REPORT OF THE COMMITTEE'S INVESTIGATIONS ON STAFF COMPLAINTS AT THE NATIONAL CULTURAL CENTRE

The Committee was established by Instruments of Appointment signed by the President of the Republic of Seychelles on 18 April 2017.

August 2017

Contents

| 1. Preface | 3 |
|--|----|
| 2. Terms of Reference of the Committee | 4 |
| 3. Institutions situated in the National Cultural Centre | 5 |
| 4. Chronology of the Committee's Activities | 7 |
| 5. Documents and Information Relied Upon | 10 |
| 6. The Law: Civil Claim through the courts and Occupational Health | 13 |
| 7. Scientific Literature Review | 16 |
| 8. Key findings from face to face Interviews | 19 |
| 9. Evidence of Causation | 21 |
| 10. Recommendations - Compensation | 23 |
| 11. Recommendations – Remedial Action and Future Practices | 25 |
| 12. References | 28 |

Preface

The work of the Committee was dominated with the gathering of information. If we were to assess the merits of compensation claims of staff of the National Cultural Centre, we needed to obtain information and data relevant to the matter.

Initially, we were provided with documentation from the Culture Department. These are listed in this report. To complement the information that we had been provided with, the Committee also undertook visits to the National Cultural Centre in Victoria and the National Records Centre at Providence. On site ad hoc interviews were conducted during these visits to the staff in both locations. The Committee also held interview sessions with over 100 current and former staff of the Culture Department and with individuals who worked in the National Cultural Centre for a prolonged period of time.

Along the way of collecting data, it became clear to the Committee that any award of compensation would not suffice in addressing the concerns proper of the staff. It was evident that there were still issues that the staff encountered in the work environment that needed to be addressed. A compensation award for malady suffered so far would only lead to further compensation awards for future ailments if the underlying issues remain.

The Committee's recommendations have been split into two separate chapters. The penultimate chapter of this report states the Committee's recommendations with regards to the merits of staff claims for compensation. The final chapter addresses existing staff concerns and recommends remedial action.

Divino Sabino Committee Chairperson

August 2017

Terms of Reference of the Committee

By Instruments of Appointment dated 18 April 2017, the Committee was established by the President of the Republic of Seychelles to investigate the complaint of staff affected by fungus in their work place and the merit of their claim for compensation.

Originally, the report and recommendations on remedial action of the Committee were to be submitted to the President by the 30th June 2017, but as the Committee required more time to gather information, this deadline was extended to the end of August 2017. It must be noted that the Committee members worked on this matter within and around their work schedules and other commitments.

The Instrument of Appointment highlights three particular areas that the Committee had to work on: -

- (i) Investigating the complaint(s) of staff affected by fungus in their work place;
- (ii) Investigate the merit of staff claims for compensation; and
- (iii) Make recommendations on remedial action.

This report addresses these three areas.

The Committee comprises of four members with diverse backgrounds: -

Mr Divino Sabino, the Chairperson of the Committee, is a practicing Attorney-at-Law and Notary.

Ms Ivonia Richardson is the Director General for Public Administration & Compliance Division in the Department of Public Administration. She is also a member of the Records Committee under the Seychelles Archives Act and Chairperson on the Committee for Management and Allocation of Office Space in Government.

Ms Cecile Decommarmond is the Director General for Human Resources and Budget Management in the Ministry of Local Government. She was formally Director in Human Resources in the Culture Department and was based at the National Cultural Centre.

Dr Jastin Bibi is a medical practitioner and currently the Senior Registrar in Epidemiology and Statistics within the Public Health Authority.

Institutions situated in the National Cultural Centre

Background

The National Cultural Centre was officially opened on 18th June 1994 on premises of Francis Rachel Street. The plan to construct the building was initiated in the National Development Plan of 1985-1989. To implement the project the Government instituted the National Library Trust Fund and construction of the building started in 1991.

The building was constructed to house the National Library as the previous building could not accommodate the demand for library services brought upon by the country's development. At the time, the National Library was situated in a building located on State House Avenue that was last renovated 1978 – 1979.

National Library

The Seychelles National Library of which its vision is to develop the Seychelles National Library as one of the country's main Information Centres, is a dual purpose library which operates both as a public and a national library and is governed by the National Library Service Act, 2010. It is a manned by a workforce of 37 staff divided into four units namely – Public Library Services, National Library Services, Technical Services and Community Library Services. Its mission is to provide public library services for educational, informational and recreational needs of all individual, this leading to a Cultural nation.

National Archives

The National Archives vision is to develop the National Archives as the country's main centre for historical research. It consists of three main Sections: The **Archives Section** comprising of the Research and Reference Unit. The **Archives Conservation** comprises of the Digital Conservation Unit. The **Records Management** located at the Providence Records Centre comprises of the Records Classification Unit, the Archives Retrieval Unit and the Inspectorate Unit. The Administrative Officer. There are presently a total of 35 members of staff including the Providence Records Centre. Its mission is to collect, preserve and make accessible archival documents of enduring value through the use of the latest information technology.

Culture Department's Secretariat

In 1998 – 1999 the Minister of Culture's Secretariat and its Principal Secretary's Secretariat was accommodated in the National Cultural Centre building.

In 2003- 2004 the Administrative and Finance Section was relocated from National Arts Council building to the National Cultural Centre.

National History Museums

In 2004 the National Museum of History was relocated from the building on State House Avenue to the National Cultural Centre. It has 10 staff.

Copyright Unit.

The Copyright Unit has 6 staff and was relocated from the National Heritage building to the National Cultural Centre in 2010.

Electoral Commission

The Electoral Commission's Office has been occupying additional space at the National Cultural Centre to facilitate conduction of national elections from 2006.

