



**20<sup>th</sup> Annual Report  
1 April 2017 - 31 March 2018**

**TT Goba  
President**

**Introduction**

The SAAE was able to consolidate its level of activities during 2017/2018 with support from both the Department of Science and Technology (DST) grant, and from ASSAf who continued to provide accommodation to the SAAE. As a result the SAAE also maintained its participation in the international network of Academies through membership of the Council of Academies of Engineering and Technological Sciences (CAETS), and attended the annual meetings. The DST's support for maintaining international links with sister academies is appreciated.

The SAAE's membership increased as did the participation by members in Academy activities. The Eastern Cape has also become one of the regular provinces for activity visits. Water Resources and Mining and Energy were areas of particular public interest nationally, and the SAAE was able to meet with the Minister of Water and Sanitation, the Premier of the Western Cape as well as participate in a DST-sponsored Shale Gas Industry event in Port Elizabeth, on 31 August and 1 September 2017.

**Executive Committee**

The Executive Committee (Exco) of the SAAE for the period 2017 – 2018 comprised the following members:

Prof M Alexander  
Mr D Botha  
Dr M Furumele  
Mr T Goba  
Prof E Kearsley  
Prof B Lacquet  
Dr H MacDonald  
Mr N Macleod\*  
Prof C O'Connor

Mr Bob Pullen  
Dr Mike Shand  
Prof W Van Niekerk

\*Mr Macleod was co-opted on 31 May 2017

Fellow TT Goba served as President of the SAAE for this year and Fellow M Shand was the Deputy President. Fellow B Pullen was responsible for the Treasurer portfolio.

All members of the EXCO serve on a voluntary basis, and their contribution of valuable time during 2017/2018 is highly appreciated.

Four Exco meetings took place during the Financial Year 2017/ 2018, on the following dates:

- 92<sup>nd</sup> - 31 May 2017
- 93<sup>rd</sup> - 16 August 2017
- 94<sup>th</sup> - 21 November 2017
- 95<sup>th</sup> - 20 February 2018

The Exco meetings took place in video conference format with members attending in Pretoria and Cape Town. The continuing generous support of Aurecon who provided these facilities is acknowledged.

The office accommodation and other support provided by ASSAf in their offices at the Woods, Perseus Park, Pretoria has continued to be of great benefit to the SAAE. This support is provided at no direct cost to the SAAE and the generosity of the ASSAf Council is greatly appreciated.

### **20<sup>th</sup> Annual General Meeting, 30 June 2017**

The 20<sup>th</sup> Annual General Meeting (AGM) was held through electronic communication. Fifty members responded which was the largest participation figure in many years.

### **Membership**

Nine Fellows were elected at the AGM which was held on 30<sup>th</sup> June 2017, bringing the total membership to 196:

- Prof Dave Deglon
- Prof Ian Jandrell
- Ms Anita Loots
- Dr Titus Mathe
- Prof Rob McCutcheon
- Prof Johan Meyer
- Prof Wessel Pienaar
- Prof Jan Harm Pretorius
- Prof Wynand Steyn

Elected Fellows Loots, Mathe, McCutcheon, Meyer, Pretorius and Steyn were welcomed by the President and members who attended the Gauteng Members' Dinner which took place at the Pretoria Country Club on 5 October 2017.

Elected Fellows Deglon, Jandrell and Pienaar were inducted at the Western Cape Members Dinner which took place on 18 October 2017 in the Palmyra Room at Kelvin Grove in Cape Town. An Honorary Fellowship was bestowed on Fellow Prof Fred Hugo for his dedicated contribution over many years not only in the academia and education, but also in the engineering profession.

At both the Gauteng and Western Cape Induction Dinners, Past President Mr Bob Pullen was the guest speaker. He is a member of the Project Management Unit of the Lesotho Highlands Development Authority (LHDA) in Maseru, Lesotho, and presented an enlightening overview of Phase 2 of the Lesotho Highlands Water Project (LHWP Ph2) which was highly appreciated.

