

Regulating the environmental impacts of factory farming in South Africa: Legal perspectives

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List of abbreviations

CAFO	Concentrated Animal Feeding Operations
CAR	Conservation of Agricultural Resources Act 43 of 1983
COP	Code of Practice
EIA	Environmental Impact Assessment
HA	Health Act 63 of 1977
ISO	International Organisation for Standardisation
MEC	Member of Council
NRCCWP	National Response Climate Change White Paper
NEMA	National Environmental Management Act 107 of 1998
NWA	National Water Act 36 of 1998
NEM:AQA	National Environmental Management: Air Quality Act 39 of 2004
NEM:WA	National Environmental Management: Waste Act 58 of 2008
NRCCWP	National Response Climate Change White Paper
OECD	Organisation for Economic Co-operation and Development
PPP	Polluter Pays Principle
UNCCD	United Nations Convention to Combat Desertification, 1994
UNEP	United Nations Environment Programme

Summary

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The main purpose of this study was to determine the impact of factory farming on the environment in South Africa. It also determined whether the current existing environmental legislation in the country adequately regulates the growing industry.

The various impacts that factory farms may have on the environment are discussed in detail and they include water pollution, air pollution and desertification. The applicable laws are discussed in detail and also applied to the environmental impacts caused by the activities on factory farms to determine the strengths and shortcomings in South African environmental legislation, regarding regulation of the industry. The application of common law, such as the law of nuisance is also discussed and considered as a possible remedy.

This study concludes that there is a lack of environmental law and regulations, which specifically regulate and resolve the environmental problems relating to the activities on factory farms. Without sufficient and effective legislation to regulate the industry, the activities on factory farms may lead to severe environmental degradation.

1 Introduction

Human beings have been farming with livestock for centuries; these farms are suppliers of meat, dairy products and leather, among others. Farmers typically farm with cattle, pigs, sheep, poultry or a combination of the aforementioned. The three main production systems in livestock farming, generally, are grazing, mixed farming and industrial systems, such as feedlots,¹ and they can be described as follows:

- Grazing systems are based on grasslands – animals roam freely and feed from the surrounding land. This system shows a low productivity rate.
- Mixed farming systems – the livestock and crop activities are integrated. This system is the main means of strengthening the agricultural system and maintaining an environmentally friendly system.
- Industrial systems – the entire system is detached from land. Animals are kept in confined spaces to ensure optimum production, which results in costs and outputs which pose a risk of potential pollution to the surrounding environment.²

In South Africa, there are agricultural as well as concentrated animal feeding operations (CAFO) livestock farms, which can also be referred to as intensive animal feeding systems. On CAFO farms, commonly known as factory farms, the livestock are bred with modern industrial methods, which include making optimal use of space and other resources to maximise production.³ These industrial livestock farms are often designed to host thousands of animals in restricted spaces and the animals are bred and slaughtered on the same premises in order to limit expenses and expedite production.⁴ It has been reported that factory farms also dispose of vast amounts of animal and other waste.⁵ Typical waste includes urine, faeces, discarded milk, blood, detergent,

1 Anon 2001 www.environment.gov.za/soer/nsoer/drivers/general/Agric.doc.

2 De Haan and Blackburn "The Balance between livestock and the environment" 4.

3 Department of Agriculture 2006 www.agriseta.co.za/downloads/LearningMaterial/116169_LG.pdf.

4 Department of Agriculture 2006 www.agriseta.co.za/downloads/LearningMaterial/116169_LG.pdf.

5 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 27.

disinfectant and other waste produced resulting from the slaughter of the animals.⁶ Animal waste itself can be defined as "carcasses or parts of animals, including products of animal origin not intended for direct human consumption".⁷ If waste disposal in this context is not executed properly it may lead to extensive damage to the environment, such as reduction of long-term soil fertility, soil erosion, pollution of water supplies, degradation of fragile ecosystems and air pollution caused by methane emissions released by the animal waste. The latter is even known to contribute to climate change.⁸

The demand for animal products in South Africa is growing fast and the potential pressure of livestock production could, as a result, exceed the absorptive capacity of the environment.⁹ It remains critically important that future production sustains the quality of the global land, water, air, plant and animal genetic resources.¹⁰ The number of animals bred and slaughtered annually will increase and consequently animal waste and the space needed to host all of the animals will also increase.¹¹ In addition, it has been proven that there is a direct link between people's demand for the maximum productivity of farm animals and environmental pollution.¹² If current trends are to be believed, industrial livestock production can only increase in order to meet the global demand for animal food products.¹³ The consumption of animal products such as meat and milk *per capita* in developing countries is, for example, currently less than a third of the consumption in developed countries.¹⁴ The implications in terms of resources needed to provide feed and to deal with waste products led the Food and Agriculture Organisation

6 Goutondji *Preventing Water Pollution by Dairy-products: Risk assessment and comparison of legislation in Benin and South Africa* 11.

7 Roberts and De Jager 2008 *International Journal of Technology Management and Sustainable Development* 138.

8 Durning and Brough Date Unknown http://www.thevegetariansite.com/env_animalfarming.htm.

9 De Haan and Blackburn "The Balance between livestock and the environment" 1.

10 De Haan and Blackburn "The Balance between livestock and the environment" 1.

11 De Haan and Blackburn "The Balance between livestock and the environment" 1.

12 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 5.

13 Swanepoel, Stroebel and Moyo *et al* "The Role of Livestock in Developing Communities: Enhancing Multifunctionality" 10.

14 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 8.

of the United Nations to conclude that "worldwide livestock production has become an important factor in environmental degradation."¹⁵

Various environmental aspects of the factory farming industry are regulated by the following South African laws: the *Constitution of the Republic of South Africa*, 1996,¹⁶ *National Environmental Management Act* 107 of 1998,¹⁷ *National Water Act* 36 of 1998,¹⁸ *National Environmental Management: Waste Act* 59 of 2008,¹⁹ *National Environmental Management: Air Quality Act* 39 of 2004,²⁰ *Health Act* 63 of 1977²¹ and *Conservation of Agricultural Resources Act* 43 of 1983. There is no specific law which regulates factory farming; the aforementioned laws form the collective framework to regulate the activities on factory farms, which may have an environmental impact.

Against this background, this study questions the extent to which South African environmental law regulates environmental degradation caused by livestock farms. This study will also determine whether or not provision is made for remedies against the person or persons responsible for the actions or omissions, which lead to degradation of the surrounding environment. With reference to the aforementioned a few common law rules will be discussed and applied to the possible environmental issues that may result from the activities on factory farms. Delictual liability, neighbour law as well as law of nuisance will be discussed together with the remedies they provide.

The impacts that the above mentioned production systems have on the environment will be discussed, however, this paper will mainly focus on the impact of industrial systems, in other words factory farms, on the environment. It is important to note that this study focuses purely on the environmental issues related to the factory farming industry from an environmental law perspective. The different chapters will broadly discuss the impact

15 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 8.

16 *Constitution of the Republic of South Africa*, 1996 (Constitution).

17 *National Environmental Management Act* 107 of 1998 (NEMA).

18 *National Water Act* 36 of 1998 (NWA).

19 *National Environmental Management: Waste Act* 59 of 2008 (NEM:WA).

20 *National Environmental Management: Air Quality Act* 39 of 2004 (NEM:AQA).

21 *Health Act* 63 of 1977 (HA).

factory farms may have on the environment, the environmental law framework and the remedies provided for by common law.

2 Environmental impacts of factory farming in South Africa

In South Africa, factory farms are known as CAFOs or intensive animal feeding systems and these farms are developing all over the country. The *Health Act* 63 of 1977 defines factory farms in South Africa as follows:

"Intensive animal feeding system" means any farming system having as its objective the breeding of animals or the production of meat, milk, eggs, fur or any other product of animal origin and where the animal in question is kept in a confined space so as to accomplish intensive feeding or maximum control of or maximum food conversion in the animal.²²

One of the motivations behind the development from normal free-range agricultural farms to factory farms is the fact that it is more cost efficient and expedites production of animal products; this is very well reflected in the abovementioned definition. Basically, these farms provide an economic advantage, but the advantages cannot always justify the disadvantages or impacts caused by them and this is emphasized in the following statement:²³

While animals are concentrated on big specialist units, their waste products will always pose a pollution threat to rivers and streams. Arable crops grown in isolation from livestock will continue to need heavy inputs of chemical fertiliser, much of which will inevitably end up damaging the environment.²⁴

While agricultural farms create a better (although still not ideal) balance in nature, industrial farms have no regard for that need for balance. Generally speaking land is not always used in an environmentally beneficial or sustainable manner and without the rotation of crops the soil is not replenished.²⁵ Factory farms make use of animal manure and chemical fertilizers to nourish the soil, but the over-application of these additives

22 Section 1(b) of the HA.

23 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 27.

24 Harvey *The Killing of the Countryside* 151.

25 Anon 2010 www.sustainabletable.org/issues/factoryfarming.

results in numerous environmental problems.²⁶ These farms have to dispose of excessive amounts of waste, for example on a farm containing 35 000 hogs over 8 million kilograms of waste is produced weekly and over 440 million kilograms annually and because of this the waste becomes a major pollutant in the surrounding environment.²⁷ The creation and disposal of this significant amount of waste has a devastating effect on the water, air and soil surrounding the factory farms.²⁸ A common manner of storing the waste is by mixing it with water and containing it in pits and afterwards it is spread over croplands. However, if over applied it spreads into surface waters.²⁹

Furthermore, the animals on factory farms are fed with high-nutrient food and the food ends up as waste in the animal manure. The animals are often confined in small areas and because of this the manure accumulates in a small area and the nutrients in the manure transform into pollutants in the environment.³⁰ This implies that environmental problems innate in the factory farming industry originate from the need to produce the animals' feed and dispose of their waste in a fast and inexpensive manner.³¹

Factory farm animals are bred to grow quickly and to produce the maximum possible meat, dairy products or offspring as required and the outcome is that feed production greatly contributes to degradation of the environment.³² The industrialisation and mismanagement of agricultural activities, such as the processing of livestock on urban

26 Anon 2010 www.sustainabletable.org/issues/factoryfarming.

27 Loehr *Pollution Implications of Animal Wastes: A Forward-Oriented Review* 26.

28 Turner 1999 *Compassion in World Farming Trust* 26-27: Belgium and the Netherlands are countries with the largest concentration of animals in confined spaces, which mainly consists of pigs. They have encountered various problems with disposal of animal manure, because of the fact that large amounts of organic nitrogen-rich waste have be disposed of and if there are no plants to feed on the nitrate, the excess nitrate may lead to environmental pollution. There are insufficient areas to apply the manure to and the run-off has lead to water pollution.

29 Anon 2010 www.sustainabletable.org/issues/factoryfarming.

30 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 5.

31 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 6.

32 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 6.

lands, has become a major problem in many developing countries, South Africa included.³³

For example, on dairy farms the main problem is environmental degradation of water resources and this form of pollution has become a major problem worldwide.³⁴ Due to storage systems which are poorly managed or damaged, dairy wastewater poses a serious threat of pollution.³⁵ Maintenance costs involved in proper storage of dairy waste are sometimes very high, and this often leads to the illegal dumping of animal waste into rivers or onto croplands.³⁶ Poor management or insufficient storage systems *inter alia* lead to improper disposal of animal waste and usage of the incorrect channels. The runoff from dairy factory farms leads to storm water pollution as well as the pollution of rivers.³⁷ Thus some of the most frequent problems on factory farms, which may lead to degradation of the environment, are the following:

- The employees have inadequate skills, discipline or training in the slaughtering of animals;
- The facilities are equipped with poor quality slaughtering equipment, whereas slaughtering takes place on the floor;
- The facilities are not maintained properly and there is a lack of spare parts for the equipment;
- Because of the small quantities involved, the high costs involved or the low value of the end product, the by-products are processed in a non-cost-effective manner;
- There may be also be a lack of adequate equipment for the processing of by-products;

33 Department of Agriculture 2006 www.agriseta.co.za/downloads/LearningMaterial/116169_LG.pdf.

34 Torr *Applications of dairy wastewater as a fertilizer to agricultural land: an environmental management perspective* 59.

35 Torr *Applications of dairy wastewater as a fertilizer to agricultural land: an environmental management perspective* 61.

36 Torr *Applications of dairy wastewater as a fertilizer to agricultural land: an environmental management perspective* 61.

37 Kuhn *et al* "Identification of areas with faecally polluted surface water resources in South Africa" 3.

- There is a lack of regulations or internal rules, such as a “Code of Conduct” on waste disposal; or
- The applicable authorities are not able to enforce the said regulations or rules.³⁸

Together with the abovementioned internal problems, the demand from growing urban populations for products produced by livestock such as meat, milk and eggs often translates into environmental degradation and disorganisation of traditional mixed farming systems. Where population pressure and poverty coincide, poor management of livestock is likely to deplete and degrade resources further. This challenge is not unique to South Africa. The United States of America’s Department of Agriculture, for example, made a bold statement regarding the factory farming industry:

The continued intensification of animal production systems without regard for the adequacy of the available land base for recycling presents a serious policy problem.³⁹

This statement may in principle be applicable to the factory farming industry in South Africa as well. The factory farming industry is growing at a very fast rate worldwide; the reason for this growth is the demand for livestock products, which subsequently leads to the growth of the population, a rise in income and urbanisation.⁴⁰ One of the major reasons for the promotion of industrial farming practices is the prevalence of income earning as the only justification for livestock farming.⁴¹ It merits saying that there are certain externalities that consumers are not aware of when they purchase animal products at a lower cost, namely: pollution of the environment, public health risks, rural community impacts and the impacts on the welfare of the animals.⁴²

So far as this dissertation aims to focus on the environmental impacts of factory farming, it merits to emphasise the pollution related challenges. Factory farms or

38 Arvanitoyannis *Waste Management for the Food Industries* 292.

39 Staff of the US Senate Committee on Agriculture “Animal Waste Pollution in America: an emerging national problem”.

40 Nieuwoudt 1998 *Agrekon* 131.

41 Samuels 2006 *Patterns of resource use by livestock during and after drought in a communal rangeland in Namaqualand* 3.

