



One Health AHP Waste Forum
**CONFERENCE OUTCOMES AND STRATEGIC
WAY FORWARD**



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Executive Summary

There is a long-standing issue of poor absorbent hygiene product (AHP) waste management in South Africa, particularly in rural, informal, and backyard dwellings. The problem stems from a lack of policy integration and communication among various government departments. The ambiguity in legislative acts and fragmented authority further hinders effective waste management. Unfortunately, AHP waste management is not a government priority, leading to a culture of complacency. The lack of compliance and enforcement, along with a failure in implementing the Duty of Care, exacerbates the problem. Currently, there is no plan in place to address AHP waste management in these areas. However, a three-year strategy has been developed based on the outcomes of the One Health AHP Waste Forum conference held in November 2023 at the Conservation Symposium. The strategy aims to prioritise rural, informal and backyard dwellings towards improving waste collection, exploring sustainable alternatives, employing appropriate technology, conducting research, establishing a circular economy system, promoting behaviour change through education, and enhancing water and sanitation in rural areas. The ultimate vision of the One Health AHP Waste Forum is to achieve a clean and healthy environment free of AHP waste.

Absorbent hygiene products waste in South Africa: Context and need

Poor absorbent hygiene products (AHP) waste management service in rural, informal, and backyard dwellings is not new to SA and has been a persistent problem for many years. There is a lack of policy integration in which AHP waste management is governed across numerous legislative frameworks and related government departments. Often the AHP waste is addressed ambiguously within the legislative acts, and this ambiguity coupled with fragmented mandated authority leads to a lack compliance and enforcement to institute effective AHP waste management. Unfortunately, the absence in communication and coordination between mandated authorities, service providers and waste service users exacerbates the problem. Sadly, AHP waste management does not seem to be a government priority, and this lack of priority is leading to a culture of complacency in effecting AHP waste management. Furthermore, failure in implementing compliance in the Duty of Care in AHP waste management among communities and various authorities further compounds the culture of complacency. These conditions have led to a culture of complacency resulting in the current status quo of ineffective AHP waste management. Consequently, there does not seem to be any planning in place to address AHP waste management issues within rural, informal and backyard dwellings (Figure 1).

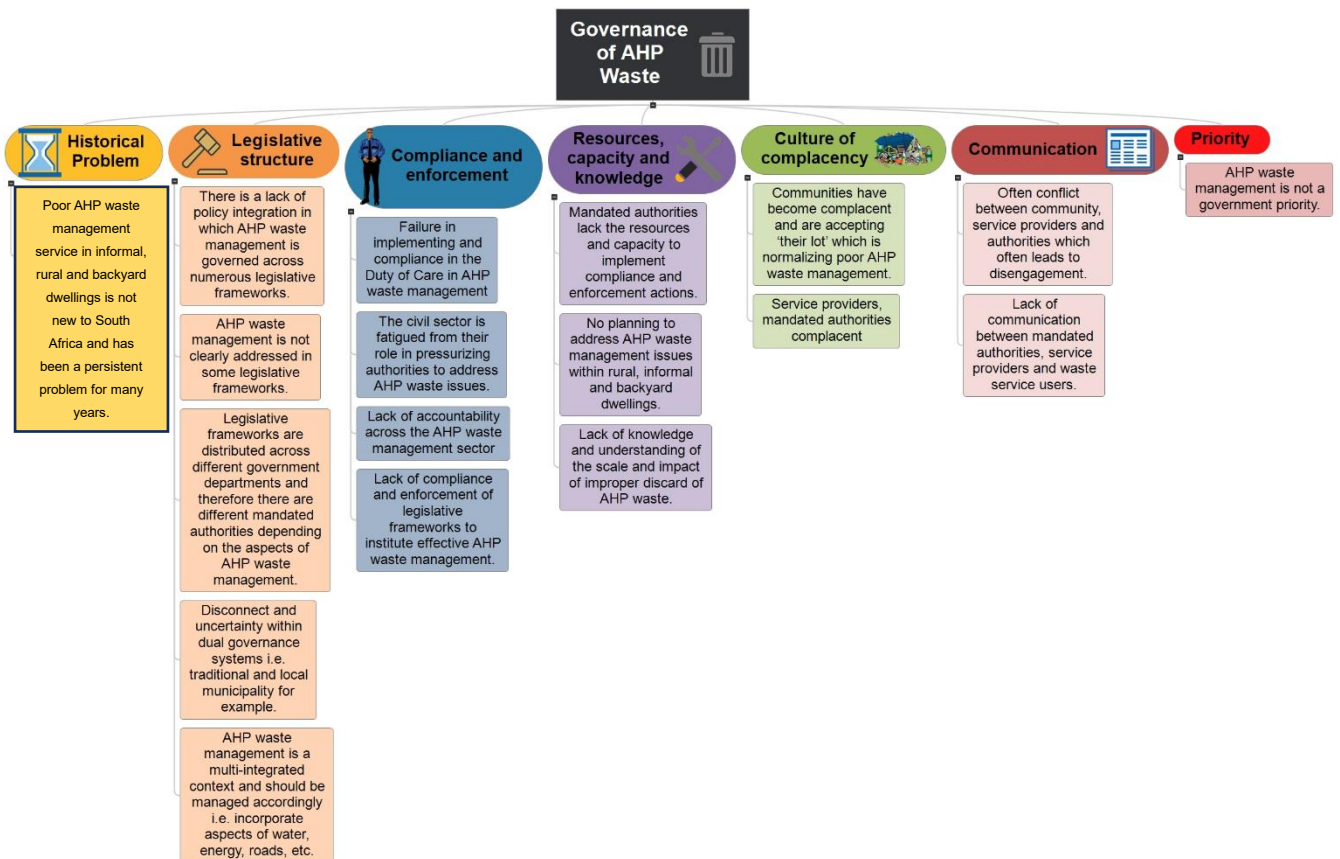


Figure 1: Governance of AHP waste in South Africa

The need for a multi-disciplinary science, technology and innovation perspective in solving South Africa's growing AHP problem.

Professor Linda Godfrey¹, CSIR¹

The AHP waste problem in South Africa and the role that a community of practice can play in terms of addressing this particular issue. AHP waste, related risks and solutions have been outlined in the National Waste Management Strategy (2020) in which it is stated: *“Absorbent Hygiene Products (AHP) Waste, particularly disposable infant diapers, represent a growing problem in relation to household waste disposed to landfill. Not only are they significant in volume and the amount of time they take to degraded but they represent a health risk, particularly in unlined landfills and to waste pickers. Potentially, these risks can be mitigated through product design measure and through recycling and through alternative waste treatment options. Recycling of waste diapers requires consumer awareness and measures to sperate these products at*

source which may be difficult to achieve in some circumstances. This should be preceded by safe collection and disposal.” However, this statement does not take into consideration that the AHP waste is a growing problem when discarded outside of landfills for example when it is discarded in open areas or water courses, for instance. It also does not look at the health risk it poses to people and the environment outside of landfills or waste pickers. Even through, waste discarded in a water course, for instance, could pose a significant risk to the people and environment surrounding the water course. Furthermore, there are limitations to recycling waste and whether recycling of AHPs is a feasible alternative. Overall, one should wonder what business or evidence was used to support the compilation of this statement. Especially when considering the commonplace discard of AHP waste discarded in beautiful open spaces across South Africa. Mainly because communities do not necessarily have access to reliable waste collection services and are forced to discard their waste in these open spaces.