To accommodate the various departments, open spaces within the National Cultural Centre were partitioned to create several closed offices.

According to a Chronology Report prepared by the Culture Department in 2015, the first complaints of serious itching was reported in 2010 when a staff member was working on old correspondences.

Chronology of Committee's Activities

By letter dated 16th February 2017, staff of the National Library and Archives wrote to the President of the Republic of Seychelles to alert the President to the difficulties that they have faced, and continue to face at the National Library and Archives.

After the members were consulted with regards to forming part of the Committee, it was the website of the Office of the President of the Republic of Seychelles, on the 31st March 2017, that announced the establishment of the Committee to investigate complaints by public sector employees located in the National Cultural Centre that their health has been affected by fungus emanating from the Archives Section in the building.

The President of the Republic of Seychelles signed the Instruments of Appointment establishing the Committee to investigate the complaint of staff affected by fungus in their work place and the merits of their claim for compensation on the 18th April 2017. By the end of April 2017, all Committee Members received their Instruments of Appointment and were provided by the Culture Department through the Department of Public Administration with a bundle of documentation in soft form. The bundle of documentation included earlier reports, investigations, photographs and memos. These are listed in the chapter below on resources consulted by the Committee.

The Committee met for the first time on 5th May 2017 wherein a plan of action was conceived and issues were discussed. It was at this stage that the Committee became wary of the original deadline of 30th June 2017, as information and data received at the time seemed inadequate.

The Committee would meet again on the 12th May 2017 to discuss gathering more information, the holding of interviews and inspection of the National Cultural Centre.

On the 17th May 2017, the Committee visited the National Cultural Centre. Firstly, the Committee met with the then Principal Secretary Ms Benjamine Rose and a delegation of senior officials of the Ministry which comprised of Mr Gabriel Essack (Technical Advisor), and Mr Alex Rath (Director for Human Resources Management). In the meeting, the officials of the Culture Department gave the Committee a briefing of the history of the issues encountered by the staff. Immediately after the meeting, the Committee inspected several areas of the building that is occupied by the National Library and administrative staff of the Culture Department. The Committee decided to inspect the premises without the senior officials. In the process the Committee observed the premises on its own accord, drew its own conclusions and spoke to several staff who were candid with the Committee Members about their ailments and concerns.

On the 19th May 2017, the Committee visited the part of the National Cultural Centre building that is occupied by the National Archives. The Committee first met with the Director of the National Archives, Mr Alain Lucas, who briefed the Committee about the history of the issues surrounding the National Archives premises. Thereafter, the Committee inspected the premises and spoke to the staff, who were candid about their experiences and observations.

The Committee held its third meeting on 26th May 2017 where it discussed the contents of a questionnaire that it wanted to use to interview all staff of the National Cultural Centre. Also discussed were members' observations in the two site inspections. Members also discussed obtaining medical reports of the staff members that consulted a Medical Doctor at the time of the outbreaks. Originally, the Committee planned to obtain these medical reports and then interview staff. It was not known to the Committee members at the time that these reports contained little information and was otherwise unhelpful towards the work of the Committee and a great deal of time was wasted trying to obtain these medical reports.

The Committee was working towards the final version of its questionnaire when they were alerted to the fact that there were some staff members of the National Archives who were leaving the jurisdiction on an extended working visit to the People's Republic of China. The Committee therefore decided to interview these 5 staff members on the 8th June 2017. Each of the five staff members were interviewed one at a time by three of the four Committee members that comprised of the interviewing panel.

The Committee met for the 4th time on 16th June 2017 where it sought to look at the progress of its work and progress in obtaining medical certificates. Members worked on finalizing the questionnaire to interview the staff of the National Cultural Centre.

When the Committee next met on 23rd June 2016, it decided that it would press on with the interviews despite not having the medical reports. The questionnaires were in a finalized format. Dr Bibi had stated that he would procure the assistance of volunteers who would assist in conducting the interviews. It was decided that in order to expedite the interviews of 100 plus workers, it would be best that each Committee member would interview staff separately, so that there would be multiple interview panels at a time.

The interviews took place on 26th June 2017 at the ex National Assembly Hall at the National Cultural Centre. Each Committee member was assigned with hard copies of the questionnaire. Three volunteers were procured by Dr Bibi to assist in conducting the interviews and they were Dr Winnie Lowah, Ms Anita Bonne and Ms Chantal Rath. Dr Bibi co-ordinated the smooth operations of the interview, accordingly, there were six interviews being conducted at any one time. This sped up the process so that 113 staff were interviewed on the day. Each interview commenced with the worker being informed that the information they provided

would remain confidential and that they should therefore be free to express their views. Each worker was assigned an identification number known only to the Committee Members and their interview questionnaires therefore did not feature their names. Workers were all asked the same set of questions which included questions on the periods when they worked at the National Cultural Centre, their ailments, work conditions and work locations, home conditions, whether they noticed a difference in their ailments when they were at the work place versus outside of the work place etc. The questionnaires were then deposited with Dr Bibi who would compile the results for statistical analysis.

On 28th June 2017, the Committee visited the National Records Centre at Providence. The Committee had been alerted to the fact that the building housed a number of archival documents and had staff issues as well.

The 6th Committee meeting was held on 14th July 2017. The Committee discussed the fact that they had been approached by individuals who claimed to have worked at the National Cultural Centre but were not informed about being interviewed. At this stage, the Committee decided against holding further interviews, as it would lead to delays in compiling the interview statistics and delays in producing this report. In any event, the preliminary results illustrated clear patterns amongst the workers interviewed. The Committee also observed the lack of medical reports received from staff. Some staff never consulted a medical doctor for their ailments, whilst some only sought over the counter medication such as anti-fungal creams for topical conditions they developed.

