

# SARAWAK BIODIVERSITY CENTRE

## ANNUAL REPORT

TRADITIONAL KNOWLEDGE DOCUMENTATION  
BIODIVERSITY GARDEN  
R&D BIODISCOVERY  
AWARENESS & APPRECIATION



Sarawak  
Biodiversity Centre

# 2015

Cover Photo: *Nocardia sienata*, actinomycetes isolated from a plant, *Litoria ternates* (Asian Pigeonwing).

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## Vision

Enriching Lives with  
Breakthrough Innovations in  
Biodiversity

## Mission

To Decode Biodiversity for the  
Benefit of Mankind

## Tagline

Biodiversity for a Better  
Tomorrow

## Foreword from the Chairman of Sarawak Biodiversity Council

As Chairman of the Sarawak Biodiversity Council, my task is to work with the Council members to ensure that the Centre has the right footing to undertake a meaningful direction in biodiversity research and management.

The State is committed to the sustainable use of its biological resources and conservation of the biodiversity which not only plays an ecological role but also, provides ecosystem services for the people.

The Centre included the Traditional Knowledge of Sarawak's indigenous communities on the utilisation of biodiversity as one of its main functions. It aims to be a centre for natural products research in Sarawak, as well as in the region by establishing one of the most diverse natural product library and live collections of plants and microbes.

Today, SBC's Natural Product Library consists of key information of the extracts and biological resources. It is the core of SBC's collaborations with research institutions and multi-national companies from the United States, Singapore, Australia, Korea and Japan, to name a few, supported by a legal framework for collaborative bioprospecting.

Sarawak is the first in Malaysia to incorporate provisions for Access and Benefit Sharing (ABS) in its biodiversity laws to ensure that our biological resources and traditional knowledge of the indigenous communities are properly managed.

In implementing ABS, SBC has completed a trial run to implement Prior Informed Consent (PIC) through effective community engagement with five villages in the supply of the LitSara® essential oil for production of personal care products.

The PIC protocol developed with these five villages is now extended to others who participate in the Traditional Knowledge Documentation Programme.



The implementation of ABS and acquisition of PIC are part of the Nagoya Protocol, an international agreement which aims at sharing the benefits arising from the utilisation of biological resources in a fair and equitable way.

This puts in place SBC's engagement and collaboration with communities in research and development that will lead to the creation of new biodiversity based socio-economic activities and ensuing rural transformation in Sarawak.

At SBC, everyone practices a culture to grow passion, develop adaptability and ingenuity to achieve success for years to come.

On behalf of the Sarawak Biodiversity Council, I would like to congratulate SBC's team for leading the way in transforming biodiversity conservation, for a better tomorrow.

A handwritten signature in black ink, written in a cursive style. The signature is fluid and appears to read 'Mohamad Morshidi bin Abdul Ghani'. Below the signature is a horizontal line.

**Tan Sri Datuk Amar Haji Mohamad Morshidi bin Abdul Ghani**  
Chairman, Sarawak Biodiversity Council

## Sarawak Biodiversity Council



**YB Tan Sri Datuk Amar Haji Mohamad Morshidi Bin Abdul Ghani**

State Secretary of Sarawak  
*Sarawak Biodiversity Council Chairman*



**YBhg Datu Sudarsono Osman**

Permanent Secretary, Ministry of Resource Planning and Environment  
*Sarawak Biodiversity Council Deputy Chairman*



**Dr Yeo Tiong Chia**

Chief Executive Officer, Sarawak Biodiversity Centre  
*Sarawak Biodiversity Council Secretary*



**YA Datu Haji Abdul Razak Tready**

State Attorney General  
*Sarawak Biodiversity Council Member*



**YBhg Dato Sri Ahmad Tarmizi Bin Haji Sulaiman**

State Financial Secretary  
*Sarawak Biodiversity Council Member*



**YBhg Datu Haji Misnu Bin Haji Taha**

Deputy State Secretary (Administration, Security and Corporate Affairs)  
*Sarawak Biodiversity Council Member*



**YBhg Datu Lai Kui Fong**

Director, Department of Agriculture, Sarawak  
*Sarawak Biodiversity Council Member*



**Tuan Haji Sapuan Ahmad**

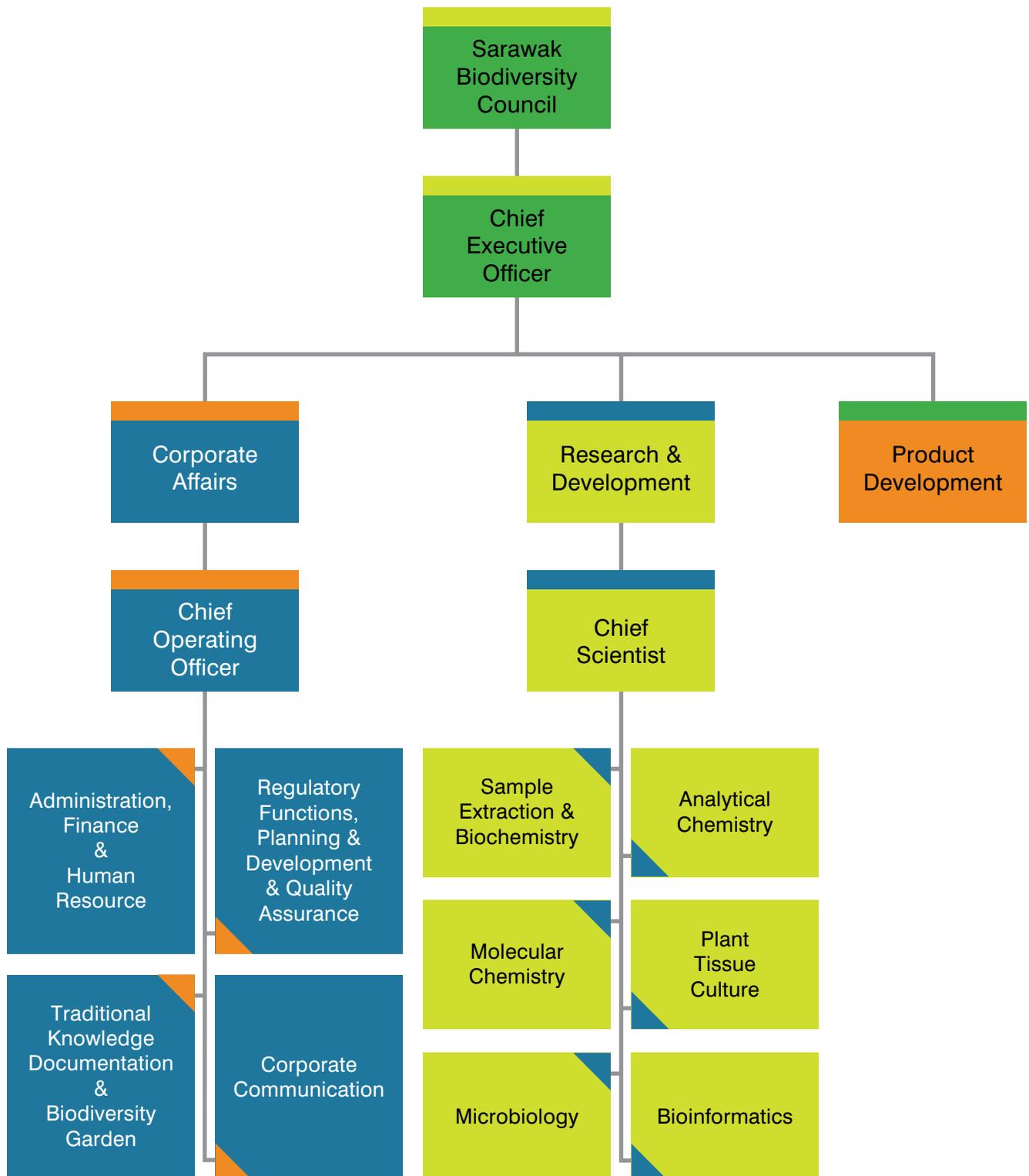
Director, Forest Department, Sarawak  
*Sarawak Biodiversity Council Member*



**Mr Peter Sawal**

Controller, Natural Resources & Environment Board (NREB)  
*Sarawak Biodiversity Council Member*

# Organisation Structure





## R&D Biodiscovery Programme

Since being established in Year 2006, SBC's R&D Biodiscovery Programme has moved ahead to enter into product commercialisation, while still targeting discoveries of new chemicals and enzymes from Sarawak's biological resources. Among others, the R&D Biodiscovery programme aims to utilise its existing natural product library to break into commercial markets and industries such as green technology, drug discovery, as well as personal and health care.

One notable achievement for the programme under the 10th Malaysia Plan (2011-2015) that will further drive SBC's research goals for the next five years, as well as future collaborations, is the establishment of the Laboratory Information Management System or LIMS which enables knowledge sharing through a systematic collating and tracking of data with regards to specimens, laboratory testing, analyses results and inventory of research related materials.

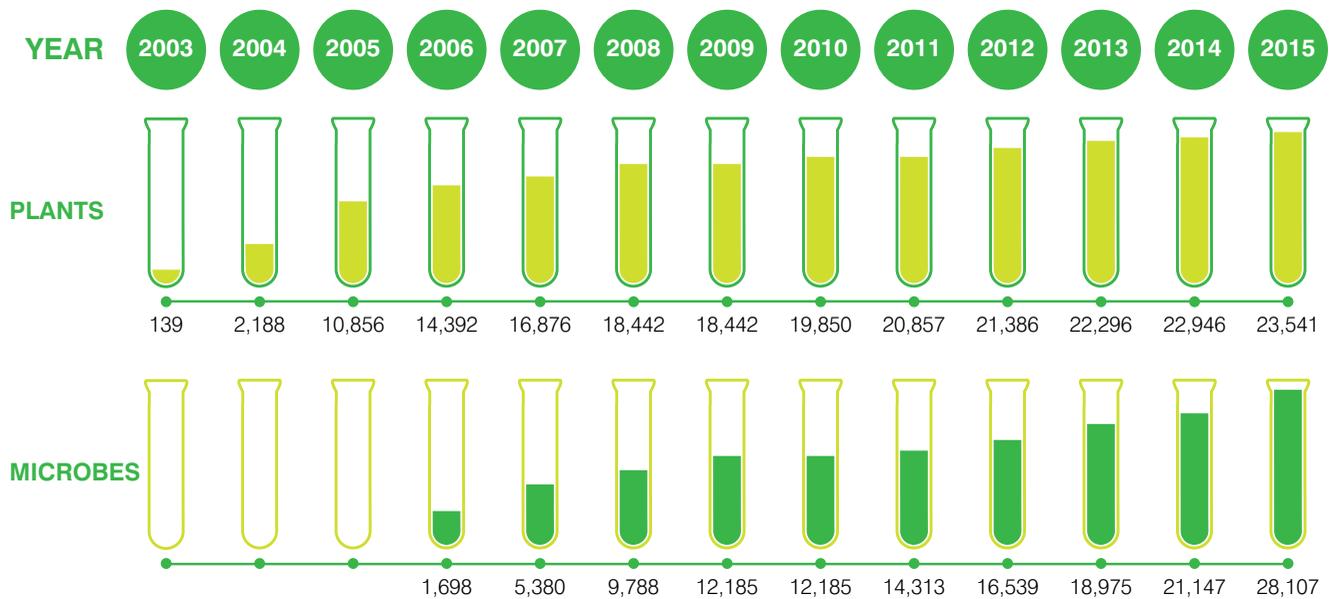
Objectives of SBC's R&D Programme are:

- to build up its **unique library of natural products** from Sarawak's biological resources
- to establish a **pipeline of products and innovations** for commercialisation
- to **develop the State's human resources** in the field of **biotechnology**; and
- to **implement** Sarawak Biodiversity Centre Ordinance and its provisions for **Access and Benefit Sharing (ABS)** to ensure efficient research processes and equitable sharing of benefits arising from research, development and commercialisation with Sarawak and the indigenous communities involved in SBC's Traditional Knowledge Documentation Programme.