42 Syed A 2005
[www.greendesignetc.net/Flows_05_\(pdf\)/SyedAsma_Industrial_Agriculture\(paper\).pdf](http://www.greendesignetc.net/Flows_05_(pdf)/SyedAsma_Industrial_Agriculture(paper).pdf).

industrial systems may lead to the following forms of pollution and/or environmental degradation:

- Ammonia emissions released from livestock manure may contribute to global warming and acidification;
- surface run-off and groundwater pollution caused by over-application of fertilisers, pesticides and slurry;
- overgrazing and changes in land utilisation, leading to soil and bank erosion as well as siltation of rivers; and
- drainage of wetlands and the extension of field margins to river banks may lead to loss of habitats and biodiversity.⁴³

In order to be able to critically analyse the legal dimensions to the above and other environmental impacts, it merits considering the above environmental impacts in greater detail.

2.1 Water pollution

It has been reported that South Africa's aquatic ecosystems, especially the river ecosystems, have severely degraded and one of the causes hereof is that the discharge of untreated effluent continues to grow.⁴⁴ Liquid slurry from the livestock on factory farms seeps into waterways and watercourses.⁴⁵ The high levels of nitrogen and phosphor contained in the liquid slurry can affect the quality of surrounding groundwater and lead to severe degradation of aquatic and wetland ecosystems.⁴⁶ Groundwater pollution poses a serious threat to the environment; the groundwater may take up to a

43 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 27.

44 Department of Environmental Affairs and Tourism *South Africa Environment Outlook: A report on the state of the environment* xx.

45 Briggs and Courtney *Agriculture and the Environment: The Physical Geography of Temperate Agricultural Systems* 276.

46 Gold *The Global Benefits of Eating Less Meat: A Report for Compassion in World Farming Trust* 36.

period of 50 years to pass through an aquifer, which leads to a delayed and continuous impact on the environment.⁴⁷

The waste water produced on factory farms pose a serious threat to the environment, because of poor management and improper maintenance of the waste storage systems on the farms – they tend to break and leak wastewater into the surrounding water resources.⁴⁸ A recent report with respect to slaughterhouses stated that vast amounts of waste are released into the surrounding environment, which leads to the pollution of land and surface water.⁴⁹ On factory farms the slaughter facilities form part of the farm; the animals are bred and slaughtered on the same premises to prevent further expenses.

Pollution of a water resource originates from a certain point source, which point source is easy to identify and is mostly within a small or confined area. The aforementioned point source may include any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft from which pollutants are, or may be, discharged.⁵⁰ The pollutants may also enter through non-point sources, which consist of larger areas of a more diffuse nature.⁵¹ Factory farms are widely known to be a common point source of pollution.⁵² Another example of a major point source of pollution is combined sewer systems. The reason for this is that these sewer systems have a single set of underground pipes and are used to collect manure and storm water runoff from the streets for wastewater treatment.⁵³

47 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 34.

48 Torr *Applications of dairy waste water as a fertilizer to agricultural land: an environmental management perspective* 17.

49 Gold *The Global Benefits of Eating Less Meat: A Report for Compassion in World Farming Trust* 37: Slaughterhouses in developing countries release large amounts of waste into the environment, polluting land and surface waters. In some slaughterhouses there is not even running water for cleaning.

50 Kanamugire “Offences and penalties for water pollution in South Africa: A Comparative analysis of South African, British, American and Australian legislation” 2.

51 Altaner 2012 <http://cnx.org/content/m41441/latest/>.

52 Torr *Applications of dairy waste water as a fertilizer to agricultural land: an environmental management perspective* 15.

53 Altaner 2012 <http://cnx.org/content/m41441/latest/>.

When storm water runoff exceeds the capacity of the sewers, it causes the sewers to block and eventually spill untreated sewage into surface waters.⁵⁴

2.2 Air pollution

Factory farming is a significant source of certain pollutant gases, which include carbon dioxide, methane, nitrous oxide, nitric oxide and ammonia – which are variously associated with air pollution, global warming, ozone depletion and soil acidification.⁵⁵ It is estimated that:

Worldwide, livestock are likely to be the greatest anthropogenic contribution to methane emissions, which, as a potent greenhouse gas, contributes to the risk of global warming and beef cattle contribute at least half of livestock-related methane emissions.⁵⁶

Worldwide, animal manure is responsible for about twenty percent of annual methane emissions, seven percent of nitrous oxide and ten percent of total greenhouse gases.⁵⁷ These emissions are contributing to what is now widely known as probably the greatest global environmental threat.⁵⁸ If factory farms in South Africa are not managed properly we will contribute even further to this rising problem. According to the *National Response Climate Change White Paper (NRCCWP)*⁵⁹ of South Africa, "Conventional, commercial input-intensive agriculture has a range of negative environmental, social and economic externalities, which increasingly render it an unsustainable model."⁶⁰

54 Altaner 2012 <http://cnx.org/content/m41441/latest/>.

55 Turner *Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 38.

56 Subak "Full Cycle Emissions from Extensive and Intensive Beef Production in Europe" 145.

57 Gold *The Global Benefits of Eating Less Meat: A Report for Compassion in World Farming Trust* 38.

58 Gold *The Global Benefits of Eating Less Meat: A Report for Compassion in World Farming Trust* 38.

59 Gen Not 757 in GG 34695 of 19 October 2011.

60 Gen Not 757 in GG 34695 of 19 October 2011.

Moreover, air pollution does not only lead to health problems, but also contributes to global warming.⁶¹ South Africa is also particularly prone to the impacts of climate change and furthermore its impacts on humans and our natural environment are becoming evident.⁶² It is clear that this problem must be addressed and minimised as far as possible.

2.3 Overgrazing, desertification and soil erosion

There are limits to the earth's capacity for environmentally sustainable production; the moment these limits are exceeded the impact on the environment is severely detrimental⁶³ and this is problematic on a national and international level.⁶⁴ When the earth reaches its capacity, desertification, among others, may occur and can be defined as follows: "Land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities."⁶⁵

Worldwide, major problems of soil erosion, compaction and a loss of soil fertility are being experienced.⁶⁶ The United Nations Environment Programme (UNEP), for example, has found that 23 percent of the world's grazing lands have been significantly degraded and the rate of the degradation increases annually.⁶⁷ The overgrazing of particularly cattle is one of the main causes of desertification and has a significant effect on approximately 680 million hectares of the agricultural land in the world.⁶⁸ From 1994 to 2004 cattle numbers increased from 12.6 million to 13.5 million a head, which leads

61 Burger 2008 *The Dairy Mail* 85.

62 Department of Environmental Affairs and Tourism *South Africa Environment Outlook: A report on the state of the environment* xxi.

63 McCarthy *et al* (eds) *Climate Change 2001: Impacts, Adaptation and Vulnerability: Contribution of Intergovernmental Panel on Climate Change: Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change* 517.

64 Environmental Monitoring Group Date Unknown www.bcb.uwc.ac.za/inforeep/land1.htm.

65 *The United Nations Convention to Combat Desertification*, 1994.

66 Dent *et al* www.unep.org/geo/geo4/report/03_land.pdf 95.

67 United Nations Environment Programme Date Unknown www.unep.org/geo/GEO3/english/141.htm.

68 United Nations Environment Programme Date Unknown www.unep.org/geo/GEO3/english/141.htm.

to overstocking and might eventually result in overgrazing.⁶⁹ Of the 9 million hectares which is extremely degraded, 5 million is situated in Africa.⁷⁰

Desertification is a significant form of land degradation and has the potential to become a very serious and fast growing problem in South Africa.⁷¹ An estimated 91% of the country is arid, semi-arid or sub-humid and vulnerable to desertification.⁷² According to a recent study conducted, approximately 19.86% of South Africa's major districts have been transformed and severely degraded.⁷³ Land degradation does not only lead to environmental problems in the pastoral areas, but also leads to migration to the cities, which eventually could result in overcrowding and unemployment.⁷⁴ The Northern Cape is mainly arid and the majority of land is used for livestock farming and mining; the aforementioned has led to overgrazing becoming one of the main causes of land degradation.⁷⁵ The concept of desertification in South Africa has in most cases exclusively been applicable to the commercialised farming areas of the arid Karoo area, but the problem has become broader, especially with regard to communal areas.⁷⁶

Land degradation must be addressed on all levels, and one of the international instruments that can be used to combat and regulate the activities which lead desertification is the *United Nations Convention to Combat Desertification*, 1994 (UNCCD).⁷⁷ Article 2(1) of the aforementioned convention states the following: "The objective of the Convention is to combat desertification and mitigate the effects of drought in countries experiencing serious drought and/or desertification, particularly in Africa." The UNCCD encourages all countries to work together to prevent desertification through implementing preventative measures on a local and global level. Land

69 Department of Environmental Affairs and Tourism *South Africa Environment Outlook: A report on the state of the environment* 93.

70 United Nations Environment Programme Date Unknown www.unep.org/geo/GEO3/english/141.htm.

71 Environmental Monitoring Group Date Unknown <http://www.bcb.uwc.ac.za/inforeep/land1.htm>.

72 Gibson *Land Degradation in the Limpopo Province* 1.

73 Fairbanks *et al* 2000 *South African Journal of Science* 96.

74 Environmental Monitoring Group Date Unknown <http://www.bcb.uwc.ac.za/inforeep/land1.htm>.

75 Naidu and Arendse 2004 www.unep.org/PEARLFulltextBLOB_5489_1674.pdf.

76 Hoffman *et al* *Land Degradation in South Africa* 1.

77 *United Nations Convention to Combat Desertification*, 1994.

degradation is an environmental problem which has an effect on everyone and must be resolved or minimised to ensure that the environmental, economic and social circumstances in our country improve instead of deteriorate.⁷⁸ Owners, managers or operators of factory farms must ensure that measures are taken to prevent desertification. It is vital that factory farms ensure that the amount of animals kept on a piece of land not exceed the earth's capacity, which once again, constitutes a balance between the environment and the economic benefits.

2.4 Impact on biodiversity

In an attempt by humanity to increase and expedite food production, habitats which are rich in wildlife are constantly being eroded, and degradation over several thousands of acres of land has resulted in the loss of several rare plant species.⁷⁹ About eighty percent of South Africa's land is used for agricultural purposes and 69% thereof is used for grazing,⁸⁰ which puts significant pressure on agricultural resources.⁸¹ In the past the agricultural sector was well known for the dichotomy between the rural small-scale farming sector and the industrial farming sector.⁸² This has changed in the last few years; the rural small scale farms in South Africa are slowly, but surely, being industrialised. The most industrialised farming areas in the country are in the Northern Cape and Western Cape.⁸³

The Northern Cape is one of the areas which has extensively been affected by bush encroachment.⁸⁴ In the areas of South Africa where immense areas of grazing land has been lost due to land degradation, the wide diversity of species have decreased and

78 Environmental Monitoring Group Date Unknown <http://www.bcb.uwc.ac.za/inforeep/land1.htm>.
79 Gold *The Global Benefits of Eating Less Meat: A Report for Compassion in World Farming Trust* 39-40.
80 Department of Environmental Affairs and Tourism *South Africa Environment Outlook: A report on the state of the environment* 91.
81 Hoffman and Ashwell *Nature Divided: Land Degradation South Africa* 2.
82 Glazewski *Environmental Law in South Africa* 20.
83 Hoffman and Ashwell *Nature Divided: Land Degradation South Africa* 1.
84 Savannah Environmental (Pty) Ltd 2012
[www.savannahsa.com/documents/4348/Appendix%20E%20\(Ecology\).pdf](http://www.savannahsa.com/documents/4348/Appendix%20E%20(Ecology).pdf).

complete habitats have been transformed. In the eastern Highveld, overgrazing has led to reduction of vegetation in wide areas, from 60 to 70 percent to a vegetation percentage of less than 30 percent.⁸⁵ The vast amount of animals on factory farms cause overgrazing in the areas where they are kept in confined spaces, for example in sheds or small cradles. The aforementioned greatly contributes to a severe loss of our country's vegetation, the erosion of soil and eventually land degradation. Soil erosion is regarded as one the greatest environmental problems in South Africa.⁸⁶ If the factory farming industry grows, vast parts of the country may eventually be severely degraded. Clearly this is a pressing issue to rural communities and the farmers that depend on the land for their livelihood.⁸⁷ Furthermore, food security may also become an issue, considering that most rural communities live from the land and crops cannot grow without the necessary nourishment.

The abovementioned impacts have serious consequences for the complex relationship between agriculture in South Africa and the environment, as well as on agriculture's growing role in the world's economy as a sector that promotes and nurtures an environmentally sustainable way of life. In order to prevent the above impacts the applicable legislation must be available to regulate the activities and enforce certain procedures and limitations. An effective environmental law framework is crucial to ensure that the environment is protected as far as possible.

3 Environmental law framework

In this section, the applicable legislation with regard to activities on factory farms will be discussed in detail. The objective is to determine whether South African environmental law makes provision for the necessary provisions required to adequately regulate the factory farming industry and effective enforcement procedures. The following legislation contains provisions which regulate the various activities on factory farms:

85 Glazewski *Environmental Law in South Africa* 21.

86 Kidd *Environmental Law* 132.

87 Department of Environmental Affairs and Tourism *South Africa Environment Outlook: A report on the state of the environment* 88.

3.1 Constitution of the Republic of South Africa, 1996 (Constitution)

The Constitution,⁸⁸ which provides South African citizens with numerous fundamental rights, also makes provision for the prevention of pollution in terms of section 24, which reads as follows:

Everyone has the right -

- (a) to an environment that is not harmful to their health or well-being; and
- (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -
 - (i) prevents pollution and ecological degradation;
 - (ii) promotes conservation; and
 - (iii) secures ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The abovementioned provision clearly states that everyone has the right to an environment which is not harmful to their health or well-being. Section 24 has two main objectives, namely: to guarantee a healthy environment as far as possible and mandate the government to take certain measures in order to ensure that the aforementioned right is fulfilled.⁸⁹

In terms of section 24(b) reasonable steps must be taken to protect the environment for present and future generations through preventing pollution and degradation of the environment, promoting conservation and ensuring sustainable development. The government has an obligation to ensure that this right is fulfilled,⁹⁰ and in the event of infringement the government has an obligation to enforce the necessary steps onto the responsible party.⁹¹ This right must be secured by making use of the reasonable and necessary legislation and other measures.⁹² The significance of this provision is that it defines the constitutional objective of the government's responsibilities towards the

88 *Constitution.*

89 Feris 2008 (24) *South African Journal on Human Rights* 10.

90 Feris 2008 *SA Public Law* 198.

91 Kidd *Environmental Law* 22.

92 Feris 2008 *SA Public Law* 198.

environmental authorities.⁹³ Therefore section 24(b) obligates the government to protect the environment as well as the health and well-being of humans living in close vicinity of industrial businesses, such as factory farms, against current or potential pollution.⁹⁴ As was shown above, water and air pollution as well as waste disposal facilities may have serious consequences on human health and is without any doubt an environmental concern that clearly falls within the scope of section 24.⁹⁵

In addition to the regulation of pollution, section 24 also promotes the conservation of the environment. South Africa's natural resources, ecologically viable areas, biodiversity, landscapes, seascapes and also protected areas⁹⁶ must be conserved and protected for future and present generations. Conservation of biodiversity is extremely important, factory farms should proceed with their activities while conserving the environment and surrounding biodiversity, if this is not possible the farm must cease the activities that negatively influence conservation. Although section 24 does not specifically mention the protection and well-being of animals, animals also form part of our biodiversity and must be treated fairly.