The 7th meeting of the Committee took place on 4th August 2017. The Committee discussed its final schedule and sought to get to work on producing this report. Recommendations were discussed. The Committee was also wary of continuously being approached by ex workers of the National Cultural Centre who wanted to be interviewed and also by certain rumours that the Committee had already decided on its recommendations.

The 8th meeting of the Committee took place on 18th August 2017. The Committee set a timetable for the remainder of the month of August with regards to completing this report. Members agreed to the format and chapters of this report and discussed its recommendations.

The 9th meeting of the Committee took place on 24th August 2017. Members discussed and agreed in principle on the recommendations set forth in this report. Dr Jastin Bibi was not in the country but took part in the meeting via Skype.

The 10th and final meeting of the Committee took place on 29th August 2017 where the Members agreed to the contents of this report.

Documents and Information Relied Upon

A. The Committee members were each presented with a bundle of documents in electronic form. Below are a list of the documents that formed part of the original bundle: -

Agreements

- Contract between Ministry of Tourism & Culture and Tall Cleaning Agency dated 10 August 2016

Budgets

- Fungus Assessment by French Experts (December 2015)
- Budget for Dr Moularat's First Visit
- Per diem for Fungus Experts Visit 23-30 January 2016
- Fungus Experts Budget Adjustments dated 25 January 2016

Communications

- Letter from Mr Gabriel Essack to Dr Jude Gedeon dated 16 October 2015
- Faisl Bousta email to Mr Gabriel Essack dated 18 November 2015
- Faisl Bousta email to Mr Gabriel Essack dated 20 November 2015
- Dr Stephane Moularat email to Mr Gabriel Essack dated 1 December 2015
- Faisl Bousta email to Mr Gabriel Essack dated 8 March 2016

Fungus Management Committee Information

- Agenda of Meeting held on 26 February 2016

- The fungus problem at the national cultural centre – Proposal from Mr Gabriel Essack dated 6 October 2015

French Experts Background

- Curriculum Vitae of Dr Stephane Moularat including Passport Photograph Page
- Curriculum Vitae of Marie Dominique Parchas
- Curriculum Vitae of Dr Faisl Bousta
- Synopsis of the Three French Experts

Photographs

- 61 Photographs of the National Cultural Centre Premises by Mr Belmont taken in 2015

- 29 Photographs of Staff Skin Conditions taken in February 2016

- 198 Photographs taken by the French Experts in 2016 of the National Cultural Centre

- 131 Photos taken in 2016 by Parchas of La Bastille, National Cultural Centre, National Records Centre and other miscellaneous

- Data Sheet of Symptoms of staff of National Cultural Centre

Project Proposals

- Dossier for French Experts
- Fungus Action Plan 2015-2016
- Fungus Dossier for Faisl Bousta

- Justification Memo to Purchase Hy-Lite 2

Quotations

- Quotation from Francois Bourges for Testing Seychelles National Library Environment

- Fungus Rapid Test Kit - Hy-Lite 2 – Picture & Pro Forma Invoice

- 2016 Quotation from Dr Moularat to evaluate indoor air quality

- 2016 Adjusted Quotation from Dr Moularat

- 2016 Quotation from Helicon Conservation Support (Jaap van der Burg) for Consultancy

- Memo from Merck Millipore

Reports

- 2015 Fungus Report from the Seychelles Bureau of Standard on Administration Wing of the National Cultural Centre

- Report of Faisl Bousta & Stephane Moularat on National Archives Buildings (29 May 2016)

- 2015 Briefing of the Visit from the Plant Protection Unit

- Chronology of Events Compiled by Gabriel Essack in 2015

- 2015 Micro Swab Analysis for Yeast and Moulds from Ministry of Health with cover letter dated 29 October 2015

- Recommendations from Public Health Commissioner by letter dated 16 October 2015

- Letter dated 24 February 2016 from Ministry of Health with summary of observations of 56 staff medical referrals

- 2016 Preliminary Presentation by Dr Bousta and Dr Moularat to Management

- Minutes of Telephonic Meeting of 27 April 2016 between Dr Moularat and members of Culture Department

- Email dated 8 January 2016 from Ms Marie Dominique Parchas to Mr Gabriel Essack with recommendations on training

- 2016 Preliminary Results Report of French Experts

- Fungus Air Sampling Summary of Tests conducted by Seychelles Public Health Laboratory conducted on 29 October 2015

- La Bastille Situation Report dated 28 January 2016

- Minutes of Meeting dated 20 October 2015 between French Ambassador to Seychelles and Senior Officials from Culture Department

Technical Documents

- 2016 Oxyde Dethylene Fiche Securite from French Experts

- 2016 How to use Biotine T

- Academic Publications from Ms Parchas

- Manual on the Storage of Archives by Ms Parchas

- Byodet RFU – Advanced Detergent Sanitiser

- Email dated 9 February 2016 from Ms Parchas with recommendations on cleaning of books

- Article on Starage and Handling Cleaning of Books and Shelves
- Fungus Data Collection Form for staff
- Map of La Bastille Location
- Hy-Lite Application Manual
- Hy-Lite Equipment Manual
- Occupational Health Guideline for Ozone
- Schematic of National Cultural Centre

B. In addition to the above, the Committee was later provided with the following documents from the Government: -

- Letter from Staff of the National Library/Archives to the President dated 16 February 2016

- Recommendations of Mr Peter Lalande dated 4 January 2016 addressed to the President

- Department of Culture Handing-Over Report for Seychelles National Archives and Vision Statement of the Seychelles National Library

-Seychelles National Museum of History Brochure

C. The Committee received a handful of medical reports from staff of the Culture Department. These were from staff that consulted medical practitioners on their own accord and at their own cost. Some of these reports date from 2013 and some from as late as mid 2017, well into the period when the Committee were conducting its investigations.

