



Improvement of the quality of milk and other dairy products and compliance with legal standards

(PRJ-0188-2018)

DAIRY STANDARD AGENCY

Year 2018/2018 (January 2018 till December 2018)

Project goals

Goal 1 - National monitoring of milk and other dairy products in collaboration with Health Authorities

Achievements

The quarterly sample runs for 2018 were successfully completed as per predetermined schedules. Based on four cycles and average 7 Metropolitan Municipalities, 12 District Municipalities and 55 Local Municipalities participated in the sampling runs representing all provinces. As per procedure results of all milk and other dairy products were benchmarked against food safety, compositional and trade metrology standards as per regulation. In the cutback environment that government operates in, the expertise needed to regulate was often lacking or too expensive to obtain. DSA in terms of its project protocol and relationships with the relevant authorities continuously worked with the law enforcement bodies and provided support through dairy technical information, workshops and guideline documents to limit the sale of non-conforming product.

The total number of samples of milk and other dairy products analysed are as per table 1 below.

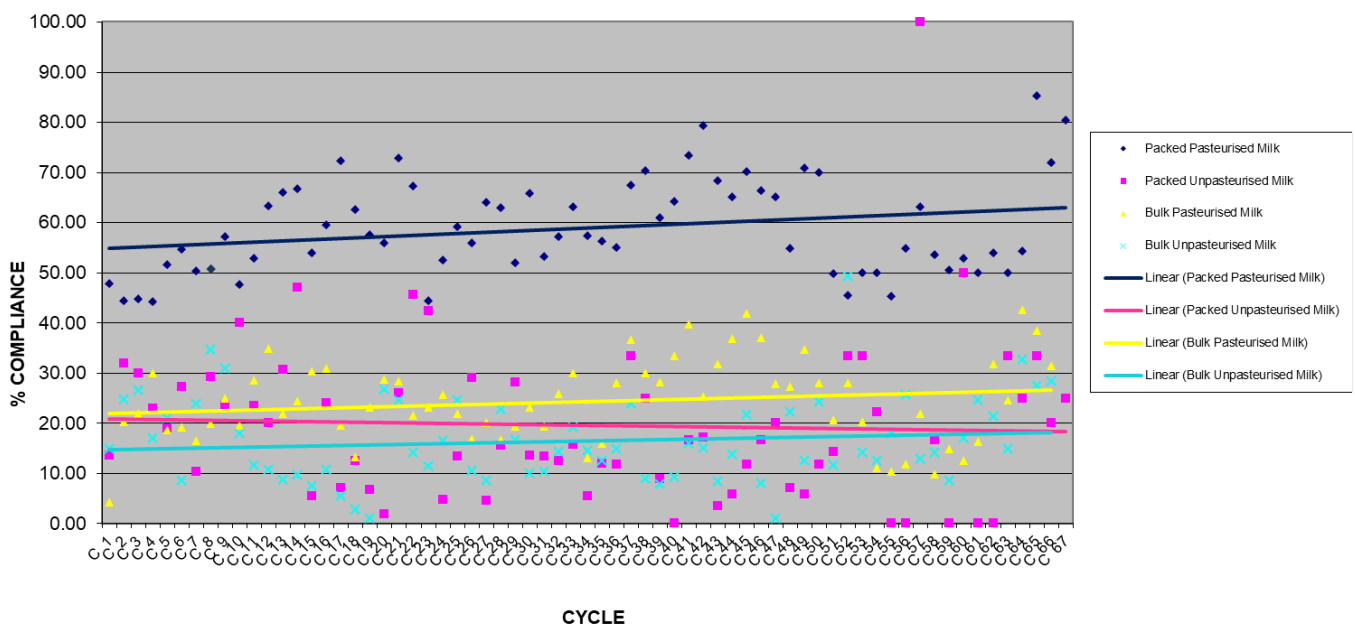
Table 1

Dairy Product	Total
Fresh milk in the categories named packed pasteurised and unpasteurised, pasteurised and unpasteurised retail bulk milk	1299
Flavoured milk	39
Yoghurt including plain, flavoured and yoghurt with added fruit and/or foodstuffs and drinking yoghurt	125
Cultured milk, cultured buttermilk	106
Butter	18
Cream	63
Cheese (various classes)	136
UHT, ultra-high pasteurised and sterilised milk	54
Condensed and evaporated milk	11
Powdered milk and powdered blend	5
Dairy desserts and custard	9
Dairy liquid blends	4
Total	1869