Commitments have been made to process AHP waste through the construction of refuse derived fuel (RDF) plants and rolling them out across the country by 2023. However, until now there does not seem to be any evidence of the existence of these RDFs nor plans to construct more RDFs. Furthermore, in terms of the feasibility of RDFs processing AHP waste, there does not really seem to be any evidence to support that the construction of RDF plants would even be the most appropriate way of dealing with AHP waste as opposed to direct incineration or even direct disposal to landfill. As such, confidence in the approach of dealing AHP waste, seemingly in the absence of supporting evidence or science, is rapidly declining, especially since evidence around the scope and the extent of AHP waste is not properly understood. In this context, it has been stated that 1.4 million nappies are sold every year in South Africa, generating 280 000 tons of waste. But have these figures been vetted through science? If they have not, how can we determine an approach to dealing with AHP waste if we do not properly understand the scope of the problem. Next to this is the question of whether we know where (rural, informal or backyard) the main problem of AHP waste is being realised.

Further to the growing questions around SA's charted approach to AHP waste management is that the measurement of change in AHP waste management has been pinned on the reduction of AHP waste that reaches landfills. The burning question is:

How was it determined that this would be the target for measuring change in AHP waste management? Surely this target would be counterintuitive if it was understood that the greatest problem of AHP waste management was poor service delivery and collection, for instance, which is resulting in improper discard of AHP waste in open areas; and if this is indeed the problem in the AHP waste management process, surely one would want to see an increase in the amount of AHP waste reaching the landfill to conclude that less AHP waste is reaching open areas and therefore, less risk to people and the environment.

In reality an increase in AHP waste to landfill would suggest improved AHP waste collection and therefore waste being safely diverted away from illegal dumping in open spaces to a place where it can be better managed and contained. Building an AHP waste management strategy on a sound data set linked to key indicators is essential. It is also relevant with respect to the embedded principles within the White Paper on Integrated Pollution and Waste Management and the National Environmental Management: Waste Act which specifies that the improvement on the waste system should only be considered if the social, environmental and economic benefits of doing so outweigh the social environmental and economic costs of discarding waste in landfill. In view of this, the question arises: has the option to recycle AHP waste been based on the evidence collected that demonstrates the need to recycle in terms of the social, environmental and economic impacts? Moreover, why are recycling and diverting of AHP waste to landfill the only options incorporated into a strategic approach to AHP waste management? Why has a multi-disciplinary approach to AHP waste management not been formulated to include other aspects such as improved waste collection, AHP product design, use of biodegradable products, consumer behaviour in purchasing and discarding of AHP products and waste? In addition, the strategy does not consider approaches to managing AHP waste in different contexts i.e., urban, rural, informal or backyard dwellings although each of these contexts present different challenges to AHP waste management. It is obvious that these situational challenges need to be addressed.

Fortunately, South Africa's Waste, Research, Development and Innovation Roadmap provides a framework (Figure 2) to approach AHP waste management strategically.

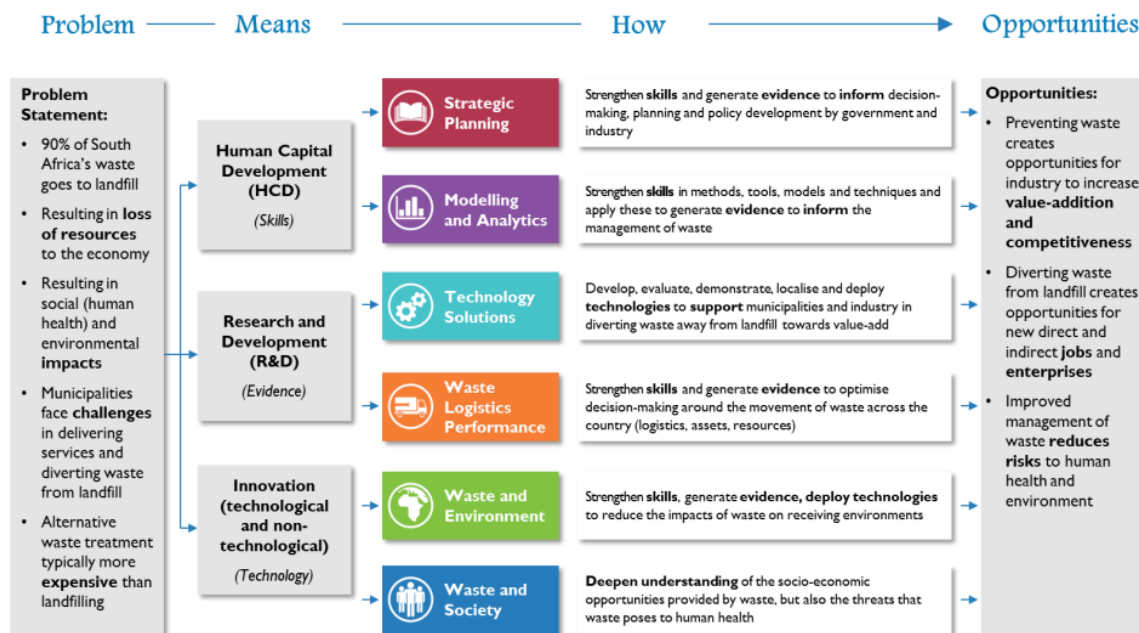


Figure 2: South Africa's Waste, Research, Development and Innovation Roadmap Framework

Through the framework the following can be considered in the development of an AHP waste management strategy:

1. Incorporate policy and legislation to regulate AHP waste.
2. Determine the economics of AHP waste management and alternatives in relation to social and environmental benefits and impacts.
3. Based on evidence, determine contextually appropriate technological solutions.
4. Determine system dynamics opportunities and challenges within AHP waste collection systems.
5. Determine impacts of AHP products and waste on the environment and identify appropriate indicators to measure and monitor these impacts.
6. Determine impacts of AHP products and waste on people and identify appropriate indicators to measure and monitor these impacts.

Information is available to address these six pillars of the RDI roadmap but it is a matter of collaborating and consolidating the available information and through this, co-construct a strategic approach to sustainably manage AHP waste in South Africa. The One Health AHP Waste Forum mini-conference to develop a community of practice around AHP waste management in South Africa offers an ideal opportunity to pioneer

the collaboration and consolidation of information towards informing an AHP waste management strategy based on sound evidence from industry professionals across a broad range of stakeholders and role-players.

Current Research

Disposable nappies and the child support grant: Possible implications for the first thousand days of babies

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South Africa has one of the world's most expansive social grant systems. Currently 47% of the population relies on a monthly grant. Of these, 18 million are permanent beneficiaries and about 10 million receive a temporary Social Relief of Distress Grant. In 2020 around 13 million caregivers of children received a child support grant (CSG). There is substantial evidence that the CSGs are spent on food, education and basic goods and services. The first 1 000 days of human development is a critical phase characterised by exceptional significance, as it establishes the course for a child's physical, cognitive, emotional, and social welfare. During this critical period in a child's development, a child support grant, offered to families with low incomes, can have a substantial influence on the child's growth and development. This presentation focuses on the usage and management of disposable nappies in a rural lower income area in the Northern Cape which raised questions regarding how CSGs are spend and the possible implications for the first 1 000 days of children. An adapted One Health baseline survey was completed with 193 Calvinia West residents to investigate the usage and management of disposable nappies. Results show that 97% of the households in the study received CSGs and all used disposable nappies for on average 17 months. It is estimated that R485 of the R500 received per month was spent on nappies. The perceived reasons for using disposable nappies are seen as convenience, comfort, and fashion. Further studies are needed to investigate not only the impact of disposable nappies on the environment, but also on the development of the children in resource-constrained areas.