Pollution may severely affect the well-being of a person or persons residing within the vicinity of a factory farm. Apart from affecting human health and well-being, pollution produced by factory farms can and do negatively affect the environment itself. Factory farms, for example, release harmful gases into the atmosphere, which may furthermore lead to a stench.⁹⁷ Because of these harmful gases and the stench caused by the waste storage facilities, neighbouring industries or residential areas may experience harmful impacts or even discomfort.⁹⁸

93 Feris 2008 SA *Public Law* 199.

94 Feris 2008 SA *Public Law* 203.

95 Glazewski *Environmental Law in South Africa* 76.

96 Van der Linde and Feris *Compendium of South African Environmental Law Legislation* 87.

97 See par 2.2 above.

98 *Hichange Investments (Pty) Ltd v Cape Produce Company (Pty) Ltd t/a Pelts Products, and others* 2004 (2) SA 393 (ECD) the terms with regard to legal recourse available to an applicant in an industrial area where different types of pollution was caused by the neighbouring industry was discussed. While taking into consideration if the said pollution was of a significant nature, Judge Leach stated that "no one should be obliged to work in an

The factory farming industry may be beneficial to the economy of the country, but some of the activities on factory farms lead to the production of waste and the waste may lead to degradation of the environment.⁹⁹ The farms must be managed or regulated more effectively or closed down if it is of a greater importance and benefit to the people and the environment. There is also a constitutional obligation on the factory farms themselves to prevent, minimise or remedy environmental damage.

3.2 National Environmental Management Act 107 of 1998 (NEMA)

NEMA forms part of the environmental law framework applicable on the factory farming industry, the applicable provision will be discussed in detail. NEMA¹⁰⁰ regulates any activities which potentially has or could have an impact on the environment. Section 2 of NEMA makes provision for environmental law principles; these principles have been emerging and have become more applicable in environmental matters.¹⁰¹ Some of these principles or norms are also applicable on factory farms and the environmental problems emerging because of the activities on the farms.

With reference to the above, section 2(4)(a)(ii) states that pollution or degradation of the environment must be avoided and if not possible, it must be minimised or remedied. Section 2(4)(a)(iv) states that waste should be avoided and if it is not possible to avoid the production of waste, it must be minimised and re-used or recycled where possible, or otherwise, be disposed of in a responsible manner. This principle clearly states that if waste cannot be avoided it should be disposed of in a responsible manner, thus the

environment of stench and, in my view; to be in an environment contaminated by hydrogen sulphide is adverse to ones well-being.”

99 Section 24(b)(iii) states that reasonable legislative and other measures should be taken to secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development. It is clearly important that other rights should be balanced with environmental rights, thus there should be a balance between the environment and economic development.

100 *NEMA*.

101 Kidd *Environmental Law* 36.

waste produced by animals on these farms should be managed and disposed of in accordance with NEMA principles.¹⁰²

The applicable principles or concepts entrenched in section 2 of NEMA are the precautionary principle,¹⁰³ preventative principle,¹⁰⁴ polluter pays principle,¹⁰⁵ duty of care principle¹⁰⁶ and cradle to grave principle. These principles provide guidance to the interpretation, administration and implementation of the Act and other environmental legislation concerned with the protection or management of the environment and human well-being in South Africa.¹⁰⁷ These principles provide a framework within which environmental management must take place, their applicability with regard to the factory farming industry will be discussed in detail.

3.2.1 Polluter Pays Principle (PPP)

The meaning of the PPP is clear in its name, the person or persons responsible for the action or activity which harmed the environment or well-being of human beings must be held liable. The aforementioned can be held liable for payment of the costs involved in the remediation of pollution or any other form of environmental degradation which has a negative impact on health or well-being,¹⁰⁸ as well as for the prevention or minimisation of additional environmental degradation or pollution, consequent to the initial cause.¹⁰⁹

Section 2(4)(p) of NEMA makes provision for the PPP and states the following:

The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution,

102 NEMA thus illustrates the hierarchy of waste management in South Africa, which is to prevent, minimise and remediate waste.

103 Section 2(4)(a)(vii) of NEMA.

104 Section 2(4)(a)(viii) of NEMA.

105 Section 2(4)(p) of NEMA.

106 Section 28 of NEMA.

107 Beech *et al* "Overview of South Africa's Environmental Legislation" 455-456.

108 Nanda and Pring *International Environmental Law and Policy for the 21st Century* 40.

109 Beech *et al* "Overview of South Africa's Environmental Legislation" 455-456.

environmental damage or adverse health effects must be paid for by those responsible for harming the environment.¹¹⁰

It is important to understand what is regarded as pollution in order to determine if the person or person did in fact cause pollution. Section 1 of NEMA defines “pollution” as follows:

“Pollution” means any change in the environment caused by —

- (i) substances;
- (ii) radioactive or other waves; or
- (iii) noise, odours, dust or heat

emitted from any activity, including the storage or treatment of waste or substances, construction and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition resilience and productivity of natural or managed ecosystems, or on materials useful to people, or will have such an effect in the future.¹¹¹

The activities on a factory farm produce waste such as manure, dairy product run-off, fat, bones, wastewater, and other waste produced by the different activities inside the factory farm, such as slaughter.¹¹² With reference to the definition of pollution, it is clear that if the waste produced by a factory farm leaks into a water resource or emits harmful gases into the atmosphere and the aforementioned leads to environmental degradation or adversely affects human health or well-being, it will surely be regarded as pollution and the owner, operator or manager of the factory farm will be held liable.

The costs involved could include those for clean-up, rehabilitation and remediation; but in certain situations, of a more serious nature, the costs can also include penalty fines and/or possible criminal convictions. In other circumstances a person can be held liable for pollution or environmental degradation caused by an independent waste contractor.¹¹³ The PPP is also clearly reflected in section 28 of NEMA.

110 Section 2(4)(p) of NEMA.

111 Section 1(xxiv) of NEMA.

112 See par 1 above.

113 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 14-15.

According to the 1972 OECD Council Recommendations on Guiding Principles Concerning the International Economic Aspects of Environmental Policies¹¹⁴ the costs do not have to be paid immediately, but certain fees or taxes should be charged against the liable party, enabling the municipalities to remedy, prevent or control the damage or loss caused by accidental pollution.¹¹⁵ The PPP only recently became applicable to the industrial agricultural sector, thus, on factory farms. Previously environmental law did not make provision for the farms to internalise their pollution costs and the necessary subsidies did not include the costs for pollution caused by them, but recently it has become evident that that the activities on factory farms contribute greatly to water and air pollution.¹¹⁶ Because of *inter alia*, the fact that emissions from factory farms diffuse into the air, it has been difficult to apply the PPP to the farms, but in theory the principle should be applied when waste produced by factory farms lead to environmental damage which adversely affects private as well as public property.¹¹⁷

The onus lies on public authorities, such as municipalities, to adequately implement the principle.¹¹⁸ The methods that they may use include: marketable permits, process and product standards, pollution charges¹¹⁹ or individual regulations and prohibitions. Subsidies for intermediary efforts are exceptions, on condition that the duration has been determined in advance, such as a bench mark,¹²⁰ and that it does not negatively affect international trade.¹²¹ Another exception applies when the "reasonable measures" that must be taken to remedy the damage or loss or to protect the environment has an adverse influence on the social and economic policies of a country or a region thereof. Furthermore, it remains critical that the financial contributions for research and development do not corrupt the principle in itself.¹²²

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- 114 Organisation for Economic Co-operation and Development Council 1972 www.acts.oecd.org/ListNoGroupView.aspx?order=title.
- 115 Birnie, Boyle and Redgwell *International Law and the Environment* 282.
- 116 Grossman 2007 *Electronic Journal of Comparative Law* 2.
- 117 Grossman 2007 *Electronic Journal of Comparative Law* 2.
- 118 Anon 2009 www.environment.gov.za/.../meansof_implementation_2009_2014.
- 119 For example abatement cost and taxation.
- 120 Mowat *Controlling pollution in the South African Leather Industry* 47.
- 121 Grossman 2007 *Electronic Journal of Comparative Law* 5.
- 122 Grossman 2007 *Electronic Journal of Comparative Law* 5.

This PPP is of significant value in the factory farming industry. The management of factory farms must acknowledge that if pollution is caused by their farms it should in principle not occur without proper punishment, but it still often does. The owner or owners of a factory farm will be held liable for the costs involved in the remedying or minimisation of water, air or any other kind of pollution caused by the waste produced by the farm.¹²³ The costs involved are broad and may include: external charges, taxes, clean-up costs, and compensation as determined.¹²⁴

3.2.2 *Precautionary Principle*

This precautionary principle is provided for in section 2(4)(a)(viii) of NEMA and states:

A risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions.

This principle basically requires or expects of a person or persons to prove that the activity they wish to commence with will not lead to serious environmental degradation or pollution.¹²⁵ In the event that they cannot provide the necessary proof that they will not cause environmental degradation, they will not be allowed to proceed with a project or certain activity.¹²⁶ The precautionary principle is a decision-making tool, which is mostly applicable in the developed world; however, it has recently gained applicability in the developing world.¹²⁷ The principle may be regarded as extreme, but has the potential to effectively prevent degradation or pollution of the environment. In order to effectively apply the precautionary principle it is vital that a few assessments are conducted to foresee possible harmful impacts. With regard to factory farms it is crucial that all waste be regarded as hazardous or harmful to the environment or health of

123 Kidd *Environmental Law* 8.

124 Grossman 2007 *Electronic Journal of Comparative Law* 8.

125 Kidd *Environmental Law* 9.

126 Nanda and Pring *International Environmental Law and Policy for the 21st Century* 58.

127 Glazewski *Environmental Law in South Africa* 18.

human beings, until proven otherwise.¹²⁸ These farms must ensure that the waste produced by them is classified by the most hazardous constituent, to ensure that precautionary measures are taken.¹²⁹

3.2.3 *Preventative Principle*

In accordance with the preventative principle, action has to be taken at an early stage to prevent potential pollution or environmental degradation, preferably before any damage has been caused to the environment.¹³⁰ The application of the preventative principle attempts to ensure that activities which cause or may cause environmental degradation are prohibited.¹³¹ The principle allows for the adoption of environmental standards, access to important information and environmental impact assessments.¹³² The preventative principle can take the form of various effective methods, which include penalties and liability rules.¹³³ The consequences of not complying with the necessary environmental standards and legislation may prove to be severe. The preventative principle can be found in South African and International environmental law, an example of the latter is principle 2 of the Rio Declaration.¹³⁴ The aforementioned principle places an international obligation on everyone to take the necessary measures to prevent damage to the environment, or alternatively, to minimise or limit the damage caused.

With reference to the above it remains vital that preventative measures are incorporated into any facilities' management plan and that all potential problems are taken into consideration to ensure that they are prevented in future practice. Factory farms must ensure that they take the necessary preventative measures to ensure that the waste produced does not lead to pollution or any other kind of environmental degradation.

128 Oosthuizen and Bell *Guidelines to Facilitate Legal Compliance with respect to Industrial Waste Management-Volume 1: Managing your Wastes to achieve Legal Compliance: An Industry Guide* 28.

129 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 15.

130 Kidd *Environmental Law* 10.

131 Nanda and Pring *International Environmental Law and Policy for the 21st Century* 57.

132 Birnie, Boyle and Redgwell *International Law and the Environment* 247.

133 Birnie, Boyle and Redgwell *International Law and the Environment* 247.

134 *Rio Declaration on Environment and Development*, 1992.

3.2.4 Cradle-to-grave principle

Another important principle is the "Cradle-to-grave" principle, which states that a person should stay responsible for the waste produced by them or their facility, even after disposal thereof.¹³⁵ The applicable section in NEMA is section 2(4)(e), which states that: "Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle." It is vital that a paper trail be maintained throughout the entire waste disposal cycle, the aforementioned will enable the party in question to prove that they have adequately complied with the applicable law.¹³⁶ Therefore, it is vital that the managers of factory farms ensure that they keep a paper trail and comply with the applicable laws as far as possible. The necessary paper trail consists of records, statements and a proper system which captures all the necessary information with regard to when, where and how the waste was disposed of. Without the aforementioned documentation, a person cannot prove that they took the necessary steps to prevent pollution or environmental degradation.

The abovementioned principles may be applied to regulate and enforce compliance in the factory farming industry and furthermore provide guidance with proper decision-making. These principles may also encourage proper and responsible management practices, which may subsequently lead to the prevention or minimisation of pollution or environmental degradation. In addition to the abovementioned principles NEMA also makes provision for another vital principle in terms of section 2(4)(i), which states:

The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated and decisions must be appropriate in the light of such consideration and assessment.¹³⁷

135 Kidd *Environmental Law* 11.

136 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 14.

137 Section 2(4)(i) of NEMA.

3.2.5 *Environmental Impact Assessment (EIA)*

There are certain activities which may potentially lead to environmental degradation; therefore it is important that an impact assessment is conducted to determine the social, economic and environmental impact of the specific activity. Factory farming is a listed activity in terms of section 24(2) and 24D of NEMA and can be found in Listing Notice 1: List of Activities and Competent Authorities Identified in terms of section 24(2) and 24D.¹³⁸ The activities related to factory farming are listed as activities 4, 5, 31 and 32. Activity 4 refers to the construction of facilities or buildings used for a high concentration of animals for commercial purposes which exceed certain densities. Activity 31 refers to the expansion of facilities or buildings as mentioned in activity 4. Activity 5 refers to the construction of facilities or buildings for the concentration of more than 1000 poultry per facility in an urban area and more than 5000 poultry per facility outside urban areas, excluding chicks not exceeding the age of 20 days. Activity 32 refers to the expansion of the facilities or buildings as mentioned in activity 5.

