



Scientific Research Organisation of Samoa

Annual Report
2021 - 2022



ANNUAL REPORT FY2021-2022

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Government of Samoa

Please address all correspondences to:
Hon. Minister of Agriculture & Fisheries

OFFICE OF THE MINISTER

MINISTRY OF AGRICULTURE & FISHERIES

(SCIENTIFIC RESEARCH ORGANISATION OF SAMOA; SAMOA TRUST ESTATES CORPORATION)

26th October 2022

Honourable Speaker of the House
Legislative Assembly
Mulinnu

Honorable Speaker

Following the Scientific Research Organisation of Samoa's Acts 2006 (RDIS Act 2006) and 2008 (SROS Act 2008). I am pleased to submit the 15th Annual Report for the Scientific Research Organisation of Samoa (SROS) for the year ended 30th June 2022.

The Annual Report is the record of the Organisation's performance during this financial year, by its mandate and output structure, and to be laid before the Legislative Assembly of Samoa.

Ma le fa'aaloalo tele lava



Hon. Laaulialemaletoa Leuatea Polataivao Fosi Schmidt
MINISTER
SCIENTIFIC RESEARCH ORGANISATION OF SAMOA

1.1 STATEMENT TO THE PARLIAMENT

I. INTRODUCTION

Talofa Lava

This financial year has had many disruptions caused by the coronavirus pandemic. During the pandemic there was a need to balance the delay in arrival of imported consumables and equipment with the ability to maintain the continuation of projects and services. At the same time, emphasis was placed on promoting the safety and hygiene of the working environments for the Organisations staff. Overall, it was a daunting journey and the Organisation was able to maintain the majority of its obligations.

During times of national lock-down to reduce the spread of Covid19, the Organisation maximised the use of its information technology infrastructure and virtual communication platforms. This allowed continued dialogue with the different divisions within the Organisation and with key partners regionally and internationally. Also, when it was permitted, minimal number of scientists and the corporate services team accessed the laboratories and offices to continue experiments and execute essential payments.

The activities performed in this financial year has enabled the Organisation to maintain its target and future ambitions as laid-out in the corporate plan 2020-2024. The multipurpose factory for the commercial division has been built and the instalments of most of the heavy equipment for the production of ethanol and dehydrated products are near completion. There is hope that there will be increased private sector interest in the value-added production lines and subsequent stimulation of crop production in the agriculture sector.

The establishment of the agriculture research division in the Organisation has seen an increase of support from local farmers for a combined effort in addressing the challenges of producing sufficient crops to meet growing consumer demand. SROS has the only operational micro propagation facility for plant tissue culture production and conservation of plant genetic materials which has been upgraded to increase the protection of Samoa's plant genetic material.

There is garnered support from international funding bodies for the establishment of a food innovation centre at SROS to support the growth of the food industry in Samoa. The food innovation centre will allow entrepreneurs to develop new products and ideas sourced from locally available resources in an incubator-type setting at SROS.

Due to requests from government entities for the analysis of drugs in biological samples, the Organisation actively identified and secured funding for equipment to perform the analysis. In addition, Cabinet has approved a new compound at Vailima for the establishment of a drugs and molecular analysis laboratory.

There has been an expansion of the renewable energy shed to house the new heavy equipment for the production of a battery prototype for solar energy storage based on the design developed by Thomas Edison. It is expected that this battery will stem the high import of batteries for solar energy storage.

The organisation utilises the different talents that each employee brings to SROS, observed through the richness of ideas, backgrounds and perspectives. SROS aspires to continue using the latest technologies for analysis and research which also provides learning opportunities for all staff.

The organisation has close ties with different national, regional and international institutions through formal and informal connections. This allows the organisation to be well informed and aware of the different challenges and opportunities that are before us. The financial support from the Government and our continuous bilateral partnership with external donors were paramount to SROS to achieving their goals and work plans for this financial year. In fact, this financial year marked a significant achievement in SROS becoming the first national research organisation from the Pacific Island Countries to be appointed a commissioned organisation to coordinate an Australian Centre for International Agricultural Research (ACIAR) project.

This annual report highlights the utilisation of the government funds and donor funding by the Organisation in the financial year 2021-2022 and displays the critical work achievements by each division. Also attached are the audited financial statements and accounts for 2021-2022, and the Auditor's opinion on the Organisation's financial and budget performances.

2.1 SROS' VISION AND MISSION

SROS Vision

"To develop Samoa through science, technology and innovation".

SROS Mission Statement

"To drive, promote and improve the development of Samoa through research in the relevant economic sectors.

II. KEY OBJECTIVES AND PRIORITIES

The research and development activities performed are geared by the Organisations objectives, which are;

- a. To undertake scientific and technical research with the primary aim of adding value and developing functional prototypes of products and processes for the local or overseas markets.
- b. To provide relevant technical and quality testing services in goods, food & food products, narcotics, biological and environmental samples.
- c. To investigate research pathways utilising local resources for renewable energy generation and conduct environmental monitoring and impact assessments.
- d. To enhance the potential of Samoan natural products through biomedical, cosmetic and pharmaceutical research.
- e. To improve agricultural production, postharvest techniques and establish effective pest & disease control measures.
- f. To engage in consultancy services to improve the various developments sectors and promote science as a subject/career.
- g. To strengthen the partnership with the private sector and stakeholders to support the commercialisation of the Organisation's prototypes.
- h. To ensure effective staff development in scientific research and support services.
- i. To effectively manage the Organisation's financial, I.T., human resources and assets.

3.1 MESSAGE FROM THE CHAIRPERSON

Talofa Lava

As Chairman of the SROS Board of Directors, I am pleased to introduce the SROS annual report 2021 - 2022. There has been a multitude of challenges the Organisation has been facing which include the COVID-19 pandemic and our Prayers goes to those who have lost loved ones because of the pandemic. It is these challenging times that have proven that the Organisation is following a sound strategy to maintain progress of its work and meet the expected outcomes no matter what the difficulties.

I continue to emphasize within the operation of the Organisation the value of science in society and its application to the pool of scientific knowledge to satisfy Samoa's needs and improvement of living standards. The venture into researching for a cure for cancer and the increased production of healthy foods are examples of how the Organisation looks into being the driver of economic growth in the near future. Being an Island country, we are always mindful of producing sustainable products and services and to find ways to rationally use our natural resources.

SROS has aligned itself to join the many research institutes in the world to satisfy the fundamental human thirst for knowledge and to maintain and enhance the human cultural heritage. With the growing number of published material by the Organisation, there is a push to diffuse the obtained scientific knowledge to our clients and the general public and be an instrument for popularization of science in Samoa. This will mean that the Organisation has to be more involved in the production of the information and the transfer of the information to the people at the same time.

The SROS Board of directors continues to nurture a culture in the Organisation which rewards high performance of staff based on a number of criterions but also seeks to build on the values of the Organisation. This makes sure that everyone is recognised and for those who have put in the extra effort to be rewarded. Maintaining a high standard of performance and continuous assessment has meant that staffs are always driven and committed.

In the near future, the Organisation will be focusing on incorporating animal science and marine research into the Organisation. This would allow the Organisation to have a better spectrum on the different research areas in the country. Having animal scientists on board means the Organisation can assist with addressing problems associated with livestock production and management. On the other hand, the marine scientists can enable research and learn on the interactions with organisms in the sea, coastal areas and the atmosphere. This can also address the vulnerability of our coral reef ecosystems due to climate change and provide innovative solutions to assist with the change in weather.

I am satisfied with everyone and all that has been carried out during this financial year. Although we have survived the waves of challenges, the Organisation should not be complacent. We should be vigilant and forward thinking, there is a lot of work before us and issues that need to be addressed. And with God's guidance and Love we will continue to provide the Science our country needs.

Bless you all



Sulamanaia Nu'uetolu Montini Ott
Chairman SROS' Board of Directors

4.1 CHIEF EXECUTIVE OFFICER REPORT

Talofa Lava

Despite the many challenges posed by the COVID-19 Pandemic, the Organisation has managed to achieve many milestones as mentioned below;

The Organisation continues to provide analytical testing services which are pivotal for scientific studies, food safety and material production. By applying optimal approaches and methodologies within a laboratory environment, analytical testing solves a number of unique challenges in complex focus areas. The analytical laboratories offer leading services that quickly and correctly classify, identify, analyse and measure samples delivered by our clients. Our biological, chemical, hard drugs and molecular testing services assist the many development sectors and the people of Samoa.

One of the many agricultural crops the Organisation focuses on is cocoa. The areas of research are in conservation and crop protection, pathology and molecular diagnostics, optimization of micro-fermentations and factors influencing sensory quality attributes. Collaborative research with countries in the region has produced a wealth of information that is relevant across the Pacific. The Organisation has research gaps and integration of scientific knowledge that provides clear and documental information that is made available to growers and the business community.

The Organisation, together with the Ministry of Agriculture and Fisheries Samoa continue to navigate biosecurity challenges hindering the opening of the export pathway of our local produce. The presence of *Phytophthora colocasiae* (the causative agent of taro leaf blight) on fresh Samoan taro is a major concern for the Department of Agricultural, Water and Environment (DAWE) in Australia. In this financial year, research was conducted to confirm that a high pressure wash combined with hot water treatment of fresh taro reduces the risk of *Phytophthora colocasiae* on taro. Our findings form part of Samoa's request to DAWE to open market access for fresh Samoan taro exports into Australia.

The Organisation has become the first national Organisation in the Pacific to be the commissioned Organisation for an ACIAR-funded project. SROS is the Project Leader for the ACIAR CS 2020/191 Project that will focus on "Adopting a gender-inclusive participatory approach to address horticultural loss in the Pacific".

The Samoa Biodiscovery Centre housed within the Organisation continues to unravel the potential of Samoan natural products. In the past 12 months, we collected more than 165 plants, 8 soil samples and 26 marine samples to investigate their anti-diabetic, anti-cancer and anti-microbial bioactivities. Samples collected produced a 25% bioactivity rate, indicative of the high potential of Samoan natural products, warranting further research into these untapped resources.