## Natural Product Library

The Natural Product Library (NPL) serves as a scientific platform for SBC's R&D Programme and research collaborations. The library consists of extracts from plants and microbes which had been systematically collected and screened in-house and/or provided to collaborators under Material Transfer and Confidential and Non-Disclosure agreements, to be screened for

various bioactivities including cytotoxic activity, anti-microbial properties and chemical ingredients that are useful for personal care and nutritional products. Among others, SBC's collaborators consist of academicians, research institutions, biotechnology, pharmaceutical, local and foreign companies.



## Sample Extraction

In the Extraction Laboratory, plant samples were extracted using various methods such as maceration solvent extraction, maceration aqueous extraction, liquid-liquid partition and reflux extraction. Extraction Laboratory has the capability to carry out extraction of plant samples from small scale, up to 15 kilograms of dried plant material. Our capability included method development to optimize extraction of targeted compound in plant samples. In year 2015, the sample extraction team had extracted 595 plant samples, which increased the number of cumulative plant extract in the Natural Product Library to 23,541.

A total 250 of plant extracts has been sent to collaborators for bioactivity screening such as anti-tumour and antimicrobial studies.



## Analytical Chemistry



The Analytical Chemistry Laboratory is equipped to carry out extraction, purification and identification of compounds. It has the capacity to carry out work from analytical to semi-preparative scale which is essential in purification of a compound of interest. With this capability, the laboratory delivers end products such as extracts, fractions or compounds to projects and collaborations.

One of the key project in the Analytical Chemistry Laboratory is the *Aglaia* project. This project focuses on the large scale isolation of silvestrol,

episilvestrol and its family of derivatives from *Aglaia stellatopilosa* to obtain sufficient quantity for biological testing. Silvestrol and episilvestrol have been part of the collaboration work with the Ohio State University, USA, in preclinical studies. A variety of secodammarane derivatives was also isolated. They are compounds that could have interesting biological activities.

A research collaboration between SBC and University of Queensland, Australia, resulted in a publication entitled "Flemingin-Type prenylated chalcones from the Sarawak Rainforest Plant *Desmodium congestum*" in the Journal of Natural Product (2015). The extract from the plant was found to have anti-MRSA activity. Bioassay-guided fractionation led to the isolation of two new prenylated chalcones, which showed moderate antimicrobial and cytotoxic activity.

SBC has a research collaboration with Singapore Immunology Network (SigN) to identify anti-malarial and anti-chikungunya compounds from plants and microbes. Four bioactive compounds have been isolated which awaits structure elucidation. Fractionation of the bioactive compounds is on-going to obtain sufficient quantity for structure elucidation.

## Microbiology

The Microbe Natural Product Library (MNPL) serves as a centralised depository where researchers, students, collaborators and interested parties can access microorganisms isolated from samples throughout Sarawak.

Year 2015, the Microbiology team isolated actinobacteria and fungal strains from soils, plants and other environmental samples. A total of 16 actinobacteria genera (*Cellulomonas*, *Agromyces*, *Isophtericola*, *Luteibacter*, *Lenzea*, *Shimazuella*, *Angustibacter*, *Marmoricola*, *Leifsonia*, *Gordonia*, *Herbidospora*, *Thermoactinomycetaceae*, *Catenulispora*, *Pseudonocardia*, *Paeniacyllus* and *Bradyrhizobium*) and 21 fungi genera (*Acrocalymma*, *Marasmius*, *Asteromella*, *Beltrania*, *Camarographium*, *Camarosporium*, *Curreya*, *Cyathus*, *Loweporus*, *Didymosphaeria*, *Dinemasporium*, *Exophiala*, *Gliocladiopsis*, *Helminthosporium*, *Humicola*, *Hypocrea*, *Lecythophora*, *Leptosphaerulina*, *Lopadostoma*, *Periconia* and *Robillarda*) were recorded as new depositories in the MNPL.

The Microbiology Laboratory's annual target to produce 2,000 microbial extracts under the 10th Malaysia Plan (10MP) was achieved for the Year

2015. A total of 1,031 actinomycetes and 1,078 fungal extracts was deposited. The number of extracts for actinomycetes and fungi accumulated from Year 2006 - 2015 were 14,569 and 8,687 respectively. The total cumulative number of actinomycetes and fungi strains in the library from Year 2006 - 2015 reached 11,946 and 7,138 respectively.

### Antimicrobial Screening

Majority of the extracts (99%) were subjected to routine antimicrobial screening by batches for profiling purposes. One percent covers extracts that were under collaboration and not screened in house.

Extracts with activity will be further tested and prioritised for compound identification.

Figure 1 shows the antimicrobial profile for the all the extracts from year 2006 to 2015 that were screened against standard yeast, fungi, Gram positive and Gram negative bacteria. Figure 2 shows in detail, activity based on the tested standard strains.

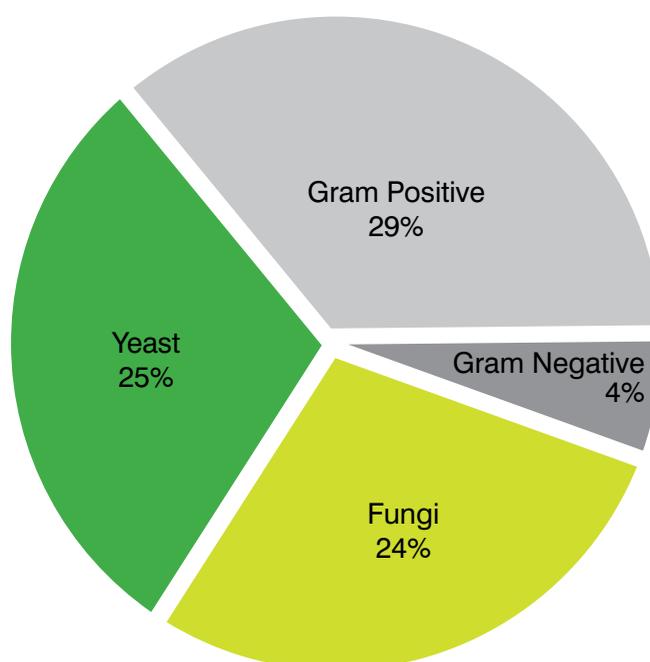


Figure 1: MNPL antimicrobial profile

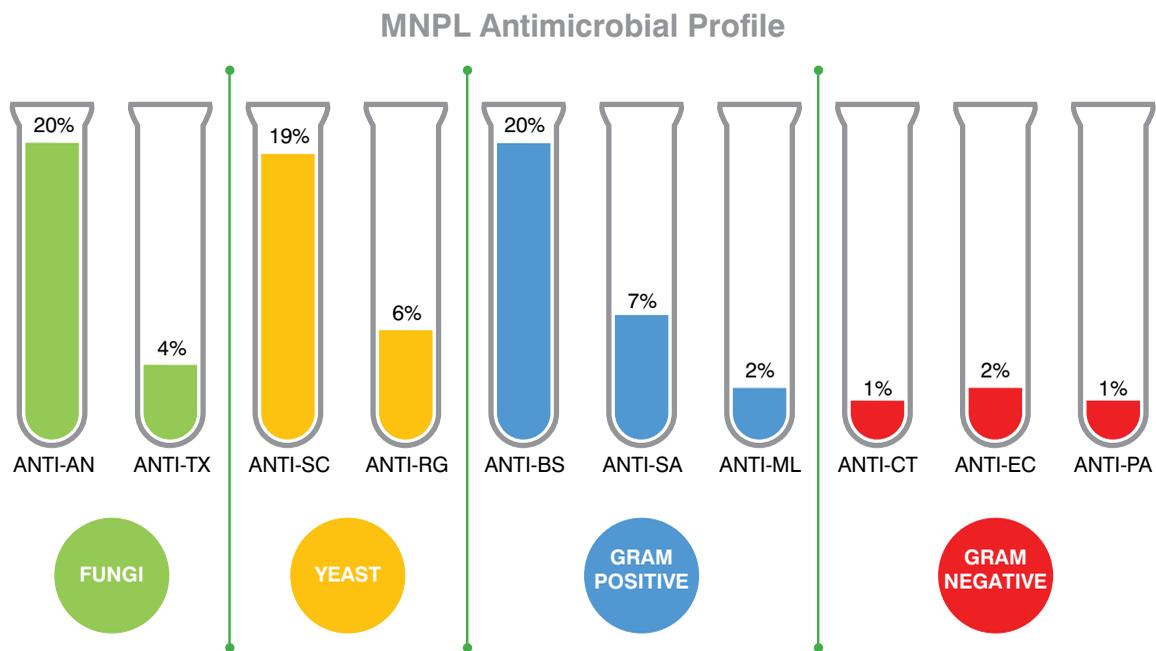


Figure 2: MNPL (11,499 extracts) antimicrobial activity against standard strains

Legend

AN: *Aspergillus niger*

TX: *Trichoderma* sp.

SC: *Saccharomyces cerevisiae*

RG: *Rhodotorula glutinis*

BS: *Bacillus subtilis*

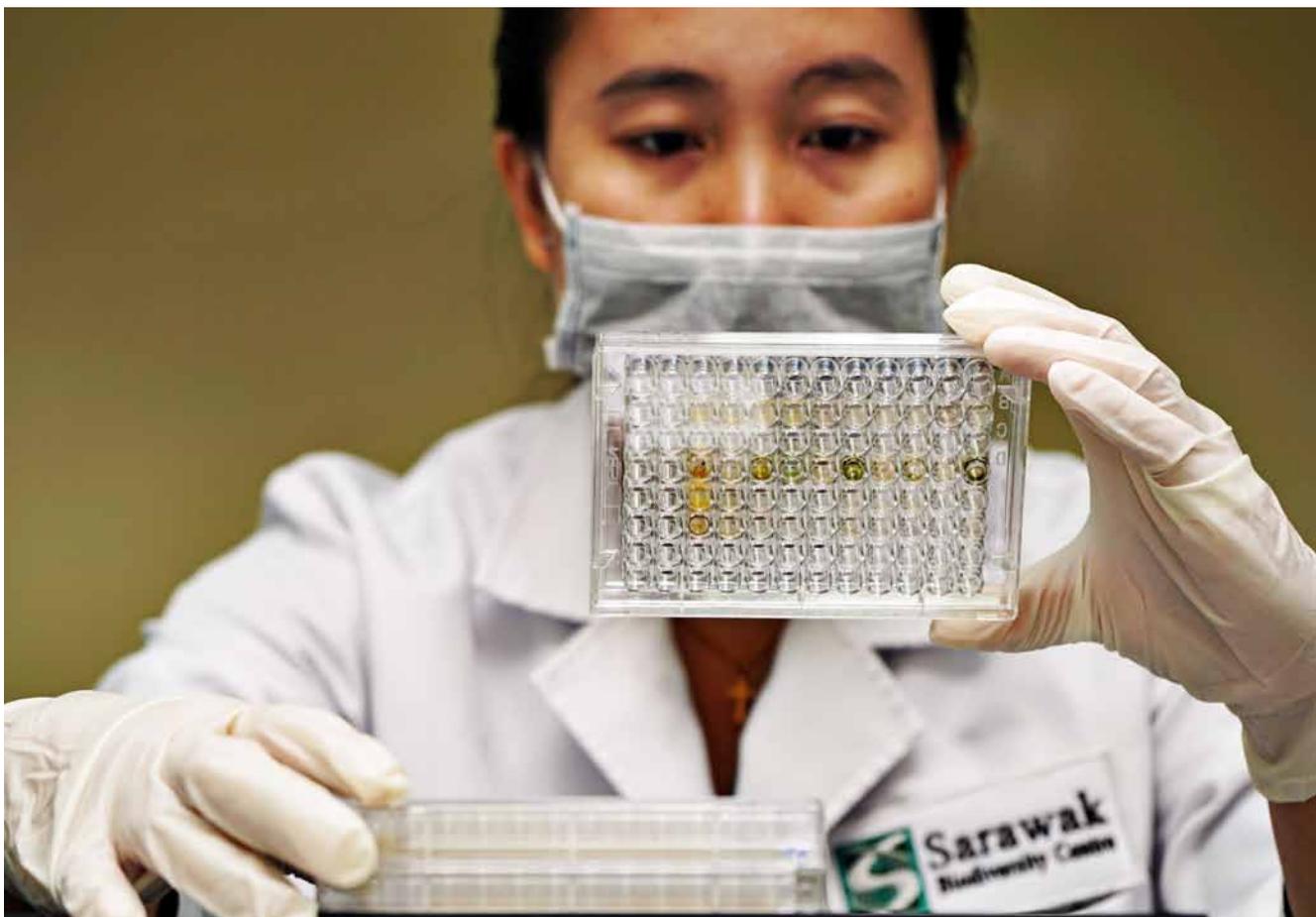
SA: *Staphylococcus aureus*

ML: *Micrococcus luteus*

CT: *Commamonas terrigena*

EC: *E.coli*

PA: *Pseudomonas aeruginosa*



## Molecular Biology

The Molecular Biology team focused on studying the transcriptomics of *Aglaia* species to determine the pathway of silvestrol biosynthesis. Silvestrol is a naturally occurring cyclopenta[b]benzofuran-type compound which is known for its biological properties in modulating protein translation through the eukaryotic initiation factor, eIF-4A. Candidate enzymes implicated in the biosynthesis pathway of silvestrol were compared between *Aglaia* species and between experimental treatments to determine their potential role in silvestrol biosynthesis.