A comparative provincial assessment of disposable diaper system dynamics

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Disposable diapers (DDs) were introduced to South Africa in 1992 and currently the industry is valued at over 7 billion Rand, accruing 10.57% annually. This growth is unsurprising considering that on average an infant uses 4.6 DDs per day for 2.5 years, accumulatively amounting to almost 5 billion DDs produced in South Africa, weighing over 6 million kg. Nappy waste often ends up in natural areas, polluting the environment. DDs also block water flow and compound the effects of flooding. Consequently, DD waste is becoming one of the most serious environmental health issues in South Africa. However, little has been done to address DD waste because it is a highly complex matter involving a variety of contributing factors. The One Health Forum, representing three NGOs and two academic institutions, conducted a system dynamics assessment with 1733 people from 40 communities located across three South African provinces. The assessment revealed that most respondents use DDs because they are easy, convenient (64%), time savers (11%) and require no washing (5%). It was found that 87% of respondents separate and discard DDs in various ways, including by road for municipal collection (23%) or in a natural space (16%). Most respondents (72%) prefer Huggies/Pampers and purchase DDs from Shoprite (62%). The mother is the key role-player (75%) in the purchasing, financing, and discarding of DDs. Respondents acknowledge that DDs negatively impact people (97%) and the environment (99%). Nonetheless, 83% of respondents would not consider using reusable diapers. Most of the respondents (37%) stated that limited access to water prevents them from being able to wash reusable diapers. Although most respondents felt that there was no solution (52%) to DD waste, they would support a central DD waste disposal area (93%). Study outcomes highlight key nexus points relating to system failures and opportunities to improve waste management of DDs in South Africa.

Exploring disposable diapers usage and disposal practices in rural areas and calculating quantities generated

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The complex inherent characteristics of disposable diapers, and the threats involved in their disposal makes the management of AHP waste in developing countries extremely challenging. The relevant challenges are due to insufficient information regarding the generation of disposable diapers and the limited availability of infrastructure for their collection, sorting, and treatment in municipalities. Although the burden on the environment of AHP use and waste is recognised, statistics regarding AHP waste are scarce, and information regarding management options and scientific information on environmental impacts of AHP remains inadequately documented within a central database. This study aimed firstly to describe the usage and disposal practices related to disposable diaper waste in 8 villages in the Kruger to Canyon Biospheres, straddling the Mpumalanga and Limpopo provinces in South Africa. Secondly, the number of diapers generated was calculated. Quantitative and qualitative data collection methods were used to collect the primary data. These were survey research, focus group discussions, participatory thematic mapping, illegal dumping mapping, and member checking. It was found that most diapers end up within the natural receiving environment due to a lack of formalised waste management service provision. Dumping hotspots were found within water courses and streams. The study showed that 4.47 diapers are generated per infant per day. A total average generation of 158 154 diapers within Bushbuckridge and 34 493 in Maruleng per day was calculated. Very high unemployment and grant dependency characterise the study area and households often spend most of a child support grant to purchase diapers. Residents indicated their willingness to make use of a diaper disposal/collection point if available and were not opposed to alternative management solutions involving disposable diapers. The results contained in this study form a

useful baseline for use in further studies to determine the feasibility of disposable diaper beneficiation options.

Absorbent hygiene products disposal behaviour in informal settlements: Determinants and underlying mechanisms in Durban, South Africa

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In South Africa, many low-income communities lack reliable waste management services. Within these contexts, AHP waste, including nappies (diapers), are not recycled, and are often dumped, ending up in watercourses and polluting the local environment. Although the structural barriers to the collection of used disposable diapers have been well explored, the behavioural determinants of safe disposal for AHPs remains poorly understood in SA, and particularly in low-income contexts. The purpose of this study was to determine the psycho-social factors driving AHP disposal behaviour for mothers and caregivers, while identifying potential underlying mechanisms (such as mental health), which may be influencing disposal behaviour, with the intention of informing a future contextually appropriate and sustainable collection system. Our findings from a cross-sectional study conducted within three purposively selected low-income communities (Johanna Road, Blackburn, and Mzinyathi), located within the eThekweni Municipality (Durban), SA suggest that one third of caregivers do not dispose of nappies sanitarily, despite intent (86.9%). Regression analysis revealed 10 psycho-social factors which significantly predict the desired behavioural outcome, the sanitary disposal of AHPs. Moreover, caregivers with poor mental health were less likely to dispose of AHPs sanitarily, which reflects previous research linking poor mental health and the impairment of health-related daily activities, particularly within vulnerable groups. Specifically, several underlying psychosocial factors were moderated by poor mental health; the prevalence of sanitary disposal of AHPs depended on the mental condition of caregiver. Our findings confirmed the link between poor mental health and unsanitary AHP disposal. This is especially relevant because poor mental health is common within South Africa. Addressing mental health problems within these communities is an essential step to providing sustainable waste management services. The findings should inform an

intervention strategy to implement a future collection system for these communities, and similar low-income or informal contexts within South Africa.

An assessment of the sustainability of introducing biodegradable diapers as an alternative to non-biodegradable diapers

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Non-biodegradable diapers have an impact on the environment, including health problems, pollution, and waste disposal. Biodegradable diapers are made from materials that break down and decompose more rapidly than non-biodegradable diapers. Setumong village, which lies in a rural area of Limpopo Province, South Africa, faces many challenges with regard to waste management. In response to the escalating concerns over waste management and its environmental impact, this study focused on evaluating the sustainability of incorporating biodegradable diapers as a viable alternative to conventional non-biodegradable diapers. The aim of the research was to conduct a comprehensive assessment of the potential benefits and drawbacks associated with adopting biodegradable diapers, thereby shedding light on their overall sustainability implications. The study was conducted with the use of a combination of qualitative and quantitative research methods. The sample size for the study was 146 households which were selected using the systematic sampling method. Information was acquired through various tools such as questionnaires, interviews, and observations. This research, which was expected to be finalised before the end of October 2023, endeavoured to provide valuable insights into the environmental, social, and economic aspects of introducing biodegradable diapers. Anticipated outcomes included creating awareness towards eco-friendly diaper alternatives. The findings are expected to contribute to waste management practices and inform policymakers, manufacturers, and consumers about the potential advantages and challenges of embracing biodegradable diapers to promote a more environmentally conscious and sustainable future. The development of biodegradable diapers is still in its initial stages. It is therefore critical from both a practical and a scientific standpoint to examine many elements of their decomposition.

Closing the tap instead of mopping the floor: Finding systemic change for the disposable diaper conundrum

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Disposable sanitary waste is ranked second to packaging in terms of plastic product leachate into the environment in South Africa with escalating implications for public health and local livelihoods. Improved waste management at the endpoint is not a solution in itself: the accumulation of waste in already overburdened landfills poses a significant threat to ecosystems and municipal resources. The systemic change that was explored is centred on reducing waste volumes through sustainable solutions in the form of choice of, and access to, new-tech washable diapers, which are affordable for lower-income areas that face water security challenges. This presentation shares lessons and successes from transformative social engagements in the rural Matatiele area of the Eastern Cape Province in South Africa. These engagements have delved into the intricate web of multi-faceted interactions in the diaper waste challenge, exploring innovative strategies to tackle them through consumer involvement and behaviour change. Target groups in this case study extend beyond parents and carers to livestock owners and traditional healers, and their perspectives on and solutions for this extensive challenge have been central to finding solutions. The economic and social ramifications of diaper waste also involved the livelihoods of local communities: the financial burden of purchasing disposable diapers can disproportionately affect vulnerable populations. We explore alternative diaper options and demonstrate how embracing these options can both reduce waste and alleviate economic strain on families. The presentation shares the real possibility of addressing diaper waste in our strategic water source areas. It advocates for comprehensive bundled approaches that tackle environmental degradation, public health risks, and socioeconomic inequalities, by involving affected groups in informed decision making, and empowerment through awareness. Central to the concept is transformative social engagement which fosters choice through awareness, catalysing change through co-creation of acceptable solutions.