In its site visits, Committee members took on-site notes and photographs.

The Law: Civil Claim through the courts and Occupational Health

If a person who worked in the National Cultural Centre wished to make a formal claim for compensation through the courts, it is likely that they would have had to do so under the law of delict as espoused under Article 1382 of the Civil Code of Seychelles Act.

Article 1382.1 states that every act of "man that causes damage to another obliges him by whose fault it occurs to repair it". And so the law not only looks at who caused the damage, but also on whether that person is at fault. Article 1382.2 defines fault as "an error of conduct which would not have been committed by a prudent person in the special circumstances in which the damage was caused".

In other words, a person will be legally responsible for damaged that he has caused if that person committed an error of conduct.

Article 1382.4 goes on to state that a "person shall only be responsible for fault to the extent that he is capable of discernment;". This brings in the notion of foreseeability. In that if the damage caused was not capable of being discerned, then no claim can be successfully brought against the person.

A worker who therefore wanted to bring legal proceedings against the Government under delict would have to fulfill the elements stated above in order to claim successfully against the Government, which controls the premises of the National Cultural Centre. Credible evidence would have to be brought to court against the Government to show that the injuries or ailments that the worker suffered was caused by the Government, that the Government is at fault legally, in that the Government acted in error in allowing persons to work at the National Cultural Centre, and that the Government was capable of discerning the ailments suffered by such persons.

Evidence of one's ailments should ideally be brought to court in the form of a medical report. Evidence that one's ailments were caused by the Government may be more difficult to prove, in fact, if one took each case individually and analyzed the available facts and evidence, it may be difficult to be convinced that that person's ailments were caused by the Government. A May 2016 report by the French Experts Dr Moularat and Dr Bousta concluded that the fungal infections observed on many employees could only have been transmitted by human interactions. Even if a tribunal of fact could be persuaded that the Government caused the ailments, it may also be difficult to be convinced that the Government was capable of discerning that such damage could occur prior to the first outbreak of ailments amongst persons working at the National Cultural Centre in 2010. In light of the law and the evidential burden that a court of law would have had to consider, notwithstanding the law of prescription (one normally has a maximum of 5 years to bring a claim for

personal injuries), the Committee therefore rules out recommending any compensation for any claims for ailments or damages suffered prior to 2010.

After the first outbreak of 2010, the Government and workers of the National Cultural Centre were now aware that the National Cultural Centre premises was potentially a hazard to the health and well being of persons who frequent it. The offices, repositories and documents were fumigated at this stage. This did not appear to stop the ailments that workers suffered and matters came to a head in early 2013 when there was a second outbreak of ailments amongst the workers of the National Cultural Centre, leading to the Government deciding to close down the premises. At this stage, it could be successfully argued before a court of law that the ailments suffered by the workers was capable of being discerned by the Government. But what caused the outbreak may not be capable of being ascertained with absolute certainty.

The burden of proof in a civil claim is on a balance of probabilities. That means that a court, in assessing whether a fact is proven, must assess the evidence and ask itself whether it is more likely than not that some matter is proven. This is unlike the burden of proof in a criminal trial, whereby a court must be satisfied beyond reasonable doubt that a person has committed the crime he stands accused of. And so if the issue at hand in civil proceedings is whether the ailments suffered by the workers of the National Cultural Centre caused by and is the fault of the Government, a tribunal of fact in civil proceedings must satisfy itself that it is more likely than not that the Government is at fault before it can go on to award any compensation.

The Committee members were cognizant of the legal process and the standard of proof required in civil proceedings. And in reaching its decisions, Committee members sought to emulate the burden of proof required in civil proceedings, i.e. on a balance of probabilities. The Committee was also mindful of the fact that in a court of law, not all evidence brought before it would be admissible, the Committee, not bound by the rules of evidence in a court of law, operated in a manner that allowed us to accept and analyze all information that was presented to us and that we collected.

The Committee members were also cognizant of the Occupational Health and Safety Decree, 1978. This law put a duty on every employer, including Government, to ensure the "health, safety and welfare at work of all his employees" (section 4(1)). Section 4(2) of the Decree elucidates on this, stating, inter alia that the duties of the employer includes: (i) arrangements for ensuring safety and absence of risks to health in connection with the use, handling, storage and transport of articles and substances; (ii) the provision of such information, instruction, training and supervision as is necessary to ensure the health and safety at work of his employees; and (iii) as regards any place of work under the employer's control, the maintenance of it in a condition that is safe and without risks.

The Decree also states, inter alia, that employees have (i) to take reasonable care for the health, safety and well being of himself and of other persons who may be affected by his acts or omissions at work; and (ii) as regards any duty or requirement imposed on his employer or any other person by or under law, to co-operate with the employer or that other person so far as is necessary to enable that duty or requirement to be performed or complied with. Essentially, an employee is also under a duty to act prudently with regards to his or her safety and to follow any safety instructions given. This is noteworthy because despite workers of the National Cultural Centre being instructed to wear safety gloves, masks and lab coats, Committee members observed that that practice was no being complied with by all relevant employees when the Committee made its site visits.

Nevertheless, the Decree goes on to state that it shall be an offence for any employer to fail to adhere to its duties under the Decree, provided that due diligence was not exercised by the employer. A court of law can also order an employer to remedy the matters that are in contravention of its duties under the Decree.