The Molecular Biology Laboratory also plays an active role in supporting other projects in term of cell-based assay for compound screening and DNA sequencing for species identification.

### Aglaia project

Transcriptome sequencing was carried out for *Aglaia stellatopilosa* leaves shielded from light and those exposed to sun light. A differential expression study comparing several transcriptome data identified enzymes potentially involved in the pathway of silvestrol biosynthesis. These genes will be examined further to determine their roles.

### Cell-based assays

A cell-based assay was set up to screen for anti-inflammatory activity of natural compounds. Among all the compounds tested, silvestrol and epi-silvestrol showed high anti-inflammatory activity.

Sulfurhodamine B assay was used to screen extracts for cytotoxic activities against NCI-H460 (lung cancer) and MCF-7 (breast cancer) cells. Among the samples tested were silvestrol, epi-silvestrol, secodammarane derivatives and microbial extracts.



## Plant Tissue Culture

The construction of the SBC's Integrated Biodiversity Research Building (IBRB) included a new Plant Tissue Culture (PTC) facilities. The building was completed in December 2015 and will be fully operational by October 2016.

The PTC team has been improving propagation method of plants, especially *Litsea cubeba* and *Aglaia stellatopilosa* because of their importance in producing LitSara® oil and silvestrol respectively.

Under a project funded by the United Nations Development Programme (UNDP) for Access and Benefit Sharing (ABS), propagation of *Litsea cubeba* were introduced to villages in the project. The aim is to ensure that these communities have planting stock for conservation and production of essential oil for commercialization. The five villages are Kampung Kiding in Padawan; Pa'Lungan and Pa'Ukat in Bario; Long Kerebangan and Long Telingan in Lawas.

The PTC team also propagated other useful aromatic plants. A pilot project in propagation of *Torenia* sp. (Sarang Bejit), *Adenosma nelsonioides* (Bunga Ta'ang), *Cymbopogon nardus* (Serai Wangi), *Pogostemon cablin* (Nilam) and *Plectranthus scutellarioides* (Ati-ati putih) was carried out at Agriculture Research Centre planting plot in 2015.



▲ *Torenia* sp., one of the aromatic plants propagated for research purposes.



▲ Propagation activities at Long Telingan, Lawas.

## Product Development

The Product Development team focused on essential oil extraction, product formulation and management of their quality. Its activities included distillations of essential oil from aromatic plants, solvent extraction and chemical analysis. The team is responsible for the formulation of natural and herbal based products that could be developed into personal care products.

The projects carried out by the Product Development team in Year 2015 were:

### LitSara® Project

The Product Development team is constantly improving the formulation of LitSara® products, natural insect repellent and personal care products such as shampoo, bodywash, bar soaps and sniff jars. In particular, studies on improving scents, moisturizing effect, repellency, antimicrobial and prolonging specific scent were carried out experimentally to determine the best formula.

### Essential oils from medicinal and aromatic plants

83 essential oils were extracted from plants, bringing the total number of essential oils in SBC's Natural Product Library to 348 in Year 2015.



▲ Trapping of *Phalaenopsis bellina* scent using headspace technique

### Scent Project: Constructing the Scent of *Coelogyne asperata*

A scent accord is made up of several ingredients that blend together to form a distinct fragrance that resembles the living plant. *Coelogyne asperata* is one of many beautiful scented orchids found growing on tree branches and rock faces near rivers in the primary forests of Borneo. The first whiff of its scent revealed a sweet smelling note that ends with a scent of licorice.

The sweet scent of orchid *C. asperata* consists of 17 compounds identified through GC/MS analysis. This data was used to reconstruct the orchid scent to give a fragrance that resembles the living plant. Seven fragrant compounds were combined to make the scent which can be used as perfumery ingredients for product formulation.

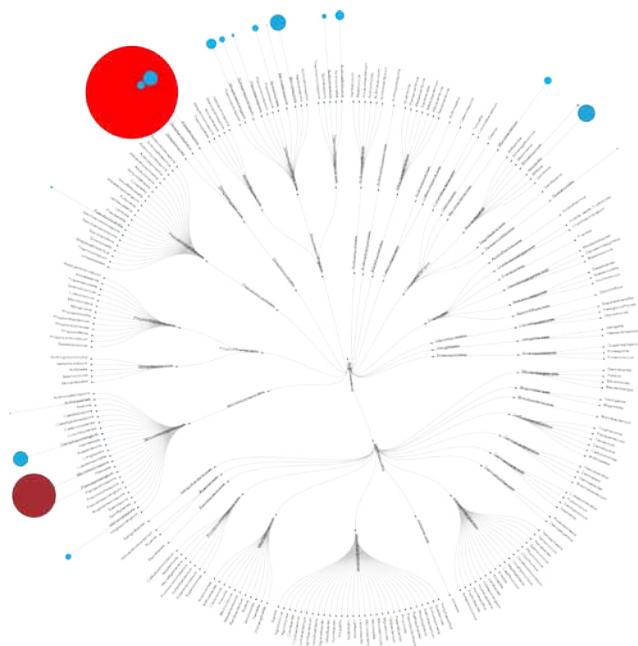


▲ *Coelogyne asperata* flower in full bloom

## Bioinformatics

Year 2015 marked a key milestone achievement for Bioinformatics programme with the successful implementation of Laboratory Information Management System (LIMS) at SBC.

The LIMS, or specifically, the software named STARLIMS was developed by Abbott Informatics, a part of the Abbott group of companies. STARLIMS is a web-based database application that facilitates inventory management, storage management, specimen usage and movement, specimen placement and removal, test assignment and much more. It also facilitates regulatory compliance to FDA 21 CFR Part 11 and ISO 17025.



Inventory Id	Generation	Status	Matcode	Container	Amount	Transaction Type	Transaction Date	Location
15PL0123	0	Released	Plant Sam...	N/A	498.0000 g	New Reception	06/18/2015 08:31:42	Plant Prep » General Are
15PL0123L1	0	Released	Leaf	N/A	0.0000 g	Aliquoted	06/18/2015 13:10:21	Plant Prep » General Are
15PL0123R1	0	Released	Root	N/A	0.0000 g	Aliquoted	06/18/2015 13:11:19	Plant Prep » General Are
15PL0123R1-F1	1	Released	Fungi Strain	N/A	0.0000	Aliquoted	07/13/2015 13:00:23	Microbiology » 28 * Room
15PL0123R1-F1-F1	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:06:07	Microbiology » Cold Roo
15PL0123R1-F1-F2	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:06:07	Microbiology » Cold Roo
15PL0123R1-F1-F3	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:06:52	Molecular Biology » Free
15PL0123R1-F1-F4	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:07:18	Microbiology » Freezer F
15PL0123R1-F1D1	0	Released	DNA Extract	N/A	0.0000 mmo...	Aliquoted	08/24/2015 10:31:47	Microbiology » Freezer F
15PL0123R1-F1...	0	Released	Pure PCR	N/A	0.0000	Aliquoted	09/28/2015 16:59:41	
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15PL0123R1-F2-F1	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:07:59	Microbiology » Cold Roo
15PL0123R1-F2-F2	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:07:59	Microbiology » Cold Roo
15PL0123R1-F2-F3	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:08:30	Molecular Biology » Free
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15PL0123R1-F2D1	0	Released	DNA Extract	N/A	0.0000 mmo...	Aliquoted	08/24/2015 10:31:47	Microbiology » Freezer F
15PL0123R1-F2...	0	Released	Pure PCR	N/A	0.0000	Aliquoted	09/28/2015 16:59:42	
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15PL0123S1	0	Released	Stem	N/A	0.0000 g	Aliquoted	06/18/2015 13:12:26	Plant Prep » General Are
15PL0123S1-F1	1	Released	Fungi Strain	N/A	0.0000	Aliquoted	07/13/2015 13:01:22	Microbiology » 28 * Room
15PL0123S1-F1-F1	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:09:39	Microbiology » Cold Roo
15PL0123S1-F1-F2	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:09:39	Microbiology » Cold Roo
15PL0123S1-F1-F3	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:10:10	Molecular Biology » Free
15PL0123S1-F1-F4	1	Released	Fungi Strain	N/A	1.0000	Aliquoted	07/27/2015 16:10:36	Microbiology » Freezer F
15PL0123S1-F1D1	0	Released	DNA Extract	N/A	0.0000 mmo...	Aliquoted	08/24/2015 10:31:48	Microbiology » Freezer F
15PL0123S1-F1...	0	Released	Pure PCR	N/A	0.0000	Aliquoted	09/28/2015 16:59:42	
15PL0123S1-F1...	0	Released	Pure PCR	N/A	0.0000	Aliquoted	09/29/2015 11:15:25	

The project began in year 2013 and STARLIMS was successfully deployed in March 2015 across all five laboratories at SBC namely, extraction, analytical chemistry, molecular biology, microbiology, plant tissue culture and bioinformatics. Such deployment offers a unified access and seamless user experience to all the researchers across five laboratories. Researchers are now able to systematically track and manage their specimens in real time. Specimen data can be readily accessed and shared with researchers from other laboratories at SBC.

One of the key impacts of STARLIMS was the extension of the system to facilitate documentation of traditional knowledge which added a new dimension to data integration. Now, SBC is able to easily correlate research findings with traditional knowledge for a particular plant specimen.

In summary, STARLIMS implementation brings great improvement to SBC's laboratory operations and allowed for multi-dimensional data integration across different laboratories.

## R&D Collaborations: Moving Forward with High Impact Collaborations

SBC's Natural Product Library (NPL) holds a depository of natural products systematically collected from the rainforests of Sarawak. It includes extracts, essential oils, scents and compounds prepared from Sarawak's indigenous plants and strains of microorganisms (actinomycetes, fungi, algae and others) collected from the environment. The NPL is special because of the uniqueness of the samples found on the island of Borneo. The 23,541 plant extracts in the NPL are mostly linked with traditional knowledge while 19,084 of microorganisms (or nearly 23,256 microbial extracts) in SBC's collection were isolated from diverse ecosystems and habitats, including highland and lowland forests, peat swamps, hot springs and caves, as well as marine environments on Sarawak's coasts.

As of 31 December 2015, SBC has established a total of 25 collaborations with national and international research institutions and corporate organizations. In Year 2015, the following collaborations were formed:



### 1. Purification and structural elucidation of bioactive compounds using spectroscopic methods with Department of Pharmacy with National University of Singapore

SBC partnered with Associate Professor Dr. Christina Chai from the Department of Pharmacy, National University of Singapore (NUS) on 27 November 2015. This collaboration provides for a platform to elucidate compounds that exhibit anti-malaria and anti-chikungunya bioactivities.

### 2. Screening of potential controlling high blood sugar, anti-aging and whitening (cosmetics) from natural products with the Department of Chemistry, National University of Singapore

SBC is collaborating with Professor Huang Dejian from the Department of Chemistry, National University of Singapore in looking for plants that can be used in controlling blood sugar, as well as for anti-aging and whitening.



### 3. Algae biofuel research Phase II collaboration with Mitsubishi Corporation: Further evaluation and analysis of the characteristic of the collected strains under Phase I and collect strains in four fields of algae utilization (PUFAS, food and feed, fatty acid oil and fuel)

In Year 2015, SBC and Mitsubishi Corporation (MC) moved into the second phase of a strategic collaboration on microalgae research which first began in Year 2012. Under the initial phase, a total of 400 microalgae strains were collected from 17 locations in Sarawak and 25 strains were then selected for further evaluation. The second phase collaboration targets four applications of microalgae – fuel, food, feed and functional materials (such as Polyunsaturated fatty acids (PUFA)).