Development of a national policy for the sustainable disposal of absorbent hygiene products in South Africa

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South Africans dispose between 700 000 and 900,000 tons per annum of used AHPs, such as diapers and feminine hygiene products. This equates to between 210 000 and 270 000 tons of potential recycled materials (dry) such as wood fibre and plastic, and between 490 000 and 630 000 tons of bio-waste such as water and human faecal matter, with potential economic value. Currently, most wet AHPs are disposed to landfill or illegally dumped in the environment, with little effort being made, by both waste management operators or suppliers of AHPs, towards diversion and/or recovery of raw materials. It takes between 300 and 500 years for AHPs to break down completely in the environment. Apart from consuming air space in registered landfill, the other issue with AHPs (and similar residual waste streams) is the safety, health, and environmental impacts that these have, especially when dumped in open fields and near fresh-water sources. Dumping is especially prevalent in rural areas and informal settlements where there are generally no proper waste management systems in place. There are several proven and emerging technologies for the treatment of AHPs. These all depend on effective separation at source and collection of sufficient volumes of AHPs. For point sources of AHP waste, such as hospital maternity wards and frail-care facilities, small modular treatment units are also available. From a design point of view, there are several possible biodegradable materials that could be used for the manufacture of more sustainable AHPs. Following the local challenges and the emerging international trends in the sustainable management of AHP waste, the Department of Forestry, Fisheries and Environment has commissioned Lindon Corporation to develop a National Policy for AHP waste. The policy will consider sustainable design and disposal options amongst other issues.

Absorbent Hygiene Products Waste Governance Framework

A policy overview and governance related to the management of AHP waste in informal areas

Belinda Langenhoven, Department of Environmental Affairs and Development Planning

Policy and legislation

The policy framework for AHP waste services has been outlined in accordance with the categories under the seven pillars of sanitation services policy (Figure 3).

Within this policy framework, AHP waste legislation has been incorporated within the following nine different legislative frameworks:

- Constitution of South Africa (Act No. 108 of 1996)
- National Environmental Management Act, 1998 (Act No. 107 of 1998); (NEMA)
- National Environmental Management: Waste Act. 2008 (Act No. 59 of 2008) (NEM:WA)
 - National Domestic Waste Collection Standards (2011)
 - National Policy for the Provision of Basic Refuse Removal Services to Indigent Households (2011)
- National Water Act, 1998 (Act 36 of 1998);
- National Environmental Management: Air Quality Act (Act 39 of 2004);
- Occupation Health and Safety Act (Act 85 of 1993)
- National Norms and Standards for Domestic Water and Sanitation Services
- National Sanitation Policy
- Sanitary Dignity Policy Framework

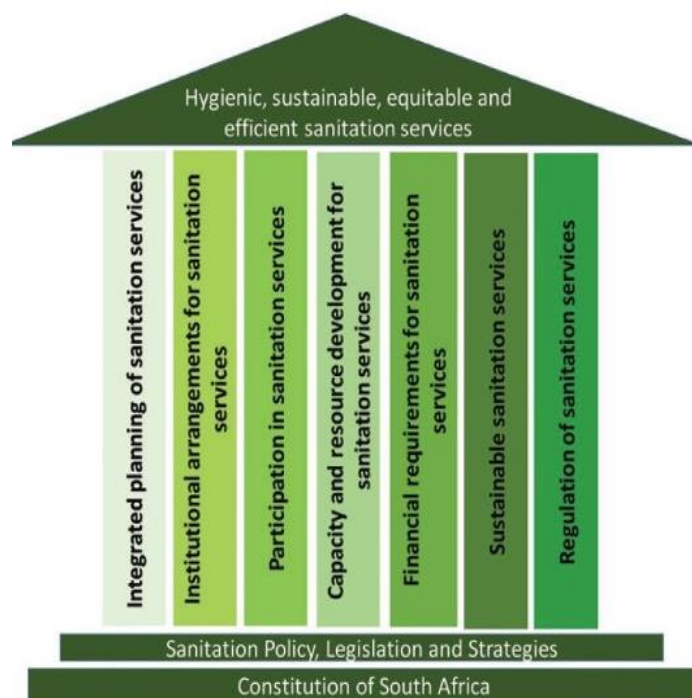


Figure 3: Seven pillars of sanitation services policy

According to S24 in the **Constitution of South Africa**, everyone has a right to an environment that is not harmful to one's health and wellbeing. This underwrites all legislation to ensure that this right is upheld. Ensuring universal access to basic sanitation is recognised as a Constitutional responsibility of the national sphere of government, with Constitutional responsibility of provision of basic sanitation services at the local sphere of government. Local government must take reasonable measures to realise this right.

The **National Environmental Management Act (1998)** underwrites the Constitution of South Africa to ensure the right to a healthy environment in which the State must:

- respect, protect, promote and fulfil the social, economic and environmental rights of everyone and strive to meet the basic needs of previously disadvantaged communities;
- place people and their needs at the forefront of its concern and serve their physical, psychological, developmental, cultural and social interests equitably;
- promote community wellbeing and empowerment through environmental education, the raising of environmental awareness;
- ensure intergovernmental coordination and harmonization of policies, legislation and actions relating to the environment;
- ensure duty of care and remediation of environmental damage (“28. (l) Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring”).

The **National Environmental Management: Waste Act (NEM:WA) (2008)** fulfils the waste management mandate of NEMA. Within the NEM:WA, sanitary waste is defined as follows: “‘Sanitary waste’ means soiled napkins, towels, pads and tampons but not classified as health care risk waste unless such waste is isolation waste.” Sanitary waste, also known as absorbent hygiene products (AHPs) waste, includes:

- nappies/diapers
- adult incontinence pads
- feminine products (pads/tampons etc.).

NEM:WA categorises waste into two categories, namely general waste and hazardous waste.

- General waste is defined as waste that does not pose an immediate hazard or threat to health or to the environment. It includes domestic waste.
- Hazardous waste is defined as any waste that contains organic or inorganic elements or compounds that may – owing to the inherent physical, chemical or toxicological characteristics of that waste – have a detrimental impact on health and the environment.

In terms of treatment, processing and disposal of waste, NEM:WA (Part 6) specifies that:

- No person may dispose of waste in a manner that is likely to cause pollution of the environment or harm to health and wellbeing.
- Normal household activities cover domestic sanitary waste, meaning that domestic sanitary waste may be disposed of in the municipal waste stream (landfill).

NEM:WA further stipulates conditions on the general duty of waste management for holders of waste in S16 as follows:

- Where waste must be disposed of, ensure that the waste is treated and disposed of in an environmentally sound manner.
- Manage the waste in such a manner that it does not endanger health or the environment or cause a nuisance through noise, odour or visual impacts.

The **National Domestic Waste Collection Standards** published in 2011 under the NEM:WA specify that domestic waste should be managed in a way that:

- promotes equity;
- is affordable;
- is clear and easy to implement;
- is practical;
- is co-designed with communities.

In addition, NEM:WA specifies that waste should be collected on site or from a determined collection point or points. However, there is no special provision for

sanitary waste management collection in challenging environments like high density informal settlements or backyard dwellings.

The General Notice No. 413 issued by the Department of Environmental Affairs in 2011 on the **National Policy for the Provision of Basic Refuse Removal Services to Indigent Households** provides for the adoption of the Free Basic Services Policy (2001). It also promotes the need for uniform refuse collection regardless of dwelling type and specifies that indigent households should receive basic refuse collection in accordance with the National Domestic Collection Standards (2011). However, the policy does not provide for separation of or separate collection of sanitary waste.

The disposal and treatment of sanitary waste is underwritten in accordance with numerous regulations including:

Treatment

- General Notice 921: List of waste management activities that have or are likely to have a detrimental effect on the environment – *the treatment of general waste using any form of treatment at a facility that has the capacity to process more than 10 tons but less than 100 tons.*
- General Notice 926: National Norms and Standards for Storage.
- National Norms and Standards for Organic Waste Composting.
- National Environmental Management: Air Quality Act (Act 39 of 2004), General Notice 893: Listed Activities.
- National Policy on the Thermal Treatment of Waste.