Scientific Literature Review

A WHO working group meeting, convened in Bonn, Germany, 17– 18 October 2007 concluded that there is sufficient epidemiological evidence to show that there is a health risk for occupants of damp or mouldy buildings, both houses and public buildings. There is an increased risk of health-related problems such as respiratory symptoms, respiratory infections, exacerbation of asthma and skin conditions. Some evidence suggests increasing risks of allergies and asthma. Although few intervention studies are available, their results have shown that remediation of dampness problems can reduce adverse health outcomes.

For instance, residential dampness is associated with a 50% increase in current asthma and substantial increases in other respiratory health outcomes, suggesting that 21% of current asthma in the United States may be attributable to residential dampness and mould (Fisk, Lei-Gomez, Mendell, 2007; Mudarri, Fisk, 2007). These estimates, for imprecisely defined risk factors, cannot indicate true causal relationships and must be interpreted with caution, but they suggest that some dampness-related risk factors contribute substantially to the burden of human respiratory disease.

There is clinical evidence that exposure to mould and other dampness-related microbial agents increases the risks of rare conditions, such as hypersensitivity pneumonitis, allergic alveolitis, chronic rhinosinusitis and allergic fungal sinusitis. Toxicological evidence obtained in vivo and in vitro supports these findings, showing the occurrence of diverse inflammatory and toxic responses after exposure to microorganisms, including their spores, metabolites and components isolated from damp buildings.

While groups such as atopic and allergic people are particularly susceptible to biological and chemical agents in damp indoor environments, adverse health effects have also been found in non-atopic populations.

Indoor environments contain a complex mixture of live (viable) and dead (nonviable) microorganisms, fragments thereof, toxins, allergens, volatile microbial organic compounds and other chemicals. The indoor concentrations of some of these organisms and agents are known or suspected to be elevated in damp indoor environments and may affect the health of people living or working there. In particular, it has been suggested that dust mites and fungi, both of which favour damp environments, play a major role. Dust mites and several fungi produce allergens known to be associated with allergies and asthma; many fungi also produce toxins and irritants with suspected effects on respiratory health.

It has been long documented that microbial agents in the indoor environment contribute to asthma. The Committee on the Assessment of Asthma and Indoor Air, Division of Health Promotion and Disease Prevention, Institute of Medicine, published "Clearing the Air: Asthma and Indoor Air Exposures" and stated that exposure to moulds is associated with exacerbations of asthma (Institute of Medicine 2000).

Spores and other particulate material, as well as volatile organic compounds produced by microorganisms, building materials, paints and solvents, are potentially irritating. In epidemiological studies, the prevalence of respiratory and irritative symptoms has been associated with perceived mould odour, possible indicating the presence of microbial volatile organic compounds (Jaakkola, Jaakkola, Ruotsalainen, 1993; Ruotsalainen, Jaakkola, Jaakkola, 1995). It has been suggested that these compounds are present in damp buildings at levels sufficient to cause symptoms of irritation in exposed people (Hope, Simon, 2007). Furthermore, the sensation of unpleasant odours as such can cause stress responses and nonspecific somatic symptoms such as headache and nausea.

There is strong evidence that significant disease can result from dampness and fungi in the home or workplace (Brunekreef et al. 1989, Dales et al. 1991, Garrett et al. 1998, Kilpalainen et al. 2001). Dust mites in damp environments explain some of the relationship between dampness and respiratory symptoms. However, the causal relationship between the damp environment and health symptoms, including respiratory symptoms, headache, fatigue, and recurrent infections, is less well understood, and mould seems to represent part of the explanation (Bornehag et al. 2001).

Other microbes including bacteria; gram positive, gram negative, and mycobacteria grow on substrates in indoor environments and may contribute to occupants' health symptoms. It has been identified that bacterial species growing with mould could also produce toxins (Myatt and Milton 2000, Peltola et al. 2001, Falkinham 2003).

Taking all these possible risk factors into consideration, patients can present to primary care services with symptoms and health concerns that require consideration of environmental factors. In some cases, patients' exposure to moulds in their homes, offices, schools, and workplaces may be having a significant effect. The environment often has a role in the development and progression of diseases (Institute of Medicine 1988, Menzies and Bourbeau 1997).

In addition, patients present with irritant symptoms and a broad array of possible "toxic effects" that include neuro-psychiatric, cognitive deficits and digestive system problems that some researchers and clinicians have noted could be associated with mould exposure. Patients may have their own anecdotes and perceived symptoms, or they may be responding to alarming notices in the lay media.

In 2004 the Institute of Medicine (IOM) found there was sufficient evidence to link indoor exposure to mould with upper respiratory tract symptoms, cough, and wheeze in otherwise healthy people; with asthma symptoms in people with asthma; and with hypersensitivity pneumonitis in individuals susceptible to that immunemediated condition. The IOM also found limited or suggestive evidence linking indoor mould exposure and respiratory illness in otherwise healthy children. In addition, in 2004 the IOM found sufficient evidence to link exposure to damp indoor environments in general to upper respiratory tract symptoms, cough, and wheeze in otherwise healthy people and with asthma symptoms in people with asthma.

There are three factors when combine in indoor environments strongly support mould growth and the corresponding potential for human exposure to mould:

- 1. Building materials and books that can become sources of nutrition for mould which is in abundance at the National library and archives.
- 2. Moisture from leaking roofs, leaking pipes, or from condensation on or water intrusion through walls or basements which to certain extent exists at the National library and archives.
- 3. Inadequate or poorly maintained ventilation systems that may not provide enough air for dilution or dehumidification or that may themselves harbour sources of mould or disperse mould spores into the occupants' breathing zone which is the case in many locations at the National library and archives.