### 4. Research collaboration with Swinburne University of Technology Sarawak (SUTS)

Two collaborations were signed with Swinburne University of Technology Sarawak (SUTS). The first, led by Dr Paul Nielsen of SUTS investigates the silvestrol compound to determine its effectiveness at killing nasopharyngeal cancer cells.

Meanwhile, another study is also being carried out with SUTS on "Natural product biosynthetic capabilities by genome sequencing and fermentation process of a rare actinomycete strain". This is a Master's Degree project carried out by SBC's Research Officer, Holed Juboi, alongside the principal investigator from SUTS, Associate Professor Dr Peter Morin Nissom.



## Traditional Knowledge Documentation

The Traditional Knowledge (TK) Documentation Programme facilitates the documentation of indigenous communities' knowledge relating to the uses and management of biodiversity found in Sarawak. Over the past 12 years, SBC has documented 5,503 plants from 1,281 species (identification is on-going) used by these communities. The number of plants documented and collected from each site is shown in Table 1.

In total, as at 31 December 2015, SBC has carried out Traditional Knowledge Documentation Workshops in 63 villages and areas throughout Sarawak, covering fifteen ethnic communities. Traditional Knowledge Documentation Consultative Meetings were also carried out in 55 areas.



In Year 2015 alone, SBC carried out four (4) TK Consultative Meetings with the community leaders at the following Districts and areas:

1. Kuching District Office- Bako
2. Kuching District Office- Santubong
3. Lingga Sub-district Office
4. Ulu Menyang, Lubuk Antu

In Year 2015, SBC conducted eight (8) 1st TK Documentation Workshop at the following areas:

1. Maludam, Betong
2. Karangan Mong, Lubok Antu, Sri Aman
3. Rumah Seking, Nanga Merit, Kapit
4. Kampung Bako Hulu, Bako, Kuching
5. Kampung Bako Hilir, Bako, Kuching
6. Sebuyau, Samarahan
7. Kampung Pasir Pandak, Santubong, Kuching
8. Kampung Selabat/ Pasir Putih, Muara Tebas, Kuching

SBC also carried out the following field work under the various projects:

#### **A. SBC-PEPSICO Collaboration & Aromatic project**

1. Kampung Lanchang, Serian
2. Kampung Pantray, Mukah
3. Kampung Jemoreng, Mukah
4. Kampung Jebungan, Mukah
5. Kuala Mendalam, Nanga Medamit, Limbang
6. Sungai Rama, Sebuyau
7. Simunjan
8. Samarahan
9. Long Tuyu, Lawas, Limbang
10. Long Iman, Mulu
11. Rh Ngumbang, Nanga Sumpa, Batang Ai, Sri Aman
12. Rh Simon Buei Panjai, Lubok Antu, Sri Aman

A total of 226 species were collected and a total of 900 extracts have been prepared and provided for taste and flavour evaluation.

#### **B. Aromatic Plants Collection**

A total of 85 plants were collected.

#### **C. Tea Project**

SBC carried out field trips in the following areas:

1. Sabal Forest Reserve, Simunjan, Samarahan
2. Bako National Park, Kuching

#### **D. Visit by Bhutan Delegation**

SBC hosted a delegation from the National Biodiversity Centre of Bhutan on a field trip to Kampung Kiding, Padawan, near Kuching. The field trip featured SBC's TK Documentation work with the community and sharing of the community's experience in carrying out the documentation.

#### **E. Community Herbal Garden**

Activities at Community Herbal Gardens in Year 2015 include:

1. Follow up visits to Jagoi Herbal Garden for propagation, field inventory and plant labelling.
2. Follow up visits to Long Iman to expand the herbal garden near the Long Iman waterfall.

#### **F. SBC-MNRE-UNDP ABS Project-“Creating a value chain leading to the development of products for the healthcare, personal care and cosmeceutical industries from Traditional Knowledge Associated with Genetic Resources and Benefit Sharing in Sarawak”.**

Activities carried out under the project in Year 2015 were:

1. Workshop on ABS with Government agencies
2. Workshop on ABS with Universities
3. Handmade soap workshop at Kampung Kiding
4. Handmade soap workshop at Long Kerebangan & Long Telingan
5. Handmade soap workshop at Pa'Ukat and Pa'Lungan
6. ABS Documentation field visit at Pa'Ukat and Pa'Lunga
7. ABS Documentation field visit at Long Kerebangan and Long Telingan
8. Follow-up trip on propagation of *Litsea cubeba* at Long Telingan and Long Kerebangan

Table 1: Number of Plants Documented and Collected as of 31 December 2015

Community	Location	Total Plants Collected	Total
Bidayuh	1. Bung Jagoi, Bau, Kuching	46	1,151
	2. Kampung Kiding, Padawan, Kuching	530	
	3. Kampung Semadang, Penrissen, Kuching	311	
	4. Kampung Semban, Padawan, Kuching	124	
	5. Kampung Serin, Serian	17	
	6. Kampung Lanchang, Serian	59	
	7. Kampung Simuti, Padawan, Kuching	50	
	8. Kampung Chupak & Skuduk, Siburan, Kuching	14	
Iban	9. Rumah Skatap, Betong	276	1,141
	10. Rumah Nyambong, Selangau, Sibu	89	
	11. Rumah Emak, Kapit	89	
	12. Rumah Changai, Song, Kapit	86	
	13. Rumah Simon Buei, Lubok Antu, Sri Aman	86	
	14. Rumah Bana, Sebauh, Bintulu	70	
	15. Rumah Lulut, Kapit	55	
	16. Rumah Rapak Tepus, Sri Aman	54	
	17. Rumah Bajau, Julau, Sarikei	71	
	18. Rh Ngumbang, Nanga Sumpa, Batang Ai, Sri Aman	32	
	19. Kampung Sual, Simunjan, Samarahan	53	
	20. Ulu Mentawai Expedition, Miri	51	
	21. Rumah Entakong, Nanga Sumpa, Sri Aman	54	
	22. Rumah Masoon, Sibuti, Miri	20	
	23. Kampung Sungai Rama, Sebuyau, Samarahan	35	
	24. Karangon Mong, Lubok Antu, Sri Aman	20	
Kayan	25. Rumah Lesong, Sungai Asap, Belaga, Kapit	81	185
	26. Long Bedian, Baram, Miri	75	
	27. Uma Bawang, Long Lama, Baram, Miri	29	
Kelabit	28. Pa' Derung, Bario, Miri	12	478
	29. Pa' Lungan, Bario, Miri	303	
	30. Pa' Ukat, Bario, Miri	163	
Kenyah	31. Long Pelutan, Baram, Miri	127	245
	32. Long Ikang, Marudi, Miri	58	
	33. Long Palai, Baram, Miri	13	
	34. Long Amo, Belaga, Kapit	47	

Community	Location	Total Plants Collected	Total
<b>Lun Bawang</b>	35. Ba' Kelalan, Lawas, Limbang	48	583
	36. Long Kerabangan, Lawas, Limbang	184	
	37. Long Telingan, Lawas, Limbang	120	
	38. Long Sebangang Asal, Lawas, Limbang	49	
	39. Long Tuyu / Paya Maga Expedition, Lawas, Limbang	137	
	40. Long Tuyu/Long Sukang, Lawas, Limbang	45	
<b>Melanau</b>	41. Kampung Jebungan, Mukah	96	194
	42. Kampung Pangtray, Mukah	48	
	43. Kampung Jemoreng, Mukah	30	
	44. Kampung Paloh, Belawai, Daro, Mukah	20	
<b>Penan</b>	45. Long Iman, Mulu, Marudi, Miri	538	1,054
	46. Batu Bungan, Mulu, Marudi, Miri	452	
	47. Long Latei, Long Bedian, Marudi, Miri	6	
	48. Long Wat, Murum, Bintulu	31	
	49. Long Seridan, Miri	9	
	50. Long Malin, Murum, Bintulu	18	
<b>Punan</b>	51. Rumah Ado, Tatau, Bintulu	39	39
<b>Selako</b>	52. Kampung Pueh, Sematan, Kuching	112	112
<b>Kedayan</b>	53. Rumah Ajan, Merapok, Lawas, Limbang (with Iban & Lun Bawang communities)	62	62
<b>Tabun</b>	54. Kampung Kuala Medalam, Nanga Mendamit, Limbang	51	51
<b>Bisaya</b>	55. Kampung Bidang, Limbang	30	30
<b>Malay</b>	56. Sundar, Lawas, Limbang (with Lun Bawang & Chinese)	16	159
	57. Maludam area, Maludam, Betong (with Iban community)	25	
	58. Kampung Hulu Bako, Kuching	15	
	59. Kampung Hilir, Bako, Kuching		
	60. Sebuyau area, Samarahan	48	
	61. Kampung Pasir Pandak, Santubong	27	
62. Kampung Selabat/ Pasir Putih, Muara Tebas	28		
<b>Bekatan</b>	63. Rumah Seking, Nanga Merit, Kapit	19	19
<b>Total Plants Collected</b>			<b>5,503</b>

## Laila Taib Ethnobotanical Garden

In Year 2015, a total of 488 plants were featured in the garden. These were made up of 92 families and 411 species of plants.

The plants in the garden are planted according to 13 different ethnic communities in Sarawak who are participating in SBC's Traditional Knowledge Documentation Programme. The communities featured in the garden are Bidayuh, Penan, Iban, Kelabit, Kenyah, Kayan, Lun Bawang, Punan, Bisaya, Selako, Tabun, Melanau and Malay.

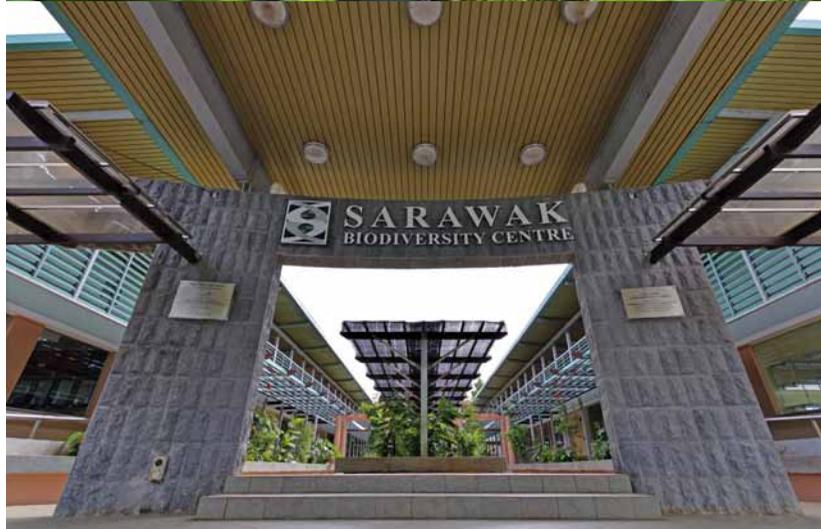
No	Community	Number of plants in the Ethnobotanical Garden
1	Bidayuh	54
2	Iban	42
3	Penan	128
4	Kelabit	39
5	Kenyah	13
6	Kayan	19
7	Lun Bawang	42
8	Punan	19
9	Bisaya	19
10	Selako	28
11	Tabun	22
12	Melanau	24
13	Malay	29
<b>Total</b>		<b>488</b>

This garden provides a site for ex-situ conservation of useful indigenous plants which creates an interest on the diversity of plants found in Sarawak, among those who visit SBC. It is also aimed at creating awareness on the importance of documenting traditional knowledge and conservation of Sarawak's plant diversity. Visits to the garden are arranged through SBC's Awareness and Appreciation Programme.

Visitors are also able to increase their understanding of plants with traditional uses for medicinal purposes, food, ritual, and building materials, among others. An example of a unique plant is the Empelas which leaves are used by the Iban community as sand paper.

Improvements also have been carried out such as changing of soil in the planter boxes to improve drainage and ease penetration of plant roots into the soil.