Disposal

- National Norms and Standards for the disposal of waste to landfill: Domestic waste goes to a Class B landfill.

The **National Water Act** (1998) specifies the prevention and remediation effects of pollution within a water resource in the following sections:

19. (1) An owner of land, a person in control of land or a person who occupies or uses the land on which –

(a) any activity or process is or was performed or undertaken or

(b) any other situation exists

Which causes, has caused or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring continuing or recurring.

(2) The measures referred to in subsection (1) may include measures to –

- (a) cease, modify or control any act or process causing the pollution
- (b) comply with any prescribed waste standard or management practice
- (c) contain or prevent the movement of pollutants
- (d) eliminate any source of the pollution
- (e) remedy the effects of the pollution

Within the **Occupational Health and Safety Act**, workers are given the right to a healthy and safe work environment in which employers take responsibility to ensure that this is established. Employers are required to provide protective clothing and equipment where necessary to reduce the risk, and in the case of sanitary products, to ensure the provision of sanitary bins, collection and disposal services.

The policy on the **Disposal of Sanitary Waste** focuses on:

- the procedure to follow when applying for the utilisation of technologies alternative to incineration for the handling of sanitary waste;
- conditions for technology for the disposal of sanitary waste;
- the technology preferred by the Department of Water and Sanitation for the disposal of sanitary through incineration.

The goal set out in the General Notice No. 982, **Norms and Standards for Domestic Water and Sanitation Services**, is to ensure sanitation services advocate and assist with effective and sustainable solid waste management practices to protect public health and prevent pollution of the environment. To this effect:

- All households shall have access to refuse containers or skips that are emptied at least twice a week and are no more than 100 meters from a communal refuse pit. All waste generated by populations living in settlements shall be removed

from the immediate living environment daily, and from the settlement environment at least once a week.

- Waste buried or incinerated on site in either household or communal pits shall be covered daily with a thin layer of earth to prevent it attracting and breeding vectors, such as flies and rodents. Where domestic refuse is not buried on site, at least one 100 litre refuse container should be available per 10 households.
- Children's faeces/nappies shall be disposed of by directly covering them with earth. Disposal sites shall be fenced off to prevent accidents and access by children and animals. Care must be taken to prevent any leachate contaminating the groundwater.
- A timely and controlled safe disposal of solid waste with a consequent minimum risk of solid waste pollution to the environment shall be put in place.
- Recycling of solid waste within communities/settlements shall be encouraged, provided it presents no significant health risk.
- An effective and sustained communication drive shall be implemented monthly to raise awareness and increase user knowledge about the benefits of solid waste management. This communication programme shall accommodate the users' socio-cultural traditions and beliefs, needs and expectations.

Further provision is made in the **Norms and Standards** relating to feminine hygiene and disposable nappies through the following specifications:

- Menstruation consideration: Women and girls of menstruating age must have access to suitable materials for the absorption and disposal of menstrual blood. Women and girls must be consulted on what is culturally appropriate. Toilets must include provision for appropriate disposal of menstrual material (waste bins with lids that are emptied regularly) or private washing facilities.
- Containment of children's faeces: Particular attention must be paid to the disposal of children's faeces, as they are commonly more dangerous than those of adults (excreta-related infection among children is frequently higher and children may not have developed antibodies to infections). Parents and caregivers must be provided with information about safe disposal of infants' faeces, laundering practices and the use of nappies (diapers), potties or scoops for effectively managing safe disposal.

The **Sanitary Dignity Policy Framework** (2019) aims to promote sanitary dignity and to provide norms and standards in respect of the provision of sanitary products to indigent persons.

According to this Framework, waste management provision involves the following:

- Indigent persons must be educated on safe options for the disposal of sanitary products, especially those used for menstrual hygiene purposes.
- Sanitary products must be disposed of in a manner that avoids direct human contact and with minimum environmental pollution.
- The framework recognizes the responsibility of the municipality as a primary service provider in respect to waste collection.
- Additionally, the framework states that where municipal waste disposal services are limited or unavailable, the school must obtain written permission of the municipality to dispose of the relevant sanitary waste at a municipal dump site.
- It further proposes that disposal must be done by means of deep burial, composting, pit burning or incineration where municipal dumpsites are not available.

Institutional arrangements

Overall, there are numerous roles and responsibilities to manage AHP waste across a range of government departments (Figure 4). The overarching authority in waste management is dually mandated to the Department of Forestry, Fisheries and the Environment and the Department of Water and Sanitation, while the Department of Trade and Industry is responsible for the socio-economic impacts and the Department of Health is responsible for impacts relating to environmental health. The Department of Human Settlements, Water and Sanitation is the regulatory body for the management and prevention of domestic waste, including AHP waste, on water quality. The Department of Basic Education also provides the necessary education and training for communities to manage waste responsibly. Through these mandated authorities and as legislation prescribes local municipalities are the delegated authority to collect and dispose of domestic waste. In the civil sector, academic and research

institutions develop valuable knowledge systems to understand the scope, extent and impact of AHP waste while NGOs and NPOs advocate socio-ecological sustainability.

Institutional Arrangements For AHP management- NWMS

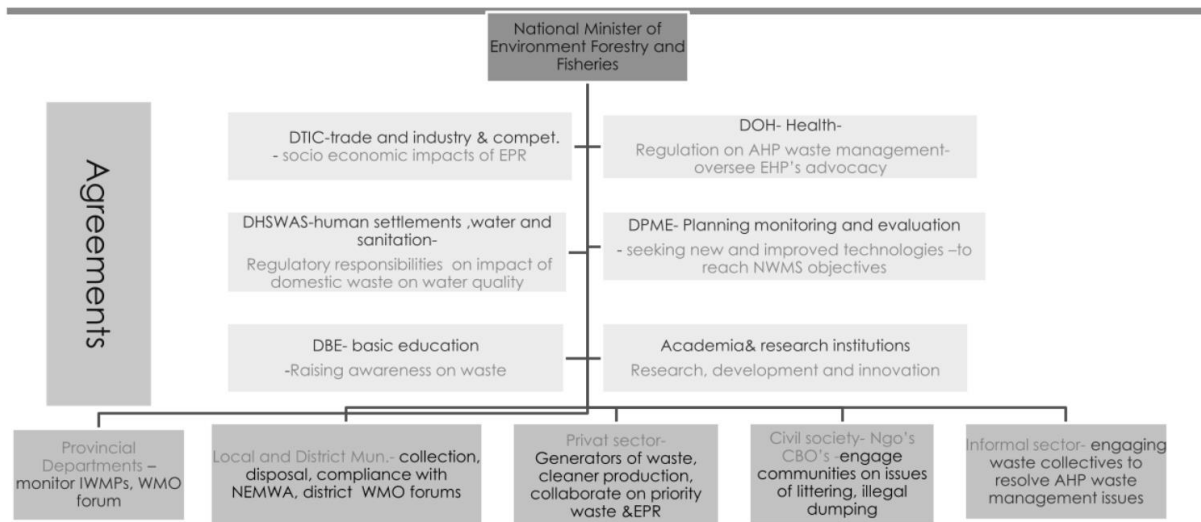


Figure 4: Institutional arrangements for AHP management

In NEM:WA, under S10, it is stated that appointed waste management officers must coordinate activities with other waste management activities in the manner set out in the national waste management strategy established in terms of section 6 or determined by the Minister by notice in the Gazette. In S11, it requires organs of state to prepare an Integrated Waste Management Plan and S12 specifies that the plan should identify and address the negative impact of poor waste management practices on health and the environment. In addition, local and national feedback forums are required to identify and address waste issues (Figure 5).