Samples were submitted to SANAS accredited laboratories as per standard procedure and results of milk and other dairy products were benchmarked against food safety, compositional and trade metrology standards as respectively gazetted under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972), Agricultural Product Standards Act, 1990 (Act 119 of 1990) and the Trade Metrology Act, 1973, (Act 77 of 1973). Non-conforming results obtained were assessed and communicated to the processors for further action. Contact details of participating authorities as well as processors were updated as per standard procedure. Non-conformance reports regarding added water, inhibitory substance positive, phosphatase positive and E.coli positive were also forwarded to the relevant authorities for further action.

Figure 1

TREND ANALYSES OVER A 67 CYCLE PERIOD (NATIONAL)
Comparison between the four main distribution types and packaging - compliance according to DSA
classification system
NOVEMBER 2002 - DECEMBER 2018



It is important to note that the above results (figure 1) are a reflection of the sample populations of the four different categories of milk sampled in terms of the DSA national dairy monitoring program whereby the majority milk samples **are deliberately taken on a risk based approach** as to identify possible non-conformities. Results should therefore not be interpreted as being representative of the national status of fresh milk in South Africa.

It is generally accepted that more than 90% of packed fresh milk offered for sale in the retail, finds its origin from the estimated top 20 to 25 dairy processors on a national level. The remainder 10% of packed fresh milk access the market place through small and medium size enterprises competing geographically on a national basis. As was the case in 2017 the categories packed unpasteurised, retail bulk pasteurised and unpasteurised milk (see figure 1) that continuously indicate a negative compliance rate remains a major concern and focus point of the DSA during 2018 in terms of critical food safety standards. Although the figures relating to this substandard products may seem insignificant in relation to the total of fresh milk sold in South Africa, it remains a persistent problem mainly due to poor control measures (law enforcement) and the unlawful sale of substandard milk to the end user.

DSA in terms of its project activities extensively used its updated guideline developments to promote the improvement of the level of compliance of the above categories of products during 2018.

DSA in terms of its project protocol and relationships with the relevant authorities (see project goals 5 and 6) continuously liaised with the relevant law enforcement bodies, providing support through dairy technical information, workshops and guideline documents to limit the sale of non-conforming products.

No Non-achievements / underperformance has been reported

Goal 2 - Investigations regarding complaints received in respect of product compliance with legal standards

Achievements

Investigations regarding complaints related to:

Underweight butter;

Milkfat % of milk sold in Western Cape;

Clotting of fresh pasteurised milk sold in Gauteng;

Labeling of dairy products sold in Kwa Zulu Natal;

Selling of unpasteurised milk in Mpumalanga in a jurisdiction not authorised by regulation;

Labeling of dairy products sold in Western Cape not complying with R146/2010;

Foreign objects present in UHT milk sold in Western Cape;

Food fraud relating to butter;

Incorrect labeling of milk sold in Gauteng;

Incorrect labeling of cheese sold nationally;

Foreign material present in UHT milk sold in Gauteng;

Watery UHT milk sold in Gauteng;

Foreign material present in fresh milk sold in Limpopo Province;

Microbiological non-conformance - raw milk sold in Eastern Cape;

All complaints were documented and investigated.

No Non-achievements / underperformance has been reported

Goal 3 - Special investigations

Achievements

Calcium determination was done on ten cultured milk samples in order to determine the range of calcium values of cultured milk manufactured from milk, reconstituted milk and/or recombined milk.

The addition of milk powder and milk protein concentrates to fresh milk and UHT milk – the investigation was continued into 2018 with application to Milk SA as an additional Milk SA project.

Listeria monocytogenes

Tests were performed on all raw and pasteurised milk obtained through the DSA National Dairy monitoring programme to determine the possible risk of *Listeria monocytogenes* contamination of fresh milk. Positive results were communicated to all relevant parties (National Department of Health, Municipal Health Services (EHP's) as well as processors in accordance with standard procedure to ensure test result traceability.

All milk samples submitted for analysis were submitted for *Listeria* spp. analysis. Samples tested positive for the presence of *Listeria* spp. were handed over to the health authorities for appropriate action.

DSA released a "Pathogen Control Guideline – *Listeria Monocytogenes*" during the first quarter of 2018 to assist industry in taking proactive measures against possible *Listeria* contamination in the factory environment.