Most of the above activities fall within the ambit of factory farms, which means that a basic assessment must be conducted before a factory farm may be constructed or commence with certain activities. Before commencement of a listed activity on a factory farm, an environmental officer must determine to what extent the activities on the factory farm will have a negative impact on the environment, socio-economic conditions and cultural heritage. Sections 24(5), 24M and 44 of NEMA make provision for certain regulations,¹³⁹ which regulate all the aspects relating to a basic assessment. Applications, queries or complaints relating to a basic assessment should be lodged with the competent authority. Each level of government has a specific competent authority and they are the following: on national level the Minister is the competent authority, for example the Minister of Environmental Affairs; on provincial level the Member of Executive Council (MEC) is the relevant authority; and on a local level the

138 GN R544 in GG 33306 of 18 June 2010.

139 GN R543 in GG 33306 of 18 June 2010.

Mayor or speaker is the relevant authority.¹⁴⁰ An application for a water licence may be lodged with Department of Water Affairs and the Minister will either grant or reject it.¹⁴¹

Regulation 1 of the regulations defines an EIA as follows:

A systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes basic assessment and the scoping and environmental impact reporting process.¹⁴²

An EIA may, more specifically, be described as "the evaluation of the effects likely to arise from a major action significantly affecting the natural and man-made environment."¹⁴³ Before commencement of a listed activity, the owner, manager or operator of a factory farm must apply for the necessary environmental authorisations and subsequent thereto the relevant competent authority must take all of the relevant factors into account and make a decision regarding the application.¹⁴⁴ After a basic assessment has been conducted and the potential impact on the environment has been determined, an environmental officer must draft and submit an impact report with the competent authority.¹⁴⁵ A basic assessment is crucial in determining what impact the vast amount of animals in a confined space and the waste related thereto will have on the environment.

Certain authorisations, such as water licence, need to be obtained before commencement of the abovementioned activities and if they are not obtained the activity may not commence or proceed.¹⁴⁶ Continuation of a listed activity without the

140 Department of Environmental Affairs Department of Environmental Affairs 2009 www.tshwane.gov.za/Services/EnvironmentalManagement/Environmental%20Management%20Documents/Atmospheric%20Emission%20Licence%20Manual%20for%20Licensing%20Authorities.pdf.

141 Tucker and Muleza 2010 <http://www.polity.org.za/article/penalty-for-failing-to-obtain-water-use-licence-can-be-severe-2010-04-12>.

142 GN R543 in GG 33306 of 18 June 2010.

143 Wood *Environmental Impact Assessment: A Comparative Review* 1.

144 Kidd and Retief "Environmental Assessments" 988.

145 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 352.

146 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 353.

necessary authorisation is a criminal offence and the guilty party may be held liable for payment of a fine not exceeding five million rand or ten years of imprisonment or both.¹⁴⁷ The necessary authorisations relating to the factory farming industry may include a water licence, air quality emission licence and waste management licence. If the aforementioned authorisations are obtained the factory farm may proceed with the activities, otherwise commencement must be postponed or ceased to prevent a fine or criminal conviction.¹⁴⁸

3.2.6 "Duty of Care"

Section 28 of NEMA makes provision for the prevention, minimisation and remediation of the environmental damaged caused by the pollution. Section 28(1) states the following:

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, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment.¹⁴⁹

Section 28 ensures compliance with the environmental duty of care and this provision is relevant whether the activity is listed or not. The "duty of care" principle is applicable to everyone and not exclusively to industries or businesses subject to environmental authorisations.¹⁵⁰ The abovementioned provision further states that the person or persons responsible for the activity which led to the pollution or environmental degradation, should take reasonable measures to remedy the source, prevent further pollution or minimise the pollution.¹⁵¹ The reasonable measures referred to are set out in section 28(3) and include the investigation, assessment and evaluation of the impact

147 Kidd and Retief "Environmental Assessments" 994.

148 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 353.

149 Section 28(1) of NEMA.

150 Sinclair 2008 www.award.org.za/file_uploads/File/Compliance_Report_full_NRM_Gov_AWARD_PDF_Version.pdf.

151 *Chevron South Africa (Pty) Ltd v Kabini* 2010 JDR 1385 (GNP) 1.

on the environment;¹⁵² the control or prevention of movement or emission of pollutants; the removal of the sources of pollution; and the remediation of the damage caused to the environment.¹⁵³ The "duty of care" is placed on an owner, the person in control of the activity or the person who has the right to make use of the property, for example a tenant.¹⁵⁴ The principle is retrospective and thus also applicable to historical pollution,¹⁵⁵ which refers to pollution which, for example, initially originated in 1980 and presently has a detrimental impact on the environment.¹⁵⁶ An example hereof is groundwater pollution caused by mining operations, which was never remedied and resulted in extensive environmental damage over the years.¹⁵⁷ Section 28 further requires that the pollution must be of a significant nature, which will be determined on a case-to-case basis, depending on the extent of the damage caused.¹⁵⁸

It may be expected that "duty of care" should be applied to the activities on factory farms at all times, which entails that the person in control of the facilities must take reasonable steps to ensure the pollution is prevented, minimised or remediated. This may be realised by properly maintaining the storage facilities and training staff to ensure that leakage or excessive emissions do not occur. Pollution caused by factory farms may also be retrospective of nature; an example hereof is groundwater pollution, which can cause long-term pollution and causes severe degradation to the environment.¹⁵⁹ Duty of care is also retrospective of nature, which means that the person liable for causing the initial pollution years ago, which still subsist and continuous to cause harm to the environment or human health or well-being, will be held liable for remediation of environmental damages and costs involved.¹⁶⁰

152 De Villiers 2007 *Potchefstroom Electronic Law Journal* 38.

153 Sinclair 2008 www.award.org.za/file_uploads/File/Compliance_Report_full_NRM_Gov_AWARD_PDF_Version.pdf.

154 Van der Linde "National Environmental Management Act 107 of 1998" 211.

155 Kidd *Environmental Law* 11.

156 Van der Linde "National Environmental Management Act 107 of 1998" 211.

157 *Bareki NO and another v Gencor Ltd and others* [2006] 2 All SA 392 (T) 434.

158 Kidd *Environmental Law* 153.

159 *Turner Factory Farming and the Environment: A Report for Compassion in World Farming Trust* 34.

160 *Harmony Gold Mining Company Limited v Regional Director, Free State Department of Water Affairs and others* (68161/2008) [2012] ZAGPPHC 11 par 21.

In terms of section 28(7) the Director-General may take reasonable steps to remedy the problem if the person liable should fail or refuse to comply with the provision and subsequent thereto the costs relating to the remediation will be claimed from the responsible party.¹⁶¹ The mentioned reasonable steps may include investigation, evaluation, assessment and drafting of a report, which states the impact of specific activities, and finally, it remains vital that the “reasonable measures” are taken before a specified date.¹⁶² Before the Department of Environmental Affairs may issue a directive the following must be taken into consideration: the severity of the impact, adoption of environmental management systems, such as the ISO 14001, and the costs involved in taking the measures.¹⁶³ If the Director-General fails to issue a directive, any third party can give 30 days notice to the Director-General to take the necessary steps and by failure thereof a court order may be granted to direct the Director-General to take the necessary steps against the liable party¹⁶⁴ and provide written confirmation that the liable party has been instructed to take remedial steps.¹⁶⁵ Alternatively, a Court may issue a statutory interdict to prevent or stop the action or activity from taking place.¹⁶⁶

Therefore, where the activities on factory farms lead to pollution of the surrounding environment, the Director-General may direct them to take reasonable steps to remedy the pollution and if the owner, manager or operator still fails or refuses to comply, the Director-General must ensure that the reasonable steps are taken and claim the costs involved from the liable party. Furthermore, a Court may issue an interdict to stop the specific activity. For example, where methane released from the excessive amounts of manure leads to air pollution and the odour becomes a nuisance to surrounding property owners, an interdict may be issued to enforce containment or minimisation of emissions and unpleasant odour.

161 Kidd *Environmental Law* 152.

162 Sinclair 2008 www.award.org.za/file_uploads/File/Compliance_Report_full_NRM_Gov_AWARD_PDF_Version.pdf.

163 Van der Linde “National Environmental Management Act 107 of 1998” 212.

164 Sinclair 2008 www.award.org.za/file_uploads/File/Compliance_Report_full_NRM_Gov_AWARD_PDF_Version.pdf.

165 Van der Linde “National Environmental Management Act 107 of 1998” 213.

166 *Hichange Investments (Pty) Ltd v Cape Produce Company (Pty) Ltd t/a Pelts Products, and others* 2004 (2) SA 393 ECD 412H - I/J.

Section 33 of NEMA also makes provision for private prosecution against the responsible party and action must once again be taken in public interest or in the interest of protecting the environment. If the responsible party is found guilty of an offence, they may be prosecuted in terms of the *Criminal Procedure Act 51 of 1977*¹⁶⁷ and punished accordingly. If it is found that the owner or manager of a factory farm was negligent or failed to obtain the necessary authorisations and the aforementioned lead to environmental degradation or health problems, the responsible party may be prosecuted privately.¹⁶⁸

3.3 National Water Act 36 of 1998 (NWA)

The NWA¹⁶⁹ regulates all activities relating to water resources and the usage thereof, which includes environmentally sustainable disposal of, for example, wastewater. Section 1 of the NWA defines waste as follows:

“waste” includes any solid material or material that is suspended, dissolved or transported in water (including sediment) and which is spilled or deposited on land or into a water resource in such volume, composition or manner as to cause, or to be reasonably likely to cause, the water resource to be polluted.¹⁷⁰

The waste produced by factory farms are mostly solid, such as manure, but when combined with water or any other liquid such as milk or blood it can become a slurry or another form of harmful wastewater. If the liquid or solid waste is spilled or deposited onto land or water in high volumes it will certainly lead to pollution and eventually have a detrimental effect on the environment and the health and well-being of humans.¹⁷¹ Thus it is clear that the waste produced on a factory farm qualifies as waste in terms of the NWA, which also means that the NWA is applicable to factory farms.

Section 1 of the NWA defines pollution as the:

167 *Criminal Procedure Act 51 of 1977.*
168 *Kidd Environmental Law 290.*
169 *National Water Act 36 of 1998.*
170 *Section 1(xxiii) of NEMA.*
171 *Kidd Environmental Law 93.*

direct or indirect alteration of the physical, chemical or biological compounds of a water resource as to make it unfit for any beneficial purpose for which it may reasonably be expected to be used; or harmful or potentially harmful to any aquatic or non-aquatic organisms; to the resource quality or to property.¹⁷²

If the waste produced by factory farms renders the water resource unfit for the purpose for which it is meant for, such as household usage, it has polluted the water resource and the owner, manager or operator can be held liable for payment of a fine or imprisoned, depending on the circumstances.¹⁷³

Section 19 of the NWA makes provision for the prevention of water pollution and section 19(1) states the following:

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.¹⁷⁴

The abovementioned section mirrors section 28 of NEMA and states that a person who is the owner, solely manages it or makes use of the land in question is responsible for ensuring that all reasonable measures will be taken to prevent pollution of a water resource from occurring, continuing to occur or recurring as a result of activities on the land.¹⁷⁵ These measures should ensure that further pollution does not occur and also remedy the damage caused to the water resource.¹⁷⁶ The measures also have to be applicable to the processes and activities on the land.¹⁷⁷ The liable person's action or omission does not necessarily have to be negligent; grounds for penalisation or

172 Section 1(xv) of NWA.

173 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 439.

174 Section 19(1) of the NWA.

175 Association of Water and Rural Development Date Unknown
www.award.org.za/file_uploads/File/WR-04C-d008.pdf.

176 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 304.

177 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 305.

prosecution immediately exist when they cause, have already caused or may potentially cause pollution to a water resource.¹⁷⁸ Thus, if a waste manager, who acts within his/her normal scope of employment, fails to treat the waste and to ensure that the facility is maintained and without leaks, they can also be held liable for the pollution caused by their failure. It is important to note that the government still has a duty to take the necessary legislative and other measures to ensure that water resources are protected and kept clean and healthy.¹⁷⁹

Furthermore, the catchment management agency may issue a directive to obligate the polluter to take reasonable measures before a specific date¹⁸⁰ to remedy the pollution or any other form of environmental degradation.¹⁸¹ These directives may include obligating the liable party to take preventative measures or commence remediation.¹⁸² Section 19(4) to section 19(8) states that if a person should fail or not adequately comply with a directive issued under the competent authority, the catchment management agency may take the necessary measures to remedy the specific problem at hand¹⁸³ and may claim all of the costs incurred while remedying the problem.¹⁸⁴ The costs may be claimed from the person or persons who directly contributed to the pollution or damage to the environment, the owner or successor of the owner at the time the pollution occurred or lastly, from the person in control of the said land or whom has a right to use the land. In terms of section 19(7) the costs claimed must be reasonable and are limited to administrative, labour and overhead costs. Section 19(8) states that if more than one person is liable the costs should be divided between all of the liable parties and they are

178 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 305.

179 Kanamugire "Offences and Penalties for Water Pollution in South Africa – A Comparative Analysis of South African, British, American and Australian Legislation" 6.

180 *Harmony Gold Mining Company Limited v Regional Director, Free State Department of Water Affairs and others* (68161/2008) [2012] ZAGPPHC 11 par 21.

181 Section 19(3) of NWA.

182 *Harmony Gold Mining Company Limited v Regional Director, Free State Department of Water Affairs and others* (68161/2008) [2012] ZAGPPHC 18 par 39.

183 Kanamugire "Offences and Penalties for Water Pollution in South Africa – A Comparative Analysis of South African, British, American and Australian Legislation" 7.

184 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 288-289.

jointly and severally liable for payment of the full amount of the costs.¹⁸⁵ In most cases the environmental officers take the necessary measures and claim the expenses from the liable party/parties.¹⁸⁶ This section puts an obligation on a factory farm owner, manager or operator to ensure that the activities on the farm does not cause water pollution, alternatively the necessary measures will be taken to minimise or remediate the water pollution and the costs involved will be claimed from the factory farm.

