



*Applying scientific
thinking in the
service of society*

Academy of Science of South Africa Annual Performance Plan

**for
2017/18**

February 2017

Foreword

The Annual Performance Plan for the Academy of Science of South Africa (ASSAf) is informed by ASSAf's Strategic Plan (2015/16-2019/20), which reflects the Academy's strategic goals and the alignment with the Department of Science and Technology's (DST) Grand Challenges and the government's national priorities, particularly those of the National Development Plan (NDP).

The strategic goals of the Academy are as follows:

1. Recognition and reward of excellence
2. Promotion of innovation and scholarly activity
3. Promotion of effective, evidence-based scientific advice
4. Promotion of public interest in and awareness of science and science education
5. Promotion of national, regional and international linkages

These goals have guided the activities within each of ASSAf's four programmes.

The **Governance and Administration Programme** is central to the efficient functioning of the Academy, providing essential, cross-cutting administrative and financial support to the Council and the secretariat, contributing to ASSAf's efficiency. The programme is also responsible for all reporting requirements and compliance matters and implementing the monitoring and evaluation (M&E) component, which was added to this programme's responsibilities in 2014/15. The overall strategic objective is to ensure good governance of the Academy through the ASSAf Council. This includes execution of Council elections, support of Council meetings and committees, efficient and effective execution of Council resolutions and efficient and effective financial and human resource management activities. This programme also aims to provide effective and targeted communication with ASSAf stakeholders to support the vision and mission of the Academy to be the apex organisation of science and scholarship in South Africa.

The **Scholarly Publishing Programme** (SPP) is regarded as a major intervention into the National System of Innovation in South Africa and makes a direct and major contribution to the promotion of innovation and scholarly activity. The strategic goal of the SPP is to enhance the national capacity to produce and publish research, on the one hand, and to increase the quality and visibility of South African research publications, on the other. The SPP's numerous activities are coordinated to achieve this goal. This programme is also responsible for the production and dissemination of the Academy's flagship journal, the *South African Journal of Science*, and the science magazine, *Quest: Science for South Africa*.

The **Liaison Programme** is structured into a number of sub-programmes, each of which is designed to establish and strengthen partnerships and engagement with key stakeholders and organisations, with the overall purpose of promoting and recognising excellence and scholarly achievement; strengthening and enhancing international scientific linkages; and advancing engagement with key policymakers in government, including parliament and relevant national scientific organisations. The internal structure of the programme is as follows: (1) Member Liaison, which includes all aspects pertaining to Academy Member elections and

communication with Members; (2) National Liaison, which is divided into strategic partnerships; scholarly lectures; prizes and awards; engagement with the business sector; and science engagement; (3) International Liaison, which is divided into strategic partnerships; African collaboration; and overseas collaboration; (4) Young Scientists' Liaison; and (5) Gender and Science, Technology and Innovation.

The **Science Advisory Programme** enables ASSAf to fulfil its science advisory role regarding key challenges facing the nation by undertaking targeted evidence-based studies. The studies fall into broad categories related to health, education, climate change, energy, the science-policy nexus, humanities, and biosafety and biosecurity. Studies are selected both proactively and reactively, primarily to respond to national priorities, to suit the niche of the Academy, and to utilise the expertise residing in the Academy's Members. ASSAf's various Standing Committees play a major role in recommending studies to be undertaken. All in-depth consensus studies are approved by the ASSAf Council. As in the past year, there will be a continued focus on the dissemination of Academy reports through stakeholder engagement to ensure improved uptake of recommendations.

This Annual Performance Plan is endorsed by the Council of the Academy of Science of South Africa.

Official sign-off

It is hereby certified that this Annual Performance Plan:

Was developed by the management of the Academy of Science of South Africa under the guidance of the Executive Officer.

Was prepared in line with the current Strategic Plan of the Academy of Science of South Africa.

Accurately reflects the performance targets which the Academy of Science of South Africa will endeavour to achieve given the resources made available in the budget for 2017/18.

Handwritten signature of Morakeng Chiloane in black ink, featuring a stylized 'M' and 'C' followed by the name 'Chiloane'.