Follow up tests (spot checks) were performed on dairy products during the second and third quarter with no non-conformances relating to the presence of *L. monocytogenes* in final product detected. Following reports from the NICD, the decline in the Listeriosis cases was evident until end 2018.

Aflatoxin M1

The Aflatoxin M1 project was started during the second quarter (Cycle 65) and has been completed in the final quarter with the final report end January 2019.

No Non-achievements / underperformance has been reported

Goal 4 - Milk and other dairy product risk identification

Achievements

DSA compiled comprehensive statistical reports following the completion of each quarterly cycle. The reports were interpreted to determine possible industry specific food safety risks. All cycle results indicating non-conformances were subsequently communicated to the respective health authorities.

Reports on non-conforming results were forwarded to the respective government departments at the end of each cycle. Each participating municipality received a quarterly report on the analysis done of samples submitted. Non-conforming processors as well as processors whose contact details were verified and who requested to receive test results were provided with individual test reports. Quarterly reports to health authorities are indicated in Table 2 below:

Table 2

Province	Total
MP	54
LP	92
WC	82
NW	112
GA	104
FS	124
NC	8
KZN	96
EC	56

The DSA national dairy monitoring program provides for the sampling of the categories namely packed pasteurised and unpasteurised milk and retail bulk pasteurised and unpasteurised milk as well as other dairy products. Relevant information regarding food safety and compositional standards for milk and other dairy products were communicated to the dairy industry and other organisations.

NATIONAL AND INTERNATIONAL FOOD SAFETY AND RECALL MONITORING

International food risk monitoring - The following websites and RSS feeds* were monitored on a weekly basis for possible food safety scares that might affect the local dairy industry:

REFERENCES:

1. Bill Marler - marler@marlerclark.com - Food Poison Journal
2. Centre for Disease Control & Prevention (CDC) - cdc@service.govdelivery.com
3. Dairy Reporter.com
4. FACTSSA - marketing@factssa.com
5. Food Focus
6. Food Focus News
7. Food Safety Magazine - info@foodsafetymagazine.com
8. Food Standards Agency - food.standards.agency@notifications.service.gov.uk
9. FoodStuffSA - DrinkStuffSA

10. Health & Safety Laboratory - HSL@public.govdelivery.com
11. News 24
12. Medical Research Council - MRC@public.govdelivery.com
13. National Institute of Allergy & Infectious Diseases (NIAID) - niaid@service.govdelivery.com
14. National Institute for Communicable Diseases - www.nicd.ac.za
15. Product Safety Australia
16. SAAFFI (South African Association of the Flavour & Fragrance Industry)
17. United States Food & Drug Administration - fda@go.fda.gov
18. USDA Food Safety & Inspection Service - usfsis@public.govdelivery.com

The focus remained on raw milk and milk products due to prevailing high trend of non-conformances detected as a result of the DSA National milk monitoring program in collaboration with Health Authorities. Industry reports since end 2016 on the prevalence of Brucellosis in milk herds in certain provinces and consumption of unpasteurised and decontaminated pasteurised retail bulk milk with specific reference to Listeriosis remained a public health concern and information in this regard has been communicated to the Department of Health.

*RSS (Rich Site Summary) uses a family of standard web feed formats to publish frequently updated information: blog entries, news headlines, audio and video.

No Non-achievements / underperformance has been reported

Goal 5 - Remedial action programs with the processors and distributors

Achievements

Quarterly milk and other dairy product sample results once processed were forwarded to the respective PD's and processors/manufacturers. These activities were followed by means of interaction with PD's and processors/manufacturers regarding non-conforming test results as well as recommendations for corrective actions. Communication is done either by means of a telephone call, e-mail report, posted report or a visit to the facility. Environmental Health Practitioners (EHP's) were also requested to communicate all test results to the relevant parties.

DSA technical personnel provided the respective processors and producer/distributors and retailers (milk shops) with comprehensive reports after the visits that are also used for further reference purposes.

Table 3

Province	Number of facilities that received visits
MP	39
LP	24
WC	4
NW	22
GA	25
FS	26
NC	0
KZN	0
EC	0

* Producer distributors (PD's) are defined as milk producers that are also engaging in the packing, distribution and selling of milk whether raw or as heat treated milk and may include other dairy products.