Key findings from face to face Interviews

Most of the staff working at the National Library, Archives and other sections affected by this outbreak were interviewed with a standardised structured questionnaire in order to better understand their working condition and possible health issues they might have experienced or currently experiencing.

Over the years, according to the interviews, the employees of the National Library, Archives and other sections are suffering from ailments which according to them are directly related to their working environment. In 2013, there was a report of increasing number of staff complaining of respiratory and skin conditions and so was the case in 2015.

Out of a total of 142 staff working as per payroll in the Department of Culture from Ministry of Youth, Sports and Culture 113 participated in the interview. The participants had a diverse profile with length of service ranging from less than one year to 45 years of which 63 had a length of service of 10 years or less, 18 had 11 to 20 years of service and 32 had a length of service of 21 years and above. Education level was determined according to school years completed of which 6 completed primary schooling, 27 secondary, 60 post-secondary and 15 studied at university level.

On average, the participants spend 8 hours a day and five days a week spent at work.

The staff performs a variety of duties according to their job descriptions ranging from general cleaning of books and documents, cataloguing, classification, processing and repair of books, dealing with clients to administrative duties of the libraries and archives. Some duties involving direct handling of old damaged books and documents may have a higher potential risk of being directly exposed to moulds and fungus.

Pertaining to the working environment, 79 out of 113 participants (70%) claims that moulds and fungus could be seen in documents, on roof and walls of the building. This was also noted during several site visits conducted by the investigation team. Leaking roof and water seepage is a problem as reported by 64 out of 113 participants (57%) and strong musty odours at work especially in the mornings was reported by 90 participants (80%). Inadequate or poorly maintained ventilation systems remains a problem in various departments whereby the central air-conditioning system has been decommissioned and several individual units installed with some having their outside unit installed indoors and according to 41 participants out of 107 (38%) with air-conditioning units admitted that their respective units are serviced regularly.

The National Library original architecture has been modified in several places with partitioning and internal roofing, proof of planning approval for such modifications were not available.

When asked regarding possible health related problems, several conditions such as mucosal membrane irritation, hoarseness of voice, exacerbation of or new onset of asthma were some of the conditions reported but the most alarming was skin irritation of different severity reported by 101 out of 113 participants (89%). These claims were also crosschecked and verified against medical reports from private doctor and from clinical notes from special outpatient clinic organised by the Ministry of Health and turned out to be accurate.

Conclusion

The most common types of illnesses directly related to mould are the allergic rhinitis and asthma. Clinically, it is well recognized that moulds can be major triggers. Exposure to mould antigens has long been implicated in the development of symptoms of perennial allergic rhinitis and such reactions also occur in funguscontaminated buildings as already illustrated. The early phase of the allergic response causes symptoms including clear rhinorrhea, nasal congestion, sneezing, post-nasal drip with sore throat, coughing, and hoarseness; and the late phase leads to increased nasal obstruction which has been reported.

In the lower airway, allergic inflammation can trigger bronchospasm, chest tightness, and shortness of breath, leading to either new onset of asthma or asthma exacerbations in sensitized individuals which was also reported.

Various dermatologic responses to mould have been described, including dryness, pruritus, and skin rashes and so was the case from the staff from the National Library and archives. Whether there is an immunologically mediated form of dermatitis in response to mould exposure in indoor environments is not clear, but in support of this, case reports of occupational contact dermatitis and contact urticaria secondary to mushroom or mould exposure.

There is extensive support of literature available and findings from the interviews strongly suggesting an association between the visible presence of moulds in the National Library and Archives with medical conditions suffered by the employees. There is also laboratory confirmation of the presence of moulds in various locations of the National Cultural Centre from tests conducted by the Seychelles Public Health Laboratory in 2015 which corroborate with the health issue claims and other findings.

Evidence of Causation

A number of employees from the Culture Department, who are based at the National Cultural Centre in Victoria, have written to the President to express their concerns and disappointment at their continuous adverse working conditions and to request payment of compensation for their sufferings and pain endured due to occupational illness.

From available records and interviews conducted with persons who worked at the National Cultural Centre, the following have been confirmed:

1. After an outbreak of skin irritations amongst the National Archives staff in 2010, the National Archives' repositories, documents and offices were fumigated.

2. The National Archives and the National Library at the National Cultural Centre at Victoria were closed to the public for one year from early 2013 and the employees were sent home in mid 2014 due to an outbreak of skin irritations amongst the staff.

3. The employees were sent to Dr Murthy in 2014 for examination, following complaints of various illness and sores that they claimed was attributable to the work environment at the National Cultural Centre. The Culture Department paid Dr Murthy for his services.

4. Treatment started at the National Cultural Centre in 2014 as follows:

- Introduction of UV lights and other equipment
- Ozone treatment were done twice a month
- Cleaning of documents and building was done by the Contractors technicians

5. Employees who were sent home returned back to work after one year but they encountered more problems with the UV lights and equipment that were being used to treat the fungus. They were sent home again for another year from October 2015 to October 2016.

6. A special clinic for all staff of the National Cultural Centre was set up at the Yellow Roof of the Victoria Hospital in November 2015. But the 56 staff attended to were not provided with medical reports. In a letter from the Ministry of Health addressed to the Culture Department dated 24th February 2016, Dr Reginald states that: -

"56 patients were referred mainly from National Archives and National Library, complaining of skin itchiness, watery eyes, stomach upset and breathing difficulties, allegedly after being exposed to substances in their working place environment. Whilst most symptoms were mild, some patients had severe breathing problems requiring the use of steroids and inhalers. Though no microorganisms were identified the clinical symptons could be a reaction from irritative agents such as chemicals or fungus."