The relevant pollution prevention methods, which should as far as possible be implemented and applied by a factory farm owner, manager or operator, include the following:

- Compliance with the applicable legislation, prescribed waste standard or management practice.
- To impede, control or modify any act or process leading to the pollution.
- Containment or prevention of the movement of pollutants.
- Removal of any possible source of the pollution.
- Remediation of the effects of the pollution on the environment.
- Remediation of the effects of any disturbance to the bed and banks of a watercourse.¹⁸⁷

Section 21 defines water use in terms of the Act and for each of the mentioned activities a permit or water use licence might be necessary. A water license is necessary for the following activities: extracting water from a water resource; storage of water; diversion or obstruction of the flow of water in a watercourse; waste disposal in a manner which may have a detrimental impact on a water resource and alteration of the bed, banks, course or characteristics of a watercourse.¹⁸⁸ Before the competent authority proceeds

185 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 306.

186 Kanamugire "Offences and Penalties for Water Pollution in South Africa – A Comparative Analysis of South African, British, American and Australian Legislation" 8.

187 Kanamugire "Offences and Penalties for Water Pollution in South Africa – A Comparative Analysis of South African, British, American and Australian Legislation" 7.

188 Beech *et al* "Overview of South Africa's Environmental Legislation" 459.

to grant or refuse the licence, the circumstances and possible detriment to the water resource must be considered carefully.¹⁸⁹

Section 21(f) states that discharging waste or water containing waste into a water resource through a pipe, canal, sewer or sea outfall or other conduit, constitutes water use, the aforementioned includes discharging waste or wastewater directly into a river.¹⁹⁰ A permit to discharge waste effluent into a water resource is compulsory as well as compliance with the applicable prescribed discharge standards.¹⁹¹ Section 21(g) states that discharging waste in a manner which may detrimentally impact a water resource is also a form of water use, this water use applies where waste is disposed of into certain storage facilities, for example oxidation ponds, evaporation dams, wastewater ponds and landfill sites.¹⁹² Factory farms, especially dairy factory farms, discharge a great amount of wastewater and also dispose of a vast amount of waste on a daily basis.¹⁹³ It is not required for the waste disposal facility to even be near a water resource, if the disposal has a detrimental impact on a water resource it is seen as disposal which is detrimental to the water resource.¹⁹⁴ The water that a factory farm discharges or disposes of is commonly known as wastewater, which is not solid waste as such, but rather water containing waste.¹⁹⁵

In order for the owner, manager or operator of a factory farm to discharge effluent, such as wastewater, legally, a water licence¹⁹⁶ must be obtained.¹⁹⁷ The water licence must specifically give them permission to discharge effluent into a water resource, such as a river, and the discharge must be limited and kept within the legal requirements to

189 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 456.

190 Kidd *Environmental Law* 170.

191 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 12.

192 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 443.

193 See par 2 regarding the impact of dairy farms on the environment.

194 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 442.

195 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 444.

196 Section 21 of the NWA.

197 Section 7(2) of the *Water Services Act* 108 of 1997.

prevent water pollution or maintain it at an acceptable level.¹⁹⁸ Alternatively, the waste licence must give them permission to manage a waste storage facility into which the waste can be contained and disposed of. The competent authority may apply certain conditions to the water licence,¹⁹⁹ for example, a specific water resource can be named for disposal purposes, treatment before disposal may be specified and the volume of wastewater disposed of on a daily basis may be limited.²⁰⁰ The water services provider of the area in which a factory farm discharges effluent has the power to approve and then prescribe a certain manner in which the effluent must be discharged or disposed of, for example through pipelines directly into the specified water resource.²⁰¹ The prescribed manner of disposal must be implemented from commencement of the activity which discharges effluent.

In terms of sections 151(i) and 151(j)²⁰² no person may unlawfully and intentionally or negligently commit any act or omission which pollutes or is likely to pollute a water resource or have a detrimental effect on a water resource.²⁰³ If factory farms are not managed properly and leakage of wastewater occurs and subsequently leads to water pollution, the owner or manager may be convicted for non-compliance with section 151(1) and found guilty of an offence.²⁰⁴ In terms of section 151(2) the penalties involved are that the person or persons can be held liable for payment of a fine of R5000 or R10 000 or imprisoned not exceeding five or ten years, depending on the conviction,²⁰⁵ if found guilty of an offence in terms of the Act.²⁰⁶ Factory farms can avoid these penalties solely by complying with the directive.²⁰⁷

198 Kanamugire “Offences and Penalties for Water Pollution in South Africa – A Comparative Analysis of South African, British, American and Australian Legislation” 2.

199 Section 29 of the NWA.

200 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 455.

201 Section 7(2) of the *Water Services Act* 108 of 1997.

202 NWA.

203 Kidd *Environmental Law* 169.

204 *Mostert and Another v State* (338/09) [2009] ZASCA 171: Appellants were found guilty of several charges relating to non-compliance with the NWA.

205 Kidd *Environmental Law* 169.

206 Thompson *Water Law: A Practical Approach to Resource Management and the Provision of Service* 303.

207 *Harmony Gold Mining Company Limited v Regional Director, Free State Department of Water Affairs and others* (68161/2008) [2012] ZAGPPHC 127 p 19 par 40.

Section 152²⁰⁸ makes provision for compensation for harm, loss or damage suffered. Where a third person suffers harm or loss because of the act or omission of another they may apply for reasonable compensation in Court.²⁰⁹ Section 153 makes provision for the damages that may be awarded to the person if the Court determines that the third person has suffered harm or a loss because of a water related problem, such as pollution. If damages are awarded to the applicant, the Court will order the accused to pay for the costs of any remedial measures²¹⁰ or attend to remediation.²¹¹ And lastly, section 155 makes provision for an interdict against a party who causes pollution through their activities, which ensures that the harmful activity is discontinued in the interest of the public and the environment. The Court may grant an order which obligates the person or business to discontinue any activity which is in contravention of the NWA.²¹² Thus a Court can also order the person in control of a factory farm to pay compensation, alternatively to discontinue the activity causing the damage.

Against the background of the above, the owners and/or managers of a factory farm must ensure that a factory farm is in possession of a legal water use license, issued under the competent authority of the relevant province.²¹³ If a factory farm operates without the required license the owner, operator or manager can be found guilty of an offence for contravention of the NWA.

208 NWA.

209 Beech *et al* "Overview of South Africa's Environmental Legislation" 460.

210 Beech *et al* "Overview of South Africa's Environmental Legislation" 460.

211 *Gerber and Another v Gerber and Others* (907/09) [2009] ZACPEHC 32: The Respondents were ordered to remedy the effects of their contravention by removing upstream weirs and pipes that diverted the course of a riverbed and prevented the flow of water to downstream farms.

212 Tucker and Muleza 2010 <http://www.polity.org.za/article/penalty-for-failing-to-obtain-water-use-licence-can-be-severe-2010-04-12>.

213 The competent authority, such as the Minister of Water Affairs, may issue a water licence or delegate the duty to a catchment agency or a competent government official in a province.

3.4 National Environmental Management: Air Quality Act 39 of 2004 (NEM:AQA)

The NEM:AQA is very relevant in the factory farming industry, since factory farms emit various harmful gases such as methane and nitrogen. The Act regulates the emission of harmful gases and sets out requirements for the necessary facilities, which will be discussed in detail. The following provisions of the Act are relevant and must be complied with:

Section 21 of NEM:AQA²¹⁴ authorises the Minister to list certain activities which may be harmful to human health or well-being and the environment. Activity number 11 is “Animal matter processing”, which includes tanning, animal slaughter, rendering plants, animal carcasses or waste disposal or recycling.²¹⁵ The aforementioned activity refers to some of the most general activities which occur on a factory farm and in the premises NEM:AQA is applicable to factory farms.

In light of the above it is also clear that NEM:AQA requires an atmospheric emission licence for the processing of animal matter and disposal of waste. The storage and/or processing facilities on factory farms may release certain harmful gases into the atmosphere, which may prove to be detrimental to human health and well-being and the environment. The harmful gases produced on a factory farm, specifically by manure and decomposing animal carcasses, include carbon dioxide, methane, nitrous oxide, nitric oxide and ammonia.²¹⁶ Without the necessary licence it is not permissible to release the aforementioned gases into the air.²¹⁷ An Air Quality Environmental Officer must first establish the nature of the gases and what impact they may have on the surrounding environment and write a report²¹⁸ with regard to damage these gases may cause to the well-being of human beings and the surrounding environment.²¹⁹

214 NEM:AQA.

215 GN R248 in GG 33064 of 31 March 2010.

216 Department of Environmental Affairs *State of Environment Report 2005: A report on state of air in South Africa* 4-5.

217 Kidd *Environmental Law* 162.

218 Section 30 of NEM:AQA.

219 Kidd *Environmental Law* 161.

Section 29 makes provision for a pollution prevention plan, which must be compiled and submitted to the Minister or MEC for approval.²²⁰ This plan must entail the possible pollution that may be caused by the emissions and also the measures that will be taken to prevent or minimize the pollution. This plan is solely necessary when the gas in question is declared as a priority air pollutant. The gases released by the waste produced on factory farms have been declared as priority air pollutants²²¹ in certain provinces²²² such as the Western Cape, North-West, Gauteng and Mpumalanga.²²³

Section 35(2) of the NEM:AQA states the following with regard to air pollution and the odours caused by it: “The occupier of any premises must take all reasonable steps to prevent the emission of any offensive odour caused by any activity on such premises.” Factory farms are very likely to emit offensive odours because of the vast amount of waste stored on them before the disposal thereof.²²⁴ It is the responsibility of the owners, farmers, managers or operators of these farms to prevent offensive odours which may disturb or cause discomfort to residents within the vicinity of the factory farm.²²⁵ There is a "duty of care" on the person responsible for the air pollution to manage, contain or remediate it and if the person in question cannot fulfil their duty they must be punished appropriately.²²⁶ If the owner, manager or operator is not able to prevent or minimize the offensive odours it is regarded as an offence and the responsible party may receive a warning or penalty under section 51 of the Act. In terms of section 37 of NEM:AQA a person must apply for an atmospheric emissions licence²²⁷ by lodging an application with the competent authority in the area where the

220 Beech *et al* “Overview of South Africa’s Environmental Legislation” 461.
 221 Department of Environmental Affairs *State of Air Report 2005: A report on the state of air in South Africa* 4-5.
 222 GN 144 in GG 35072 of 2 March 2012.
 223 City Health Department 2005
<http://www.capetown.gov.za/en/CityHealth/AirQualityManagement/Documents/Plan%20-%20Air%20Quality%20Management%20Plan%2015%20Aug%202008.pdf> 12.
 224 GN 144 in GG 35072 of 2 March 2012.
 225 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 14.
 226 City Health Department 2005
<http://www.capetown.gov.za/en/CityHealth/AirQualityManagement/Documents/Plan%20-%20Air%20Quality%20Management%20Plan%2015%20Aug%202008.pdf> 13.
 227 Kidd *Environmental Law* 163.

listed activity will take place.²²⁸ When considering the application the licensing authority must take certain factors into account.²²⁹ These factors are set out in section 39 and include: the applicable minimum standards set for ambient air and point source emissions, the possible pollution that may be caused by the activity and the impact of that pollution on the environment, including health, social conditions, economic conditions, cultural heritage and ambient air quality. After consideration of the aforementioned factors, the licensing authority may grant or refuse the application and provide the applicant with reasons, if necessary.²³⁰ If the activity is listed or it is determined that the gases or odours emitted by the activities on a factory farm may be harmful, the factory farm owner, manager or operator has a statutory obligation to obtain an atmospheric emissions licence. Without the aforementioned license a factory farm is not legally allowed to proceed with the activities which emit harmful gases into the atmosphere and if they ignore this fact the owner, manager or operator may be found guilty of an offence.

Section 51 of the NEM:AQA makes provision for offences and penalties in the event of non-compliance or contravention of NEM:AQA. The applicable offences include: failure to submit or implement a pollution prevention plan; failure to submit an atmospheric impact report required in terms of section 30; failure to notify the Minister as required by section 33; contravention or failure to comply with a condition or requirement of an atmospheric emission licence; submission of false or misleading information on an application for an atmospheric emission licence or for the transfer, variation or renewal of such a licence; providing an air quality officer with false or misleading information; and lastly, the contravention or failure to comply with a condition subject to which exemption from a provision of this Act was granted in terms of section 59.

228 Beech et al "Overview of South Africa's Environmental Legislation" 461.

229 Department of Environmental Affairs 2009
www.tshwane.gov.za/Services/EnvironmentalManagement/Environmental%20Management%20Documents/Atmospheric%20Emission%20Licence%20Manual%20for%20Licensing%20Authorities.pdf.

230 Kidd *Environmental Law* 164.

In terms of section 51(2) a person who operates a controlled emitter is guilty of an offence in the event that the emissions from that controlled emitter do not comply with the prescribed standards. In terms of section 23(1) of NEM:AQA a machine or activity can be declared as a controlled emitter if it "results in atmospheric emissions which through ambient concentrations, bioaccumulation, deposition or in any other way, present a threat to health or the environment."²³¹ Some of the gases released by the waste on factory farms have been declared as priority air pollutants²³² and are harmful to the environment and human health, which makes it clear that factory farms fall within the ambit of section 23(1). Furthermore, If the air pollutant emitted by a listed activity is at a concentration above the emission limits,²³³ as specified in the emission licence, the person who performs or manages the said activity may be found guilty of an offence.²³⁴

The above outline suggests that factory farms must ensure that they strictly comply with NEM:AQA in order to ensure that they do not commit an offence in terms of the abovementioned provision. The toxic gases released by the waste, specifically the manure, have to be controlled and regulated by the person in charge thereof. If these harmful emissions exceed the legal limit and pose a threat to the environment and/or human health, the factory farm owner, manager or operator will be found guilty of an offence. If found guilty of an offence in terms of section 51, the person or persons convicted of the said offence may be held liable for payment of a fine or imprisoned for a period not exceeding ten years.²³⁵

The penalties may also vary with regard to the specific circumstances involved. For a first conviction the liable party may have to pay a fine not exceeding 5 million rand or imprisonment for a period not exceeding 5 years. There is a consistent ratio of one million rand fine equal to one year of imprisonment. In the case of a continuing offence

231 Section 23(1) of NEM:AQA.

232 Department of Environmental Affairs *State of Environment Report 2005: A report on state of air in South Africa* 4-5.