The Organisation continues to provide research support to several government Ministries and international donor Organisations. For instance, SROS conducted analyses to determine the quality of Samoa's water sources such as rivers, lakes and natural spring pools. These tests assess the presence of biological and chemical contaminants that can cause long term health problems to aquatic life, animals and our people.

The Organisation remains committed to strengthening its reputation by building on its partnership with many national, regional and international Organisations. In addition, the

Organisation continues to make international strides by participating and engaging effectively in international meetings and conferences. Through these activities, not only is the Organisation building its profile, but the platforms also allow the Organisation to contribute to knowledge and information delivery and sharing in Science.

We continue to embrace the demands and aspirations of our 2022-2024 Corporate Plan. Although there have been many challenges, the Organisation has surpassed expectations in the delivery of its expected corporate plan outputs, as per the outcome of our mid-term review. We have continued to make steady progress in completing planned activities to support and achieve objectives in the different development Sectors in Samoa.

The Organisation is not immune to the financial implications and restrictions being experienced globally resulting from the pandemic. It has become even more challenging to raise additional finance to support scientific research. We however believe that doors are beginning to open up and with the continuous support from our leaders, our clients and stakeholders, the contribution of the Organisation to the development of Samoa through science, technology and innovation can only continue in its upward trajectory.

The following is a report from each division outlining the different activities carried out. A more detailed report on each work can be made available upon request.



Dr Seuseu Joseph Tauati
Chief Executive Officer
Scientific Research Organisation of Samoa

5.1 TECHNICAL SERVICES DIVISION (TSD)

The Technical Services Division (TSD) is an internationally accredited testing arm of the Scientific Research Organisation of Samoa (SROS). It is responsible for the provision of relevant technical and quality testing services to goods, food and food products to ensure the excellent quality, food safety and their suitability for trade. In regards to regulatory functions, it is responsible for narcotics analysis for investigations and prosecution of offences and other environmental samples analysis such as soil, air and water for environmental monitoring purposes. The international accreditation covers the scopes respectively for Biological and Chemical Testing laboratories.

The critical functions of TSD have been executed by its four (4) testing and one (1) research laboratories, namely;

- Chemical
- Biological
- Narcotics
- Molecular and Forensic
- Cancer Research

The Technical Services expertise encompasses an array of microbiological, physical, chemical, narcotics and molecular diagnostic and forensic analyses for products including but not limited to foods, waters, oils, animal feed, illegal drugs (narcotics), soil and biological samples.

This financial year provides TSD with challenges that not only have impacted clients but also might affect the accreditation status at the upcoming assessment. The closure of international borders and number of national lock downs caused the discontinue of some essential global proficiency testing programs as well the inhibition of samples submission from the clients.

Apart from TSD mandates as being a testing arm of SROS, it has a research laboratory that focus on the bioprospecting for medicinal drugs or biochemical which have the portential to cure or inhibit the growth of cancer.

T.S. Division's key achievements for this financial year 2021/2022 include:

- a) Achieved the completion of the upgrade of the cancer research laboratory to enhance competency and capacity, meeting the recommended international standards and necessary security.
- b) Achieved the developments of the frequent and highly demanded tests requested by ministries, government authorities and customers to regulate and monitor the conformance of products to nonu juice and ava standards. The validated developed tests were strictly for ava lactones and scopoletin.
- c) Achieved the development of the high performance liquid chromatography (HPLC) tests for cocoa flavonol. The cocoa favonol test was requested by clients to determine the flavonol contents in cocoa varieties found in Samoa comparing to cocoa varieties reported elsewhere. The health benefits of cocoa flavonols are reported to lower the blood pressure therefore prevent heart failure or attack.

- d) Achieved the successful completion of the desktop assessment for SROS testing laboratories that resulted in the maintaining of the International Accreditation status for Biological and Chemical Testing Laboratories for another year
- e) Achieved the satisfactory performance in the Global Proficiency Programme, mainly for the Biological testing laboratory. The results ensured the competency of the staffs, the good capacity of equipment and validated methodologies.
- f) Continued partnership with government Ministries (MNRE, MOH, MAF, MCR, MOP, MJCA) and Authorities (SWA, AA, SPA) to monitor, regulate and evaluate projects according to their conformance to national & international standards and regulations, as well as providing testing reports for court cases.
- g) One thousand two hundred and five (1205) various samples were received for analytical analysis. It was a more than 40% decrease compared to the last financial year. The analyses were for physical, chemical and biological tests related to quality and safety. Other analyses were requirements of projects respectively on the impact of climate change.
- h) Seven hundred and fifty (750) biological samples were received for COVID 19 confirmatory tests. It was more than 260% increased as compared to the last financial year. The 99% of the samples were obtained from private Medical Clinics for COVID-19 tests for people who have travelled overseas. Additionally, more than 200 swine samples (nasal swaps, meat and meat products) were tested for African Swine Fever (ASF) virus.
- i) Achieved 70 narcotics analysis to confirm for controlled substances under the Narcotics Act 1967. The samples were submitted by Ministry of Police to confirm for drugs namely the marijuana and methamphetamine. Fifty six cases were for methamphetamine and fourteen for marijuana.

6.1 FOOD SCIENCE & TECHNOLOGY DIVISION (FSTD)

Food Science & Technology is responsible for research on food material through value addition using the appropriate technologies to develop new products and improve existing processing techniques. This involves food preservation, development of new and novel foods and ingredients, and food sensory, packaging and safety consideration.

FST Division's key achievements for this financial year 2021/2022 include:

- a) Cocoa Work – ACIAR continues to fund development work and research for cocoa under the regional project HORT/2014/078. The following are some of the completed and ongoing work under this development assistance:
 - Tray fermentation, a new method for fermentation was researched and compared to boxes to determine its efficiency and suitability for farmer use. A technical report entitled “*Tray fermentation trials, ochratoxin A, Cadmium and Lead levels for Cocoa in Samoa*” was produced from the initial part of this work. Ongoing work is promoting the tray fermentation method, conducting community surveys and giving out essential equipment to participating farmers like fermenting trays, tarpaulins for drying, harvesting hooks and storage containers.
 - A new market for fermented cocoa beans in Canada was tested through a trial shipment of 1000kg fermented, dried beans from Samoa. The supplier has indicated that if all goes well for

this trial shipment, he will guarantee another 3,000 kg to be ordered for chocolate making from local farmers continuously.

- b) Passive solar dehydrators – 2 solar dehydrators have almost arrived for trials. These dehydrators are targeted for drying products like turmeric, ginger, guava leaves, soursop leaves, 'ava and any other consumable product. These will be for producing teas that have already been trialled and tested in the local market. Capsules of guava leaves, turmeric and 'ava have also been trialled and further research is necessary before functional products are completed.
- c) Locally produced flour – the team continue to produce breadfruit flour to satisfy some orders from clients (Gluten-Free store NZ and Skyline) while awaiting the commercial operation to start. Small research has been completed for banana flour, and this product can be added as another gluten-free flour option produced in Samoa. The team also assisted private sector start ups to establish their breadfruit flour operations.
- d) Secured funding under the Pacific Island Rural Agriculture Facility Project for a value added project in the community. A project proposal entitled “Equipping youth and women to make a business out of agricultural value added products” was prepared and secured funding to assist various farmers particularly women and youth through the provision of essential equipment.
- e) Food Innovation Centre establishment – The building extension is now complete to cater for this development. We are awaiting formal approval to acquire the Ultra High Temperature (UHT) treatment equipment to allow us to work with liquid and semi-liquid products. A few other equipments are being sourced to enable a fully functional innovation centre where business people can work with our Staff to develop products using the equipment we have for a small fee.
- f) There is ongoing work for sampling and testing the quality of 'ava grown, processed and sold in Samoa. This will confirm the quality of local 'ava varieties grown, gauge the quality of powdered 'ava sold in the local market, and highlight areas needing attention for future projects.
- g) Fermented miki and infused fermented oil research – The ongoing fermented miki research work has resulted in a consistent formula confirmed from sensory evaluation for a commercial product. The study has also resulted in a fermented, infused coconut oil for cooking and salads, which can be added to the list of products from Samoa.

7.1 PLANTS & POSTHARVEST TECHNOLOGIES DIVISION.

The Plants & Postharvest Technologies Division key functions are:

- Minimise agricultural postharvest losses
- Ensure food security and food safety through improved postharvest handling
- Open access to overseas markets and
- Investigate pharmaceutical and cosmetic potential of Samoan plant natural products

The PPT Division key achievements for this financial year include:

- a) The completion and the submission of the final report for the PRISCO19 Project. This project was completed with the distribution of 550 crates to a total of 91 farmers. Of the 91 farmers, 35 were Savaii farmers, and 56 were Upolu farmers. Of the 91 farmers, 60 were fruit and vegetables farmers, and 31 were root crop farmers.
- b) Securing and completing the PHAMA Plus Hot Water Treatment Project despite limited project time-frames and COVID-19 lockdown. At the completion of this project, the PPTD were able to confirm that high pressure washing taro at 50 psi for 15 seconds, followed by hot water treatment at 48C for 25 minutes were sufficient to address the risk of *Phytophthora colocasiae* on fresh taro corms. The PPTD report forms the basis of Samoa's request to the Department of Agriculture, Water and Environment (DAWE) in Australia to consider reopening market access of fresh Samoan taro into Australia
- c) Securing, signing and commencing its ACIAR HORT 2019/165 Project on Enhanced fruit systems for Tonga and Samoa (Phase 2): Community based citrus production. Project activities commenced during this financial year including PPTD conducting a rapid review of the source of local citrus being sold around the Apia Urban Area during the April-May season. The project team also conducted a survey of 30 citrus farmers in Savaii to assess the baseline of citrus production, farm practices, citrus use and marketing protocols.
- d) In the first of its kind, PPTD through SROS has become the first national organisation in the Pacific to be the commissioned organisation for an ACIAR-funded project. This ACIAR HORT 2020/191 Project will focus on Adopting a gender inclusive participatory approach to address horticultural loss in the Pacific. SROS will lead the project team, comprising Mainstreaming of Rural Development Initiative Tonga Trust (MORDI TT), Fiji National University (FNU), and Solomon Islands National University (SINU), with partnerships in Australia including the University of the Sunshine Coast (USC), Griffith University, and Western Sydney University (WSU).
- e) PPTD were also able to secure a new project under the ACIAR Research Support Facility (ARSF). This project will allow PPTD scientists to characterize the causes of postharvest rots of taro. The research will assess effects of different temperatures on taro to definitively identify optimal temperature for long-term storage, as well as identify the effects of poor postharvest handling of taro on taro morphology and rot development. Poor postharvest handling that will be assessed will include dropping taro and compressing taro with weights.
- f) Securing, signing and commencing a new Cocoa Phylogenetics project to identify plants with black pod disease resistance from Samoan cocoa. The Samoa Cocoa Industry Development Initiative (SCIDI) funded by MFAT NZ and managed through AgriChain has approved this small project for PPTD and Massey University, where PPTD is tasked with collecting and extracting DNA for Massey University to sequence and genotype.
- g) Continuation of plant collection under its Plant Natural Products research. From July 2021 to June 2022, PPTD has collected 62 plant samples from across Upolu and Savaii. We have prepared 124 extracts from these plants, assessed them for antimicrobial activity, and have found 19 extracts to be bioactive, which is a 15% bioactivity rate.