7. Tests for yeast and mould conducted by the Seychelles Public Laboratory on the 9th November 2015 at the 9 separate locations within the National Archives resulted in 6 positive outcomes. Yeast and mould were confirmed on old books, within the Library attics shelf, a repository shelf and an old book in the library attic.

8. Two French experts, Dr Bousto and Dr Moularat were in Seychelles from 23rd to 29th January 2016 to evaluate the situation and conducted tests on site during the period that the employees were sent home for the second occasion. Following the results derived from the various tests conducted, the UV lights and ozone treatment were stopped as they were found to be hazardous to human health causing ailments such as tingling sensations and soar throats. They also recommended that the building should be constantly cleaned and aired to improve air circulation and reduce the concentration of volatile chemicals in the air.

8. The employees were exposed to these undesirable conditions and they had to go and see private Doctors and spend their own money to buy medicines and ointments.

9. Although their working environment is better now without prolonged exposure to the UV lights and ozone treatment the employees are continuously complaining of itchiness, tiredness and other illness which they believe is attributable to the condition at the National Cultural Centre.

Remuneration for Employees Located at the National Cultural Centre

The staff from the **National Archives, the Museum and the National Library** of the Culture Department works under undesired conditions as they are often exposed to dust, fungi and chemicals which are used to preserve paper and different objects they deal with.

The current schemes of service make provision for staff of above mentioned divisions to be paid an Inducement Allowance at the rates specified below to compensate them for working under such undesired conditions:

Rates of Inducement Allowance SR

| 1. | Archives: (fixed rate for all staff from Assistant Restoration to Principal Archivist) | 2,000.00 |
|----|---|----------|
| 2. | Museum: (The staff also need to lift heavy objects, climb Ladders & scaffolding, go on field to collect Specimens for museum collection & exhibition) The allowance also cover for any work undertaken outside normal working hour. | |
| | Receptionist | 600.00 |
| | Museum Assistant/Senior | 2,000.00 |
| | Asst Museum Curator/Curator | 2,000.00 |
| | Museum Conservator & Restoration | , |
| | Assistant/Restoration Officer | 2,500.00 |
| | Asst Museum Conservator and | , |
| | Exhibition Designer/Museum | 2,500.00 |
| | Asst Herbarium Curator/Herbarium | , |
| | Curator | 3,000.00 |
| | • Director | 3,500.00 |
| 3. | National Library (fixed rate for all staff) | 2,000.00 |

The risk factor on the health of staff located at the National Cultural Centre in Victoria and the Records Centre at Providence, associated with their working conditions is high and there is a need for them to be paid a Location Inducement Allowance in addition to the current Inducement Allowance.

Recommendations – Compensation

From the findings and reports produced to the Committee it is evident that the working environment at the National Cultural Centre has had an adverse/detrimental effect on employees of the Culture Department. The fact that the employees had to be treated and sent home for two years whilst the building and documents were being treated indicate that there is a problem despite the absence of medical reports to support employees' individual case for a claim on grounds of 'occupational illness'.

The Public Service Orders, section 330, which also make reference to the Occupational Safety & Health Decree, Cap 151, provide for employers to ensure that the work place is safe for employees whilst at work and entitle them to claim for compensation resulting from accidents whilst on duty.

In the case of the employees of the Culture Department located at the National Cultural Centre, their grievance and claim for compensation on grounds of 'occupational illness' should fall within the threshold of 'accidents whilst on duty'.

It is therefore recommended that a case is submitted to the Office of the Attorney General to determine the amount for the payment of compensation for persons who were employed at the National Cultural Centre, in Victoria and at the Records Centre at Providence who have been in employment for the four and a half years from 1st January 2013 to 30th June 2017, on a pro rata basis, to compensate them for their pain and suffering.

The date of 1st January 2013 was chosen by the Committee as the starting point for the award of compensation as this was the timeframe in which a relatively large number of the persons interviewed stated that they started suffering from their ailments.

The Committee further recommends the resumption of a Location Inducement Allowance to workers at the National Cultural Centre as from 1^{st} July 2017, as elaborated upon in the following chapter.

Recommendations – Remedial Action and Future Practices

1. Medical Treatment for Employees of the Culture Department

To date employees of the Culture Department are still complaining of the undesirable working environment at the National Cultural Centre and the Records Centre and they claim that they have to incur additional expenses for payment of medical fees and medicines.

It is recommended that the affected employees are provided with free medical evaluation and treatment for occupational illness until the National Cultural Centre and the Records Centre are treated and pronounced as safe working environments.

2. Office Accommodation

The National Cultural Centre currently accommodates the administrative staff of the Culture Department, the National History Museum, the Copyright Unit, the National Library and the National Archives and its staff.

Additionally since 2006 the office of the Electoral Commission has been occupying the space normally used as the lending librarywhich has been blocked off completely within the building. The lending library is currently not operational and the books have been placed in containers until the office space is vacated by the Electoral Commission. The building is therefore overcrowded and staff is occupying partitioned temporary offices which restrict the airflow and also contributing to the undesired working environment.

The National Archives has two Repositories where old books and documents are kept. The environment in the repository is unpleasant, even with air conditioning and humidifier, and prolong stay can be detrimental to one's health.

To free up space at the National Cultural Centre, alternative accommodation at the Le Chantier Mall has been reserved for the administrative staff of the Culture Department to be available in the first quarter of 2018. The office space which will be vacated at the National Cultural Centre will be re-allocated to staff of the Library so that the temporary offices can be demolished.

The National Cultural Centre is overcrowded and requires continuous cleaning and maintenance to ensure a safe working environment for all employees and the public that visit this establishment.