No Non-achievements / underperformance has been reported

Goal 6 - Communication with the authorities and other organisations

Achievements

a. Department of Health: Directorate Food Control

DSA served as standing member on the Food Legislative Advisory Group. In its supportive role, DSA assisted the industry with a substantial amount of queries relating to food labelling requirements as well as dairy technical matters, which in several cases resulted in facilitation processes with the Directorate Food Control. Related matters included the Listeriosis outbreak, review of the Regulations governing general hygiene requirements of food premises, the transport of food and related matters and food additives (Codex General Standards for Food Additives).

b. Municipal Health Authorities

Communication with the municipal health authorities based on information obtained from project 1 was continuous through the year and primarily focused on the implementation of remedial action on non-conforming/substandard milk and other dairy products. Interactions with Environmental Health Practitioners were also used to encourage information and education sessions as an industry initiative to promote the improvement of milk and other dairy product safety and quality.

Industry guidelines were communicated with specific reference to pathogen control in dairy facilities. The illegal sale of raw milk as well as sale of milk of substandard quality (food safety) remained a priority.

c. Department of Agriculture, Forestry and Fisheries (DAFF)

i) Directorate: Inspection Services (IS)

Due to the appointment of the DAFF assignee in terms of the Agricultural Product Standards Act limited activities by the Directorate Inspections Services were noted. Following a directive by the executive officer of DAFF whereby all functions relating to the enforcement of R260/2015 and R78/2013 were delegated to the assignee, communications with inspectorate were disrupted.

Results regarding infringements in terms of the Regulations relating to dairy and imitation dairy products, as a result of the DSA national monitoring program were partly communicated only to DAFF:FSQA.

ii) Directorate Food Safety and Quality Assurance – FSQA (policy making)

Communication with FSQA continued regarding dairy product composition queries, interpretation of the Regulations relating to dairy and imitation dairy products continued. Formal communication with DAFF: FSQA continued regarding the industry challenges with specific reference to R260/2015, as well as the use of dairy terms. Formal communication with industry via the Regulations and Standards Project of Milk SA to this effect also was continuous resulting in final comments presented to DAFF: FSQA for consideration with the expectation that new dispensations will be issued early in 2019.

iii) Directorate Animal Health

DSA liaison with the directorate included communication regarding chemical residue monitoring programme. Further liaison took place on import requirements and the application of the Veterinary Procedural Notice 20, Standards for the registration of a veterinary approved dairy establishment for export.

d. National Regulator for Compulsory Specifications (NRCS): Legal Metrology

Standard procedure provides for a quarterly reporting regarding metrology infringements to the Senior Manager, inspections: Legal Metrology NRCS. One formal complaint was raised with NRCS in the first quarter.

e. Perishable Product Export Control Board (PPECB)

Industry information sessions were held on 16, 18 and 20 April 2018 in Pretoria, PE and Cape Town respectively to ensure effective implementation of the Standard Operating Procedure as agreed between DAFF, industry and PPECB. The implementation process of the latest PPECB SOP was however halted by the DAFF Executive Officer due to concerns considered unjustified

by the Regulations and Standards Project of Milk SA. Since the filing of papers in the High Court by the Woodlands/Milk SA joint application against matters relating to the latest appointment of the assignee, no further developments regarding the PPECB as assignee over dairy export took place until the fourth quarter.

f. South African Bureau of Standards (SABS).

DSA continued to serve on the Technical Committee SABS TC 70/SC 4, Legal Metrology - sale of goods as well as the SABS TC 034 SC 17 Food products – Hygiene practices in the food industry. DSA participated in the balloting of draft standards as well as further provided comment on drafts namely SANS 10049, SANS 10330, SANS 1678 and 1679 relating to pasteurised and sterilised milk. Outcomes of meeting where applicable were communicated to the Regulations and Standards Project of Milk SA.

Milk SA, MPO and SAMPRO

DSA attended the Milk SA Advisory Committee meetings on which it serves and also interacted on a regular basis with the project managers of the Milk SA Consumer Education Project and SAMPRO Training. Additional work took place as Milk SA separate registered as Milk SA projects and reported on under the following project headings:

Investigation into the establishment of infrastructure regarding supply of standardised standards used for the calibration of laboratory equipment in the local dairy industry.