- h) PPTD has expanded its natural products research to marine organisms. From July 2021 to June 2022, PPTD has collected 26 marine samples from Manono tai, from which 52 extracts were prepared. There were 17 extracts that showed antimicrobial activity.
- i) Continuation of its Soil Genome-Mining project supporting natural products and biodiscovery research. Due to the delay in securing approval for sampling permits (legal from MNRE), the PPTD were only able to collect 8 soil samples, from which 64 bacterial isolates were found. These bacterial isolates will be DNA extracted, then DNA samples will be sent away for sequencing for genome mining.

8.1 ENVIRONMENT AND RENEWABLE ENERGY DIVISION (ERED)

ERED is responsible for:

- Investigating research pathways utilising local resources for renewable energy generation
- Conducting environmental impact assessments, environmental baseline studies, and natural resource monitoring programs
- Liasing closely with the Environment Sector, Energy Sector, and Water Sector to provide research and technical assistance to support national projects

ERED key achievements for this financial year include:

- a) Water quality monitoring program – continued collaboration with the Ministry of Natural Resources and Environment (MNRE) in monitoring of 26 priority water catchments throughout Upolu on a bi-monthly basis. The sites include rivers, lakes and natural spring pools, and recommendations based on data for Jan – Dec 2021 was submitted to MNRE in February 2022 to better inform water resource management plans.
- b) Waste water assessment for Apia Urban area – from March – May 2022, ERED implemented a one-off sampling and environmental assessment of 50 waste discharge sites throughout the Apia urban area upon request by the Planning and Urban Management Agency (PUMA of MWTI) and in collaboration with Hunter H2O – a water specialist company in Australia. Findings from the study was shared with PUMA and Hunter H2O, to assist with future plans on Apia’s waste water management system.
- c) Pesticides management study – Two short studies into Samoa’s pesticide management systems and protocols were successfully implemented and completed, upon request from World Bank. These studies were implemented from October 2021 – February 2022 with the purpose of identifying gaps in Samoa’s pesticide management practices against the FAO Code of Conduct; review potential pesticide alternatives; and deliver a workshop for relevant stakeholders to discuss findings and share views. The study findings were shared with World Bank and MAF.

- d) Ecosystem Services project – Securing of project funding through a United Nation Joint Programme (UNJP) to: (i) support natural product research and conservation of medicinal plants, and (ii) expansion of water monitoring program to include water ecosystem sites in Savaii for the first time. These research activities will be implemented throughout 2022-2023.
- e) Waste management – supported the national Circular Economy for the Recovery of Waste (CERO Waste) programme under UNDP, through piloting of paper waste processing into products. Procurement of the equipment has been completed, and trials will begin in the second half of 2022 upon completion of the building in which the equipment will be housed.
- f) Monitoring of the performance and emissions of the new biomass gasification plant at Afolau – through the GEF funded ‘Improving the Performance and Reliability of RE Power Systems in Samoa’ (IMPRESS) project, ERED implemented quarterly monitoring of the quality of syngas produced from the Afolau gasification plant and its emissions. Findings from the monitoring rounds were reported to the IMPRESS Technical Working Committee meetings on a quarterly basis. Monitoring data on this technology is essential in proving its efficiency and support future management decisions on its sustainability and potential expansion.
- g) Biogas systems – Further research biogas into developing a biogas system based on a modified SROS design was slowed throughout this period, to allow for ERED team to instead provide technical assistance in monitoring five new biogas systems throughout Upolu and Savaii, installed and funded by IMPRESS. The monitoring work will continue throughout 2022 – 2023 period, and findings will support proper maintenance and use of the systems, as well as work to inform potential biogas systems to be enhanced further with biogas compressors. ERED are also providing technical assistance in determining compressor specifications for procurement.
- h) Solar energy battery research – Phase 2 of the project which requires building of a series of 1.2V batteries for battery performance (charging/discharging curve) assessment was delayed due to technical issues with the hydraulic shearing machine – the machine for cutting the iron nickel plates to build the battery cells. A series of troubleshooting exercises identified the issues which included re-wiring the motor and changing the switch to an electrical one. These issues have now been addressed and the research will resume throughout 2022-2023.
- i) Bio-prospecting anti-diabetes research - Collected and prepared extracts from an additional 41 local plants and screened for bioactivity against diabetes. Plant extracts were screened against the enzyme alpha-glucosidase, from which 5 species showed positive bioactivity. Methods were also developed for screening of plant extracts against other enzymes, namely; lipase (fat), and xanthine oxidase (gout). These methods are in the process of being validated, for screening of plant extracts against lipase and xanthine oxidase early 2023.
- j) Taro ethanol processing – Successfully completed activities under the COVID-19 preparedness project funded by Japan. The project provided funding for processing of taro ethanol into hand sanitiser to meet the growing demand from local health clinics, pharmacies, businesses.

9.1 AGRICULTURE RESEARCH DIVISION (ARD)

The ARD's key functions are:

- To improve agriculture crop production and protection in Samoa through research and development
- To provide relevant crop development solutions to issues raised by farmers
- Develop strategies for the efficient Management of insect pests and diseases of crops
- Maintain genetic material of improved crop varieties through micropropagation of pest and disease-free planting material

The ARD Division key achievements for this financial year include:

- a) Soil Nutrient Management Project ACIAR.** The overall objective of the soil nutrient management projects is to ensure that soil knowledge is enhanced and provide a reliable foundation for the sustainable intensification of taro production in Samoa. This research highlights the importance of budgeting for soil fertility management and increasing the yield of taro production. ARD has worked to quantify nutrient cycling in taro production systems by undertaking field trials.
- b) Responding to emerging pest and disease threats to horticulture in the Pacific islands. HORT/2016/185 ACIAR.** This project aims to build on developing technologies that can support sustainable intensification of high-value crops, including addressing the increased incidence and severity of pests and diseases. The different components of the project include: The bacteria cause the citrus greening disease in Samoa *Candidatus Liberubacter sp* can be transmitted by the Asian citrus psyllid (ACP). The ACP is present in Samoa and is commonly found in a variety of citrus plants. ARD is continually to determine the presence of the bacteria and identify natural enemies for the psyllid.
- c) ARD is researching insecticide resistance in *Brassica* (cabbages) production.** Pests will be collected from commercial *Brassica* farms and exposed to a range of locally available insecticides. This controlled research will be performed in the SROS research laboratories.
- d) Pest & Disease Diagnostic Agronomic Practices Services is available via SROS-ARD** – Is an available service to the high demand from farmers on pruning, grafting, budding as well as pest and disease observation and recommendation. IT is a service where by research knowledge is shared with farmers for betterment of their agriculture farming practices. This also include developing and offered presentations for better understanding.
- e) FAO TCP/SAM/3803 Building capacities on tissue culture to support & sustain biodiversity for food security & nutrition.** SROS has a micropropagation unit at Nu'u that has several agriculture crop plantlets maintained to protect the genetic material from being lost and as a source of material to establish new plantations when the need arrives. This FAO project will focus on building the capacity of the ARD staff and equip the laboratory. The project was launched on 11th June 2021, and work on procuring the required equipment has just commenced.
- f) Pacific Seed For Life (PS4L) Integrated Program** is a Seed Security foundation for sustainable agriculture production particularly in building resilient farming systems and healthy communities. It's a program to ensure access of rural households, particularly farmers and farming communities to adequate quantities and qualities of seeds and planting materials of crop varieties adapted to their agro-ecological conditions and socio-economic needs, at planting time and

under normal/abnormal weather conditions. A consultancy service has been approved undertaking this work for 12 months period.

10.1 COMMERCIAL DIVISION NAFANUA PURE PRODUCTS LIMITED (NPPC)

Commercial Division business vision is connecting farmers, businesses, and communities to a better future through product development and innovation:

- Aim to maintain better work relationships with the local farmers and businesses.
- Create work partnerships with the local farmers for the supply of raw materials.
- Increase product development process and systems to meet the local and overseas demand.
- Patent and register new product developments and innovative ideas as Samoan Made.

The Commercial Division and NPPC key achievements for this financial year include:

- a) Completed construction of Multipurpose Buidling warehouse with a few minor touches to be added. This is to ensure that we comply with HACCP and MOH standards in acquiring certificates and licenses to operate.
- b) Completed procurement of distiller machine, and is now awaiting instalment by qualified expert from Germany who is required for the installation and operation of the equipment.
- c) Continued collection of breadfruit and bananas for flour production. We purchased different weight contents of flour packaging from China. The marketing and awareness campaign for our flour products is done through online and local media outlets. We have also had discussions on a weekly basis with restaurants and eateries to add breadfruit and banana flour into their menus.
- d) Commenced the first commercial production and marketing process of Taro Hand Sanitizers for the Local Market.