It is recommended that:

a) The Electoral Commission moves out of the building and remove all the old roofing sheets and blockage allowing the air to flow freely into the building; b) Demolish the temporary offices once the administration staff of Culture Department moves to their new location at Le Chantier Mall.

c) A complete renovation plan should be prepared, including appropriate air condition units, and budgeted for to restore the building to its original state by an agreed date.

d) In line with section 25 of the Occupational Safety and Health Decree, that Health & Safety representatives are elected and appointed in the Culture Department and that employees' are sensitized in keeping a high level of hygiene at the workplace, inclusive of appropriate use of safety apparel.

e)The construction of a new purpose built modern archival institution with modern archival storage systems conductive to the Seychelles climate, in a suitable, preferably elevated location, is planned and budgeted for to relocate the Archives within the next five to ten years.

3. Location Inducement Allowance

Employees of the National Library, Museum and Archives have to continuously be exposed to old documents and books at the National Cultural Centre, being the nature of their duties, even after the building has been treated and maintained.

It is recommended that the Scheme of Service for the National Library Cadre, the Museum Cadre and the Archives be revised to include payment of a monthly Location Inducement Allowance, of not less than SR1,000.00 to be effective from 1st July 2017, based on the frequency of exposure to such documents and books taking into consideration the health risk of the employees.

4. Up-keeping and Maintenance of Public Records in Government

The situation at the National Cultural Centre should be seen as an eye opener for other government organizations in the way they keep and maintain public records. Some reports pointed out that the source of fungus at the National Cultural Centre and the Records Centre could be from untreated documents sent to the National Archives from other government organisations.

It is recommended that other government organizations are sensitized to keep and maintain records in a clean environment and to conduct appropriate fungus treatment programmes.

5. Review of Laws & Policies with regards to Document Retention

That the Government consider further digitization and then possible disposal of hard copies of certain non-essential or low historical value documents. This may require a review of the policies or the relevant laws, such as the Seychelles Archives Act.

References

Bornehag CG et al. (2001). Dampness in buildings and health: Nordic interdisciplinary review of the scientific evidence on associations between exposure to 'dampness' in buildings and health effects (NORDDAMP). *Indoor Air*, 11:72–86.

Brunekreef B et al. (1989). Home dampness and respiratory morbidity in children. *American Review of Respiratory Diseases*, 140:1363–1367.

Dales RE, Burnett R, Zwanenburg H (1991). Adverse health effects among adults exposed to home dampness and molds. *American Review of Respiratory Dis- eases*, 143:505–509.

Falkinham JO. 2003. Mycobacterial aerosols and respiratory disease. *Emerging Infectious Diseases* 9(7):763-67.

Fisk WJ, Lei-Gomez Q, Mendell MJ (2007). Meta-analyses of the associations of respiratory health effects with dampness and mold in homes. *Indoor Air*, 17:284–296 Fisk WJ et al. (2002). Performance and costs of particle air filtration technologies. *Indoor Air*, 12:223–234.

Garrett MH, Rayment PR, Hooper MJ (1998). Indoor fungal spores, house dampness and associations with environmental factors and respiratory health in children. *Clinical and Experimental Allergy*, 28:459–467.

Hope AP, Simon RA (2007). Excess dampness and mold growth in homes: an evidence-based review of the aero irritant effect and its potential causes. *Allergy and Asthma Proceedings*, 28:262–270.

Institute of Medicine (IOM). 1988. Division of Health Promotion and Disease Prevention. *Role of the Primary Care Physician in Occupational and Environmental Medicine*. Washington, DC: National Academy of Sciences. http://books.nap.edu/catalog/9496.html

Institute of Medicine (2000). *Clearing the air: asthma and indoor air exposures*. Washington, DC, National Academies Press.

Institute of Medicine (2004) *Damp indoor spaces and health*. Washington, DC, National Academies Press.

Jaakkola JJ, Jaakkola N, Ruotsalainen R (1993). Home dampness and molds as de-

terminants of respiratory symptoms and asthma in pre-school children. *Journal of Exposure Analysis and Environmental Epidemiology*, 3(Suppl.1):129–142.

Kilpeläinen M et al. (2001). Home dampness, current allergic diseases, and respiratory infections among young adults. *Thorax*, 56:462–467.

Menzies D, Bourbeau J. 1997. Building-related illnesses. *N Engl J Med* 337(21):1524-31

Mudarri D, Fisk WJ (2007). Public health and economic impact of dampness and mold. *Indoor Air*, 17:226–235.

Myatt TA, Milton DK. 2000. Endotoxins. Chapter 42 of *Indoor Air Quality Handbook*. New York: McGraw Hill.

Peltola J, Andersson MA, Haahtela T. Mussalo-Rauhamaa H., Rainey FA, Kroppenstedt RM, Samson RA, Salkinoja-Salonen MS. 2001. Toxic-metabolite-producing bacteria and fungus in an indoor environment. *Appl Environ Microbiol* 67(7):3269-74.

Ruotsalainen R, Jaakkola N, Jaakkola JJ (1995). Dampness and molds in day-care centers as an occupational health problem. *International Archives of Occupational and Environmental Health*, 66:369–374.

University of Connecticut. Health Center Division of Occupational and Environmental Medicine. (2004). *Guidance for Clinicians on the Recognition and Management of Health Effects Related to Mold Exposure and Moisture Indoors*. https://health.uconn.edu/occupational-environmental/wpcontent/uploads/sites/25/2015/12/mold_guide.pdf

Who guidelines for indoor air quality dampness and mould (2009). http://www.euro.who.int/__data/assets/pdf_file/0017/43325/E92645.pdf?ua=1