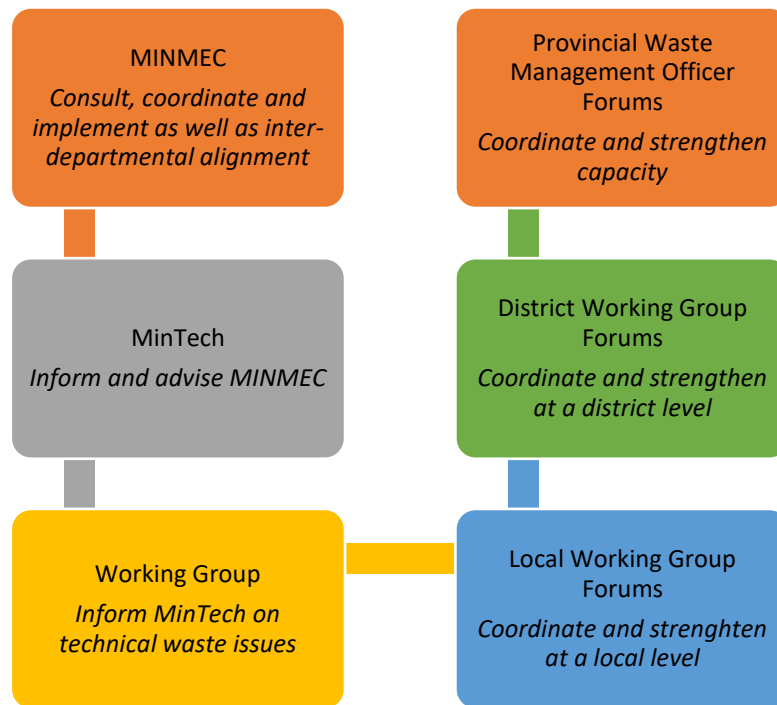


Figure 5: Local to national communications feedback forums

Approach to absorbent hygiene products waste management

The **National Waste Management Strategy 2020** (Addendum 1) recognises that AHP is a growing problem because of the quantity of waste being produced and the time it takes to degrade. Through the NWMS, AHP waste is a health risk, particularly to unlined landfills and waste pickers. NWMS aims to develop and implement a strategy and related standards concerning the design and disposal of AHPs such as baby and adult nappies (diapers) and feminine care products. A key target identified by the Department of Forestry, Fisheries and the Environment is to reduce the disposal of AHPs to landfill by 10%. To achieve this aim, product design strategies are being investigated while recycling and alternative waste treatment options are being explored. The strategy also recognises the consumers' role in waste management at source.

Aligning AHP waste management with the One Health approach (Figure 6) is also a key supporting framework. One Health is based on a collaborative, multisectoral and transdisciplinary approach – working at the local regional, national and global levels – with the goal of achieving optimal health outcomes recognising the interconnection between people, animals, plants and their shared environment.



Figure 6: One Health government framework

Case studies from the field

An analysis (Figure 7) of case studies presented by industry professionals revealed that the main driver of illegally discarded AHP waste is inadequate or non-existent collection services of AHP waste within rural, informal and peri-urban areas. Due to the lack of AHP waste collection service, it is observed that most people within these areas are dumping AHP waste in watercourses or open areas. This may pose a threat to human health while decreasing the quality of ecological goods and services. It is particularly noted in the context of natural water resources since AHP waste products discarded in a watercourse pollutes the water, which reduces water quality and availability. It is also recognised that the illegal dumping of AHP waste has a negative impact on the aesthetics of the community, which in turn negatively impacts the community's pride and dignity. AHP waste may also negatively affect the economy as it reduces livestock and agricultural productivity. AHP waste discarded in watercourses

also blocks storm water drainage lines, compounding the effects of flood events, which can increase the cost of disaster management. Further to this, tourism opportunities could be affected as waste negatively impacts on the aesthetics of the environment. It is recommended that efforts be made towards improving the municipal AHP waste collection and management systems in parallel with educating communities to support safer AHP waste management systems. However, it should be noted that cultural beliefs and hesitation to actively participate in AHP waste management within communities may offer some resistance to an effective AHP waste management system. It is also suggested that AHP products be redesigned, and alternative products be mainstreamed within communities in rural, informal and peri-urban areas. Finally, it is proposed that financial models relating to enterprise development to promote an AHP circular economy be well developed to provide incentives to key role-players, such as producers and users of AHP products, to facilitate the uptake of a strategy to reduce the amount of AHP waste being generated and discarded outside of the municipal system.



Figure 7: Analysis of case studies from the field

SWOT analysis: Opportunities to address absorbent hygiene products waste management

Based on the opportunities identified through existing research and relevant case studies, five key opportunities have been identified to address AHP waste management in rural, informal and backyard dwellings in South Africa. To investigate the feasibility of these strategies, a SWOT analysis for each strategy has been documented below.

Improve the municipal waste collection and removal system

Municipalities are struggling to implement effective waste management services in general but in particular within rural, informal and backyard dwellings. This can be attributed to issues within governance, economic, organisational, social and technological limitations as described in Table 1.

Table 1: Challenges preventing effective municipal AHP waste management

Municipal limitations	Description
Governance	In instances when an AHP waste management plan is in effect, it is not regularly reviewed, monitored and adjusted within a set timeframe.
	Lack of planning
	There is a lack of trust in the municipalities among communities often related to fraudulent and corrupt activities and allegations.
	Lack of compliance and enforcement across the various legislative acts at a local, provincial and national level
	Municipalities do not provide equitable AHP waste management services across all communities or dwellings
	Unstable political environment
Economic	Lack of budget and financial management
Organisational	Inadequate capacity
	Municipalities are disempowered and demotivated to address AHP waste management issues
	Lack of information and related statistics
Social	Poor relationships with stakeholders and role-players
	Lack of engagement with all relevant role-players and stakeholders
	Municipalities lack credibility within their communities
	Communities are not able to engage with municipalities on service-related issues

	There is often a negative communication stream and relationships between the municipality and the community.
	Communities do not act as responsible environmental citizens.
	There is a lack of transparency within the municipality.
	The communities do not understand the municipal AHP waste management systems and do not know who to engage with regarding AHP waste management issues.
Technological	Lack of resources
	Poor access to current knowledge and information
	Municipalities do not encourage or support AHP waste enterprises to promote a circular economy in the AHP waste sector.
	Lack of skills and capacity

Collaboration between stakeholders and key role-players is central towards informing and supporting municipalities to improve AHP waste management. The SWOT analysis of the current municipal AHP waste service delivery is outlined in Table 2.

Table 2: SWOT analysis of current municipal AHP waste service delivery

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Legislation prescribes responsibility of AHP waste collection to municipalities. • Legislation outlines roles and responsibilities of AHP waste management under general waste regulations. • Constitution states that everyone has a right to a clean and healthy environment and therefore, AHP waste should be effectively managed to reduce risk of health to the surrounding community. • Municipal system operational and with some capacity and resources to support the collection of some AHP waste through the general waste stream. • Users of AHPs are separating AHP waste from their general waste. 	<ul style="list-style-type: none"> • Lack of resources and budget to extend services beyond urban dwellings. • Lack of capacity to reach dwellings outside of urban areas. • Lack of knowledge around the logistical arrangements of AHP waste collection within areas outside of urban dwellings • Political and economic influences in prioritising urban dwellings for AHP waste (general waste) collection and removal
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Align with legislation and engage with communities to co-design an AHP waste collection and removal system. • Education campaigns to improve AHP waste handling and preparation to facilitate collection and removal. 	<ul style="list-style-type: none"> • AHP waste management strategy/approach may not meet the varying community needs and contexts for effective waste management. • In general, it is perceived that municipal functionality is on the decline and therefore

<ul style="list-style-type: none"> • One Health AHP Waste Forum approach in collaboration with all sectors can offer support and guidance to the waste management sector. • Research relevant and appropriate technologies to inform the various aspects of AHP waste processing and management. • Harness extended producer responsibility to develop partnerships and collaboration in developing a value system to support the AHP waste collection and removal service. • Leverage funding support to establish a functional municipal AHP waste removal system within rural, informal and backyard dwellings to reduce pollution and health risks to the community. • Potential to create a value chain through the AHP waste stream to support municipal waste collection and removal service. • If prioritised, the improved municipal AHP waste management multidimensional (technology, systems, partnerships, etc.) approach can be scaled across South Africa. 	<p>improvement in AHP waste collection may not be realised.</p> <ul style="list-style-type: none"> • Lack of compliance and enforcement across national, provincial and local authorities. • Increased social, environmental and economic risk as AHP waste issues escalate due to a growing population and failure to improve municipal waste service. • Degrading environment and surrounds become normalised within communities.
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Absorbent hygiene product circular economy potential

There are existing case studies and technologies to reprocess AHP waste which could be evaluated and considered for use in South Africa. A SWOT analysis of the overall feasibility of AHP waste in a circular economy is outlined in Table 3.