11.1 CORPORATE SERVICES DIVISION (CSD)

The Corporate Service Division is responsible for the day to day operations of SROS, including a variety of responsibilities such as finance, human resources management, information technology (I.T.), marketing, administration functions and general services.

The C.S. Division key achievements for this financial year include:

- a) Completed and submitted the budget estimates for FY2022-2023 to the Ministry of Finance.
- b) SROS' received a total grant of \$5.3 million tala this financial year, a 14% increase from the FY2020-2021. Despite total income for the year reduction, expenses were well controlled for

the year as it was reduced by \$518,459 or 8% as compared to previous year. There was also an improvement of net assets of 12% increase compared to the previous year.

- c) Completed and submitted all four quarterly report updates to the Ministry of Public Enterprises (MPE). The Quarterly Report consists of two main sections the performance and work plan updates from each division and the financial updates.
- d) The finance team completed the procurement of consumables and scientific equipment for all divisions, ensuring procurements are in line with SROS and MOF policies and that payments are made in due time.
- e) Completed procurement of 2 heavy duty photocopier machines for the staff .
- f) Installed the wireless internet connection for the new warehouse.

12.1 PROGRESS IN ACHIEVING THE CORPORATE PLAN (CP) 2020-2024

Priority Objectives	Work Activities
a) To undertake scientific and technical research with the primary aim of adding value and developing functional prototypes of products and processes for the local or overseas market.	<ul style="list-style-type: none"> Completed ACIAR Cocoa HORT/2014/078 tray fermentation trials for improving quality of beans and now promoting the method to all cocoa farmers and giving out tools and equipment Gluten-free breadfruit and banana flour now produced by the Nafanua Pure Products Company Taro Ethanol is continuously produced for hand sanitisers and whiskey production COVID-19 preparedness project funded by Japan- Production and research for taro ethanol to produce hand sanitisers, and face masks. Fermented miki and infused fermented oil research is ongoing Local ava powder research has identified gaps needing attention under future projects to ensure improved practices for quality The multipurpose processing equipment has yet to be acquired Trials for tableting ava extract and guava leaves have started
b) To provide relevant technical and quality testing services in goods, food, food products, narcotics, biological, and environmental samples.	<ul style="list-style-type: none"> Achieved International accreditation for biological and chemical testing laboratories. Achieved the development of the methodologies for Covid 19 and ASF tests. Achieved the development of ava lactones tests (for ava national and regional standards) Achieved the development of scopoletin test (for nonu juice national and regional standards) Achieved the satisfactory performance of the testing laboratories- FAPAS and Global Proficiency Programme. Achieved the development of cocoa flavanols tests (cocoa standard) Achieved the development of ohcratoxin A test (cocoa standard) Total of 1,205 various samples received and tested. Total of 750 biological samples for Covid19 and 200 samples for ASF. Achieved 70 narcotics confirmatory case for hard drugs tested.

<p>c) To investigate research pathways utilising local resources for renewable energy generation and conduct environmental monitoring and impact assessment.</p>	<ul style="list-style-type: none"> • Ongoing monitoring of new biogas systems throughout Upolu and Savaii in collaboration with MNRE (quarterly) • Implemented a rainwater harvesting study upon request by the Water and Sanitation Sector • Equipment procured for phase 2 of the solar energy battery and assessment of battery performance in collaboration with EPC • Monitoring and reporting of quality of syngas produced from the Afolau gasification plant, as well as emissions. • Ongoing monitoring of water quality of springs and riverways throughout Upolu, to be expanded to Savaii by the end of 2022 • Completed an environmental assessment for waste water sites in Apia urban area. • Procured equipment for pilot study of paper waste processing. • Procured equipment for plant fiber processing
<p>d) To enhance the potential of Samoan natural products through biomedical, cosmetic and pharmaceutical.</p>	<ul style="list-style-type: none"> • Plant collection under its Plant Natural Products research. Collected 62 plant samples from across Upolu and Savaii. • A total of 124 extracts have been found to be bioactive, which is a 15% bioactivity rate. • Ongoing fractionation for the purification of bioactive components from bioactive plant extracts. • A total of 8 soil samples were collected from which 64 bacterial isolates were grown from. A total of 26 marine samples were also collected, and we found 17/52 extracts to have antimicrobial activity (32% activity). • Collected and prepared extracts from an additional 31 local plants and tested for bioactivity screening for anti-diabetes research. • Plant extracts were screened against the enzyme alpha-glucosidase, from which 2 species showed positive bioactivity. • Completed the upgrade of the cancer research laboratory to meet the international standards, required security and enhance its capacity for biomolecular researches. • Collected more than 80 sponges from around Savai'i, Manono and Upolu. Thirty percent (30%) were extracted for potential bioactivity compounds.

<p>e) To improve agricultural production and postharvest techniques, and establish effective pest & disease control measures.</p>	<ul style="list-style-type: none"> • Completed PRISCO 19 project (distributed 550 crates to 91 farmers around Upolu and Savaii) • Secured and commenced new project – ACIAR Citrus fruit tree project • Commenced and completed PHAMA Plus project on semi commercial high pressure wash and hot water treatment of fresh taro to remove taro leaf blight from taro corms. • Secured and commenced new project – MFAT NZ Genotyping of 400 cocoa plants. • Secured new project - ACIAR adopting a gender inclusive participatory approach to address horticultural food loss in the Pacific. • Secured new project – ACIAR research support facility for the post harvest handling of taro • Completed Soil Nutrient Management Project ACIAR.
<p>f) To engage in consultancy services to improve various development sectors and promote science as a subject/career.</p>	<ul style="list-style-type: none"> • Cocoa Work – ACIAR continues to fund development work and research for cocoa in the region. • Initiated and progressed the development of the Samoan ST and I policy • Engaged in consultancy work with World Bank in pesticide management • Engaged in consultancy work for Samoa's Water Sector to assess Rainwater Harvesting systems
<p>g) To strengthen partnership with the private sector and stakeholders to support the commercialisation of the Organisation's prototypes</p>	<ul style="list-style-type: none"> • Ongoing collection of breadfruits and bananas from local farmers to produce gluten-free flour. • Strengthened partnership with local taro farmers through increased volumes of taro purchased over 2021-2022 for processing of sanitizing products
<p>h) To ensure effective staff development in scientific research and support services</p>	<ul style="list-style-type: none"> • Local technical trainings for the Staff • Online courses for FSTD, PPTD, ERED, ARD and TSD Staff. • Online IANZ accreditation process for TSD staff. • Support services staff attended trainings offered by Public Service Commission.
<p>i) To effectively manage SROS' financial, information technology and human resources</p>	<ul style="list-style-type: none"> • Installed wireless internet for new awarehouse. • Submitted SROS' annual accounts for the FY2020-2021. • Prepared SROS' annual accounts for the FY2021-2022 • Submitted SROS' budget for the FY2022-2023. • Audit process for the FY2021-2022 Annual Accounts, payments, receipting, assets, and inventories. • Review SROS' Human Resource Manual. • Completed all the staff performance appraisals. • Completed the recruitment and selection process for vacant positions.

13.1 KEY FINANCIAL AND BUDGET PERFORMANCES

I. BUDGET FOR FY2021-2022

- The total SROS budget was \$5,270,735 from the Government, and 14% was the approved budget's increase from the last financial year 2020-2021. The additional approved budget was for the new lab consumables, new positions and salary adjustments.

II. SUMMARY OF EXPENDITURE COSTS

- The total expenditure costs was \$6,225,978. The total was spent on administrative, personnel, occupancy, director fees, and project cost expenses. At the end of the financial year, the current spending was under by 8% when compared to the last fiscal year spending of 2020-2021.

III. SUMMARY OF REVENUE PERFORMANCE

- SROS' primary revenues source is from the Government Grant, technical services sampling fees, and Donor project income. After the 12 months, total income received and generated was \$6,755,894, a reduction of 17% compared to last financial year's revenue.

IV. SUMMARY OF CAPITAL COSTS

- New capital costs for the current financial year was \$236,614 tala: The following information is the breakdown of the new assets or capital costs inside the FY2021-2022.

Buildings (new & renovation)	\$83,432
Office Equipment	\$68,713
Lab equipment	\$84,469

14.1 OUTLOOK FOR NEXT YEAR (FY2022-2023)

SROS aims to continue to improve its scientific research methods and assist the private sectors and the government ministries in scientific testing and consultancy services.

Therefore the following are the major tasks and targets for the Organisation inside the financial year of 2021-2022:

- a) Maintain and continue the Technical Services testing IANZ international accreditation.
- b) Offer consultancy services to Government Ministries, Government funded projects and private sectors.
- c) Continue the capacity development and professional skills for the Staff through local and overseas training.
- d) Continue to work closely with donor partners, private sectors, local and overseas Universities.
- e) Secure funding from the Government and Donor partners for new scientific projects.

15.1 FUTURE RISKS AND UNCERTAINTIES

I. Future Risks

- ✓ Pandemics and lockdown both have a major impact on SROS' services especially the shortage of consumables supplies.
- ✓ One of the ongoing risks is staff turnover. SROS' scientists are becoming the target by other Government Ministries and Regional offices. These offices offered better salary benefits and attractive remuneration packages.
- ✓ Replacing existing scientific machines is very costly. SROS' need to replace and upgrade the existing experimental machines and devices to improve the quality of testing results.
- ✓ Increase of requests for scientific research that is outside of the organisation ability. There are multiple requests from local and exporters and SROS can carry out the work.
- ✓ Copyright and patent for high-value-added products and scientific methodologies such as the Medicinal Plants.

II. Uncertainties

- ✓ Government priorities and policies impact current work policies and plans. Therefore, SROS need to re-allocate funds and resources to accommodate the government's priorities for SROS.
- ✓ Scientific research to assist the country responds to current and future pandemics.