233 GN R248 in GG 33064 of 31 March 2010.

234 Section 51(3) of NEM:AQA.

235 Section 52(1) of NEM:AQA.

the liable party may have to pay a fine not exceeding R10 000 or imprisonment for a period not exceeding six months, or both for every day that the person or persons persist with the specific act or omission.²³⁶

3.5 National Environmental Management: Waste Act 58 of 2008 (NEM:WA)

The NEM:WA regulates the management and disposal of waste. Factory farming falls within the ambit of the listed activities set out in Category A of the applicable regulations.²³⁷ The aforementioned regulations were drafted to identify potential harmful activities for which a basic assessment is required. A waste management license is compulsory for the listed activities and must be obtained before commencement of the activity in question.²³⁸ Before a waste management license can be obtained a basic assessment²³⁹ must be conducted to ensure that there are adequate facilities for purposes of proper waste disposal.

Schedule 1 of the NEM:WA lists the waste management activities for which a waste management license is required.²⁴⁰ Sections 10 and 11 refer to activities which produce animal waste and thus applicable to factory farms. Section 10 refers to animal manure at a facility which processes, treats or stores an excess of tonnes of manure on a monthly basis. Section 11 refers to the processing of animal waste at biogas installations where the facility receives five tonnes or more per day, including animal manure, abattoir waste or vegetable waste. The construction of these facilities and structures associated with the processing of manure and abattoir waste also forms part of the aforementioned listed activity.

236 *National Environmental Laws Amendment Bill B 66B OF 2008.*

237 Gen Not 409 in GG 32188 of 30 April 2009.

238 Section 19(3) of NEM:WA.

239 See par 3.2.2.

240 Kidd *Environmental Law* 183.

Section 21 of the NEM:WA makes provision for the general requirements for the storage of waste and states that any person should take the necessary steps to ensure that:²⁴¹

- The containers used for waste storage are in a good condition, fit for waste storage and that they are maintained on a regular basis;
- Reasonable and adequate steps are taken to prevent accidental leakage or spillage of waste;
- The waste cannot be blown away by a strong wind and lead to pollution;
- Nuisances, for example unpleasant odours, visual impacts and breeding of vectors are prevented;
- Environmental pollution and harm to the health and well-being of the surrounding community are prevented.²⁴²

With reference to the above requirements, the factory farm, as the waste generator, also has certain responsibilities and they include: the proper classification of the different aspects of waste management in order to minimise or prevent harm to the environment or human health; to regularly monitor compliance with the applicable legislation, to ensure proper application of the cradle-to-grave principle and lastly to ensure that the waste hierarchy is applied.²⁴³

Factory farm managers or operators must ensure that the abovementioned steps are taken to prevent pollution, health problems or any other nuisances. Generally, factory farms have on-site waste storage facilities to avoid additional expenses and the owner, manager or operator must always ensure that these facilities are maintained properly.

The following must be done to prevent spillage or leakage:

- The containers must be kept away from storm water drains;
- They must be the appropriate size to prevent leakage or spillage of waste;

241 Kidd *Environmental Law* 181.

242 NEM:WA.

243 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 14.

- They must be emptied on a regular basis;
- They must be covered to prevent that they overflow during heavy rainfall.²⁴⁴

The abovementioned requirements must be met strictly; if the facility does not comply with the legal requirements as contemplated in the NEM:WA, a factory farm manager or operator must take the necessary measures so ensure compliance. These requirements are provided to ensure that the waste storage facilities are properly equipped to prevent leakage or any other occurrence which may lead to air, water of any other type of pollution.

A factory farm owner, manager or operator must implement a waste management plan²⁴⁵ to ensure that the waste is stored and disposed of properly.²⁴⁶ The waste management plan should include the following aspects: identification of waste streams, classification of waste, waste handling and storage on-site, hazardous waste transport off-site, waste management policies, and procedures and criteria for selecting a waste contractor.²⁴⁷ The consideration of the aforementioned aspects will ensure that a proper and effective waste management plan or program is drafted and applied in practice. The aforementioned will also ensure that the waste produced on factory farms will be managed and stored in a manner which is not detrimental to the environment and human health and well-being.²⁴⁸

Section 66 of NEM:WA requires the person or persons in control of a listed waste activity to submit a waste impact report.²⁴⁹ The impact report is only compulsory if an environmental management inspector, on reasonable grounds, suspects that the person has on one or more occasions contravened or failed to comply with the provisions of the NEM:WA and if the failure may have had a detrimental impact on human health or the

244 Oosthuizen en Bell *Guidelines to Facilitate Legal Compliance with respect to Industrial Waste Management-Volume 1: Managing your Wastes to achieve Legal Compliance: An Industry Guide* 56.

245 Kidd *Environmental Law* 180.

246 Kidd *Environmental Law* 185.

247 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 15.

248 Kidd *Environmental Law* 180.

249 Kidd *Environmental Law* 188.

environment, including social conditions, economic conditions, ecological conditions or cultural heritage.²⁵⁰ This report is an effective way to enforce compliance with the provisions of this Act. If the person or persons are obligated to submit the waste impact report they may run the risk of being found guilty of an offence in terms of section 67 of the Waste Act. Factory farm owners, managers or operators will be obligated to submit this report if it is found that the activities on the farms may have caused pollution such as water pollution. This report will determine whether the activity may proceed or not, it may even lead to closure of the farm if it is found that the activities have caused severe pollution and degradation to the environment.²⁵¹

Section 67 of NEM:WA makes provision for offences²⁵² and penalties in the event of non-compliance with the provisions of the Act. If an offence is committed, the person or persons responsible will be found guilty and convicted accordingly in terms of section 69 of the NEM:WA. Non-disclosure of information relating to waste and purposely or negligently causing waste spillage are regarded as serious offences. To avoid penalties or convictions it is vital that a waste licence be obtained and that the regulations and requirements with regard to storage facilities and waste disposal are strictly complied with. The owners, manager or operators of factory farms must also ensure that the conditions of the licence, for example, restrictions or limitations, are met as far as possible. If the applicable regulations and/or conditions are not complied with and the waste produced on a factory farm leaks into a water resource, the responsible party may be criminally convicted.

250 Section 66(1) of NEM:WA.

251 Kidd *Environmental Law* 188.

252 Section 67 of NEM:WA makes provision for the following offences:

- Failure to comply with the necessary provisions of the Act relating to requirements that should be met and measures which must be taken to prevent pollution;
- Failure to submit or draft a industry waste management plan as required by section 28;
- Failure to comply with abovementioned plan;
- Failure to comply with the norms or standards set out in this Act;
- Failure to perform a site assessment or submit the necessary report;
- Failure to comply with a condition or requirement of a waste management licence;
- Failure to submit a waste impact report;
- Intentionally supplying false or misleading information while applying for a waste licence or supplying same to a waste management officer or environmental management inspector.

Section 68 of NEM:WA makes provision for the penalties and the fines payable in the event of contravention. The penalties vary from R1000 to R10 000, which amount depends on the seriousness and circumstances of the offence committed. If the person liable for payment of the penalty refuses or is financially not able to pay the fine, they will be imprisoned for a specified period, not exceeding ten years.²⁵³

With reference to the above it seems that NEM:WA makes provision for a few significant provisions for the regulation of factory farms. However, there may still exist a need for additional waste legislation to ensure that the factory farming industry is regulated adequately.²⁵⁴

3.6 Health Act 63 of 1977 (HA)²⁵⁵

The purpose of the HA is to ensure prevention of nuisances and offensive conditions, to provide municipal health services, to promote frequent monitoring of water quality, to manage harmful waste and to control environmental pollution.²⁵⁶

This HA defines a factory farm as an "intensive animal feeding system," which refers to a farm constructed for purposes of breeding animals for the production of meat, milk, eggs, fur or any other product of animal origin. The animals are kept in a confined space so as to accomplish intensive feeding or maximum control of or maximum food conversion in the animal. In terms of section 36(d) the Minister may, after consultation with the Minister of Agriculture, Forestry and Fisheries, draft regulations relating to the regulation, control, restriction or prohibition of intensive animal-feeding systems, and to the registration of such systems, the requirements in regard to the manner of application for such registration, the submission of terrain, building and site plans for such systems, the materials which shall be used in the construction of such systems, the construction

253 Kidd *Environmental Law* 188.

254 Roberts and De Jager "Current Meat-related Waste Disposal Practices of Free State Red Meat Abattoirs, South Africa" 1.

255 HA.

256 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 12.

and ventilation of such systems, the provision of sewerage and drainage systems and water and washing and sanitary conveniences for workers at such systems, the prevention of overcrowding of such systems, or any other matter deemed necessary, with which any such feeding system shall comply for the purposes of registration, and the circumstances under which any such registration may be cancelled or suspended.

The Minister of Health and Welfare has drafted a few regulations regarding dairy factory farming, namely:

- Government Notice No R.1256 of 27 June 1986:²⁵⁷ Regulations relating to milking facilities and the transport of milk;
- Government notice No R.1555 of 21 November 1997:²⁵⁸ Regulations relating to milk and dairy product;
- Government Notice No R.1809 of 3 July 1992,²⁵⁹ as amended: Regulations relating to maximum limits of medicine and stock residues allowed in foodstuffs;
- Government Notice No R.918 of 30 July 1999:²⁶⁰ Regulations governing general hygiene requirements for food premises and the transport of food;
- Government Notice No R.908 of 27 June 2003:²⁶¹ Regulations relating to the application of the hazard analysis and critical control point system.

However, regulations regarding other types of factory farms, for instance meat production factory farms, still fail to exist. As the factory farming industry grows, the need for a wider range of regulations will also grow. Section 20 of the HA makes provision for the duties and powers of the local authorities and obligates them to take the necessary and reasonable measures to prevent, minimise or remediate pollution.²⁶²

257 GN R1256 of 27 June 1986.

258 GN R1555 in GG 18439 of 21 November 1997.

259 GN R1809 IN GG 4856 of 3 July 1992.

260 GN R918 in GG 20318 of 30 July 1999.

261 GN R908 in GG 25123 of 27 June 2003.

262 Kanamugire "Offences and Penalties for Water Pollution in South Africa – A Comparative Analysis of South African, British, American and Australian Legislation" 27.

The local authorities have a duty to prevent or manage any threat towards human health and well-being – this can be done by providing proper regulations.

In terms of section 38, the Minister may draft regulations regarding the disposal and treatment of hazardous waste which may be dangerous or detrimental to health, removal or remediation of pollution or a nuisance and lastly regarding the reporting of existing pollution, a nuisance or any other threatening condition.²⁶³ Section 57 of the HA makes provision for offences and penalties, stating that any person who fails to comply with any provision of the HA shall be found guilty of an offence and be held liable to pay a fine not exceeding five hundred rand or be imprisoned for a period not exceeding six months or both on a first conviction.²⁶⁴ On a second conviction the person will be held liable and must pay a fine not exceeding one thousand rand or be imprisoned for a period not exceeding one year or both of the aforementioned.²⁶⁵ On a third conviction the person will be held liable to pay a fine not exceeding five thousand rand or be imprisoned for a period not exceeding two years or both of the aforementioned.²⁶⁶

In the event of non-compliance with the provisions of the HA a factory farm owner, manager or operator, whomever is in charge, can be held liable for the above mentioned fines or imprisonment. These laws are created to protect the environment and human health and well-being, their ultimate purpose is to fulfil the constitutional right provided for by section 24 of the Constitution.

3.7 Conservation of Agricultural Resources Act 43 of 1983 (CAR)

The CAR regulates and controls the utilisation of natural agricultural resources and promotes the conservation of soil, water sources, vegetation, combating of weeds and invader plants and other matters related thereto.

263 Kidd *Environmental Law* 171.

264 Section 57(a) of the HA.

265 Section 57(b) of the HA.

266 Section 57(c) of the HA.

Section 1 of CAR refers to and defines “large stock units” (which can be compared to factory farms) as follows:

A unit which consists of the prescribed number of animals of a prescribed kind, type, breed, age or sex, or which is in a prescribed phase of production or is of a prescribed approximate live mass.²⁶⁷

The CAR is also applicable to the factory farming industry as the activities conducted on factory farms fall within the ambit of the CAR. Section 6(1)(n) of the CAR makes provision for control measures and states that control measures may be prescribed for the protection of water resources against pollution resulting from farming activities. The control measures may prohibit or obligate a person or persons where pollution is concerned.²⁶⁸ If the farm owner, manager or operator refuses or neglects to comply with these measures, the person can be found guilty of an offence.²⁶⁹ In terms of section 7 of the CAR a person or persons may also be directed to comply with the measures.

In terms of section 18 an executive officer, any other officer of the department, a member of a soil conservation committee or an authorised person may at any reasonable time enter upon any land in order to determine if and to what extent water pollution has occurred because of the activities on the factory farm. If water pollution originates on or near a factory farm, any authorised person can enter the farm to investigate the pollution and determine the extent thereof. They may further direct them to remediate the pollution or take the reasonable measures to prevent it.

Section 23 of the CAR makes provision for penalties in the event of contravention of the Act. The responsible party may be found guilty of an offence and will be held liable for payment of a fine or imprisonment. Section 25 of the CAR makes provision for the liability of the employer or principle and states that the employer or principal shall be held liable for the act or omission of the employees, agents or managers and may be convicted and sentenced. Section 25 also states that in the event that the owner of the

267 Section 1 of CAR.

268 Section 6(3) of CAR.

269 Section 6(5) of CAR.

factory farm can prove that the act or omission was not permitted by him/her and all reasonable measures were taken to prevent it, or the act or omission did not fall within course of the employment or the scope of the authority of the person concerned, vicarious liability may be excluded.

The CAR is applicable to certain aspects of the factory farming industry, but most importantly makes provision for the exclusion of vicarious liability, subject to certain circumstances. The aforementioned may prove to be of significant importance since the owner of a factory farm may not always be held responsible for the actions or omissions of his/her employees.

4 Common Law

Common law rules play an important role in the South African legal system and may be applied when necessary and applicable. In addition to the existing statutes, common law provides additional remedies to a third party who has suffered damages, whether environmental or personal. Where the statutory laws, as discussed above, find no application or cannot provide the proper legal remedy, common law may provide an alternative remedy. The applicable common law rules include law of delict, the law of nuisance and the law of neighbours – these rules play a very significant role when it comes to noise pollution, air pollution and water pollution.²⁷⁰ Common law rules are relevant in the factory farming industry as some of the activities on a factory farm may lead to excessive noise, air pollution and water pollution, which may give rise to cause of action, lead to a nuisance or cause damage.