Table 3: AHP circular economy

Strengths	Weaknesses
<ul style="list-style-type: none"> • AHP waste can be repurposed into a resource, which would reduce the amount of AHP waste being discarded. • Existing products developed from AHP waste include biomass, kitty litter and building material, for example. • The large volumes of AHP waste provide a level of economic strength to support the feasibility of developing a circular economy. • People are separating AHP waste from general household waste, which makes it 	<ul style="list-style-type: none"> • Difficult to process the complex plastic components in AHP products. • Difficult to separate the different components. • Health risk in the process of separating waste from the plastic and the soiled part of a nappy. • Difficult to resell a repurposed AHP waste product within the consumer industry.

easier to process AHP waste within a circular economy framework.	
Opportunities	Threats
<ul style="list-style-type: none"> Transforming AHP waste into products for use in the building industry Conduct research into the compound components of AHP waste in terms of degradation acceleration, biodegradable components, separation, etc. Engage with producers and other suppliers of materials within the AHP manufacturing system to improve AHP design. Extended producer responsibility policy can leverage support for product development. 	<ul style="list-style-type: none"> Perceptions and cultural beliefs place a number of recycled/repurposed AHP waste products market at risk. Need a consistent supply of AHP waste materials in the recycling consumer stream to ensure economic feasibility.

Technology to support absorbent hygiene product waste management

Existing technologies are available to improve AHP waste collection, removal and reprocessing of AHP waste into usable products. These various technologies need to be researched and considered for their suitability for the South African context in relation to spatial and geographical limitations found within rural, informal and backyard dwellings. An outline of the SWOT analysis to understand the use of technology in AHP waste management has been outlined in Table 4.

Table 4: Technology to support AHP waste management.

Strengths	Weaknesses
<ul style="list-style-type: none"> There are tested existing technologies available at different capacity levels to process AHP waste. There is technology to process AHP waste into biomass for fuel production. Reprocessed AHP waste can be repurposed into commercial products thereby reducing the volume of AHP waste entering the waste collection and removal system. There are some existing case studies and research to inform appropriate technological approaches to process AHP waste. 	<ul style="list-style-type: none"> Logistics (spatial and geographical) and the related costs of implementing technological solutions. Technological solutions require scaled implementation across multiple sites within a municipal area. Inequity of service delivery between rural/informal/backyard and urban dwellings Lack of leadership at a community and local/provincial level to support effort required to implement technological solutions. Lack of knowledge and understanding around AHP waste system dynamics and alignment of appropriate technologies which would address the AHP waste problem.

	<ul style="list-style-type: none"> Failed or failing AHP waste municipal waste service. Scalability is a challenge due to complex spatial and geographical limitations.
Opportunity	Threat
<ul style="list-style-type: none"> Use existing case studies and research to inform a pilot AHP waste processing technological system. Establish a pilot AHP waste processing site per municipality. Based on reprocessed AHP waste products, create value chains within the circular economy. Provide a framework to motivate uses to manage AHP waste at a household level which aligns with receiving need requirements of the pilot AHP waste processing technological system. Develop community-based business models for waste beneficiation. Leverage the Extended Producer Responsibility policy to leverage support from key role-players in the AHP manufacturing, distribution and waste stream. Initiate research and development to inform AHP waste processing technological solutions. 	<ul style="list-style-type: none"> Uncertainty around the spatial and geographical implementation and economic sustainability Concession volumes for technology models to be economically productive must be consistent. Incentives can create expectations. Agility of technology to keep pace with growth and demographics change

Alternative absorbent hygiene products such as reusable nappies

Working reusable nappy projects are being implemented in South Africa and the feasibility of socio-ecological and socio-economic models should be explored to roll out across South Africa. Table 5 outlines the SWOT of reusable nappies in rural, informal and backyard dwellings.

Table 5: Alternative AHP products such as reusable nappies

Strengths	Weaknesses
<ul style="list-style-type: none"> Reusable products like nappies have a long life span. In the long term they are more economical than disposal AHPs. 	<ul style="list-style-type: none"> Inaccessible to communities Limited water supply in rural, informal and backyard dwellings to wash reusables. Requires large initial capital investment.

<ul style="list-style-type: none"> • In the long term, reusables provide economic empowerment. • The use of reusable products can reduce the amount of AHP waste entering communities, resulting in cleaner communities. • Reusables have a smaller impact on the environment. • Reduced waste production and discarding of waste into watercourses reduces the risk of sewage and stormwater blockages. • Restores dignity to women because it is more economical to use reusables and they do not run the risk of running out of nappies, for example, because they do not have money to buy them. • Healthy and safe for baby • Improves social relations and reduces suspicious behaviour related to cultural beliefs like witchcraft. • No technology required to manage waste. 	<ul style="list-style-type: none"> • Not mainstreamed in markets • Scalability is expensive. • Materials used to produce reusables are imported. • Local production is inhibited by loadshedding. • It is difficult to purchase because it is not readily available.
Opportunities	Threats
<ul style="list-style-type: none"> • Job creation through small business enterprise development to produce and distribute reusables within communities. • Boosts the local economy through the establishment of small reusable product businesses. • Improved economy contributes to improved livelihoods, reducing poverty and crime. • Skills capacity development to manufacture reusables within communities. • Positive behavioural change and improved responsible citizenship. • Reduced AHP waste • Partnerships with AHP manufacturers to support reusable markets 	<ul style="list-style-type: none"> • Lack of knowledge and appreciation for reusables • Resistance to change from AHPs to reusables. • Limited and inconsistent water supply to wash reusables. • Washing reusables can be a health risk. • Loadshedding in local enterprise development can limit productivity.

Education and awareness

Education campaigns should underpin all strategies to promote responsible household AHP waste management within communities located in rural, informal and backyard dwellings. There are various opportunities and threats involved in implementing education campaigns. These have been outlined in Table 6.

Table 6: SWOT analysis of education and awareness campaigns to address AHP waste.

Strengths	Weakness
<ul style="list-style-type: none"> • Civil society is actively initiating educational programmes within communities. • Civil society networks and collaboration strengthen environmental education efforts and efficacy. • The Department of Environmental Health community intervention and educational programmes are functional. 	<ul style="list-style-type: none"> • Lack of existing educational resources around AHP waste management best practices • Awareness programmes are once off events and not consistent or continuous. • Poverty alleviation and economic development prioritise government focus over AHP waste management. • AHP waste management falls within different government department mandates; therefore, it is difficult to develop an integrated educational programme. • Lack of coordination and collaboration between educational initiatives. • Cultural beliefs around AHP waste are not addressed in educational programmes.
Opportunities	Weakness
<ul style="list-style-type: none"> • Department of Education can include AHP waste management and related topics within the Life Orientation learning programme. • Tailor education programmes to reduce stigma around AHP waste products and promote the use of alternative products such as reusables. • Develop educational resources towards improving practice around AHP use and AHP waste. • Include AHP waste recommendations on AHP product packaging. • Leverage existing networks. • Leverage existing infrastructure like clinics and schools to distribute educational materials. • Incorporate existing EPWP programmes like the “Yes” programme to implement education programmes within communities. • Engage with and through traditional knowledge systems and authorities. 	<ul style="list-style-type: none"> • Poor accessibility and reach within rural, informal and backyard dwellings. • Limited access and availability of funding to support the implementation of educational programmes. • Government departments work in silos making it difficult to develop and implement a coordinated educational programme. • Lack of continuity and traction of educational programmes • Lack of community youth involvement • Aspects concerning AHP waste have a low social status. • AHP waste is culturally taboo.

