

FOOD WASTE MANAGEMENT **ON-SITE SOLUTIONS FOR THE** **SAFARI, LODGE AND RESORT** **INDUSTRIES**



FOOD WASTE AN ENVIRONMENTAL, ANIMAL & SAFETY RISK

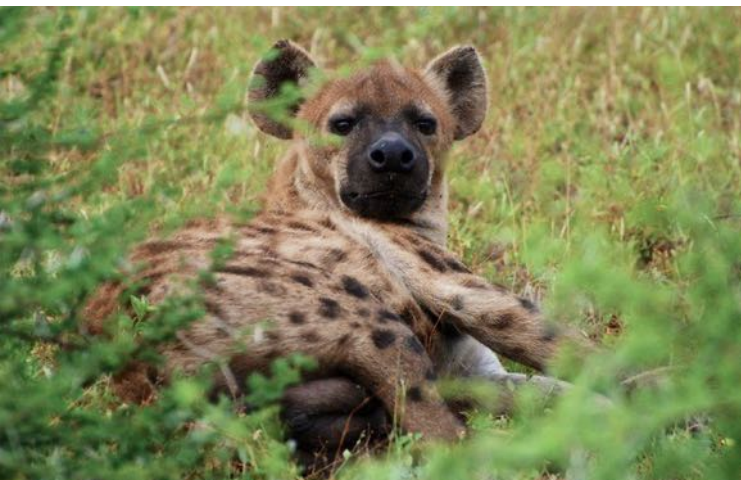
Managing food waste in environmentally sensitive areas is a challenge for many reasons:

- Dumped, the waste rots and poisons the environment.
- Burning produces smells and toxic smoke.
- Dumping into a caged pit contaminates ground water, and attracts baboons, honey badgers, squirrels and mongooses.
- Kitchen waste attracts hyenas and other dangerous animals which can come into contact with guests and staff.
- Rotting food waste produces pathogens which are harmful to wildlife.
- Food waste has a high environmental footprint and contributes to the global climate emergency.

CLOSED SYSTEMS ON-SITE MANAGEMENT SOLUTIONS

Without a formal waste management service provider, these problems require on-site systems which are:

- Closed so as not to allow access to animals, birds or insects.
- Robust enough to withstand the power of larger inquisitive animals like baboons.
- Able to process waste fast so that it quickly loses its appeal to scavengers.
- Automated to minimise staff management requirements.
- Programmable so as to suit the unique requirements of individual locations in terms of power requirements and food types.
- Compliant with environmental and waste regulations which produces a stable non-smelly non-toxic output which is not appealing to animals or insects.





EARTH BOKASHI

Small volume waste solution

The Earth Bokashi system uses indigenous Southern African micro-organisms to pre-ferment food waste in 50L closed drums.

As fermented food-waste does not rot, the drums can be stored indefinitely and then easily and quickly composted or further processed through an enclosed worm-composting unit.

Easy to use and apply, the Earth Bokashi system is ideal for waste volumes of less than **1,000kg/month**.

Output from the Earth Bokashi and Earth Cyclor processes requires additional storage or treatment. The Earth Cyclor produces an active—hot—compost which needs to finish either in a compost pile with other garden waste or in a simple aerated container. Once cool, it can be used for gardening.



EARTH CYCLER

Automated in-vessel composter

The Earth Cyclor is a fully automated, in-vessel composting machine.

With a data connection, the Earth Cyclor can be remotely accessed and managed from anywhere in the world.

A flow-through continuous solution, the Earth Cyclor has two versions. The smaller can process **up to 3,500kg food waste per month** and the larger **up to 8,000kg food waste per month**.

Both solutions require additional carbon input which can include woody material such as cardboard and compostable packaging.

BOKASHI

- ✓ • Low cost.
- Quick and easy to implement.
- Low training requirement.
- Measurable.
- No power requirement.
- Scalable (just add drums).

EARTH CYCLER

- Fully automated.
 - Low labour requirement.
 - Digital reporting and measurement.
 - Remote access and management.
 - Flow through continuous process.
 - Quick and efficient.
 - Plug n Play system with low maintenance requirements.
 - Low energy and can be solar powered.
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- ✗ • Two step process (contents require further composting post fermentation).
 - Batch process which requires an additional 14 days to complete fermentation after filling.
 - Can be labour intensive.
 - Storage space required.
 - Becomes complex at high waste volumes.
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- More expensive than bokashi system.
 - Requires electrical connection.
 - Discharge from the machine — depending on through-put speed—needs to be matured out of the vessel in an aerated bin or with other landscape/garden waste (where it works as a compost activator).



AUTOMATED OPERATIONAL SIMPLICITY

The intelligent PLC guides operators on loading requirements while automatically managing the composting process.

The composting machines weigh material inputs and outputs for impact reporting and also communicates when contents should be discharged.



DATA ENABLED REMOTE MANAGEMENT FUNCTION

With a mobile, wireless or wired data connection the Earth Cycler can be remotely controlled, composting programmes adjusted, software updated and performance measured from anywhere in the world.



MEASUREMENT & PERFORMANCE IMPACT REPORTING

All on-site solutions measure all inputs and outputs. Reporting from this data show (on a cumulative and monthly basis):

- Food waste processed.
- Carbon saving vs. dumping.
- Carbon value (at set prices).

Online reporting dashboards are an optional subscription.

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