## **INTERNATIONAL ACTIVITIES**

### **Council of Academies of Engineering and Technological Sciences (CAETS)**

The Real Academia de Ingenieria of Spain was the host of the 25<sup>th</sup> CAETS Council Meeting and Convocation which were held in Madrid from 13 to 16 November 2017. "Engineering a Better World – Challenges of the Bio-Economy" was the theme at all the meetings.

The Council meeting, which was held on 16 November 2018, was preceded by a Board meeting on 13 November which was attended by President Trueman Goba, who had been elected as a CAETS board member for the 2017/2019 term of office.

This was followed by two days of presentations on 14 and 15 November, focused on the theme "Engineering Challenges of the Bio-Economy" and at which the SAAE was represented by Dr Trueman Goba, Dr Mike Shand, Vice President, Mr Bob Pullen, Past President and Mr Felix Reinders, Fellow of the SAAE who is actively concerned with the Challenges of the Bio-economy,

Sub-themes of the conference were the Future of Food, which included, *inter alia*, papers relating to sustainability and reduction of waste; New Genetic Engineering - including the vast opportunities that this offered, albeit under continuing social scrutiny; The Blue Economy - versus the threat of over-exploitation by humans; and Energy – especially from the point of view of diversification and the potential role that renewable fuels and renewable power generation will play in keeping global temperatures at safe levels.

At the Council meeting on 16 November it was business as usual as various resolutions and administrative actions were taken that included, amongst others, plans for the future and procedures for considering new applications for CAETS membership. Further presentations and discussions were held on Ethics in Engineering and Diversity in Engineering.

A report back to SAAE members on Challenges of the Bio-economy and related aspects of the meetings in Madrid will be made at various centres in SA during 2018.

## **Pilot Study for the Africa Catalyst Initiative**

The year also saw the SAAE participate for the first time in the Africa Catalyst Initiative of the Global Challenges Research Fund (GCRF) of the UK. As one of fifteen assignments comprising Phase I of the Initiative, a Pilot Study of the institutions in the engineering profession in Swaziland was undertaken by Fellows Bob Pullen and Johann du Plessis on behalf of the SAAE for which I am most thankful, and was completed in July 2017.

The initiative is aimed at developing and strengthening the institutional capacity of the engineering professions in countries in Sub-Saharan Africa.

## **LOCAL ACTIVITIES**

Following publication of the report entitled ***South Africa's Technical Readiness to Support the Shale Gas Industry*** which was prepared by a panel of experts constituted jointly by ASSAf and the SAAE, an event was hosted in Port Elizabeth by ASSAf in partnership with the DST. Four members of the SAAE Exco attended the event which was aimed at highlighting critical national reports and activities, analyzing the regulatory environment, consolidating findings and recommendations, and providing a platform for debate.

Subsequent to the event Prof O'Connor, supported by Dr Mike Shand and Fellow Steve Hrabar, made a presentation to the Parliamentary Portfolio Committee for Science and Technology on 1 November 2017 on the findings of the report on South Africa's Technical Readiness to Support the Shale Gas Industry.

## **Science Action Plan for Shale Gas Exploration in the Karoo Basin**

In March 2018 the SAAE assisted ASSAf to compile a draft Science Action Plan for the Shale Gas Industry in South Africa. The draft report was compiled by Prof Cyril O'Connor supported by Dr Mike Shand and Fellow Steve Hrabar. The draft report was discussed with DST on 15 March 2018 and was being finalized by ASSAf at the time of the report.