One Health Absorbent Hygiene Product Waste Forum: A strategic way forward

Based on the outcomes of the One Health AHP Waste Forum conference, a three-year strategy has been developed. The strategy is the culmination of input from a variety of role-players within the private, public and civil sectors of society (Addendum 2).

Vision

A clean and healthy environment free of absorbent hygiene product (AHP) waste.

Mission

Collective action to enable the sustainable management of AHP waste towards a clean and healthy environment for ALL.

Objectives

- Improve the waste collection and removal system.
- Investigate sustainable alternatives to AHPs, like reusables and or biodegradable products.
- Contribute towards ensuring that appropriate technology is employed to manage AHP waste and collection.
- Identify and improve knowledge gaps in AHP waste through research.
- Provide input to support the establishment of an AHP circular economy system.
- Positively shift behaviour through education.
- Improve water and sanitation in rural, informal and backyard dwellings.

One Health Absorbent Hygiene Product Waste Forum: Associations and geographic scope

Currently, the One Health AHP Waste Forum consists of numerous associations including representatives from academic, civil, public and private enterprises, as outlined in Table 7.

Table 7: Current One Health AHP Waste Forum associations

Current associations			
Academic institutions	Civil groups	Public institutions	Private enterprise
University of Pretoria	Endangered Wildlife Trust	SALGA	Kimberly and Clark
University of the Western Cape	Saveact	eThekweni Municipality	TASC
University of Limpopo	TUF	Department of Forestry, Fisheries and Environment	Biddykins
University of KwaZulu-Natal	International Crane Foundation	Western Cape Government Department of Environmental Affairs and Development Planning	Green Edge
ETH, Mark	Durban Green Corridors		Aquila Environmental Consultants
	Environmental Rural Solutions		
	Greenmatter		
	Kruger to Canyons		
	Conservation South Africa		

While the Forum recognises that to guide and improve AHP waste management across South Africa it is necessary to expand the network to include other bodies as indicated in Table 8.

Table 8: Additional associations to strengthen One Health AHP Waste Forum

Additional associations				
Academic institutions	Civil groups	Public institutions	Private enterprise	
UNISA	Conservation Outcomes	Department of Environmental Health	National Pride	
Water Research Commission	The Nature Conservancy	Department of Women, Youth and Disability	P&G	
National Research Foundation	CHAT	Department of Human Settlements	Edana	
	Water Aid	Department of Health	South African Cloth Nappy Association	
	PHE organisation		Department of Education	Shoprite
			Institute of Natural Resources	OK
			Department of Corporate Governance and Traditional Affairs	Clicks
			Ingonyama Trust Board	Lovies
			Institute of Solid Waste Association	MRS
		Nedbank Green Trust		

Through the Forum, representatives from these additional associations will be invited to join the Forum in which they can contribute towards addressing AHP waste management in South Africa.

Strategic approach

Based on the One Health AHP Waste Forum geographic scope and strategic objectives, key actions and outputs have been identified to address AHP waste management, as shown in Table 9.

Table 9: Objectives, activities, timeframes and outputs in the One Health AHP Waste Forum's approach to address AHP waste in South Africa

Problem statement	Poor municipal AHP waste collection and removal within rural, informal and backyard dwellings is putting the health and wellbeing of people and their environment at risk.		
Goals	Activities	Activity timeframe (Year and Quarter)	Outputs
1. Improve municipal AHP waste collection and removal system	· Identify pilot municipalities in South Africa to target efforts to improve municipal AHP waste collection and removal system.	2023, Q1	· Five municipalities participating in pilot project to improve municipal AHP waste management
	· Establish municipal AHP waste collection and removal task team at pilot sites.	2023, Q2	· Five AHP waste task teams established
	· Conduct a situational assessment of municipal AHP waste collection at pilot municipal sites within rural, informal and backyard dwellings.	2023, Q 3 & 4	· Five municipal specific AHP waste collection and removal situational assessments
	· Analyse, report and determine actions among task team members to improve municipal AHP waste collection and removal.	2024, Q 1	· Municipal specific strategies to improve AHP waste collection and removal
	· Implement actions to improve municipal AHP waste collection and removal.	2024, 2025 & 2026	
	· Monitor outcomes of actions taken.	2024, 2025 & 2026	
	· Report and adjust action where required.	2024, Q4; 2025, Q4; 2026, Q 4	

	· Report on outcomes to provincial and national authorities.	2026, Q1	
2. Investigate an AHP circular economy system through the reprocessing of AHP waste.	· Research opportunities for reprocessing AHP waste to prevent AHP waste from entering landfill sites.	2024 Q 1 - 4	· Published research
	· Engage with stakeholders on strategies to facilitate an AHP circular economy.	2025 Q 1	· Guideline for reprocessing AHP waste
3. Determine which appropriate technologies are available to effectively manage AHP waste and support waste collection.	· Based on outputs of goals 1 - 3, research technologies which would support the improvement of municipal AHP waste collection and removal and technologies which could be used to reprocess AHP waste.	2024 Q 1 - 4	· Published research · Guideline for use of appropriate technologies to reduce AHP waste
4. Provide alternatives to AHPs, such as reusables.	· Research alternative and reusable products in terms of social, economic and environmental feasibility including resource and infrastructure availability within rural, informal and backyard dwellings to support related processes in the use of alternatives and reusables.	2024 Q 1 - 4	· Published research
	· Compile a report to inform and guide a strategic approach towards the use of alternatives and reusables.	2025 Q 1	· Guideline for AHP alternatives and reusables for decision-makers
5. Educate communities to engage more effectively on AHP system dynamics.	· Develop household AHP waste management guidelines.	2024 Q 2 & 3	· Household AHP waste improvement education campaign
	· Work with municipal AHP waste task teams to develop education campaigns to distribute guidelines to improve AHP waste household management within existing community systems.	2024 Q 4	· AHP packaging AHP waste management guideline
	· Engage with AHP manufacturers to distribute	2024 Q 2 & 3	

	guidelines for effective household management of AHP waste.		
Impact	Improved AHP waste management system and a reduction in AHP waste being discarded within communities and the environment.		

Conclusion

There is an urgent need to address AHP waste in rural, informal and backyard dwellings across South Africa. This requires effective management of AHP waste within the municipal systems, as well as coordination between mandated authorities across different government departments as these relate to the various AHP waste-related legislative Acts. Coordination requires collaborative effort among the public, private and civil sectors to improve compliance and enforcement, capacity and access to resources to develop an integrated approach to AHP waste management within the following five key strategic focus areas:

1. Improved AHP waste collection and removal
2. Suitable sustainable alternatives to AHP
3. Suitable AHP waste processing technologies
4. Research to fill knowledge gaps
5. Education to promote responsible AHP waste management

The design of the One Health AHP Waste Management Forum's three-year strategy to address AHP waste has been based on available information provided by key industry professionals. The strategic plan provides a framework to support authorities and vital role-players towards improving AHP waste management within the key strategic focus areas. The strategy is adaptive, to be reviewed and adjusted where necessary in consultation with all stakeholders.

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