Morakeng Chiloane
Financial Manager

Handwritten signature of Roseanne Diab in black ink, appearing as 'Diab' with a horizontal line underneath.

Roseanne Diab
Executive Officer

Handwritten signature of Jonathan Jansen in black ink, appearing as 'Jansen' with a horizontal line underneath.

Jonathan Jansen
President and Chair of Council

Naledi Pandor
Minister of Science and Technology

Date 08-03-2017

Handwritten signature of Naledi Pandor in black ink, appearing as 'Naledi Pandor' with a horizontal line underneath.
Signature:

Table of Contents

Part A: Strategic overview

1. Updated situational analysis
 - 1.1 Performance delivery environment
 - 1.2 Organisational environment
2. Revisions to legislative and other mandates
3. Overview of 2017/18 budget and MTEF estimates
 - 3.1 Expenditure estimates
 - 3.2 Relating expenditure trends to strategic outcome-oriented goals
4. Key planning concepts
 - 4.1 Vision
 - 4.2 Mission
 - 4.3 ASSAf values
 - 4.4 Policy context
 - 4.5 Strategic outcome-oriented goals

Part B: Programme and sub-programme plans

5. Programme 1: Governance and administration programme
 - 5.1 Strategic objective annual targets and performance indicators for 2017/18
 - 5.2 Quarterly targets for 2017/18
 - 5.3 Reconciling performance targets with the budget and MTEF
6. Programme 2: Scholarly publishing programme (SPP)
 - 6.1 Strategic objective annual targets and performance indicators for 2017/18
 - 6.2 Quarterly targets for 2017/18
 - 6.3 Reconciling performance targets with the budget and MTEF
 - 6.4 Scholarly publishing programme activities
7. Programme 3: Liaison programme
 - 7.1 Strategic objective annual targets and performance indicators for 2017/18
 - 7.2 Quarterly targets for 2017/18
 - 7.3 Reconciling performance targets with the budget and MTEF
 - 7.4 Liaison programme activities
8. Programme 4: Science advisory programme
 - 8.1 Strategic objective annual targets and performance indicators for 2017/18
 - 8.2 Quarterly targets for 2017/18
 - 8.3 Reconciling performance targets with the budget and MTEF
 - 8.4 Science advisory programme activities
9. Summary of high-level performance indicators

Annexure: Revised Strategic Plan 2015/16 – 2019/20

PART A: Strategic Overview

The Academy of Science of South Africa (ASSAf) is the official national science academy of South Africa, established by an Act of Parliament, *Act 67 of 2001* as amended and represents South Africa in the international community of science academies. ASSAf is part of a network of over 100 global science academies known as the InterAcademy Partnership (IAP) and is also a member of the Network of African Science Academies (NASAC).

ASSAf has a dual role:

- To honour distinguished scholars through election to membership of the Academy
- To provide science advice to government and other stakeholders on critical national and global issues.

1. Updated situational analysis

1.1 Performance delivery environment

The overarching goals of ASSAf are informed by the ASSAf Act and set out in the revised Strategic Plan (2015/16-2019/20), which is attached as an Annexure to this Annual Performance Plan (APP). The changes made are in the performance environment and are related to the 2015/16 audit findings and the requirement for performance indicators to be included in the Strategic Plan.

The broad strategic goals, however, remain unchanged and are as follows:

1. Recognition and reward of excellence
2. Promotion of innovation and scholarly activity
3. Promotion of effective, evidence-based scientific advice
4. Promotion of public interest in and awareness of science and science education
5. Promotion of national, regional and international linkages

ASSAf's science advisory role in support of policy development is informed by key national challenges, particularly those outlined in the National Development Plan (NDP), and is executed in both a responsive and proactive manner. ASSAf strives to address cross-cutting and complex issues that suit the particular convening strength and niche of an Academy. The Academy's strength lies in undertaking in-depth, evidence-based studies, ASSAf also seeks to implement projects in collaboration with other science academies in Africa and abroad, in its efforts to influence regional and global policy.

ASSAf has been the host organisation of the International Council for Science (ICSU) Regional Office for Africa (ROA) with effect from May 2015, and which is planned for a period of five years. Since March 2015, ASSAf has also hosted The World Academy of Sciences Regional Office of sub-Saharan Africa (TWAS ROSSA). The responsibilities attached to these two offices align closely with ASSAf's strategic goals and strengthen co-operation within Africa.