In Year 2015 alone, a total of 65 visits took place in the garden; these included schools and corporate visits.





## Biodiversity-Biotechnology Awareness & Appreciation Programme

SBC recognises the importance of public awareness and appreciation towards related biotechnology applications and initiatives. Under the programme, SBC provides the platform and opportunities for the general public and specific target groups (scientists, researchers, policy makers, business and industry players, investors) to share experience and ideas, and to discuss trends, directions and issues relating to biodiversity, bioprospecting and R&D through seminars, workshops, conferences, forums, public lectures, dialogue sessions and exhibitors.

SBC also provides opportunities for members of public, particularly students to learn about the State's rich biodiversity, the value of Traditional Knowledge of the indigenous communities, biotechnology applications in bioprospecting and career prospects in related fields through appreciation visits to SBC and talks.



## Highlight Events

### SBC Balanced Scorecard 2015-2020 Brainstorming Session

#### Sarawak Biodiversity Centre Balanced Scorecard 2016

<b>Vision</b>	Enriching Lives with Breakthrough Innovations in Biodiversity		
<b>Mission</b>	To Decode Biodiversity for the Benefit of Mankind		
<b>Tagline</b>	Biodiversity for a Better Tomorrow		
<b>Strategic Theme</b>	<b>R&amp;D Excellence</b>	<b>Strategic Collaborations</b>	<b>Effective Community Engagement</b>
<b>Strategic Result</b>	A Strong Pipeline of Ideas Leading to Breakthrough Innovations	High Impact Collaborations and Innovative Products	High Number of Communities Participating in TKDP
<b>Strategic Objectives and Strategy Map</b>			
		<b>STRATEGIC OBJECTIVES</b>	<b>TARGET</b>
			<b>KPI</b>
<b>Stakeholders Satisfaction</b>		SS1: Increase Stakeholder Satisfaction & Community Engagement SS2: Implement Benefit Sharing	85% 2
<b>Financial</b>		F1: Increase Sources of Funding F2: Budget Optimisation	RM300K 90%
<b>Internal Processes</b>		IP1: Improve Internal Efficiency IP2: Provide a Platform for Converting TK to Products IP3: Establish a Pipeline of Ideas IP4: High Impact Collaborations and Innovative Products	50% 4 4 4
<b>Organisational Capacity</b>		OC1: Improve Distribution of Roles & Responsibilities OC2: Improve Staff Capacity & Motivation OC3: Improve Facilities and Working Environment	2 25 2
<b>SCS Shared Values</b>			
• Integrity • Professionalism • Results Oriented • Sense of Urgency & Ownership • Kind & Sharing • Team Spirit			



In February 2015, SBC held a brainstorming session involving selected staff from various levels and programmes. The session was to set directions for SBC under the 11th Malaysia Plan. The outcome of this session was a review of SBC's Vision, Mission and development of its second Balanced Scorecard.

In line with the implementation of Access and Benefit Sharing (ABS) under the Sarawak Biodiversity Centre (Amendment) Ordinance 2014, SBC's revised vision is "Enriching Lives with Breakthrough Innovations in Biodiversity" while its mission is "To Decode Biodiversity for the Benefit of Mankind".

These and strategic themes for "R&D Excellence", "Strategic Collaborations" and "Effective Community Engagement" will drive SBC's efforts to encourage active community participation in its

research projects with the aim of creating a value chain through benefits such as alternative sources of income and subsequently improving livelihoods of these communities through sustainable use of biological resources.

This is the fundamental principle of ABS – to channel benefits back to the indigenous communities whose traditional knowledge has played a key role in building up SBC’s Natural Product Library.

SBC is committed to achieve its vision and mission through the implementation of the Balanced Scorecard.

The aims are to attain strategic results from a strong pipeline of ideas leading to breakthrough innovations, high impact collaborations and innovative products and an increase in the number of communities participating in Traditional Knowledge Documentation Programme.

### Roadshow: Listen to Nature’s Voice with Marc Anderson

In Year 2015, SBC organised a series of public talks with Marc Anderson, a sound recordist from Australia. These talks entitled “Listen to Nature’s Voice” were conducted in Kuching, Sibul and Miri on 11, 13 and 15 July respectively, and targeted school children to inculcate a sense of wonder and appreciation towards nature around them.

Marc Anderson is known for his recording of nature’s sounds during dusk at the frog pond in Kubah National Park which won the international recognition as being voted the “Most Beautiful Sound in the World” for Year 2014.

During the talks, Anderson presented the art and meaning behind recording nature’s soundscapes and how these recordings can give an insight into the health of a particular ecosystem.

He also described how recordings of nature’s sounds can complement biodiversity conservation efforts by way of monitoring and identifying target species through the sounds that they make. He highlighted the positive and negative effects different sorts of sounds have on human beings. Students who attended the talks also had the opportunity to interact with Anderson through activities that demonstrated soundscape recordings.



## SBC Biodiversity Day 2015

SBC held its annual Biodiversity Day on 23rd – 24th May 2015. The theme for the event was “Biodiversity for Sustainable Development”, which was also the theme for the International Day for Biological Diversity. The International Day for Biological Diversity recognised worldwide is observed on 22 May annually.

The main objective of this annual event is to promote the importance of awareness and appreciation of Sarawak’s local biodiversity and to create awareness towards SBC’s function in sustainable research and development on biodiversity found in Sarawak.

Many fun and interactive learning activities were carried out throughout the two days at SBC’s premises. These activities included pottery painting contest and a recycled-art contest for children, clown appearances, laboratory based hands on activities, mini-exhibition on Traditional Knowledge zoological and herbarium specimens, demonstrations by indigenous communities on how they utilise biodiversity, public awareness talks and exhibition by invited agencies.

Visitors to Biodiversity Day was also able to tour SBC’s Laila Taib Ethnobotanical Garden which features plants used by indigenous communities in their daily lives, as well as purchase plants which include commonly used herbs and spices.

1,628 visitors participated in this event over the two days.



*School children participating in the Biodiversity Recycled Art Contest.*



*Children viewing algae in water sample.*



*Candy chromatography hands-on game.*



*Traditional dance demonstration by indigenous community.*

## Joint Briefing on the Sarawak Biodiversity Regulations 2004, Wildlife Protection Ordinance 1998 and Forest Ordinance 2015

On 26 and 27 November 2015, SBC and the Sarawak Forest Department (SFD) conducted a joint briefing on the Sarawak Biodiversity Regulations 2004, Wildlife Protection Ordinance 1998 and Forest Ordinance 2015.

The briefing, specifically targeted at enforcement agencies stationed at entry-exit points in Sarawak, such as the Royal Malaysian Customs and Malaysia Airports Holding Berhad, as well as tourist guides from various travel agencies was aimed at creating awareness on existing laws in Sarawak that are put in place to protect biological resources and deter illegal collection of flora and fauna.

The briefings saw active participation from the audience who shared experiences and challenges in disseminating information about protection and conservation of Sarawak's biodiversity among their respective stakeholders.

A series of similar joint briefings have been targeted for Year 2016 in different locations throughout Sarawak.



## SBC Teambuilding and Fitness Bootcamp, 5 – 7 November 2015

SBC has organised its Teambuilding annually since 2008 to impart team spirit and leadership among its staff.

In Year 2015, SBC's teambuilding was themed "Strategic Thinking and Planning".

On the first day, experienced strategic thinking trainer, Tuan Haji Tajodin Hj Sanusi carried out a comprehensive programme on strategic planning within a team and enhancing leadership skills through various problem solving and scenario based activities.

The following two days of activities encompassed aspects of health and fitness. Dr Go Chin San from Normah Medical Specialist Centre talked about the importance of keeping our colons healthy during a session entitled "Healthy Colon and Tips to Prevent Colon Cancer".

Trainers from The GymBox then put SBC staff through a gruelling regime of fitness activities, after teaching correct ways of warming up and postures when exercising.

The SBC Welfare and Sport Club also organised a "weigh-in" session for its "Biggest Loser" competition, aimed at encouraging the staff to exercise and maintain a healthy lifestyle. The contestants who signed up for the challenge are given a year to lose weight and tone up and will again "weigh-in" during SBC's Teambuilding and Fitness Bootcamp in Year 2016.



## Certificate of Achievement for three consecutive years without sick leave at SBC from 2012 – 2014

SBC is proud to announce that 11 staff stated below were rewarded the Certificate of Achievement for consecutively 3 years without sick leave at SBC from 2012-2014.

1. Dr Yeo Tiong Chia
2. Alan Anak Ringah
3. Bee David Anak Lamada
4. Bernardine Ida Anak Joseph Jinam
5. Fesmuela Anak Kagong
6. Frankie Anak Kumbak
7. Harny Anak Chapi
8. Joeng Anak Melos
9. Margarita Naming
10. Rosy Anak Tian Lin
11. Sunarjo Bin Suip

## Sijil Penghargaan Perkhidmatan Cemerlang Tahun 2014

For 2014, SBC awarded 17 staff with the Certificate of Appreciation for Outstanding Service (Sijil Penghargaan Perkhidmatan Cemerlang) as they have shown their Performance Appraisal Report on achievement of 85% and above.

1. Aloysius Sim Kwang Peng
2. Annie Anthoney Empra
3. Asha Devi Kaushal
4. Elizabeth Alice Anak Gabriel Nasib
5. Frankie Anak Kumbak
6. Gilbert Lau Sei Kung
7. Holed Anak Juboi
8. Hugh Anak Doyos
9. Keekoti Sue Anak Betin
10. Masmah Binti Jaya
11. Mohamad Nasar bin Pawi
12. Ng Yik Han
13. Rigep Anak Anyain
14. Rosy Anak Tian Lin
15. Sabda Bin Safiee
16. Sunarjo Bin Suip
17. Zurien Amiera Binti Irwan

## Anugerah Perkhidmatan Cemerlang 2014 (APC)

The Excellent Service Award (Anugerah Perkhidmatan Cemerlang) was also awarded to 7 staff for their exemplary performance in Year 2014.

1. Anna Ng Mei Na
2. Bernard Anak Jerome
3. Cynthia Anak Seta
4. Noor Mehrunnika Dawood Sha Sulaiman Kamal Batcha
5. Nuraqilah Binti Othman
6. Tu Chu Lee
7. Tuanku Sukri Bin Tuanku Rapahie

## Journal Contribution 2015

1. Hii Mei Mei  
Publication of “Genome wide comprehensive analysis and web resource development on cell wall degrading enzymes from phyto-parasitic nematodes” in The Journal of BMC Plant Biology, Volume 15, 2015
2. Dr Yeo Tiong Chia, Jovita Elderson Anak Ripen and Cynthia Anak Seta  
Publication of “Flemingin-Type Prenylated Chalcones from the Sarawak Rainforest Plant *Desmodium congestum*” in The Journal of Natural Products, Volume 78, Issue 8, 2015
3. Dr Yeo Tiong Chia, Holed Anak Juboi, Ann Anni Basik and Sunita Sara Gill Binti Shamsul  
Publication of “*Luteipulveratus halotolerans* sp. Nov., an actinobacterium (*Dermacoccaceae*) from forest soil” in The International Journal of Systematic and Evolutionary Microbiology, Volume 65, 2015
4. Dr Yeo Tiong Chia, Ann Anni Basik and Keekoti Sue Anak Betin  
Publication of “Identification of anti-tubercular Lipophilic natural products from Malaysian *Streptomyces* species” in The Journal of Natural Products, Volume 8, 2015