16.1 CSO IMPLEMENTATION (WHERE APPLICABLE)

- ✓ Not applicable to SROS in this financial year.

Audited Financial Statements

The Scientific Research Organisation of Samoa
For the year ended 30 June 2022

The Scientific Research Organisation of Samoa
Financial statements
For the year ended 30 June 2022

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The Scientific Research Organisation of Samoa
Management responsibility statement
For the year ended 30 June 2022

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL REPORTING

The accompanying financial statements are the responsibility of Management. The financial statements have been prepared according to International Financial Reporting Standards and include amounts based on management's best estimates and judgements.

Management has established and maintained the accounting and internal control systems that include written policies and procedures. These systems are designed to provide reasonable assurance that our financial records are reliable and form a proper basis for the timely and accurate preparation of financial statements, and that our assets are properly safeguarded.

The Board of Directors oversees Management's responsibilities for financial reporting. The financial statements have been reviewed and approved by the Board of Directors on recommendation from Management.

Our independent auditors, Leota & Niumata Chartered Accountants, having been appointed by the Auditor General and Controller of the Independent State of Samoa, have audited our Financial Statements. The accompanying independent auditors' report of the Samoa Audit Office outlines the scope of their examination and their opinion.



Dr. Seuseu Tauati
Chief Executive Officer

Apia, Samoa

Dated: 31/10/2022



Faaea V. Talilai
Manager, Corporate Services
Division

Apia, Samoa

Dated: 31/10/2022

**The Scientific Research Organisation of Samoa
Directors' report
For the year ended 30 June 2022**

The Directors present their report together with the financial statements of The Scientific Research Organisation of Samoa for the year ended 30 June 2022 as set out on the accompanying pages and the auditors' report thereon in accordance with the Public Finance Management Act 2001 and the Public Bodies and Accountability Act 2001.

Directors

The Directors of the Organisation at any time during the financial year were:

Sulamanaia Nu'uetolu Montini Ott	Chairman
Dr. Satupaitea Viali	Director
Tusani Iosefatu Reti	Director
Nive Tauiliili	Director
Masoe Iosefa Tautua	Director (Deceased in July 2021)
Shelly Burich	New Director (appointed 4 th May 2022)
Dr. Seuseu Tauati	Ex-Officio/CEO

The Board of Directors' appointments were formalised on the 4th March 2020 for a term of three (3) years as per F.K. (19)43.

Principal Activity

The principal activity of The Scientific Research Organisation of Samoa is to conduct scientific research and develop technologies which outcomes are of great value in the development and sustainability of value-added goods and services for export and to achieve reduction on fuel imports and greenhouse gas emissions. There has been no significant change in the principal activity of the Organisation during the year or any of the classes of business that it operates in.

State of Affairs

In the Opinion of the Directors:

- i. the accompanying Statement of Financial Performance, Statement of Changes in Equity and Statement of Cash Flows are drawn up so as to give a true and fair view of the operations and results of the Organisation for the year ended 30 June 2022.
- ii. the accompanying Statement of Financial Position is drawn up so as to give a true and fair view of the state of affairs of the Organisation as at 30 June 2022.

Operating Results

The net profit for the year is	\$ 529,916	2021: Net Profit	\$ 1,388,047
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Dated at	<u>31st</u>	this	<u>Oct</u>	day of	<u>2022</u>
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Going concern

The financial statements of the Organisation have been prepared on a going concern basis. We consider the application of the going concern principle to be appropriate in the preparation of these financial statements as we believe that the Organisation has adequate funds to meet its liabilities when they fall due over the next 12 months from the date of the Directors' report.

**The Scientific Research Organisation of Samoa
Directors' report
For the year ended 30 June 2022**

Current assets

Prior to the completion of the Organisation's financial statements the directors took reasonable steps to ascertain that the current assets of the Organisation were shown in the accounting records at a value equal to or below the value that would be expected to be realized in the ordinary course of the business.

At the date of this report, the directors are not aware of any circumstances which would render the values attributable to the current assets in the Organisation's financial statements misleading.

Related party

All related party transactions have been adequately recorded in the financial statements and disclosed in the notes to the financial statements.

Events subsequent to balance date

No matters or circumstances have arisen since the end of the financial year which would require adjustment to or disclosure in the financial statements.

Other circumstances

As at the date of this report:

- no charge on the assets of the Organisation has been given since the end of the financial year to secure the liabilities of any person;
- no contingent liabilities have arisen since the end of the financial year for which the Organisation could become liable;
- no contingent liabilities or other liabilities of the Organisation have become or are likely to become enforceable within period of twelve months after the end of the financial year which, in the opinion of the directors, will or may substantially affect the ability of the Organisation to meet its obligations as and when they fall due.

As at the date of this report, the directors are not aware of any circumstances that have arisen, not otherwise dealt with in the report or the Organisation's financial statements, which would make adherence to the existing method of assets or liabilities of the Organisation misleading or inappropriate.

Unusual transactions

The result of the Organisation's operations during the financial year and up to the date of this report, has not in the opinion of the directors, been substantially affected by any item, transaction or event of a material and unusual nature other than those disclosed in the financial statements.

This report is made in accordance with a resolution of the Board of Directors and signed on behalf of the Board:



Sulamanaia Nu'uetolu Montini Ott
Chairman

Apia, Samoa

31 / 10 / 2022



Nive Tauiliili
Director

Apia, Samoa

31 / 10 / 2022

The Scientific Research Organisation of Samoa
Statement of financial performance
For the year ended 30 June 2022

		2022	2021
INCOME	Notes	SAT\$	SAT\$
Grants from Government of Samoa		5,270,735	4,627,284
Technical services income		245,752	329,033
Donor project income	12	1,073,583	2,713,537
Other income	13	165,825	462,631
Total income		<u>6,755,894</u>	<u>8,132,484</u>
 EXPENDITURES			
Audit fees - current		27,755	24,150
Audit fees - FY 19/20 over-accrued		-	6,014
Depreciation	11	794,885	679,193
Personnel costs	14	3,616,427	3,440,840
Occupancy costs	15	214,397	180,012
Administrative costs	16	522,871	863,550
Donor project costs	17	560,071	954,095
Other costs	18	407,021	498,033
Directors fees & board expenses	21	82,550	98,549
Total expenditures		<u>6,225,978</u>	<u>6,744,437</u>
 Net Profit		<u>529,916</u>	<u>1,388,047</u>

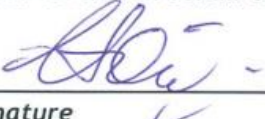
The accompanying notes form part of this financial statement.

The Scientific Research Organisation of Samoa
Statement of financial position
As at 30 June 2022

		2022	2021
	Notes	SAT\$	SAT\$
Accumulated Funds			
Opening balance		4,549,069	3,161,022
Add: profit/(loss)		529,916	1,388,047
Closing balance		<u>5,078,985</u>	<u>4,549,069</u>
Represented by:			
Current assets			
Cash and cash equivalent	5	364,053	130,575
Term deposit	6	51,275	50,000
Trade and other receivables	7	266,965	405,080
Prepayments		4,787	-
Stock on hand		129,843	134,253
Total current assets		<u>816,922</u>	<u>719,908</u>
Current liabilities			
Trade payables		49,255	249,353
Other creditors and accruals	8	271,635	147,278
Allowance for staff benefits	9	174,289	159,886
Deferred income	10	235,757	535,632
Total current liabilities		<u>730,936</u>	<u>1,092,149</u>
Working capital		85,987	(372,240)
Non Current assets			
Property, plant and equipment	11	5,636,075	5,582,159
		<u>5,636,075</u>	<u>5,582,159</u>
Non Current liabilities			
Deferred income	10	643,077	660,850
		<u>643,077</u>	<u>660,850</u>
Net assets		<u>5,078,985</u>	<u>4,549,069</u>

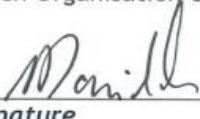
The accompanying notes form part of this financial statement.

Signed for and on behalf of the Directors of The Scientific Research Organisation of Samoa:


Signature
 Sulamanaia Nu'uetolu Montini Ott
 Chairman

Apia, Samoa

31 / 10 / 2022


Signature
 Nive Tauilili
 Director

Apia, Samoa

31 / 10 / 2022

The Scientific Research Organisation of Samoa
Statement of changes in equity
For the year ended 30 June 2022

	2022 SAT\$	2021 SAT\$
Accumulated funds		
Opening balance	4,549,069	3,161,022
Add: Surplus	<u>529,916</u>	<u>1,388,047</u>
Closing balance	<u>5,078,985</u>	<u>4,549,069</u>
Total accumulated funds	<u>5,078,985</u>	<u>4,549,069</u>

The accompanying notes form part of these Financial Statements

The Scientific Research Organisation of Samoa
Statement of cash flows
For the year ended 30 June 2022

		2022	2021
	Notes	SAT\$	SAT\$
Cash flows from/(to) operating activities			
Cash received from Government of Samoa		5,270,735	4,627,284
Cash received from	- Technical services	245,752	329,033
	- ACIAR Project Funds	-	74,058
	- FAO Consultancy	-	34,444
	- TCM Project Funds	17,772	304,097
	- Other income	165,825	462,631
Cash paid for expenses		(5,231,266)	(5,981,849)
Net cash flow by operating activities		468,818	(150,303)
 Cash flows from/(to) investing activities			
New Term Deposit		-	(50,000)
Interest received		1,275	-
Purchase of property, plant and equipment	11	(236,614)	(2,716,029)
Net cash used by investing activities		(235,339)	(2,766,029)
 Net increase/(decrease) in cash		233,478	(2,916,332)
 Cash and cash equivalent at the beginning		130,575	3,046,907
 Cash and cash equivalent at the end	5	364,053	130,575

The accompanying notes form part of these Financial Statements

1. General

The Research and Development Institute of Samoa is an independent corporate body constituted and operating under the provisions of the Research and Development Institute of Samoa (RDIS) Act 2006 and amendments. Its name changed to The Scientific Research Organisation of Samoa (SROS) on 20th November 2008 following amendment of the Act. It is currently located at Nafanua.