Since 2008, ASSAf has hosted the National Chapter of the Organisation of Women in Science for the Developing World (OWSD), which provides an anchor for ASSAf's gender and science activities.

ASSAf supported the founding of the South African Young Academy of Science (SAYAS) and continues to provide secretariat support for their activities. Office space and support services (such as IT, finance) are provided to the South African Academy of Engineering (SAAE) at no cost.

ASSAf reported a deficit at the end of 2015/16 and in order to avoid a recurrence of such a situation, ASSAf has been compelled to cut back on activities and on its staffing budget in order to remain within budget for 2017/18. In the absence of confirmed additional funding, ASSAf may be compelled to explore alternative options which may include restructuring and reorganisation of the programmes. Staff will endeavour to raise external funds and should the funding situation improve, a revised budget and revised outputs will be submitted.

ASSAf's foremost strengths are its Members, who are considered to be the 'brains trust' of the nation and who give of their time to support ASSAf activities on a voluntary basis in the service of society; and its unique Academy methodology, known as a consensus study, for undertaking studies and providing evidence-based science advice in support of policy development.

ASSAf's weakness relates primarily to its inadequate profile and lack of awareness amongst government departments, other than the DST, of its potential contribution within South Africa.

A threat is its financial sustainability, given its reliance on government funding which is not expected to increase in the short term. Financial pressure has resulted predominantly from increased compliance requirements.

1.2 Organisational environment

As a membership-based organisation, the key intellectual resources of the Academy reside in its membership, which currently comprises 504 Members. A total of 38 new Members was elected in 2016. Members, who volunteer their service, are supported in their science-advisory role by the fulltime staff of the secretariat, which currently numbers 34. Part-time staff includes the editors of the Academy's periodical publications.

ASSAf is governed by a Council, comprising 12 elected members and a thirteenth member appointed by the Minister of Science and Technology as a representative of the National Advisory Council on Innovation (NACI). A new Council was elected during 2016 and took office in October 2016.

The activities of the Academy are structured into four programmes as follows: Governance and Administration Programme; Scholarly Publishing Programme; Liaison Programme; and Science Advisory Programme.

ASSAf is currently accommodated in rented premises in Persequor Park, Lynnwood, Pretoria. The lease has been renewed until June 2017. The purchase or construction of a building remains a key imperative for ASSAf in order to avoid escalating rental costs and to cater for

future expansion. A permanent Academy home is important, given ASSAf's prestige, both nationally and internationally.

As a result of increased compliance requirements, a number of new responsibilities and systems have had to be introduced. These include supply chain management, risk management and information management. In the face of an inadequate increase in ASSAf's funding to accommodate these requirements, the Academy is under severe financial pressure.

2. Revisions to legislative and other mandates

During 2016, a process commenced to amend the ASSAf Act. This process has not yet been concluded.

3. Overview of 2017/18 budget and MTEF estimates

The projected baseline allocation over the 2017 Medium Term Expenditure Framework (MTEF) is approximately 59% of the total budget. However government funding through the DST makes up approximately 91% of the ASSAf's projected budget over the same MTEF period. There is a projected budget decrease in the two outer years of 2018/19 and 2019/20 due to uncertainty of funding from the other sources outside of the baseline. Revenue from non-exchange transactions, both local and international are largely earmarked for new projects and/or activities and cannot be determined with certainty. Income from exchange transactions is mainly made up of membership fees, advertising revenue, subscriptions revenue as well as interest that is generated solely from short term low risk investments. From 2017/18, it is anticipated that revenue from publications will not be realised because of the decision to utilise e-publishing.