4.1 Delictual Liability

In most circumstances where pollution occurs the first step to take is to proceed with a civil claim, however, this course of action may eventually place the costs on the

270 Nabileyo *The Polluter Pays Principle and Environmental Liability in South Africa* 4.

consumer or citizen in our society. It is vital that an effective compensation system be implemented to ensure that the responsible party is held liable for the costs of the damage suffered.²⁷¹ The law of delict is an effective solution for compensation claims for damages suffered as a result of pollution. For instance, if a factory farm manager or operator failed to contain or minimise harmful and odorous emissions, which led to unpleasant circumstances and health problems, the owner or manager should be held liable for remedial costs or compensation.²⁷² In this situation a regulatory system instead of a statutory system will be used to right the wrong that has been done.²⁷³

An owner, manager or operator of a factory farm can be held delictually liable for an action or omission which led to environmental damage or has affected the health or well-being of a third party.²⁷⁴ For instance, if the effluent from a factory farm leaks into a public stream, pollutes it and ends up affecting a persons health,²⁷⁵ the affected person may proceed against the responsible party in terms of breach of statutory duty and lodge a delictual claim against them.²⁷⁶ Alternatively, the affected person may apply for an interdict to order the farm owner to stop discharging effluent or refrain from continuing with any activities which may lead to the discharge of effluent and cause pollution of water resources.²⁷⁷

4.2 Neighbour law

Where one person interferes with the health, well-being or enjoyment and use of a neighbour or caused actual damage to the person or their property, it is regarded as a "nuisance";²⁷⁸ this also constitutes the link between neighbour law and law of nuisance.

271 Kuschke *Insurance against damage caused by pollution* 126.

272 Kuschke *Insurance against damage caused by pollution* 127.

273 Kuschke *Insurance against damage caused by pollution* 127.

274 Kuschke *Insurance against damage caused by pollution* 131.

275 *Rainbow Chicken Farm (Pty) Ltd v Mediterranean Woollen Mills (Pty) Ltd* 1963 1 SA 201 (N).

276 Kanamugire "Offences and Penalties for Water Pollution in South Africa – A Comparative Analysis of South African, British, American and Australian Legislation" 12.

277 Kanamugire "Offences and Penalties for Water Pollution in South Africa – A Comparative Analysis of South African, British, American and Australian Legislation" 13.

278 Badenhorst, Mostert and Pienaar *Silberberg and Schoeman's The Law of Property* 109.

The extent of damage caused to the neighbour's property, or on it, must be taken into consideration when determining whether the nuisance which caused the damage was unreasonable.²⁷⁹ A balance must be drawn between the competing interests of the respective neighbours to determine if the one neighbour did indeed suffer a loss or damages of a substantial nature and is entitled to lodge a claim.²⁸⁰ Where a land owner "abuses" his/her rights by using land in an unreasonable manner and causes harm or damage to a neighbour, it constitutes inappropriate use of right of ownership.²⁸¹

A factory farm owner or manager must ensure that the limits with regard to right of ownership and use of property is not exceeded by harmful or annoying activities which infringes the neighbouring property owners' right of use and enjoyment, or leads to damage. Pollution of mutual water sources is an infringement of a neighbour's right of use and enjoyment.²⁸² The law of nuisance is closely related to neighbour law and they are mostly simultaneously applicable to environmental matters.

4.3 Law of nuisance

The law of nuisance provides a few forms of nuisance, which include a private nuisance, a public nuisance, noise pollution and offensive odours. The aforementioned forms of a nuisance, as well as their applicability on the factory farming industry, will be discussed in detail. Probably the most common form of nuisance is a private nuisance, which was defined in *Intercape Ferreira Mainliner (Pty) Ltd and Others v Minister of Home Affairs and Others*²⁸³ as follows:

In the context of the present case, the term nuisance connotes a species of delict arising from wrongful violation of the duty which our common law imposes on a person towards his neighbours, the said duty being the correlative of the right which his

279 Badenhorst, Mostert and Pienaar *Silberberg and Schoeman's The Law of Property* 110.

280 Badenhorst, Mostert and Pienaar *Silberberg and Schoeman's The Law of Property* 110.

281 Badenhorst, Mostert and Pienaar *Silberberg and Schoeman's The Law of Property* 113.

282 *Regal v African Superslate (Pty) Ltd* 1963 (1) SA 102 (A) 110H-111B.

283 *Intercape Ferreira Mainliner (Pty) Ltd and others v Minister of Home Affairs and Others* 2010 (5) SA 367 WCC 402 par 142.

neighbours have to enjoy the use and occupation of their properties without unreasonable interference.²⁸⁴

A private nuisance claim will be applicable in a situation where pollution is caused by the owner or occupier of property in close proximity with neighbouring properties and the owners or occupiers of the other properties has suffered loss or damage because of the activity of the aforementioned owner or occupier.²⁸⁵ An owner or occupier of property has the right to enjoyment of his/her property without interference or disturbance of an undesirable nature, and that right must be restored.²⁸⁶ Reasonableness and fairness will be weighed up against each other to determine if the person or persons were indeed adversely affected and what the extent of the nuisance was.²⁸⁷ To determine whether a nuisance does or did exist and if it was caused negligently or purposely, the "reasonable man test" will be applied to the facts.²⁸⁸ Thus, it would lead to a nuisance claim if an activity on a factory farm caused water or air pollution and the said pollution interfered with the surrounding property owners' enjoyment. If reasonable care and also a certain degree of skill were exercised to prevent leakage into water supply or release of harmful gases into the atmosphere, it may be determined that the owner, manager or operator is not liable for payment of a fine or compensation.²⁸⁹ Another example of non-liability regarding a nuisance is if the factory farm owner has obtained a servitude, which grants the owner the right to release wastewater, produced by the factory farm, into a specific water resource, mainly to enable them to carry out their business. The aforementioned cannot be regarded as unreasonable and the owner cannot be held liable for compensation.²⁹⁰ If a factory farm does not have a water licence or any other right to discharge the wastewater into a water resource and it leads to unreasonable pollution, the owner may be held

284 *Intercape Ferreira Mainliner (Pty) Ltd and others v Minister of Home Affairs and Others* 2010 (5) SA 367 WCC 402 par 142.

285 *Kuschke Insurance against damage caused by pollution* 368.

286 *Kuschke Insurance against damage caused by pollution* 127.

287 *Kuschke Insurance against damage caused by pollution* 141.

288 *Kuschke Insurance against damage caused by pollution* 364.

289 *Lowry and Edmunds Environmental Protection and the Common Law* 36.

290 *Dreyer v Cloete* (1877) 7 142.

responsible for discharging wastewater into the water resource and a damages claim will be awarded in favour of the affected party.²⁹¹

Another negative aspect of a factory farm in this context is the offensive odours from the animals and waste facilities.²⁹² Every person has an innate right to untainted and unpolluted air and if this is taken from them or interfered with, the person or persons may claim for damages.²⁹³ The farm must be operated properly and the managers or operators must ensure that the facilities are cleaned and maintained regularly in order to prevent unpleasant odours, which may subsequently lead to a nuisance and constitutes negligence regarding waste disposal.²⁹⁴ All reasonable measures must be taken to ensure that the odours are contained and will not negatively interfere with the neighbouring owners or occupiers' enjoyment of their property.²⁹⁵ The remedies for causing a private nuisance include: abatement and compensation for damage caused or losses suffered, and extensive interference with enjoyment or personal injuries.²⁹⁶ Where a visible economic loss or environmental degradation exist, it is easy to determine the amount payable for remedial costs or loss suffered.²⁹⁷

Activities on a factory farm may also lead to a public nuisance, which refers to a nuisance generally affecting a group of people or the public in general.²⁹⁸ This serves as a way to protect human interests²⁹⁹ instead of merely land rights. This nuisance is usually applicable where water or air pollution has led to extensive damage of the environment and as a result a group of people or the general public's interest has been affected.³⁰⁰ For instance, in the event that emissions, such as methane, from a factory farm have caused air pollution and a group of people or the public in general's health has been detrimentally affected, they can proceed with a damages claim against the

291 *The Clarence Trustees and M.L. Clarence v Pietermaritzburg Corporation* (1907) 28 NLR 559.

292 See par 3.4 above.

293 Samuels *The history, development and future of public nuisance in light of the Constitution* 37.

294 Nabileyo *The Polluter Pays Principle and Environmental Liability in South Africa* 5.

295 *Eskom v Rini Town Council* 1992 (4) SA 96 (E) 99.

296 *Kuschke Insurance against damage caused by pollution* 369.

297 Nabileyo *The Polluter Pays Principle and Environmental Liability in South Africa* 7.

298 Kidd *Environmental Law* 147.

299 Samuels *The history, development and future of public nuisance in light of the Constitution* 17.

300 *Kuschke Insurance against damage caused by pollution* 370.

farm owner. The remedies available include injunctions, abatement notices or damages claims which leads to compensation.³⁰¹ The only person with *locus standi* to proceed with legal action is the owner of the damaged property, the person in whom the owner vested his rights, such as a tenant or the person whose health or well-being has been adversely affected.³⁰² It must also be kept in mind that certain unpleasant smells form part of the factory farming industry and must be endured to an extent, but if the odours adversely affect the environment or the health and well-being of persons residing in the vicinity of the factory farm, an effort must be made to minimise or contain the odours as far as possible.³⁰³

Another form of nuisance is noise pollution.³⁰⁴ The machinery on factory farms, especially the industrial implements³⁰⁵ used for butchering, can be very loud and may disturb owners or occupiers of surrounding property.³⁰⁶ The noise must be disturbing and interfere with the person's right of enjoyment of property or has impaired their hearing or sleeping patterns.³⁰⁷ The affected person may apply for an interdict to order the owner or manager of the factory farm to cease production of the excessive noise or contain it as far as possible. An interdict may also be granted to limited production of the excessive noise to certain times or circumstances.³⁰⁸ If the noise has affected the person's health and well-being or overall enjoyment of their property, a claim may be lodged for compensation.³⁰⁹

With reference to the above, it is clear that a person affected by pollution has the option to make use of common law for the most satisfactory remedial solution against the responsible party, which may be a factory farm.

301 *Kuschke Insurance against damage caused by pollution* 370.

302 Kidd *Environmental Law* 146.

303 Lowry and Edmunds *Environmental Protection and the Common Law* 32.

304 *Kuschke Insurance against damage caused by pollution* 38.

305 *Rushmer v Polsue & Alfieri* 1906 1 Ch 234.

306 Samuels *The history, development and future of public nuisance in light of the Constitution* 39.

307 Kidd *Environmental Law* 197.

308 *Lone Creek River Lodge (Pty) Ltd v Global Forest Products (Pty) Ltd* 2008 JDR 0090 (T) 14.

309 *Laskey and Another v Showdown CC and Others* 2007 2 SA 48 (C) 56 par 18.

5 Recommendation

With reference to all of the above, it is clear that South African legislation regulates the factory farming industry to an extent, but most of the legislation discussed in section 3 are only applicable on a general level. The statutory framework available for prevention, minimisation and remediation of the various problems relating to the factory farming industry is still quite limited. It is imperative that the government recognise the growing industry and the problems which may follow it. The environment, and health and well-being of humans are very important and should be prioritized. Legislation, specifically relating to factory farms, should be created in order to regulate every aspect regarding the industry, which includes sufficient enforcement methods.

Section 24(b) places an obligation on the government to make use of reasonable measures to fulfil the fundamental environmental and socio-economic constitutional right, entrenched in section 24(a).³¹⁰ If the activities on factory farms lead to pollution, degradation of the environment or harm the health and well-being of humans, the government must promulgate and enforce legislation to ensure that human health and well-being is not adversely affected by the factory farming industry. The aforementioned also places a constitutional obligation on the factory farm owners to take all reasonable steps to prevent environmental degradation and/or harm to human health and well-being. If a factory farm causes pollution, the owner, manager or operator is guilty of infringement of a constitutional right and may be held liable for compensation, payment of a fine or imprisonment. To ensure that this right is fulfilled, the government and factory farm owners must work together in compliance and enforcement of the necessary laws.

NEMA makes adequate provision for the principles which provide guidance to the factory farm owners, managers or operators, which ensures that they manage the farms in an environmentally sustainable manner.³¹¹ NEMA also makes provision for the applicable EIA procedure to be followed for commencement of the listed activities on a

307 Feris 2008 *SA Public Law* 203.

308 Beech *et al* "Overview of South Africa's Environmental Legislation" 455-456.

factory farm. Some of the activities on a factory farm are listed and thus subject to a basic assessment, which will determine to what extent the said activities will damage the environment, and human health and well-being.³¹² The aforementioned is a very positive part of environmental law as it is of significant importance to determine what impact the activities on a factory farm will have on the environment or human health and well-being. Another positive aspect is the existence of enforceable sanctions, such as criminal convictions and private prosecution, which may prove to be very effective enforcement and preventative tools.³¹³ It is crucial that the relevant authorities take the necessary steps to ensure that the owners, managers or tenants of factory farms comply with the provisions of NEMA and prevent potential pollution or remedy pollution which already occurred. The aforementioned may be realised by drafting legislation or regulations, which enforces implementation of the said principles, such as the cradle-to-grave principle, into a management plan.

Section 28 of the Act provides the "duty of care" principle as well as the "Polluter Pays Principle" (PPP). The aforementioned principles may prove to be very effective preventative and enforcement tools. The "duty of care" places a responsibility on the owner, manager or operator of a factory farm to act with care at all times, which obligates the said person to ensure that reasonable measures are taken to prevent, minimise or remediate pollution or damage caused to the environment.³¹⁴ The PPP places responsibility on the person or persons liable for pollution or damage to the environment or health and well-being of a third party, to remediate the pollution and provide compensation for the damage caused.³¹⁵ Thus, if applied adequately, the principles may act as very effective enforcement tools, which is of significant value in the environmental world. However, it is important to note that the PPP is effective in theory, but the problem arises with the practical application thereof.³¹⁶ Regulation of an industry, especially the enforcement of accepting liability, is complex and the governments' effort to sufficiently apply the principle is still inadequate. In addition to the

309 See par 3.2.5 above.

313 Kidd and Retief "Environmental Assessments" 994.

314 *Chevron South Africa (Pty) Ltd v Kabini* 2010 JDR 1385 (GNP) 1.

