on the market or use of the feed in question;
c) Notify all retailers and other outlet as well as consumers of the product.
d) Laying down special conditions for the food or feed in question;
e) Any other appropriate interim measure.
f) Immediate removal from outlets and cleaning of the area.
g) Compile and submit a detailed report to the Swaziland Environment Authority on the immediate response measures undertaken within 2 days.

As soon as possible, and at most within 10 working days, the Swaziland Environment Authority shall confirm, amend, revoke or extend the measures taken and the SEA shall publicise through relevant media the reasons for its decision without delay.

In cases where non-GM and GM products coexist, the operator shall take appropriate measures to avoid contamination. Regular monitoring through testing of both products should be done.

If a food business operator has reason to believe that a food or feed which the operator has imported, produced, processed, manufactured or distributed is not in compliance with GMOs related food or feed safety requirements, the operator shall:

a) Immediately initiate procedures to withdraw the food or feed in question from the market and inform the Swaziland Environment Authority of the action taken.
b) Shall inform the consumers of the reason for its withdrawal, and if necessary, recall from consumers products already supplied to them.

5.4.3 Recovery Plan

During the recovery process the operator shall:

a) Identify the extent to which the GMO was distributed.
b) Withdraw or collect the distributed stock.

5.4.4 Mitigation Plan

The operator shall:

a) Destroy the GMO appropriately.
b) Compensate all affected stakeholders.
c) Compile a comprehensive report on the whole incidence. This report should be used to inform the preparedness plan.

5.5 Emergency Response Strategy for Unintentional Release into the Environment

Unintentional release into the environment may include, but not limited to:

a) GMO materials from Labs/Containment Facilities
b) GMOs from storage facilities,
c) Invasion, theft of GMOs from storage facilities
d) Fire in LMO/GMO facilities
e) Un-intentional LMOS/GMOs release during transportation
f) Civil disorder
g) Cyclones, including storm surge
h) Earthquake
i) Flood
j) Accidents
k) Structural instability (such as packaging materials, containment facilities, buildings)
l) Terrorism.

5.5.1 Preparedness Plan

The preparedness plan should cover:

a) Awareness creation**:** The operator should sensitize stakeholders on the potential risk associated the GMO in question.
b) Provision of handling facilities: They should be appropriate for the GMO in question.
c) Regular assessment of GMO handling facility: there should periodic inspection of the GMOs handling facilities such as storerooms, greenhouse, laboratory or silos.
d) Identification and storage of equipment: Identify all equipment to be used in case of emergency and ensure proper storage such that it is easily accessible.
e) Security: Ensure that there is proper security (fencing, security personnel, restrictions of access and buffer zones)
f) Transportation: The shortest route for transportation should be identified and the most appropriate type of vehicle should be used and labeled.
g) Emergency response agencies: Identify and list all relevant stakeholders to be contacted in case of emergency and their contacts.
h) Risk assessments, materials safety data sheet, and personal protection equipment.
i) Dissemination of the plan: The emergency preparedness plan should be disseminated to all relevant stakeholders particularly those who are part of the response plan.

5.5.2 Response Plan

In the event of any the above listed incidents, the operator(s), subject to any requirements of the Swaziland Environment Authority, shall:

a) Immediately (within 1 hour) inform the office of the Biosafety Registrar at the Swaziland Environment Authority and other relevant stakeholders of the nature, circumstances and location of the damage or accident including potential damage that is likely to occur as a result of the GMO activity or incident involving GMO under his control;
b) Comprehensively evaluate the magnitude of the damage.
c) Cordon-off area (provide containment) if necessary ; and
d) Take appropriate response measures to avert any adverse effect from occurring as a result of the activity or accident.
e) Compile and submit a detailed report to the Swaziland Environment Authority on the immediate response measures undertaken within 2 days

Where damage occurs and the operator is not yet known by the office of the Biosafety Registrar at the Swaziland Environment Authority shall:

a) Identify the operator which has caused the damage;

b) Evaluate the damage;
c) Determine which response measures should be taken by the operator;
d) Communicate in writing to the operator to implement appropriate response measures immediately.
e) Implement response measures if the operator fails to comply; and
f) Issue an order to recover from the operator, the costs and expenses of, and incidental to, the evaluation of the damage and the implementation of response measures. An operator can only appeal against such an order after settling costs for the evaluation and implementation of response measures.

Decisions of the Swaziland Environment Authority requiring the operator to take response measures should be rational and communicated in writing to the operator immediately after the operator is known.