3.1 Expenditure estimates

Income	2017/18	2018/19	2019/20
	R'000	R'000	R'000
Baseline	17 346	18 352	19 379
Additional allocation 2016/17	1 000	-	-
Open access project	6 915	7 316	7 726
Contract funding from DST	3 427	2 594	-
Contract funding from international sources	2 722	-	-
Contract funding from local sources	1 540	-	-
Revenue from exchange transactions	1 582	1 336	1 340
Total	34 532	29 598	28 445

Expenditure	2017/18	2018/19	2019/20
	R'000	R'000	R'000
Governance & Administration Programme	9 696	9 248	9 353
Scholarly Publishing Programme	8 680	8 220	8 443
Liaison Programme	8 957	7 182	6 306
Science Advisory Programme	7 199	4 948	4 343
Total	34 532	29 598	28 445

3.2 Relating expenditure trends to strategic outcome-oriented goals

ASSAf's Annual Performance Plan is informed by its strategic goals as contained in its Strategic Plan (2015/16-2019/20) and the National Development Plan (NDP). These goals guide the activities within each of ASSAf's four programmes. However, due to budgetary constraints, some major cuts in aspects of ASSAf's activities have had to be considered.

The expenditure trend over the 2017 MTEF period is such that a total of approximately R28 million has been allocated to the Governance and Administration Programme, a total of approximately R25 million to the Scholarly Publishing Programme, approximately R22 million to the Liaison Programme and about R16 million to the Science Advisory Programme. In the same period, it is envisaged that even though a lesser allocation from the baseline is assigned to the Science Advisory Programme relative to the other programmes, activities will be strictly linked to and driven by additional funding that is to be sought.

4. Key Planning Concepts

4.1 Vision

The Academy of Science of South Africa (ASSAf) aspires to be the apex organisation for science and scholarship in South Africa, recognised and connected both nationally and internationally. Through the diversity of its membership which represents the collective voice of the most active scholars in all fields of scholarly enquiry, ASSAf aims to generate evidence-based solutions to national problems.

4.2 Mission

The mission of the Academy is to:

- Recognise scholarly achievement and excellence in the application of scientific thinking for the benefit of society;
- Mobilise Members to ensure that they are available to contribute their expertise in the service of society;
- Conduct systematic and evidence-based studies on issues of national importance, producing authoritative reports that have significant impact on policy-making;
- Promote the development of an indigenous system of South African research publications, increasing their quality, visibility, accessibility and impact;
- Publish science-focused periodicals that will showcase the best of southern African research to a wide national and international audience;
- Develop productive partnerships with national, regional and international organisations with a view to building our capacity in science and its application within the National System of Innovation (NSI);
- Create diversified sources of funding for sustainable functioning and growth of a national academy;
- Communicate effectively with relevant stakeholders through various media and fora.

4.3 ASSAf values

ASSAf's strength resides in the quality and diversity of its membership; internationally renowned scholars elected by their peers, who give of their time voluntarily in the service of

society. The membership could be regarded as the 'brains trust' of the nation. ASSAf is able to use its membership as a collective resource for evidence-based solutions to national problems. Through the well-recognised convening power of academies, ASSAf is able to mobilise the best scientific minds from across the nation, as well as internationally, to provide authoritative advice to government and other stakeholders based on scientifically rigorous analysis of evidence and consensus of diverse experts. As such, ASSAf is an independent, non-biased and credible source of scientific advice. The diversity of its membership, embracing the full disciplinary spectrum, enables ASSAf to focus on issues of a multi-disciplinary, multi-sectoral nature and to bring the strengths of a fully inclusive approach to bear on the issues of national and international concern.

ASSAf fully embraces the principles espoused in the Constitution of South Africa.

The further value of the Academy is its promotion of excellence through election to Academy membership and awards, and the fostering of scholarly activity through the provision of fora for scholarly activities and debate.

Science advisory activities are a common feature of academies around the world, all using an evidence-based approach based on the convening of experts with diverse perspectives to discuss and illuminate issues.

It is important to distinguish the niche of the Academy from other organisations within the NSI in terms of science advice in support of policy development. Key universal elements of Academy advice are that it is:

- Authoritative
- Independent
- Objective
- Free of vested interests
- Trusted
- Based on volunteer contributions
- Based on rigorous analysis of evidence and peer review
- Transparent
- Multi-disciplinary and able to address complex issues that transcend disciplinary boundaries.

4.4 Policy context

ASSAf is committed to the outcomes approach as developed by Government (<http://www.info.gov.za/issues/outcomes/index.html>).