## Presentations at Conferences

No	Title	Presenter	Type	Conference/ Seminar/Workshop/ Exhibition	Date
1	Expression and purification of His-tagged flavonol synthase of <i>Aglaia stellatopilosa</i> in <i>Escherichia coli</i> .	Belinda Ng Ling Nah	Poster	40th Malaysia Society for Biochemistry and Molecular Biology, Putrajaya, Malaysia	10 -11.6.2015
2	De Novo sequencing and assembly of <i>Aglaia stellatopilosa</i> leaf transcriptome	Gilbert Lau Sei Kung	Poster		
3	A systematic approach in classifying actinomycetes isolated from paddy fields in Sarawak	Ann Anni Basik	Oral	BIT's 5th Annual Congress of Microbes 2015 (WCM2015), Shanghai, China	2.8.2015
4	Fermentation Of Actinomycetes Towards Diverse Compounds Production	Sabda Bin Safiee	Oral		
5	Regulating Biological Resources in Sarawak	Margarita Naming	Oral	Seminar Pengeksportan dalam Industri Herba Tahun 2015, Negeri Sembilan, Malaysia	17-19.8.2015
6	Keizinan Berasaskan Makluman Awal (Prior informed consent-PIC): Pengalaman SBC	Margarita Naming	Oral	Bengkel Protokol Komuniti tentang ABS (Access and Benefit Sharing), Sabah, Malaysia	24.11.2015
7	<i>Cyathus Striatus</i> A Potential Source For Anticancer	Jane Sebastian Taka	Poster	The Regional Taxonomy And Ecology Conference 2015 (TEC 2015) , Kuching, Sarawak, Malaysia	1.12.2015
8	Study On Soil-Borne Fungi Isolated From Mount Tai Ton Sarawak	Jamilah Hassan	Poster		
9	Bamboo Fungi Isolated From Sarawak: Potential Source Of Bioactive Metabolites	Ajuwin Lain	Poster	The Regional Taxonomy And Ecology Conference 2015 (TEC 2015) , Kuching, Sarawak, Malaysia	7-10.12.2015
10	Actinomycetes Fermentation Targeting Various Compounds Production Materials	Ng Yik Han	Poster		

## SBC Audit Committee 2015



**YBhg Datu Laura Lee Ngien Hion**

Deputy State Financial Secretary, State Financial Secretary's Office  
*Audit Committee Chairman*



**YBhg Datu Lai Kui Fong**

Director, Department of Agriculture  
*Audit Committee Member*



**Mr Peter Sawal**

Controller, Natural Resources & Environment Board (NREB)  
*Audit Committee Member*



**Mr John Kennedy Janang**

Principal Assistant Secretary, State Financial Secretary's Office  
*Audit Committee Member*



**Ms Christina Wong Hie Ping**

Accountant, Sarawak Biodiversity Centre  
*Audit Committee Secretary*

## SBC Establishment Committee 2015



**YBhg Datu Haji Misnu Bin Haji Taha**

Deputy State Secretary (Administrative, Security & Corporate Affairs)  
*Establishment Committee Chairman*



**YBhg Datu Sudarsono Osman**

Permanent Secretary, Ministry of Resource Planning and Environment  
*Establishment Committee Deputy Chairman*



**YBhg Datu Lai Kui Fong**

Director, Department of Agriculture, Sarawak  
*Establishment Committee Member*



**Dr Sabariah Putit**

Director, Chief Minister's Department (Human Resource Management)  
*Establishment Committee Member (w.e.f. 01.03.2015)*



**Dr Yeo Tiong Chia**

Chief Executive Officer, Sarawak Biodiversity Centre  
*Establishment Committee Secretary*

## SBC Finance & Investment Committee 2015



**YBhg Dato Sri Ahmad Tarmizi Bin Haji Sulaiman**

State Financial Secretary  
*Finance & Investment Committee Chairman*



**YBhg Dato Haji Sudarsono Osman**

Permanent Secretary, Ministry of Resource Planning & Environment  
*Finance & Investment Committee Member*



**YBhg Dato Lai Kui Fong**

Director, Department of Agriculture  
*Finance & Investment Committee Member*



**Tuan Haji Sapuan Ahmad**

Director of Forests/Controller of Wildlife/  
Controller of National Parks And Nature Reserves  
*Finance & Investment Committee Member*



**Dr Yeo Tiong Chia**

Chief Executive Officer, Sarawak Biodiversity Centre  
*Finance & Investment Committee Member*

## **Financial Statement for the Year Ended 2015**

**COUNCIL MEMBERS**

- Chairman : State Secretary Sarawak  
YB Tan Sri Datuk Amar Haji Mohamad Morshidi bin Abdul Ghani, PSM, DA,  
PGBK, JSM, PPC (Emas), PPB.
- Deputy Chairman : Permanent Secretary  
Ministry of Resource Planning and Environment  
YBhg Datu Haji Sudarsono bin Osman, DJBS, PPC, PBK, PPB.
- Secretary : Chief Executive Officer  
Dr Yeo Tiong Chia
- Council Members : State Attorney General, Sarawak  
Yang Arif Datu Haji Abdul Razak Tready, DJBS, PPC (Emas), PPB, PPDM.
- State Financial Secretary  
YBhg Dato Sri Ahmad Tarmizi bin Haji Sulaiman, PNBS, DJBS.
- Deputy State Secretary (ASCA)  
YBhg Datu Haji Misnu bin Haji Taha, DJBS, PPC, PPB, PPD, PPT.
- Director  
Department of Agriculture, Sarawak  
YBhg Datu Lai Kui Fong, DJBS, PPC (Emas), KMN, PBK, PPB, PPS, PPT.
- Director  
Department of Forest, Sarawak  
Tuan Haji Sapuan Ahmad, PTE (Jubli Emas), PBK, PPS, PPB.
- Controller of Environmental Quality  
Mr Peter Sawal, PBK, PPB.

**OFFICER AND PROFESSIONAL ADVISORS**

Chief Executive Officer : Dr Yeo Tiong Chia

Registered office : Lot 724 Block 3, Sentah-Segu Land District  
KM 20 Jalan Borneo Heights  
Semengoh, Locked Bag No. 3032  
93990 Kuching  
Sarawak

Auditor : Ketua Audit Negara Malaysia

Bankers : Malayan Banking Berhad  
Level 1, Wisma Satok  
Jalan Satok  
93400 Kuching  
Sarawak

RHB Bank Berhad  
Jalan Kulas  
93400 Kuching  
Sarawak

**PENYATA Pengerusi dan Timbalan Pengerusi**

Kami, **TAN SRI DATUK AMAR HAJI MOHAMAD MORSHIDI BIN ABDUL GHANI** dan **DATU HAJI SUDARSONO BIN OSMAN** yang merupakan Pengerusi dan Timbalan Pengerusi **MAJLIS KEPELBAGAIAN BIOLOGI SARAWAK** dengan ini menyatakan bahawa, pada pendapat Ahli - Ahli Majlis, Penyata Kewangan yang mengandungi Lembaran Imbangan, Penyata Pendapatan, Penyata Perubahan Ekuiti dan Penyata Aliran Tunai yang berikut ini berserta dengan nota-nota kepada Penyata Kewangan di dalamnya, adalah disediakan untuk menunjukkan pandangan yang benar dan saksama berkenaan kedudukan **MAJLIS KEPELBAGAIAN BIOLOGI SARAWAK** pada **31 DISEMBER 2015** dan hasil kendaliannya serta perubahan kedudukan kewangannya bagi tahun yang berakhir pada tarikh tersebut.

Bagi pihak Majlis,



.....  
**TAN SRI DATUK AMAR HAJI MOHAMAD  
MORSHIDI BIN ABDUL GHANI**

Tarikh: 20<sup>th</sup> April 2016  
Kuching

Bagi pihak Majlis,



.....  
**DATU HAJI SUDARSONO  
BIN OSMAN**

Tarikh: 20<sup>th</sup> April 2016  
Kuching

**PENGAKUAN OLEH PEGAWAI UTAMA YANG BERTANGGUNGJAWAB  
KE ATAS PENGURUSAN KEWANGAN  
MAJLIS KEPELBAGAIAN BIOLOGI SARAWAK**

Saya, **DR YEO TIONG CHIA**, pegawai utama yang bertanggungjawab ke atas pengurusan kewangan dan rekod-rekod perakaunan **MAJLIS KEPELBAGAIAN BIOLOGI SARAWAK**, dengan ikhlasnya mengakui bahawa Lembaran Imbangan, Penyata Pendapatan, Penyata Perubahan Ekuiti dan Penyata Aliran Tunai dalam kedudukan kewangan yang berikut ini berserta dengan nota-nota kepada Penyata Kewangan di dalamnya, mengikut sebaik-baik pengetahuan dan kepercayaan saya, adalah betul dan saya membuat ikrar ini dengan sebenarnya mempercayai bahawa ianya adalah benar dan atas kehendak-kehendak Akta Akuan Berkanun, 1960.

Sebenar dan sesungguhnya )  
diakui oleh penama di atas )  
di KUCHING, SARAWAK )  
pada **19<sup>th</sup>** haribulan **April 2016**.)

  
.....

Di hadapan saya

  
.....

**~~PESURUHJAYA SUMPANJ,~~**  
**MAGISTRATE**

**(IBRAHIM BIN KIPLI)**  
1st Class Magistrate  
Kuching District Office



**LAPORAN KETUA AUDIT NEGARA  
MENGENAI PENYATA KEWANGAN  
MAJLIS KEPELBAGAIAN BIOLOGI SARAWAK  
BAGI TAHUN BERAKHIR 31 DISEMBER 2015**

**Laporan Mengenai Penyata Kewangan**

Penyata Kewangan Majlis Kepelebagaian Biologi Sarawak bagi tahun berakhir 31 Disember 2015 telah diaudit oleh wakil saya yang merangkumi Lembaran Imbangan Pada 31 Disember 2015 dan Penyata Pendapatan, Penyata Perubahan Dalam Ekuiti serta Penyata Aliran Tunai bagi tahun berakhir pada tarikh tersebut, ringkasan polisi perakaunan yang signifikan dan nota penjelasan lain.

*Tanggungjawab Majlis Terhadap Penyata Kewangan*

Majlis bertanggungjawab terhadap penyediaan dan persembahan penyata kewangan tersebut yang saksama selaras dengan piawaian pelaporan kewangan yang diluluskan di Malaysia dan Ordinan Badan Berkanun (Prosedur Kewangan Dan Perakaunan), 1995. Majlis juga bertanggungjawab terhadap kawalan dalaman yang ditetapkan perlu oleh pengurusan bagi membolehkan penyediaan penyata kewangan yang bebas daripada salah nyata yang ketara sama ada disebabkan oleh fraud atau kesilapan.

*Tanggungjawab Juruaudit*

Tanggungjawab saya adalah memberi pendapat terhadap penyata kewangan tersebut berdasarkan pengauditan yang dijalankan. Pengauditan telah dilaksanakan mengikut Akta Audit 1957 dan piawaian pengauditan yang diluluskan di Malaysia. Piawaian tersebut menghendaki saya mematuhi keperluan etika serta merancang dan melaksanakan pengauditan untuk memperoleh jaminan yang munasabah sama ada penyata kewangan tersebut bebas daripada salah nyata yang ketara.

Pengauditan meliputi pelaksanaan prosedur untuk memperoleh bukti audit mengenai amaun dan pendedahan dalam penyata kewangan. Prosedur yang dipilih bergantung kepada pertimbangan juruaudit, termasuk penilaian risiko salah nyata yang ketara pada penyata kewangan sama ada disebabkan oleh fraud atau kesilapan. Dalam membuat penilaian risiko tersebut, juruaudit mempertimbangkan kawalan dalaman yang bersesuaian dengan entiti dalam penyediaan dan persembahan penyata kewangan yang memberi gambaran yang benar dan saksama bagi tujuan merangka prosedur pengauditan yang bersesuaian tetapi bukan untuk menyatakan pendapat mengenai keberkesanan kawalan dalaman entiti tersebut. Pengauditan juga termasuk menilai kesesuaian polisi perakaunan yang diguna pakai dan kemunasabahan anggaran perakaunan yang dibuat oleh pengurusan serta persembahan penyata kewangan secara menyeluruh.

Saya percaya bahawa bukti audit yang saya peroleh adalah mencukupi dan bersesuaian untuk dijadikan asas bagi pendapat audit saya.

*Pendapat*

Pada pendapat saya, penyata kewangan ini memberikan gambaran yang benar dan saksama mengenai kedudukan kewangan Majlis Kepelbagaian Biologi Sarawak pada 31 Disember 2015 dan prestasi kewangan serta aliran tunai bagi tahun berakhir pada tarikh tersebut selaras dengan piawaian pelaporan kewangan yang diluluskan di Malaysia.