The SROS objectives are:

- a) to promote the national economy of Samoa based on research and development;
- b) to undertake scientific and technical research with the primary aim of adding value to local resources or services;
- c) to develop functional prototypes of products and processes based on scientific and technical research for the local or overseas markets;
- d) to establish partnership with the private sector and commercial interests to support the Organisation's activities; and
- e) Ensure effective training for researchers and professionals engaged in scientific and technical research.

2. Adoption of new and revised Standards

There were no new standards adopted during the financial year.

3. Statement of significant accounting policies

a. Basis of preparation

The financial statements of The Scientific Research Organisation of Samoa ("Organisation") have been prepared in accordance with International Financial Reporting Standards ("IFRS").

The financial statements have been prepared on the historical cost basis, except for the revaluation of certain properties and financial instruments that are measured at revalued amounts or fair values at the end of each reporting period, as explained in the accounting policies below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Organisation takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these financial statements is determined on such a basis.

b. Functional and presentation currency

Items included in the financial statements are measured using the currency of the primary economic environment in which the Organisation operates (the "functional currency") which is the Samoan Tala (WST). The Organisation operates in Samoa and therefore the financial statements are presented in Samoan Tala which the Organisation's functional and presentation currency.

3. Statement of significant accounting policies (continued)

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the transactions at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss. Monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transactions.

Foreign exchange gains and losses that relate to borrowings and cash equivalents are presented in profit or loss together with all other foreign exchange gains and losses and are presented in profit or loss at a net amount.

c. Government grants

The fair value of government grants are not recognised until there is reasonable assurance that the Organisation will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Organisation recognises as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Organisation should purchase, construct or otherwise acquire non-current assets are recognised as deferred income in the statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Organisation with no future related costs are recognised in profit or loss in the period in which they become receivable.

Government grants towards staff re-training costs are recognised as income over the periods necessary to match them with the related costs and are deducted in reporting the related expense.

Government grants relating to the acquisition of property, plant and equipment are treated as deferred income and released to profit or loss over the expected useful lives of the assets concerned.

d. Financial instruments

Recognition and derecognition

Financial assets and financial liabilities are recognised when the Organisation becomes a party to the contractual provisions of the financial instrument.

Financial assets are derecognised when the contractual rights to the cash flows from the financial asset expire, or when the financial asset and substantially all the risks and rewards are transferred. A financial liability is derecognised when, it is extinguished, discharged, cancelled or expires.

Classification and measurement of financial assets

Classification and initial measurement

Except for those trade receivables that do not contain a significant financing component and are measured at the transaction price in accordance with IFRS 15, all financial assets are initially measured at fair value adjusted for transaction costs (where applicable).

3. Statement of significant accounting policies (continued)

Classification and measurement of financial assets (continued)

Financial assets of the Organisation are classified into the amortised cost category only and consist of cash and cash equivalents, bank term deposits and trade receivables. The classification is determined by both:

- the entity's business model for managing the financial asset
- the contractual cash flow characteristics of the financial asset.

All income and expenses relating to financial assets that are recognised in profit or loss are presented within finance costs, finance income or other financial items, except for impairment of trade receivables which is presented within other expenses.

Subsequent measurement of financial assets at amortised cost

Assets that are held for the collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortized cost. A gain or loss on a debt investment that is subsequently measured at amortized cost and is not part of a hedging relationship is recognized in profit or loss when the asset is derecognized or impaired. Interest income from these financial assets is included in 'interest income' using the effective interest rate method.

Impairment of financial assets

The Organisation assesses on a forward-looking basis the expected credit loss associated with trade and other receivables carried at amortized cost. The impairment methodology applied depends on whether there has been a significant increase in credit risk. For trade receivables, the Organisation applies the simplified approach due to the short term nature of the financial assets, which requires expected lifetime losses to be recognized from the initial recognition of the receivables.

Offsetting of financial instruments

Financial assets and liabilities are offset, and the net amount reported in the statement of financial position where there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the assets and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Organisation or the counterparty.

The Organisation's financial liabilities include trade and other payables and are classified into the amortised cost category.

Financial liabilities are initially measured at fair value, and, where applicable, adjusted for transaction costs unless the Organisation designated a financial liability at fair value through profit or loss.

Subsequently, financial liabilities are measured at amortised cost using the effective interest method.

All interest-related charges and, if applicable, changes in an instrument's fair value that are reported in profit or loss are included within finance costs or finance income.

3. Statement of significant accounting policies (continued)

e. Cash and cash equivalents

Cash and cash equivalents comprises of petty cash, cash at bank and cash held by other Government Ministries for relevant projects form an integral part of the Organisation's cash management are included as a component of cash and cash equivalents for the purpose of the statement of cash flows.

f. Property, Plant and equipment

Items of property, plant and equipment are measured at cost less accumulated depreciation and any accumulated impairment losses.

Depreciation is charged so as to allocate the cost of assets less their residual values over their estimated useful lives, using the straight-line method.

The following rates are used for the depreciation of property, plant and equipment:

Buildings and improvements & roads	5%
Motor vehicles	20%
Laboratory equipment	20%
Furniture and fittings	20%
Office and other equipment	20%
Work in progress	0%

g. Income tax

The Scientific Research Organisation of Samoa is not subject to taxation.

h. Stock on hand

Stock on hand are stated at the lower of cost and net realisable value.

i. Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. Rentals payable under operating leases are charged to statement of income and expenditure on a straight-line basis over the term of the relevant lease.

IFRS 16 'Leases'

IFRS 16 will replace IAS 17 'Leases' and three related Interpretations. It completes the IASB's long running project to overhaul lease accounting. Leases will be recorded in the statement of financial position in the form of a right-of-use asset and a lease liability. There are two important reliefs provided by IFRS 16 for assets of low value and short-term leases of less than 12 months.

3. Statement of significant accounting policies (continued)

IFRS 16 'Leases' (continued)

The current location (land) of the Organisation is leased from Ministry of Natural Resources and Environment with a fixed amount of \$16.00 per annum. The Organisation is a beneficiary body which offers services that supported the community and most of its research findings are funded and supported by the Government funds and resources including the land. The Scientific Research Organisation of Samoa's location (land) is the property of the Government and Ministry of Natural Resources and Environment is the responsible entity who manages and allocates land properties with the sole purpose of serving the people. In case the Organisation becomes a trading body then further discussion with the responsible Ministry to review the terms and conditions of the lease. At the moment any development by The Organisation such as the construction of a new building, The Organisation should seek permission from the Land Board.

The 2 acre land leased from Samoa Land Corporation with a fixed amount of \$2,300.00 per annum is situated at Salelologa. SROS's long-term plan is to expand its services in the future for people living in Savaii. Another plan is to establish a commercial warehouse for processing value-added raw materials and a centralised location for farmers. The long term plans that were mentioned are not yet implemented because of the limitation of financial resources.

The Organisation has sought relief under the standard since its leases are of low value.

j. Provisions

A provision is recognized in the statement of financial position when the Organisation has a present legal or constructive obligation as a result of past event, and it is probable that an outflow of economic benefits will be required to settle the obligation.

k. Employee benefits

i. Salaries and wages, annual leave and long service leave

Liabilities for employees' entitlements to salaries and wages, annual leave, long service leave and other current employee entitlements (that are expected to be paid within twelve months) are accrued at undiscounted amounts, and calculated at amounts expected to be paid as at reporting date.

Liabilities for other employee entitlements, which are not expected to be paid or settled within twelve months of reporting date, are accrued in respect of all employees at the present value of future amounts expected to be paid. A provision of one-third of sick leave balance as at year end is taken into account as a liability.

ii. Superannuation contributions

The Organisation contributes towards the National Provident Fund, a defined contribution plan in accordance with local legislation and to which it has no commitment beyond the payment of contribution. Obligations for contributions to the defined contribution plan are recognised immediately in the statement of income and expenditure.

4. Financial risk management

Financial risk factors

The Organisation's activities expose it to financial risks such as market risks related to cash flow interest risk, credit risk and liquidity risk. Risk management is carried out by management and the Board of Directors. They evaluate and monitor financial risks in all areas of the business.

Cash flow interest risk.

Cash flows interest rate risk is the potential for a change in interest rates to change net interest costs and earnings in the current reporting period and in future years. The risk is managed closely by the management and the directors within approved policy parameters.

Financial risk management (continued)

Cash flow interest risk (continued)

The Organisation has interest-bearing asset in the form of term deposits. This is at fixed interest rate and hence, there are no interest rate risks during the period of investment.

For re-investment of term deposits, the Organisation negotiates an appropriate interest rate with the banks and invests with the bank which offers the highest interest return. Given the fixed nature of interest rates, the Organisation has a high level of certainty over the impact on cash flows arising from interest income derived from these term deposits.

Credit risk

Credit risk is the risk of financial loss to the Organisation if a customer or counter-party to a financial instrument fails to meet its contractual obligations and arises principally from the Organisation's receivables from customers. The Organisation's exposure to credit risk is influenced mainly by individual characteristics of each customer.

The Organisation's exposure to credit risk is influenced mainly by the individual characteristics of each customer. The Board through Management monitors and manages the approval of credit whereby each new customer is analysed individually for creditworthiness before the Organisations' standard payment and delivery terms and conditions are offered. A good portion of accounts receivable customers include Government Ministries and State Owned Enterprises. Management consider these accounts receivable as representing a low risk of credit default.

However specific provision has been made for those customers where the organisation has assessed that there is no chance of recovery. Refer to note 6 for details of the movement in impairment provision.

Liquidity risk

Liquidity risk is the risk that the Organisation will not be able to meet its financial obligations as they fall due. The Organisation's approach to managing liquidity risk is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Organisation's reputation. The Organisation carries out cash flow projections taking into account cash inflows and outflows annually which assist it in monitoring cash flow requirements and optimizing its cash returns on investments. Typically, the Organisation ensures that it has sufficient cash on demand to meet expected operational expenses, including the servicing of financial obligations. Cash position is monitored on a daily basis.