315 Nanda and Pring *International Environmental Law and Policy for the 21st Century* 40.

316 Grossman 2007 *Electronic Journal of Comparative Law* 2.

PPP, it is vital to implement certain enforcement and inspection mechanisms to ensure product safety and quality, but most importantly to ensure that pollution or environmental degradation does not occur.³¹⁷ Furthermore, it is vital that the government attends to drafting specific guidelines for the factory farming industry. These guidelines must include examples of precautionary and preventative measures as well as the consequences of non-compliance. The existence of specific guidelines may eliminate the uncertainty with regard to the applicability of the PPP.

As discussed in section 3.3, water is a very essential and significant resource and should be protected and conserved as far as possible. Section 19 of the NWA places a duty on a factory farm owner, manager or operator to prevent, minimise and remediate degradation of a water resource and also provides certain sanctions and directives to realise the aforementioned. However, the prescribed penalties are not always adequate and may be quite vague, which leaves the decision with regard to the nature of the penalty up to the judicial system.³¹⁸ The catchment management agency may also issue a directive to obligate the polluter to tend to remediation or pay the costs thereof, but if not complied with the state takes the responsibility onto them and might struggle to claim the costs from the polluter.

With reference to the above it is evident that without proper and regular monitoring methods, directives and penalties may prove to be useless. Compliance may be monitored through, for example, regular and proper on-site investigations conducted by an environmental officer. It is vital that the water resources surrounding a factory farm be tested on a periodical basis in order to determine whether slurry or effluent has leaked into the water resources. It is apparent that there exists a need for regulations which demand and permit that environmental officers regularly visit, as well as perform water-quality tests on factory farms, and if not complied with the offices also run the risk of being held liable for damage or loss suffered. It is also vital that the proper investigation methods and procedures be implemented, especially where there is

317 Chakravorty, Fisher and Umetsu 2007 *Environmental Economics and Policy Studies* 22.

318 Kidd *Environmental Law* 273.

reason to believe that the activities on a factory farm may lead to water pollution.³¹⁹ Compliance and enforcement may prove to be problematic without adequate guidelines regarding preventative methods.

After consideration of the content of section 19, it is clear that in order to prevent pollution a carefully planned strategy, to ensure effective implementation, is a necessity. The mentioned strategy requires identification of the actions leading to the pollution, prioritisation of the necessary steps required obtaining the maximum effect in the management process and lastly, it is vital that this strategy is incorporated into the management structure of the business. Section 28 of NEMA also makes provision a similar planned structure to develop reasonable measures for the same purpose.

With regard to section 3.4 which discusses the NEM:AQA, it was found that the prescribed regulations³²⁰ of the Act have identified certain activities on factory farms as listed activities,³²¹ for which an atmospheric emission licence is required. The said licence sets out emission standards and limitations, which is very good in theory, as this limits harmful emissions. In order to enforce compliance with licence conditions and other important provisions of the Act, NEM:AQA makes provision for penalties or imprisonment in the event of contravention. Examples of contravention by a factory farm are commencing with listed activities without an atmospheric emission licence; non-compliance with the licence conditions and being responsible for the action or failure which led to air pollution.

With reference to the above, the main concern is the monitoring and enforcement of the standards and limitations of the emissions released by factory farms. It is vital that regular investigations and air quality tests are conducted in order to determine whether these conditions have been breached. An environmental officer has an obligation to ensure that the pollution prevention plan drafted by the owner, manager or operator of

319 Kidd *Environmental Law* 273.

320 GN R248 in GG 33064 of 31 March 2010.

321 Animal matter processing includes tanning, animal slaughter and rendering plants, animal carcasses or waste disposal or recycling.

the farm is sufficient and includes methods to prevent, minimise or remediate any potential pollution caused by waste produced on the factory farm. In addition to the aforementioned methods, it must also include precautionary methods, such as a basic assessment, to ensure that the reasonable measures are taken to prevent pollution. An example of the aforementioned is that the manager or operator must, as far as possible, ensure that the emissions released by the factory farm are kept at a minimum level, alternatively the emission must be contained as far as possible. Regular monitoring will act as an incentive for the farm owners, managers or operators to ensure that they remain within the standards and limitations prescribed by the Act and regulations. Furthermore, joint compliance monitoring site inspections and joint enforcement action initiatives may also prove to encourage compliance.³²² In conclusion, it may prove vital for a factory farm to draft and implement an adequate pollution prevention plan to ensure prevention of potential pollution or harm to human health and well-being as far as possible.³²³

In section 3.5 it was found that waste related activities on a factory farm are identified as listed activities in terms of NEM:WA, which requires that a waste management licence be obtained. The said licence may include standards and conditions with regard to requirements for waste disposal facilities, daily limitations on waste disposal as well as prescribed disposal methods. NEM:WA makes provision for penalties, imprisonment or court ordered remediation in the event of non-compliance with the prescribed standards and conditions. The aforementioned are very effective enforcement tools and regarded as very positive provisions of the Act.

The NEM:WA and regulations can adequately be applied to the activities on factory farms and the penalties can certainly act as a deterrent against actions or omission which may lead to damage or pollution. The NEM:WA makes provision for a site assessment that must be conducted by an independent person, there is reason to

322 Department of Environmental Affairs 2009
www.tshwane.gov.za/Services/EnvironmentalManagement/Environmental%20Management%20Documents/Atmospheric%20Emission%20Licence%20Manual%20for%20Licensing%20Authorities.pdf.

323 Section 29 of NEM:AQA.

believe that the waste produced by the factory farm may potentially cause or has caused pollution. Afterwards, a site assessment report must be submitted to the competent authority and be considered to determine if the liable party will be directed to remediate the pollution or take the reasonable measures to prevent or minimise further pollution. The aforementioned may prove to be a very effective enforcement tool.

The NEM:WA also requires of an organ of state, such as the municipality, to submit a waste management plan, but neglects to require that the business owners (in this case the factory farm owner) also draft a waste management plan. A detailed plan to manage waste and prevent pollution is crucial. The employees must be provided with specific procedures and trained accordingly to ensure that the facilities are cleaned and maintained regularly; furthermore, a properly drafted waste management plan will serve as guidance. Internal regulations are not always sufficient, a waste management plan will provide the manager or operator of the farm with tools to properly train and educate their employees. Thus, it is highly recommended that factory farms and any other industry with waste related activities, should be obligated to implement a waste management plan into their business management rules and procedures.

With reference to the above the main purpose of the Act is to ensure that the environment and health and well-being of the public is protected, which is a constitutional right that must be fulfilled.³²⁴ NEM:WA may regulate the waste related activities on a factory farm to some extent, but it was found that South African environmental legislation, regarding the regulation of disposal and handling of waste, is currently insufficient.³²⁵ There is a definite need for specific legislation or regulations regarding the management and disposal of waste on a factory farm. With reference to the aforementioned it remains vital that the government acknowledges the said need and drafts the necessary legislation.³²⁶

324 See par 3.1 above.

325 Roberts and De Jager "Current Meat-related Waste Disposal Practices of Free State Red Meat Abattoirs, South Africa" 1.

326 Roberts and De Jager "Current Meat-related Waste Disposal Practices of Free State Red Meat Abattoirs, South Africa" 1.

As discussed in section 3.6, the HA makes provision for the creation of regulations regarding disposal of animal and other waste which may prove harmful to human health. The said regulations are created to regulate most aspects of the industry, which may be of significant value in current and future regulation of the factory farming industry. In the event that health problems occur because of non-compliance with the regulations, the responsible party may be held liable for penalties or imprisonment. A few regulations relating to dairy factory farms have been created, however, up to date the government has failed to create regulations relating to other types of factory farms, for example factory farms dealing with meat production. The aforementioned makes it clear that there exists a shortfall in environmental law. In order to prevent potential future health problems it remains vital that additional regulations be drafted as soon as possible. Without the proper regulations a factory farm manager or operator has no guidelines regarding disposal of animal and other waste and consequently will not be able to properly inform and train employees to dispose of animal waste in a manner which will not pose a threat to human health and well-being.

It is important to note that the competent authority in the government is responsible for the creation of additional and broader regulations to ensure proper regulation of the factory farming industry. Furthermore, it is recommended that a “Code of Practice” (COP), specifically relating to the factory farming industry, be drafted and implemented. The aforementioned COP may include the following:

- Manufacturing practice code
- Hygiene Practice code
- Laboratory Practice code
- Distribution Practice code
- Fair Treatment of Animals code³²⁷

327 Goutondji *Preventing Water Pollution by Dairy-products: Risk assessment and comparison of legislation in Benin and South Africa* 33.

The “Code of Practice” has the potential to contribute to proper management of factory farms. The proper and environmentally beneficial management of factory farms can be realised by compliance with the applicable legislation and effective internal rules and regulations. It is of utmost importance that the problems be addressed immediately, if not prevented or mitigated correctly, factory farms may prove to be a major threat to the environment and health of humans in the future.

With reference to section 3.7, the CARs most important role in regulating the factory farming industry, is the provision for on-site investigations.³²⁸ The aforementioned may prove to be a very useful and successful preventative tool in ensuring that factory farms take the necessary steps to prevent water pollution. The CAR also makes provision for the exclusion of vicarious liability of the employer or principal, which is not provided for by any of the other laws applicable to factory farming. This exempts the employee, agent or manager from liability, except if the employer or principal can prove the factors as mentioned. The vicarious liability will most likely act as an incentive to the owners or principal to ensure that the correct procedures are followed, the employees are trained properly and the facilities are maintained to prevent pollution which may detrimentally affect a third party or the environment. The aforementioned may play an important role in the prevention of pollution or environmental degradation and the exclusion of vicarious liability, under certain circumstances, is a positive development regarding the liability aspect in environmental law. If a factory farm employee acted without permission and his/her actions lead to water pollution or health problems, the employer will be exempt from liability and the employee will exclusively be held liable for damages.

As determined in section 4,³²⁹ Common law could act as a safety net and make up for the possible shortcomings in environmental legislation relating to pollution. Neighbour law and the law of nuisance provide affected parties with alternative remedies such as abatement notices, interdicts and compensation, which may prove to be more effective

328 See par 3.7 above.

329 See par 4 above.

than statutory remedies. These remedies may be used against an owner, manager or operator of a factory farm in the event that the factory farm discharges wastewater into a mutual water resource and as a result thereof a neighbouring property suffers damages or health problems occur.³³⁰ One of the problems regarding common law is that it can be interpreted in many different ways and the outcome depends on the interpretation of the judicial system. Where one person finds a nuisance to be reasonable, another may differ. Furthermore, it is required that the pollution or damage be of a significant nature, which is a vague description and also subject to interpretation. The aforementioned may be avoided through prescribed definitions, which are reasonable and applicable in most situations, but this may also prove to be too difficult to accomplish. Taking action in terms of common law is recommended in certain circumstances, but may not always be successful.

Without specific guidelines, the owner, managers or operators of these farms may easily mismanage the farm and use techniques which may cause pollution of the air or water resources. As mentioned throughout the above recommendations there is a definite need for specific regulations regarding factory farms in order to ensure that they have a set of guidelines to assist them in managing the farm in an environmentally sustainable manner. Because of the industrial nature of factory farms they must also be obligated to implement an environmental management system into the business. An environmental management system, such as the *International Organisation for Standardisation's* management system 14001 (ISO 14001), will compel them to ensure that the necessary laws are complied with. If the laws applicable to factory farms are strict and the penalties are enforced sufficiently, they will have no other choice but to manage the farms in accordance with the applicable laws and regulations. It is vital that a factory farm owner, manager or operator provide the necessary facilities, develop effective procedures, conduct risk assessments before each activity and train their employees to conduct their duty without posing any risk to the environment.³³¹

330 *Regal v African Superslate (Pty) Ltd* 1963 (1) SA 102 (A) 110H-111B.

331 Red Meat Abattoir Association *By-products management – Red meat abattoirs* 14.

6 Conclusion

The measure of environmental regulation seems to have a direct relationship with the level of economic development of the country in question. Lower income countries are often ill-equipped to deal with the complex policy instruments necessary for the control of livestock pollution. Developing countries primarily focus on more basic issues of food production and security, rather than environmental conservation.³³²

With reference to the above, it is imperative that small livestock farms remain in existence, even though factory farming may be faster and more cost effective, it has a higher potential of leading to extensive environmental degradation. Small-scale farms form part of South African heritage, they tend to bring the community together and also create employment opportunities for the surrounding community, contrary to the aforementioned, factory farms are mostly industrialised and require only a few employees for maintenance and management purposes.³³³ It is vital that the consumers be made aware³³⁴ of the external impacts that factory farms have on their health, well-being and the environment.³³⁵ Consumer complaints may prove to be a powerful enforcement mechanism as a good reputation is very important for businesses.

Regarding the environmental law framework discussed in this study, it is important to note that currently there exists no specific legislation or regulations relating to the factory farming industry and the management thereof. The legislation discussed in this study has a general application on the factory farming industry, which may prove to be insufficient in the near future, thus the shortfall in environmental law should be addressed as soon as possible.

332 Chakravorty, Fisher and Umetsu 2007 *Environmental Economics and Policy Studies* 12.
333 Syed A 2005
[www.greendesignetc.net/Flows_05_\(pdf\)/SyedAsma_Industrial_Agriculture\(paper\).pdf](http://www.greendesignetc.net/Flows_05_(pdf)/SyedAsma_Industrial_Agriculture(paper).pdf).
334 Kidd *Environmental Law* 281.
335 Syed A 2005
[www.greendesignetc.net/Flows_05_\(pdf\)/SyedAsma_Industrial_Agriculture\(paper\) pdf 7](http://www.greendesignetc.net/Flows_05_(pdf)/SyedAsma_Industrial_Agriculture(paper) pdf 7).

Factory farming in South Africa is still a new concept, but because of the cost-effectiveness and production speed the industry is growing at a fast pace. If the factory farming industry is not regulated properly, South Africa will eventually suffer the same consequences as the United States of America and Europe³³⁶ where the majority of livestock farms are industrialised and one of the main causes of severe environmental degradation. It is vital that a balance is found between food production, security and the conservation and protection of the environment. Economic and social development should not justify the pollution or potential pollution caused by factory farms.

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