## **National Water and Sanitation Masterplan**

The SAAE was invited by Mr Trevor Balzer, DDG of the Department of Water and Sanitation, who is a Fellow of SAAE, to participate in a first roundtable briefing regarding the preparation and implementation of a National Water and Sanitation Master Plan. After the briefing SAAE invited Fellows with expertise in the field of water and sanitation to participate in preparing comments on the draft Master Plan. On 24 January 2018, Fellows and a few invited guests met to debate the comments. The consolidated comments and concerns about management and technical capacity were submitted to the Department of Water and Sanitation on 8 February 2018. Receipt of the comments was acknowledged by the DWS on 20 February 2018, with appreciation.

## **Joint Activities with the SAICE**

The beginning of 2018 saw the height of the recent water supply crisis in the Western Cape.

On 29 January 2018 the CEO of SAICE and members of SAICE and SAAE met with officials of the City of Cape Town and Premier of the Western Cape, Helen Zille. Drought measures were discussed, advice given and further assistance was offered.

On 7 February 2018 Fellow Neil Macleod met with the Parliamentary Portfolio Committee for the Department of Water and Sanitation concerning the drought in the Western Cape and concerns were raised in this instance again regarding the capacity of the Department to undertake its function of managing the water supply systems of South Africa.

## **Annual Academy Lectures**

On 2 November 2018 the former Director-General of the Department of Water and Sanitation, Fellow Prof Mike Muller, made the first presentation of the 2017 Annual Academy Lecture entitled **Decolonising Engineering** in Cape Town. The Lecture provided a perspective on the challenges faced by water institutions in South Africa and how policy debates could be improved. The same Lecture was presented in Johannesburg on 14 March 2018, and will be presented in Port Elizabeth on 10 April 2018.

## **Hendrik van der Bijl Memorial Lecture**

The Hendrik van der Bijl Memorial Lecture was again presented by the SAAE in collaboration with the Faculty of Engineering, Built Environment and Information Technology, University of Pretoria, on 27 September 2017. The Lecture, which was held in the Senate Hall of the University, was attended by 115 guests. The guest speaker, Mr Peter Staude, Chief Executive Officer of Tongaat Hulett Limited, was introduced by Prof Cheryl de la Rey, Vice Chancellor of the University. Mr Staude used his experience from Tongaat Hulett to discuss how one could stop being a spectator in today's fast-changing and inter-connected world which is full of opportunity as well as risk.

## **FINANCIAL OVERVIEW**

During the Financial Year 2017/18 the retained income of the SAAE increased from R252 907 to R311 110, represented by cash in the bank. The Academy had no liabilities at year-end.

The main sources of income were (i) membership fees which amounted to R191 750, (ii) financial support from the ASSAf in the amount of R107 239, representing a Grant from the DST specifically to cover the cost of CAETS membership and maintaining international relationships, and (iii) donations and sponsorships of R89 157.

The main items of expense were costs associated with being affiliated to CAETS (including attendance at CAETS Council and Convocation meetings), and administration costs. The Academy enjoys generous support from sponsors of functions such as Induction Dinners and public lectures, and the value of this support is accounted for as income from donations. The costs of undertaking an investigation of the institutions in the engineering profession in Swaziland,

as a project in the first phase of the Africa Catalyst initiative of the GCRF in the UK, were funded by a grant from the sponsors of the Initiative. These activities cost R341 574 during 2017/18, 45% of the total turnover of the Academy.

The Academy continues to make every effort to secure additional sources of financial support so as to be able to undertake the kind of activities which are necessary to build a sustainable organization of value to South African society.

## **OUTLOOK FOR THE FUTURE**

The focus of the SAAE is on improving the mobilization of knowledge and experience of its members to formulate independent, evidence-informed advice, usually on policy matters, for transmission to Government and to Industry.

This implies that every effort has to be made towards identifying new platforms where such advice may be of value, and to take the initiative as early as possible so that members have an opportunity to contribute their expertise. In this regard some industrial companies may see the benefit of having such support available from the SAAE and be attracted to contributing financial support which could strengthen the SAAE.

**Fellow TT Goba**

**President**

**South African Academy of Engineering, Johannesburg**

**14 June 2018**