(TOIEYAH BINTI HAJI TIOH)  
b.p. KETUA AUDIT NEGARA  
MALAYSIA

KUCHING  
TARIKH: 17 JUN 2016



**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**BALANCE SHEET AS AT 31 DECEMBER 2015**

	Note	2015 RM	2014 RM
<b>NON-CURRENT ASSETS</b>			
Property, plant & equipment	4	<u>19,323,981</u>	<u>13,169,574</u>
<b>CURRENT ASSETS</b>			
Cash and bank balances	5	3,440,791	2,259,806
Fixed deposits	5	30,793,992	40,385,448
Other receivables	6	753,551	691,203
Tax Refundable	8	2,719	-
		<u>34,991,053</u>	<u>43,336,457</u>
<b>CURRENT LIABILITIES</b>			
Other payables and accruals	7	2,542,307	708,390
Provision for taxation	8	-	16,979
		<u>2,542,307</u>	<u>725,369</u>
<b>NET CURRENT ASSETS</b>		32,448,746	42,611,088
		<u><b>51,772,727</b></u>	<u><b>55,780,662</b></u>
<b>FINANCED BY:</b>			
General reserve	9	27,945,314	33,682,269
Development grants	10	14,649,518	16,480,932
		42,594,832	50,163,201
<b>NON-CURRENT LIABILITIES</b>			
Deferred income	11	9,177,895	5,617,461
		<u><b>51,772,727</b></u>	<u><b>55,780,662</b></u>

*The notes on pages 44 to 53 form an integral part of the financial statements.*

**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**INCOME STATEMENT**  
**FOR THE YEAR ENDED 31 DECEMBER 2015**

	Note	2015 RM	2014 RM
Revenue	<b>12</b>	1,212,382	1,472,848
Government grant	<b>13</b>	2,000,000	2,000,000
Transferred from deferred income	<b>11</b>	932,843	904,543
		<u>4,145,225</u>	<u>4,377,391</u>
Staff cost	<b>14</b>	(5,872,871)	(5,697,108)
Depreciation of property, plant & equipment	<b>4</b>	(1,217,375)	(1,161,611)
Other operating expenses	<b>15</b>	(2,498,804)	(1,883,486)
Deficit before taxation		<u>(5,443,825)</u>	<u>(4,364,814)</u>
Taxation	<b>8</b>	(293,130)	(312,828)
Net deficit after taxation		<u><u>(5,736,955)</u></u>	<u><u>(4,677,642)</u></u>

*The notes on pages 44 to 53 form an integral part of the financial statements.*

**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**STATEMENT OF CHANGES IN EQUITY  
FOR THE YEAR ENDED 31 DECEMBER 2015**

	<b>Development Grants RM</b>	<b>General Reserve RM</b>	<b>Total RM</b>
Balance as at 1 January 2014	8,441,727	38,359,911	46,801,638
Received during the year	10,834,613	-	10,834,613
Expended during the year	(2,795,408)	-	(2,795,408)
Deficit for the year	-	(4,677,642)	(4,677,642)
Balance as at 31 December 2014	<b>16,480,932</b>	<b>33,682,269</b>	<b>50,163,201</b>
Received during the year	4,053,727	-	4,053,727
Expended during the year	(5,885,141)	-	(5,885,141)
Deficit for the year	-	(5,736,955)	(5,736,955)
Balance as at 31 December 2015	<b>14,649,518</b>	<b>27,945,314</b>	<b>42,594,832</b>

*The notes on pages 44 to 53 form an integral part of the financial statements.*

**CASH FLOW STATEMENT  
FOR THE YEAR ENDED 31 DECEMBER 2015**

	Note	2015 RM	2014 RM
<b><u>CASH FLOW FROM OPERATING ACTIVITIES</u></b>			
Deficit before tax		(5,443,825)	(4,364,814)
Adjustments for the items not involving the movements of cash and cash equivalents			
Depreciation of property, plant & equipment	4	1,217,375	1,161,611
Interest income		(1,172,520)	(1,251,313)
Loss on disposal of property, plant & equipment		-	1,894
Transfer from deferred income		(932,843)	(904,543)
Operating deficit before working capital changes		(6,331,813)	(5,357,165)
(Increase) / decrease in other receivables		(62,349)	31,587
Increase / (decrease) in other payables		1,833,917	(81,153)
Cash used in operation		(4,560,245)	(5,406,731)
Income tax paid		(312,828)	(300,767)
<b>Net cash used in operating activities</b>		<b>(4,873,073)</b>	<b>(5,707,498)</b>
<b><u>CASH FLOW FROM INVESTING ACTIVITIES</u></b>			
Purchase of property, plant & equipment		(2,878,504)	(5,378,280)
Development grant received		4,053,727	10,834,613
Development expenditure		(5,885,141)	(2,795,408)
Interest income		1,172,520	1,251,313
<b>Net cash (used in) / generated from investing activities</b>		<b>(3,537,398)</b>	<b>3,912,238</b>
<b>Net decrease in cash and cash equivalents</b>		<b>(8,410,471)</b>	<b>(1,795,260)</b>
Cash and cash equivalents at beginning of the year		42,645,254	44,440,514
<b>Cash and cash equivalents at end of the year</b>	5	<b>34,234,783</b>	<b>42,645,254</b>

*The notes on pages 44 to 53 form an integral part of the financial statements.*

## NOTES TO THE FINANCIAL STATEMENTS

### 1. Corporate Information And Principal Activities

The Sarawak Biodiversity Council (formerly known as Sarawak Biodiversity Centre), a body incorporated in accordance with the Sarawak Biodiversity Centre Ordinance, 1997, is a Sarawak State Government – owned statutory body and its vision is “To be the centre of excellence for biodiversity research and sustainable utilisation”.

On 8 December 2003, the State Legislative Assembly passed the Sarawak Biodiversity Centre (Amendment) Ordinance 2003 which came into force on 1 April 2004. With the amendments, SBC is entrusted with the following statutory functions:

- **conduct Bioprospecting/R&D Programme** on the biodiversity of the State;
- **implement the Traditional Knowledge Documentation Programme** among the traditional communities in the State;
- **establish a database** on information related to the biological resources of the State; and
- **play a role in raising public awareness** on the potential usage and value of the State’s biodiversity.

On 6 May 2014, the State Legislative Assembly passed the Sarawak Biodiversity Centre (Amendment) Ordinance 2014 which came into force on 10 June 2014. This amendment provided for the requirement of prior-informed consent and benefit sharing based on mutually agreed terms.

The financial statements of the Sarawak Biodiversity Council (Council) were authorized for issue by the Council Members during its 44th Council Meeting held on 19 April 2016.

### 2. Financial Risk Management Policies

The Council’s financial risk management policy seeks to ensure that adequate financial resources are available for the development of the Centre’s activities whilst managing its risk.

The main risk arising from the Council’s financial instruments are interest rate risk, credit risk, liquidity risk and foreign currency risk. The Council’s reviews and agreed policies for managing each of these risks are summarized as below:

#### (a) Interest Rate Risk

The Council has no borrowings. Surplus funds are placed with reputable banks.

#### (b) Credit Risk

Credit risk is managed through the application of credit approvals and monitoring procedures.

## **2. Financial Risk Management Policies (cont'd)**

### **(c) Liquidity Risk**

The Council monitors and maintains a level of cash and cash equivalent deemed adequate by management to finance the Council's operations and mitigate the effects of fluctuations in cash flows.

The Council relies heavily on Government Grant and as such liquidity and cash flow risk is very much dependent on availability of government assistance.

### **(d) Fair Value**

Fair value is defined as the amount at which the financial instrument could be exchanged in a current transaction between knowledgeable willing parties in an arm's length transaction, other than in forced or liquidation sale.

The fair values of the financial assets and liabilities approximate their carrying values.

## **3. Significant Accounting Policies**

### **(a) Basis of Accounting**

The financial statements of the Council are prepared under the historical cost convention and in compliance with applicable Private Entities Reporting Standards issued or adopted by Malaysian Accounting Standards Board (MASB), Statutory Bodies (Financial and Accounting Procedure) Ordinance 1995 and Treasury Instruction.

### **(b) Property, Plant and Equipment**

Property, plant and equipment are stated at cost less accumulated depreciation and impairment loss. Depreciation is computed monthly, principally by the straight-line method based on the estimated useful life of the related assets. The rates of depreciation are as follows: -

Buildings	5% p.a.
Office equipment	15% p.a.
Furniture, fixture and fittings	10% p.a.
Computers and accessories	20% p.a.
Office renovation	10% p.a.
Temporary office	10% p.a.
Specialised equipment (equipment)	15% p.a.
Specialised equipment (computer)	20% p.a.
Specialised equipment (software)	20% p.a.
Lab specialised equipment	15% p.a.
Lab furniture & fittings	10% p.a.
Motor vehicles	20% p.a.
Nursery sheds	10% p.a.

### **3. Significant Accounting Policies (cont'd)**

#### **(c) Operating Grant**

Grant received from the State Government for the operation or maintenance of the Council's activities and is credited to Income Statements.

Grants that compensate the Council for operating expenses incurred are recognised as income over the periods necessary to match the grant on a systematic basis to the costs that it is intended to compensate.

#### **(d) Development Grants**

The Council receives Development Grants from the State Government in order to finance activities and projects related to biodiversity research and development protection. This is in line with the functions and powers of the Council, as provided by the Sarawak Biodiversity Centre Ordinance, 1997. The grants so received are credited to the Development Grants and offset against future costs when incurred.

Government Grants are recognised initially at their fair value in the balance sheet as deferred income where there is reasonable assurance that the grant will be received and all attaching conditions will be complied with. Grants that compensate the Council for the cost of the projects are recognised as income when the research and development projects are completed.

#### **(e) Impairment Of Assets**

Property, plant and equipment are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. Whenever the carrying amount of an asset exceeds its recoverable amount, an impairment loss is recognised as income for items property, plant and equipment carried at cost. The recoverable amount is the higher of an asset's net selling price and value in use. The net selling price is the amount obtainable from the sale of an asset in an arm's length transaction.

Value in use is the present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. Recoverable amounts are estimated for individual assets or, if it is not possible, for the cash-generating unit.

Reversal of an impairment loss recognised in prior years is recorded when there is an indication that the impairment loss recognised for an asset no longer exists or has decreased. The reversal is recorded in income or as a revaluation increase.

#### **(f) Deferred Income**

Government grants in respect of the acquisition of property, plant and equipment are credited to the deferred income and released to the Income Statements on straight line basis over the expected useful lives of the assets.

### **3. Significant Accounting Policies (cont'd)**

#### **(g) Employee Benefits**

##### **(i) Short-Term Benefits**

Wages, salaries, bonuses and social security contributions are recognised as expenses in the year in which employees of the Council render the associated services. Short-term accumulating compensated, such as paid annual leave are recognized when services rendered by employees that increases their entitlement to future compensated absences; and short-term non-accumulating compensated absences; such as sick leave are recognized when the absences occur.

##### **(ii) Defined Contribution Plan**

As required by law, the Council makes contributions to the Employee Provident Fund (EPF). Such contributions are recognised as an expense in the Income Statement as incurred.

#### **(h) Financial instrument**

Financial instruments are recognised in the Balance Sheet when the Council has become a party to the contractual provisions of the instrument. The particular recognition methods are dissolved below:-

##### **(i) Other Receivable**

Other receivables are carried at anticipated realisable value. Bad debts are written off when identified. An estimate is made for doubtful debts based on review of all outstanding accounts as at the Balance Sheet date.

##### **(ii) Other payables**

Other payable are stated at cost, which is fair value of the consideration paid in the future for good and services received.

#### **(i) Revenue recognition**

Revenue is recognised when it is probable that the economic benefits associated with transaction will flow to the Council and the amount of the revenue can be measured reliably.

(i) Interest income is recognised on a time proportion basis that reflects the effective yield on the asset.

(ii) Other income is recognised at the point of receipt or sales by the Council.

#### **(j) Research and development**

Research and development expenditure comprised deferred direct project costs and related overheads incurred for projects ranging from 2 to 30 years. These research and development expenditures are recognised as expenses when the research and development are completed.