Liaison with industry members continued regarding the Milk SA project relating to the standardisation of standards for calibration of laboratory equipment resulting in the following progress made:

- Initial start-up capital was received from Milk SA end September 2018 which allowed DSA to continue with the development of the independent laboratory facility.
- Since end September 2018 extensive work has been done with the establishment of the laboratory facility, equipment as well appointment of a competent laboratory manager to produce national standards (initially for fat, protein, lactose and total solids of raw milk), also to take control of the import of standards for MUN and SSC's and to facilitate the order and distribution of standards.
- From surveys conducted and individual information obtained, consensus on the import of MUN has been reached. The remaining concern is the standardisation on the use of one SSC standard, and the impact of such standard once decided amongst other on statistical data used in herd health management.
- A decision regarding the import of SSC standards has to be based on a scientific approach, considering what is collectively in the best interest of the organised dairy industry. To this effect discussions have been furthered with expertise to assist regarding the way forward and a scheduled meeting is to take place in the first quarter of 2019 to finalise matters.

Special investigation into food fraud: adulteration of local and imported milk and other dairy products

The outsource of the development and establishment of appropriate test methods with specific reference to milk powders to UHT milk was done in the last quarter of 2018 and the work is to continue in 2019.

Regulations and Standards Project of Milk SA

DSA as project manager of the Milk SA Regulations and Standards Project consulted regularly with the organised dairy industry via the project regarding regulatory matters with specific reference to the appointment of the DAFF Assignee. The management committee of the project continuously interacted with electronic correspondence to the members of the Advisory Committee on a regular basis. Where applicable, outcomes of correspondence were forwarded to the organised dairy industry on an informative basis or requesting comments on regulations and standards. Priority was given to the preparation of the court case against the Minister of the Department of Agriculture, Forestry and Fisheries, the DAFF Executive Officer and the appointed Assignee. Additional matters included regular interaction and meeting between the Management Committees of the Regulations and Standards and Customs Duty and Market Access Advisory Committees.

CGCSA: FSI – DSA as member of the Food Safety Initiative (FSI) interacted on a regular basis with management regarding share of regulatory information. Matters related to regulations under the Foodstuffs, Cosmetics and Disinfectants Act, Agricultural product Standards Act and the DAFF appointed Assignee.

IDF – DSA MD is a member of SANCIDF and of the IDF Standing Committee: Standards of

Identity and Labelling and provided inputs to SANCIDF electronically.

SANCU - DSA attended relevant meetings of SA National Consumer Union regarding dairy food safety and quality related issues.

SASDT – The MD served on the management of the Northern branch of the SASDT. DSA attended Northern as well as Western Cape meetings and exhibited and presented at the SASDT National Symposium in 2018.

Tertiary institutions – DSA served as a member of the Advisory Boards of the Departments of Environmental Health of the Tshwane University of Technology as well as Nelson Mandela Metropolitan University. The purpose of the advisory boards is to give industry inputs and assist the universities with the development of course material for Environmental Health Practitioners.

No Non-achievements / underperformance has been reported

Goal 7 - Liaison on legislation with authorities and other organisations

Achievements

Although a blended role of activities exist, it is important to note that the work of the Regulations and standards project of Milk SA project is not a duplication of this DSA project. The fundamental difference of Project 7 relates to the relationship and involvement of DSA as self-regulatory initiative with government structures and execution of the law. The Regulations and standards Project of Milk SA relates to participation in the formalisation of draft regulations and standards and comments on regulatory matters, as well as communication through Milk SA in the interest of the dairy industry and other stakeholders.

DSA continued liaison with the authorities regarding the following legislation and standards:

1. Department of Health: Directorate Food Control

Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972)

New draft Regulations on Hygiene Requirements for Food Premises and the Transport of Food, Listeriosis outbreak and Codex General Standards for Food Additives.

2. Department of Agriculture, Forestry and Fisheries - Agricultural Product Standards Act, 1990 (Act 119 of 1990)

Regulations relating to the classification, packing and marking of dairy products and imitation dairy products intended for sale in RSA (R260/2015) and dispensations.

DAFF appointed assignee i.t.o. the APS Act.

PPECB as assignee in terms of the Regulations regarding control of the export of animal products, R422 of 22 May 2015.

3. Non-compulsory South African National Standards – SABS

SANS 10049: 2012 – Edition 4, Food safety management - Requirements for prerequisite programs (PRPS).

SANS 10330: Food safety - Requirements for a Hazard Analysis and Critical Control Point (HACCP) system.

SANS 1678 and 1679 - Pasteurised and Sterilised Milk.