5.5.3 Recovery Plan

During the recovery process the operator shall:

a) Establish the extent of spread and determine the coverage of the contamination.
b) Partner with local and other authorities in the process of recovery
c) Ensure containment to restrict further spread of the GMO.
d) Ensure safe storage prior to disposal of recovered GMO

5.5.4 Mitigation Plan

a) Clean –up / site remediation
b) Appropriate handling / treatment / final disposal of salvaged material

5.6 Other cases

In the event an accident results from a case not covered above, the provisions stated in 5.5 of these procedures shall be followed.

In all cases covered in this section (section 5 of these Procedures) the Swaziland Environment Authority has the responsibility to monitor the implementation of the procedures by operators through information forwarded to it and site inspection. Annex 1 provides a check list that can be used as one of the tools for this purpose.

5.7 Other Authorities

These are other authorities that may be of assistance to the operator in minimising, remediating, cordoning off, transporting and providing health assistance in terms of toxicities and poisoning. They include, but not limited to:

a. The Royal Swaziland Police (RSP)
b. Fire and Emergency Services

c. Umbutfo Swaziland Defence Force (USDF)
d. Emergency Medical Services (EMS)
e. Traditional Authorities
f. Municipality Office

6.0 AWARENESS ON THE EMERGENCY RESPONSE PROCEDURES

The Swaziland Environment Authority shall endeavour to inform all operators and other relevant stakeholders about these procedures. Stakeholders shall be expected to domesticate relevant sections according to their intended GMO activities and develop their own emergency response plans which they shall forward to the Swaziland Environment Authority when applying to the Swaziland Environment Authority . The stakeholders will be required to ensure that their staff members are trained on Emergency Response Plans.

ANNEX 1

EMERGENCY INSPECTION CHECKLIST

Name of Party: ……..……..

Name of Reporting Officer: ……

Designation: ……

Date of Incident: ……..

Type of GMO/LMO: ……..

GM Permit Number: ……..

ISSUE	YES	NO	COMMENT
1. Does the Party have a valid GMO Permit			
2. Was the incident reported on time to the CA?			
3. Were other agencies informed?			
4. Was there any unintended release?			
5. Was there any non-compliance recorded?			
6. Has the public been informed?			
7. Were follow up measures taken?			
8. Has the incident report been submitted?			

Date of Inspection: ……...

Name of Inspector: ……

Signature: ……..

Biosafety Emergency Response organisations' Contact Persons

ORGANISATION	ADDRESS	CONTACT PERSON	CONTACT DETAILS	ALTERNATE CONTACT PERSON	CONTACT DETAILS
World Food Programme	Lilunga House, 1st Floor, Mbabane	Bhekinkosi Kunene	24044963/2 ext 2420 76028554 bhekinkosi.kunene@wfp.org	Carlos Temba	24044962/3 ext 2401 78136518 carlos.temba@wfp.org
USA Distillers	Farm 1085, BigBend-Lavumisa Rd, Big bend	John Creamer	23646057/8/9 76020862 jcreamer@usadistillers.com	Xolile Ntshalintshali	23646057/8/9 76029870 compliance@usadistillers.com
National Disaster Management Agency	RHUS Office Park, Lot 195, Karl Grant Street	Majahonke Sibonakaliso Mamba	2404 0256 / 2404 2777 76673164 majahonke@ndma.co.sz majahonkentfulini@gmail.com	Mthobisi Dlamini	2404 0256 / 2404 2777 76065902 mthobisi@ndma.co.sz
National Maize Corporation	11th Street Matsapha Industrial Site	Nomcebo Msimango	25187432 76657021 sherq@nmc.co.sz	Mathanzima Slombo	25187432 78027472 mathanzima@nmc.co.sz
Swaziland National Agricultural Union	Mancisha na Street Ministry of Agric Crop promotion	Lwazi Mamba	25059358 76058607 Knowles1@live.com snau@swazi.net	Melusi Kunene	25059358 76170788 noelkunene@gmail.com
Swaziland Cotton Board	Matata Loop Rd Across Railway Bridge	Jeconiah Msibi	23646068 76127191 jmsibi@cottonboard.co.sz	Louige Dlamini	23646068 76052072 ldlamini@cottonboard.co.sz
Ngwane Mills / Feed Master	Box 1371 Matsapha King Mswati III Aveneu West	Thulani Nkambule	2518 5510 76217857 thulanin@feedmaster.co.sz	Mlondi Magwaza	7621 3200 mlondim@feedmaster.co.sz
Swaziland Milling	Box 158 Manzini Mbandzeni Street,	Thabo Nkambule	2505 2261 ext. 158 / 159 thabo@swazilandmilling.sz	Lindiwe Dlamini	7602 8913 lindiwe@swazilandmilling.sz