**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**4. Property, plant and equipment**

2015	Buildings RM	Office equipment RM	Furniture, fixtures and fittings RM	Computers and accessories RM	Office renovations RM	Motor vehicles RM	Specialised equipment RM	Temporary office RM	Nursery sheds RM	Lab specialised equipment RM	Lab furniture and fittings RM	Total RM
<b>Cost</b>												
Beginning of year	6,922,675	668,492	442,546	818,072	542,009	859,980	110,830	378,473	94,068	9,335,232	647,730	20,820,107
Additions	1,473,314	38,930	2,400	48,450	-	-	-	-	-	2,974,225	-	4,537,319
End of Year	8,395,989	707,422	444,946	866,522	542,009	859,980	110,830	378,473	94,068	12,309,457	647,730	25,357,426
<b>Accumulated Depreciation</b>												
Beginning of year	2,689,257	465,269	254,648	694,071	363,855	537,800	110,792	378,472	45,334	7,394,028	571,169	13,504,695
Additions	346,134	51,438	36,920	62,923	53,735	91,847	-	-	8,407	517,956	48,015	1,217,375
End of Year	3,035,391	516,707	291,568	756,994	417,590	629,647	110,792	378,472	53,741	7,911,984	619,184	14,722,070
<b>Net Book Value at end of year</b>	<b>5,360,598</b>	<b>190,715</b>	<b>153,378</b>	<b>109,528</b>	<b>124,419</b>	<b>230,333</b>	<b>38</b>	<b>1</b>	<b>40,327</b>	<b>4,397,473</b>	<b>28,546</b>	<b>10,635,356</b>
<b>Add:</b>												
Work-in-progress												8,688,625
												<b>19,323,981</b>

**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**4. Property, plant and equipment (cont'd)**

2014	Buildings RM	Office equipment RM	Furniture, fixtures and fittings RM	Computers and accessories RM	Office renovations RM	Motor vehicles RM	Specialised equipment RM	Temporary office RM	Nursery sheds RM	Lab specialised equipment RM	Lab furniture and fittings RM	Total RM
<b>Cost</b>												
Beginning of year	6,783,319	518,890	436,606	795,212	542,009	824,081	110,830	378,473	94,068	8,528,649	628,580	19,640,717
Additions	139,356	150,188	17,340	30,960	-	181,300	-	-	-	833,800	19,150	1,372,094
Disposals	-	(586)	(11,400)	(8,100)	-	(145,401)	-	-	-	(27,217)	-	(192,704)
End of Year	6,922,675	668,492	442,546	818,072	542,009	859,980	110,830	378,473	94,068	9,335,232	647,730	20,820,107
<b>Accumulated Depreciation</b>												
Beginning of year	2,340,541	423,784	228,009	628,555	310,120	618,548	110,792	378,472	36,927	6,933,317	524,829	12,333,894
Additions	348,716	42,070	36,149	73,616	53,735	64,652	-	-	8,407	487,926	46,340	1,161,611
Disposals	-	(585)	(9,510)	(8,100)	-	(145,400)	-	-	-	(27,215)	-	(190,810)
End of Year	2,689,257	465,269	254,648	694,071	363,855	537,800	110,792	378,472	45,334	7,394,028	571,169	13,504,695
<b>Net Book Value at end of year</b>	<b>4,233,418</b>	<b>203,223</b>	<b>187,898</b>	<b>124,001</b>	<b>178,154</b>	<b>322,180</b>	<b>38</b>	<b>1</b>	<b>48,734</b>	<b>1,941,204</b>	<b>76,561</b>	<b>7,315,412</b>
<b>Add:</b>												
												5,854,162
												<b>13,169,574</b>

**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**5. Cash and cash equivalents**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Cash and bank balances	3,440,791	2,259,806
Deposit with licensed banks	7,670,000	12,859,954
Deposit with licensed finance companies	23,123,992	27,525,494
	<u>34,234,783</u>	<u>42,645,254</u>

**6. Other receivables**

**Other Receivables**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Other receivables	104,222	37,446
Interest receivables	649,329	653,757
	<u>753,551</u>	<u>691,203</u>

**7. Other payables and accruals**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Other Payables	2,394,212	21,859
Accruals	148,095	686,531
	<u>2,542,307</u>	<u>708,390</u>

**8. Provision for Taxation/Taxation**

In exercising the powers under Section 127(3)(b) of Income Tax Act 1967, YB Menteri Kewangan Malaysia had made a new order: **Income Tax (Exemption) (No.22) Order 2006 [P.U. (A) 207 @ 01 June 2006]**. This order is applicable to Sarawak Biodiversity Council where the Minister had exempted:

- (a) any person from the payment of income tax in respect of income relating to the allocations given by the Federal or State Government in the form of grant or subsidy;
- (b) a statutory body from the payment of income tax in respect of income derived from
  - i. the income received in respect of an amount chargeable and collectible from any person in accordance with the provisions of the Act regulating the statutory authority; or
  - ii. any donations or contribution received.

**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**8. Provision for Taxation/Taxation (cont'd)**

This Order shall have effect from the Year of Assessment 2006. Income Tax (Exemption) (No.17) Order 1995 [PU. (A) 213/1995] and Income Tax (Exemption) (No.4) Order 2003 [PU. (A) 33/2003] are revoked from the Year of Assessment 2006.

The provision for taxation is made based on the fixed deposit interest income only.

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Balance at 1 Januar	16,979	4,918
Current Year Provision	293,130	312,828
Tax Paid	(312,828)	(300,767)
Balance at 31 December	<u>(2,719)</u>	<u>16,979</u>

**Taxation**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Current year tax expense	293,130	312,828
Tax paid for current year	(295,849)	(295,849)
Tax (refundable) / payable	<u>(2,719)</u>	<u>16,979</u>

**9. General reserve**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Balance as at 1 January	33,682,269	38,359,911
Net deficit for the year	(5,736,954)	(4,677,642)
Balance as at 31 December	<u>27,945,315</u>	<u>33,682,269</u>

**10. Development grant**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Balance as at 1 January	16,480,932	8,441,727
Received during the year	4,053,727	10,834,613
Expended during the year	(5,885,141)	(2,795,408)
Balance as at 31 December	<u>14,649,518</u>	<u>16,480,932</u>

**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**11. Deferred income**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Balance as at 1 January	5,617,461	5,381,217
Received during the year	4,493,277	1,140,787
Released to Income Statement	(932,843)	(904,543)
Balance as at 31 December	<u>9,177,895</u>	<u>5,617,461</u>

**12. Revenue**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Fixed deposit interest income	1,172,520	1,251,313
Tender document fees	6,991	12,300
Other income	32,871	209,235
	<u>1,212,382</u>	<u>1,472,848</u>

**13. Government Grant**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Operating grant	<u>2,000,000</u>	<u>2,000,000</u>

**14. Staff cost**

	<b>2015</b>	<b>2014</b>
	<b>RM</b>	<b>RM</b>
Personnel emolument	4,627,995	4,646,280
Staff incentives	105,109	64,906
EPF	587,615	658,129
SOCSO	51,268	66,943
Overtime	57,441	49,304
Transport and travelling	273,092	100,267
Medical expenses	107,718	93,082
Staff uniform	62,633	18,197
	<u>5,872,871</u>	<u>5,697,108</u>
Number of staff	<u>102</u>	<u>96</u>

**SARAWAK BIODIVERSITY COUNCIL**  
(Incorporated under The Sarawak Biodiversity Centre Ordinance 1997)

**15. Other operating expenses**

	2015 RM	2014 RM
Advertisement	6,896	6,906
Audit fees	8,512	8,000
Bank charges	1,090	12
Computer and accessories	28,353	124,957
Consultancy fees	80,521	117,370
Conference and seminar fees	35,186	700
Council Members' allowance and sitting fees	84,400	80,200
Electricity charges	270,284	272,438
Entertainment	37,404	39,680
Fuel and lubricant	19,539	21,805
Human resource development expenses	102,008	45,087
Lab consumables	769,814	314,143
Lab maintenance	298,706	165,634
Insurance	37,783	17,430
Market testing and research	282,679	218,797
Motor vehicles road tax	2,087	1,803
Newspapers	17,575	17,289
Office expenses	102,356	102,103
Office maintenance	155,060	171,338
Postage and courier	26,167	26,507
Printing and stationery	23,430	30,144
Repairs and maintenance - motor vehicles	24,998	13,380
Telecommunication and internet charges	46,387	71,978
Unclaimable goods and services tax (GST)	23,239	-
Water charges	14,329	15,785
	2,498,803	1,883,486

**16. Capital commitment**

Approved capital expenditure and contracted for in the financial statement as at 31 December 2015 is nil. (Year 2014: RM7,447,479).

**17. Currency**

All amounts are stated in Ringgit Malaysia (RM).

## Appendices

- 1 List of Traditional Knowledge Documentation Consultative Meeting
- 2 Biodiversity-Biotechnology Awareness & Appreciation Programme

## List of Traditional Knowledge Documentation Consultative Meetings

1.	Annah-Tebiak area, Kuching	28.	Lubuk Antu district, Lubok Antu, Betong
2.	Ba'Kelalan, Lawas, Limbang	29.	Lundu/Sematan Area, Kuching
3.	Bario, Marudi, Miri	30.	Maludam Sub district, Betong
4.	Bau District, Kuching	31.	Marudi District, Miri
5.	Belaga Sub-district, Kapit	32.	Matu District, Mukah
6.	Belawai Sub-district, Mukah	33.	Merapok area, Lawas, Limbang
7.	Beluru Sub-district, Miri	34.	Murum area, Sg Asap, Belaga, Kapit
8.	Betong District, Betong	35.	Nanga Medamit, Limbang
9.	Bung Bratak, Bau, Kuching	36.	Nanga Merit Sub-district, Kapit
10.	Buntal area, Santubong, Kuching	37.	Niah Sub-district, Miri
11.	Dalat District, Mukah	38.	Pa'Barei, Baram, Miri
12.	Daro District, Mukah	39.	Padawan Sub-district, Kuching
13.	Igan Sub-district, Mukah	40.	Pakan District, Sarikei
14.	Julau District, Serikei	41.	Sebauh Sub-district, Bintulu
15.	Kampung Salak, Santubong, Kuching	42.	Sebuyau Sub-district, Samarahan
16.	Kanowit Sub-district, Sibiu	43.	Serian District, Serian
17.	Kapit District, Kapit	44.	Serin Area, Kuching
18.	Kuching District, Kuching (Bako & Santubong), Kuching	45.	Sg Tepus, Ulu Balingian, Selangau, Sibiu
19.	Lawas District, Lawas, Limbang	46.	Siburan Sub-district, Kuching
20.	Limbang District, Limbang	47.	Sibuti Sub-district, Miri
21.	Lingga Sub-district, Sri Aman	48.	Simunjan District, Samarahan
22.	Long Lama Sub-district, Miri	49.	Song District, Song, Kapit
23.	Long Latei, Long Bedian, Miri	50.	Sri Aman district, Sri Aman
24.	Long Semado, Lawas, Limbang	51.	Sundar Sub-district, Lawas, Limbang
25.	Long Seridan, Miri	52.	Sungai Asap, Belaga, Kapit
26.	Long Terawan, Mulu, Miri	53.	Tatau District, Bintulu
27.	Long Tuyu, Lawas District, Lawas, Limbang	54.	Tebedu Sub-district, Serian
		55.	Ulu Menyang, Lubok Antu, Sri Aman

## Biodiversity-Biotechnology Awareness & Appreciation Programme

In year 2015, SBC carried out/organised and participated in the following activities under this programme:

No	Activity	Number of Activities Achieved in 2015
1	Awareness and Appreciation Visits to SBC	26 Visits
2	Public Awareness Visits to Schools/Divisional Awareness Talks	2 Visits
3	Public Awareness Talks/Workshops	2 Workshops 3 Public Lectures Tour 5 Public Talks
4	Seminars/Forums/Dialogue Sessions	3 Seminars
5	Participation in School Programme	7 Programmes
6	Participation at Exhibitions	9 Exhibitions
7	VIP and Corporate Visits	39 Visits
8	Press releases/Articles/Features	36 Articles
9	SBC Publication/Promo Materials	1 SBC Corporate Video
10	SBC Open Day	1 event in May 2015





KM20, JALAN BORNEO HEIGHTS, SEMENGOH, LOCKED BAG NO. 3032, 93990 KUCHING, SARAWAK, MALAYSIA

TEL: +6 082 610610 FAX:+ 6 082 611535

EMAIL: [biosar@sbc.org.my](mailto:biosar@sbc.org.my) WEBSITE: [www.sbc.org.my](http://www.sbc.org.my)