4. Compulsory South African National Standards – SABS

SANS 289 ED 1.6: Labelling requirements for prepackaged products (prepackages) and general requirements for the sale of goods subject to legal metrology control.

Adoption of ISO standards referred to in the R260/2015 Regulations relating to the classification, packing and marking of dairy products and imitation dairy products intended for sale in the Republic of South Africa, R260 of 2015 under the Agricultural Product Standards Act, 1990 (Act 119 of 1990) as SA National Standards by the SABS.

5. Codex Alimentarius and ISO

ISO/TS 22002-3:2011 - Prerequisite programs on food safety - Part 3: Farming

ISO/TS 22002-6:2016 - Prerequisite programs on food safety - Part 6: Feed and animal food production.

6. DSA Technical Committee

The technical workgroup committee activities in 2018 were mainly relayed to the Milk SA

projects relating to the investigation into the establishment of infrastructure regarding supply of standardised standards used for the calibration of laboratory equipment in the local dairy industry and special investigation into food fraud: adulteration of local and imported milk and other dairy products.

No Non-achievements / underperformance has been reported

Goal 8 - Information and education

Achievements

DSA presented information sessions based on the DSA Code of Practice and related guideline materials to professional EHP's as well as two hundred and twenty two Environmental Health Practitioners, on a national level, at the respective tertiary institutions. These information sessions are also available to other professions and government/municipal officials, milk producers, processors and distributors that require information regarding food safety and quality standards on a national level.

Date	University	Amount of students attending
30 and 31 August 2017	CPUT	23 students
24 May 2017	DUT	12 students
25 May 2017	MUT	33 students
2 and 9 June 2017	UJ	42 students
4 and 11 September 2017	TUT	59 students
17 August 2017	CUT	42 students
21 September 2017	NMU	11 students

Two information sessions were held at the University of Pretoria main campus and Onderstepoort to 3rd and 4th year students respectively.

One workshop was held with professional Environmental Health Practitioners of the Thabo Mofutsanyane DM and two presentations were delivered at the National Institute for Environmental Health in Cape Town and Port Elizabeth.

No Non-achievements / underperformance has been reported

Goal 9 - Media communication

Achievements

DSA signed contractual agreements with Veeplaas and Agri Connect. Project work resulted in twelve advertisements, five advertorials, three talks on national radio stations, two Milk SA Essay booklet publications and one television broadcast.

No Non-achievements / underperformance has been reported

Goal 10 - Development of guideline documentation

Achievements

Revision work initiated in 2017 was completed and published in 2018 of the following guidelines:

1. DSA Retail Bulk Milk Guidelines;
2. DSA Guidelines for the interpretation of quality problems in milk.

The DSA Code of Practice of the Secondary Industry was on more than one occasion delayed due to amendment in legislation and voluntary standards and publication is now expected in 2019.

No Non-achievements / underperformance has been reported

Goal 11 - Milk SA Regulations and Standards Project of Milk SA

Achievements

DSA as project manager of the Milk SA Regulations and Standards Project consulted regularly with the organised dairy industry via the Regulations and Standards Project of Milk SA regarding regulatory matters with specific reference to the appointment of the DAFF Assignee. The management committee of the project continuously interacted with electronic correspondence to the members of the Advisory Committee on a regular basis. Where applicable, outcomes of correspondence were forwarded to the organised dairy industry on an informative basis or requesting comments on regulations and standards. Priority was given to the preparation of the court case against the Minister of the Department of Agriculture, Forestry and Fisheries, the DAFF Executive Officer and the appointed Assignee. Additional matters include regular interaction and meetings between the Management Committees of the Regulations and Standards and Customs Duty and Market Access Advisory Committees.

No Non-achievements / underperformance has been reported

Income and expenditure statement

Income and expenditure statement	Desember Maandstate 2018 - BI1-4.pdf Desember Maandstate 2018 - BI5-7.pdf Desember Maandstate 2018 - BI8.pdf Desember Maandstate 2018 - Voorblad.pdf Finansiële jaarstate vir die jaar geëindig 2018.pdf
Unnecessary spending during period	No

Popular Report

[DSA Popular Report for 2018.pdf](#)

Additional documentation

No file has been uploaded

Statement

Levy funds were applied only for the purposes stated in the contract	Yes
Levy funds were applied in an appropriate and accountable manner	Yes

Sufficient management and internal control systems were in place to adequately control the project and accurately account for the project expenditure	Yes
The information provided in the report is correct	Yes