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

Other risks

Operational risk

Operational risk is the risk of loss arising from systems failure, human error and fraud. When controls fail to perform, operational risks can cause damage to reputation, have legal or regulatory implications, or lead to financial crisis. The Organisation cannot eliminate all operational risk, but through a control framework and by monitoring and responding to potential risks, the Organisation is able to manage risks. Controls include effective segregation of duties, access, authorisation and reconciliation procedures, staff education and assessment procedures.

5. Cash and cash equivalent

	2022	2021
	SAT\$	SAT\$
Petty cash	500	500
Cash at ANZ Bank (Samoa) Limited - main account	17,633	20,807
Cash at BSP Bank Ltd - Main Account	78,094	2,186
Cash at BSP Bank Ltd - Project Account	167,052	51,214
Cash at BSP Bank Ltd - Technical Services	100,773	55,868
	<u>364,053</u>	<u>130,575</u>

6. Term deposit

	2022	2021
	SAT\$	SAT\$
Term Deposit - BSP Bank (Samoa) Ltd	51,275	50,000
	<u>51,275</u>	<u>50,000</u>

7. Trade and other receivables

	2022	2021
	SAT\$	SAT\$
Trade receivables	268,450	221,198
Other receivables	21,069	201,935
Less: Provision for doubtful debt	(22,554)	(18,053)
	<u>266,965</u>	<u>405,080</u>

The Organisation uses the simplified model for calculating lifetime expected credit losses (ECL) and has applied the probability of default (PD) to the overall portfolio of debtors as they share similar credit characteristics being mainly Government Ministries and State-Owned Enterprises.

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

8. Other creditors and accruals

	2022 SAT\$	2021 SAT\$
Accrued expenses	217,405	109,339
Audit fees	24,150	24,150
Electricity	27,764	13,773
Land lease	<u>2,316</u>	<u>16</u>
Total other creditors and accruals	<u>271,635</u>	<u>147,278</u>

9. Allowance for staff benefits

	2022 SAT\$	2021 SAT\$
Staff annual leave entitlements	<u>174,289</u>	<u>159,886</u>
Total allowance for staff benefits	<u>174,289</u>	<u>159,886</u>

Movement for allowance of staff benefits

Balance at beginning of the year	159,886	122,530
Additional allowance during the year	210,146	210,798
Utilised during the year	<u>(195,743)</u>	<u>(173,442)</u>
Balance at year end	<u>174,289</u>	<u>159,886</u>

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

10. Deferred income

The following projects are currently carried out and implemented by SROS where funds are received within SROS's account. The following balances represent the unused/used funds at balance date.

Donors	Opening balance (2021)	Additional funding	Expenses	Cost Capitalised	Transfer to Other Income	Ending balance (2022)
Current						
SCIDI Project	1,029	-	-	-	1,029	-
SPC/ACIAR cocoa project	8,142	15,895	11,066	-	12,971	-
MNRE - Water Stream Profiling Project	2,225	-	1,305	-	920	-
Commercialisation Project	471,213	-	88,894	382,319	-	-
COVID19 testing machine - UNDP	40,300	-	1,255	21,564	-	17,481
MNRE - Rainwater Harvesting	2,207	19,820	11,000	-	11,027	-
Value Chain Development Project (PFR)	10,516	13,391	11,955	-	11,952	-
Consultancy World Bank #1	-	32,109	13,000	-	19,109	-
Consultancy World Bank #2	-	23,399	11,500	-	11,899	-
CITRUS - University of Sunshine	-	52,234	7,548	-	-	44,686
Hunter H2O Holdings Project	-	15,115	6,400	-	-	8,715
SCIDI Project 2	-	16,885	840	-	-	16,045
IWSA Project	-	25,906	2,561	-	-	23,345
PHAMA Plus Hot Water Project	-	16,000	8,000	-	8,000	-
PIRAS	-	124,925	-	-	-	124,925
Prissco Project	-	885	325	-	-	560
	535,632	356,564	175,649	403,883	76,907	235,757
Non-current						
Coconut Oil Refinement Fund	270,769	-	-	-	-	270,769
Avocado Margarine Fund	182,117	-	-	-	-	182,117
TCM EIF Tier II Project Fund	207,964	-	7,926	9,847	-	190,191
	660,850	-	7,926	9,847	-	643,077
Total Deferred liability	1,196,482	356,564	183,575	413,730	76,907	878,843

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

11. Property, plant and equipment

	Buildings & Roads SAT\$	Equipment & Furnitures SAT\$	Lab Equipment SAT\$	Motor vehicles SAT\$	Assets transferred from MAF SAT\$	Work In Progress SAT\$	TOTAL SAT\$
Cost							
1 July 2020	3,385,883	2,142,085	5,206,788	602,483	-	-	11,337,239
Additions	1,855,445	173,925	651,653	-	35,000	-	2,716,023
Disposals							
1 July 2021	5,241,328	2,316,010	5,858,441	602,483	35,000	-	14,053,262
Additions	83,432.8	68,713	84,469	-	-	612,187	848,801
Disposals	-	-	-	-	-	-	-
At 30 June 2022	5,324,761	2,384,723	5,942,910	602,483	35,000	612,187	14,902,063
Accumulated depreciation							
1 July 2020	1,396,619	1,894,259	3,996,382	504,650	-	-	7,791,910
Depreciation	186,174	101,398	331,254	54,000	6,367	-	679,193
Disposals	-	-	-	-	-	-	-
1 July 2021	1,582,793	1,995,657	4,327,636	558,650	6,367	-	8,471,103
Depreciation	257,132	104,379	401,707	24,667	7,000	-	794,885
Disposals	-	-	-	-	-	-	-
At 30 June 2022	1,839,925	2,100,036	4,729,343	583,317	13,367	-	9,265,988
Carrying amount							
30 June 2021	3,658,535	320,353	1,530,805	43,833	28,633	-	5,582,159
30 June 2022	3,484,836	284,687	1,213,567	19,166	21,633	612,187	5,636,075

Work in progress relates to lab equipment not yet installed and used.

12. Donor project income

	2022 SAT\$	2021 SAT\$
Projects - Ministry of Finance		
ACIAR Project Fund - 2014/077	-	74,058
Japan Grant assistance	-	14,808
ACIAR Cocoa Project (ARD)	106,446	-
CPRDESS Project	337,318	-
ACIAR HORT 2016/185 - Emerging Pests	15,036	-
UNESCO ST&I Project	17,482	-
	<u>476,282</u>	<u>88,866</u>

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

	2022	2021
	SAT\$	SAT\$
Donor project funds		
FAO Consultancy fund - Covid 19 Research income		34,444
MNRE - Water Stream Profiling Income	1,305	-
TCM EIF Tier II Project fund	17,772	304,097
Value Chain development Consultancy Project Income	11,955	3,227
MNRE - Rainwater Harvesting Project	11,000	27,523
Water Sector - GCF Income	-	153,818
SPC ACIAR Cocoa Project Income	11,066	7,844
COVID19 testing - UNDP	22,816	202,233
Commercialization Project	471,212	1,851,885
Covid19 testing - Food loss	-	39,600
CITRUS - University of Sunshine	7,549	-
Prissco Project	325	-
Consultancy World Bank Project #1	13,000	-
Consultancy World Bank Project #2	11,500	-
Hunters H2O Project	6,399	-
IWSA Project	2,561	-
PHAMA Plus Hot Water Project	8,000	-
SCIDI Cocoa I Project	-	-
SCIDI Cocoa II Project	840	-
	<u>597,300</u>	<u>2,624,671</u>
Total Donor project income	<u>1,073,583</u>	<u>2,713,537</u>

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

13. Other income

	2022 SAT\$	2021 SAT\$
Interest received	1,457	-
Other income	<u>164,368</u>	<u>462,631</u>
Total Other income	<u>165,825</u>	<u>462,631</u>

14. Personnel costs

	2022 SAT\$	2021 SAT\$
Salaries and wages	3,242,754	3,125,504
NPF employer contributions	320,837	277,583
ACC employer levies	31,770	29,425
Higher duty allowances	<u>21,067</u>	<u>8,328</u>
Total Personnel costs	<u>3,616,427</u>	<u>3,440,840</u>

15. Occupancy costs

	2022 SAT\$	2021 SAT\$
Electricity	212,081	175,597
Land lease	<u>2,316</u>	<u>4,415</u>
Total Occupancy costs	<u>214,397</u>	<u>180,012</u>

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

16. Administrative costs

	2022 SAT\$	2021 SAT\$
Advertising and promotions	5,673	13,410
Bank charges	10,831	19,803
Internet charges	116,095	95,063
Fees, license and registrations	7,434	38,389
Rental / hire	34,516	49,597
Fuel and oil	25,976	37,472
Printing and stationery	27,275	78,631
Repairs and maintenance - motor vehicles	42,284	56,997
Repairs and maintenance - building	36,550	94,661
Repairs and maintenance - office equipment	27,681	13,499
Repairs and maintenance - plant & equipments	4,056	9,429
Repairs and maintenance - furniture and fittings	229	343
Subscriptions	4,300	1,272
Telephone, fax and postages	25,970	19,881
DSA / transit / permit visa & incidental allowances	1,033	2,755
Water supplies	14,800	11,189
Insurance	71,812	58,227
Local travel	7,721	36,543
General expenses	51,331	201,283
Loss on foreign exchange	2,803	7,053
Provision for doubtful debt	4,502	18,053
	<u>522,871</u>	<u>863,550</u>

17. (a) Donor project costs

	2022	2021
	SAT\$	SAT\$
(a) Projects - Ministry of Finance		
ACIAR Project 2014/077	-	70,259
ACIAR HORT 2016/185 Emerging Pests	15,036	-
Japan Grant assistance	-	14,808
CPRDESS Project	238,219	-
ACIAR Cocoa Project - ARD	106,446	-
	<u>359,701</u>	<u>85,067</u>
	2022	2021
	SAT\$	SAT\$
Donor project funds		
IMPRESS Project	-	28,361
TCM EIF Tier II Project costs	7,926	107,979
FAO Consultancy - COVID 19 Research - Food loss	-	34,444
Value Chain Consultancy Project	11,955	3,227
COVID 19 - UNDP	1,255	52,848
SCIDI Cocoa II Project	840	-
MNRE - Rainwater Harvesting	11,000	27,523
Stream Profiling Project - Water Sector	1,305	-
Water Sector - MNRE - GCF	-	153,818
SPC/ACIAR Cocoa Project	11,066	7,844
Commercialization	88,208	452,985
CITRUS 2019/165 University of Sunshine	7,549	-
Hunter H2O Project	6,399	-
IWSA Project	2,561	-
PHAMA Plus Hot Water Project	8,000	-
Prissco Project	325	-
UNESCO ST&I Project	17,482	-
World Bank Consultancy Project 1	13,000	-
World Bank Consultancy Project 2	11,500	-
	<u>200,370</u>	<u>869,029</u>
Total donor project costs	<u>560,071</u>	<u>954,095</u>

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

18. Other costs

	2022	2021
	SAT\$	SAT\$
Lab consumables	216,501	290,212
Freight and handling costs	12,149	33,322
Accreditation costs	10,834	14,160
Plant hire expenses	789	2,392
Interviewing panel allowances	250	-
Gas expenses	34,636	8,483
Cleaning expenses	10,290	20,200
Staff training costs	2,227	7,085
Professional services expenses	51,751	16,084
Awareness expenses	920	8,186
Other internal project costs	59,600	74,452
Office catering costs	7,075	23,456
	407,021	498,033

19. Project grants

The following projects are currently carried out by the Organisation as the Implementing agency, in which the actual Organisations funds are held by Government via the Ministry of Finance (MOF). Per confirmation from MOF, the following balances represent the unused Organisations funds at balance date.

Project description	Balance as at 30/06/2021	Funds received	Funds expended	Balance as at 30/06/2022
IUCN Biodiesel Project Funds - MNRE	23,283	-	-	23,283
Japanese Embassy - Sustainable Growth of Fragrant Plants for Poverty Reduction Project	454	-	454	-
ACIAR funded Regional Fruit Tree Project	38	-	38	-
Soil Management for Farm Resilience Project	41,460	-	39,772	1,688
Pacific Cocoa Project	157,086	-	72,148	84,938
Respond to Emerging Pests and Disease Threats to Horticulture in the Pacific	4,026	122,499	23,258	103,267
UNESCO ST & I Polciy Project		17,500	17,468	32
CERO Waste (Paper Waste Machinery)	135,403	-		135,403
COVID19 Preparedness and Recovery Diversification	90,516	244,855	220,665	114,706
Total Project Grants held at MOF	452,266	384,854	373,803	463,317

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

-
- i. IUCN Biodiesel Project Funds - Ministry of Natural Resources & Environment: To determine the optimum conditions and characteristics of the alkali process for biodiesel production using Jatropho oil as a feedstock.
 - ii. Respond to Emerging Pests and Disease Threats to Horticulture in the Pacific (ACIAR): Aim to develop sustainable plant health systems that align with the UN Sustainable Development goals. They reflect concerns over the high regional use of the pesticides that constitutes a major threat to human, animal health and ecosystem health. Therefore, the project promotes Integrated Pest and Disease Management (IPDM) approaches to reduce pesticide use and increase biodiversity on farms.
 - iii. UNESCO ST & I Policy Project: Aim to improve productivity and efficiency of budgets made available for Science. Open Science may also allow for citizen participation in public research. This will in turn promotes citizens' trust in Science.
 - iv. Japanese Embassy - Sustainable Growth of Fragrant Plants for Poverty Reduction Project: To promote orchids and fragrant oils as another means for income generation and job creation in the rural communities.
 - v. ACIAR funded Regional Fruit Tree Project: To increase the efficiency of breadfruit and pineapple value chains through improved productivity and postharvest handling practices, and to enhance private sector and Government research and extension capacities in support of fruit industry development.
 - vi. COVID19 Preparedness, Response & Recovery Project: The Scientific Research Organisation of Samoa was contracted by UNDP to procure the equipment and consumables required to allow for in-country testing of COVID-19. The overall goal was to build Samoa's capacity to test for COVID-19 locally, eliminating the reliance on sending samples to New Zealand and Australia for testing, particularly in light of reduced flights and board closures.
 - vii. Pacific Cocoa Project: This project is strengthening cocoa value chains in the South Pacific Islands, including Fiji, Samoa, Solomon Islands and Vanuatu, and Australia. This project encompasses research activities involved in fermentation technologies, and establishing laboratory tests for toxins associated with long-term storage of fermented cocoa beans. Funded by ACIAR
 - viii. CERO Waste: To utilise by-products for value added products to produce value added products
 - ix. Soil Management: This project aimed to ensure that soil knowledge is enhanced in the Pacific Island Countries Territories and provides a reliable foundation for sustainable intensification of agricultural systems. Funded by ACIAR.
 - x. Responding to Emerging Pests & Disease Threats to HORT in the Pacific: This project aims to develop integrated pest and disease management strategies for the sustainable intensification of fruit and vegetable crop production, addressing the threats posed by the inappropriate use of pesticides, emerging pests and diseases and climate change. Funded by ACIAR.

21 Related parties

a) Directors

The names of persons who were Directors of the Organisation with sitting allowances and annual directors fees paid out during the financial year were as follows:

Sulamanaia Nu'uetolu Montini Ott (Chairman)
 Asiata Dr. Satupaitea Viali (Director)
 Dr. Sonny Manuleleua Lameta (Director)
 Masoe Leilua Iosefa Tautua (Director)
 Nive Tauiliili (Director)
 Shelley Burich (new Director)

The Scientific Research Organisation of Samoa
Notes forming part of the financial statements
For the year ended 30 June 2022

	2022	2021
Directors Fees & Board Expenses	SAT\$	SAT\$
Balance represents board expenses for meetings held throughout the year.		
Board expenses	3,978	4,459
	-	
Directors' fees	78,573	94,090
	<u>82,550</u>	<u>98,549</u>

b) Key Management Personnel

The key management personnel are those persons having authority and responsibility for planning, directing and controlling activities of the Organisation during the financial period were:

Chief Executive Officer - Dr. Seuseu Tauati
 CEO Executive Assistant - Frances Belford - Viali
 Corporate Services Manager - Alailepule Christopher Lei Sam (resigned 11th March 2022)
 Technical Services Manager - Dr. Pousui Fiamé Leo
 Environment & Renewable Energy Manager - Annie Toailoa
 Plant & Postharvest Technology Manager - Dr. Masuisuiollemalietoa Seesei Molimau-Samasoni
 Food Technology Manager - Tuimaseve Kuinimeri Finau

The remuneration of key management salaries for the period was as follows:

	2022	2021
	SAT\$	SAT\$
Salaries and short-term employee benefits	<u>701,791</u>	<u>734,201</u>

22. Capital commitments

The Cabinet approved on the 9th March 2022 (FK(22)08) the transfer of the building and land where Medcen (Vailima) was located to The Scientific Research Organisation of Samoa for building of its laboratory for molecular diagnostic and narcotics. This plan is implemented through a lease agreement in accordance with laws and policies of the Government of Samoa. This matter is currently in discussion and no formal agreement is in place.

23. Subsequent events

There was no impact of the Covid19 to The Scientific Research Organisation of Samoa operation in the current financial year. Government of Samoa continues to support the Organisation through financial and budget support. The Scientific Research Organisation of Samoa was also appointed by the Government as one of the key agencies to assist the Government to respond to any COVID19 outbreak.

24. Approval of financial statements

These financial statements were approved by the board of directors and authorised for issue on the date the accounts were signed.

Please address all correspondences
to the Controller and Auditor General



AUDIT OFFICE

REPORT OF THE AUDIT OFFICE

TO THE GOVERNING BODY IN CHARGE OF GOVERNANCE – SCIENTIFIC RESEARCH ORGANISATION OF SAMOA

Audit Opinion

We have audited the accompanying Financial Statements of the Scientific Research Organisation of Samoa which comprise the Statement of Financial Position as at 30 June 2022, the Statements of Financial Performance, Statement of Changes in Equity and Statement of Cash flows for the year then ended, including a Summary of Significant Accounting Policies. The Accounting Firm of Leota and Niumata Chartered Accountants, assisted in the audit. The Engagement Partner on the audit resulting in this Independent Auditor's Report is Mrs. Alice Niumata-Leota.

In our opinion, the financial statements give a true and fair view of the financial position of the Scientific Research Organisation of Samoa as at 30 June 2022, and of its financial performance and cash flows for the year then ended, in accordance with International Financial Reporting Standards (IFRSs).

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of Financial Statements* section of our report. We are independent of the Scientific Research Organisation of Samoa in accordance with the ethical requirements that are relevant to our audit of financial statements in Samoa, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Responsibilities of Those Charged with Governance for the Financial Statements

Directors and Management are responsible for the preparation and fair presentation of the financial statements in accordance with International Financial Reporting Standards, and for such internal control as directors and management determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, directors and management are responsible for assessing the Organisation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Scientific Research Organisation of Samoa or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Organisation's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with International Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with these International Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a

material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Organisation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the directors and management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Organisation's ability to continue as a going concern. If we conclude that material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Organisation to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicated with the Directors and Management regarding, among other matters, the significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Legal and Regulatory Requirements

In our opinion the financial statements of the Organisation have been prepared in accordance with and complies with the requirements of:

- i. Public Bodies (Performances and Accountability) Act 2001, and the
- ii. Public Finance Management Act 2001.

We also confirm that:

- a. We have been given all information, explanations and assistance necessary for the conduct of the audit; and
- b. The Organisation has kept financial records sufficient to enable the financial statements to be prepared and audited.

Our audit was completed on the 31st October 2022 and our opinion is expressed as at that date

Apia, Samoa
31 October 2022



Ah Siu Lin
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