It will contribute towards addressing impact indicators and achieving outputs and targets associated with the 14 outcomes outlined in the Government's Medium-Term Strategic Framework for 2014 to 2019 that have been linked to objectives set in the NDP.

Linkages between ASSAf's strategic goals and activities related to the NDP are summarised in the following table.

NDP Issues	ASSAf's Strategic Response	Relevant Achievements	Proposed Interventions
-------------------	-----------------------------------	------------------------------	-------------------------------

Economy and Employment	Strong focus on human capital development to enhance employment opportunities	<ul style="list-style-type: none"> - Standing Committee on Science for Reduction of Poverty and Inequality - Improving quality and visibility of SA scholarly publishing to improve research - Innovation and business dialogue - Support for young scientists and SAYAS 	<ul style="list-style-type: none"> - Fostering science, business link - Application of gender lens to innovation - Focus on poverty and unemployment
Economic Infrastructure	Provision and support of infrastructure needed for a knowledge-based economy	<ul style="list-style-type: none"> - Establishment of Open Access Platform (SciELO SA) for SA scholarly journals to improve visibility of SA research - Investigation of national site licence (NSL) for core commercial journal databases 	<ul style="list-style-type: none"> - Maintenance and expansion of SciELO SA - Continued investigations for the NSL - Initiation of African Open Science/Data Platform
Transitioning to a Low Carbon Economy	Promotion of evidence-based scientific advice through appropriate consensus studies	<ul style="list-style-type: none"> - Various relevant evidence-based studies e.g. State of Green Technologies in SA. 	<ul style="list-style-type: none"> - Continued execution of new relevant evidence-based studies and dissemination to promote uptake of recommendations
Integrated and Inclusive Rural Economy	<ul style="list-style-type: none"> - Promotion of evidence-based scientific advice through appropriate consensus studies - Promotion of open access and open science to support development and equitable access 	<ul style="list-style-type: none"> - Various relevant evidence-based studies e.g. Local Economic Development in Small Towns; Revitalisation of Agricultural Education and Training 	<ul style="list-style-type: none"> - Continued execution of new relevant evidence-based studies and dissemination to promote uptake of recommendations
Positioning SA in the World	Promotion of regional and international linkages in order to: <ul style="list-style-type: none"> - strengthen ASSAf's and SA's global 	<ul style="list-style-type: none"> - Leadership positions in international bodies e.g. ICSU, IAP for Science, IAP for 	<ul style="list-style-type: none"> - Fostering development of BRICS academy grouping - Partnering with and strengthening

	<p>position and reputation;</p> <ul style="list-style-type: none"> - enhance the quality and impact of ASSAf's work; - enable ASSAf to collaborate with and support the development of other African science academies. 	<p>Health, TWAS, NASAC</p> <ul style="list-style-type: none"> - Promotion of an African agenda - Hosting of ICSU ROA, TWAS ROSSA, OWSD SA national chapter, GenderInSITE - Bilateral agreements with key academies in Africa and abroad - Active role in development and strengthening of African science academies - Participation in SADC and African advisory platforms 	<p>African science academies, particularly in SADC</p> <ul style="list-style-type: none"> - Giving effect to MoUs with key academy partners through appropriate activities and joint reports
Human Settlements	Promotion of evidence-based scientific advice through appropriate evidence-based studies	Various relevant evidence-based studies e.g. Pathways to a Low Carbon City	- Continued execution of new relevant evidence-based studies and dissemination to promote uptake of recommendations
Improving Education, Training and Innovation	<ul style="list-style-type: none"> - Recognition and reward of excellence - Promotion of innovation and scholarly activity - Promotion of public interest in and awareness of science and science education - Support of women in science activities and young scientist activities 	<ul style="list-style-type: none"> - Award of gold medals and various prizes - Hosting of Distinguished Visiting Scholars, scholarly lectures, symposia and webinars - Improving quality and visibility of SA scholarly publishing - Establishment of Open Access Platform (SciELO SA) for SA scholarly journals to improve visibility of SA research - Standing Committee on STEM Education 	<ul style="list-style-type: none"> - Continued activities as indicated under achievements - Completion of various evidence-based studies focused on education e.g. agriculture, health professionals. - stronger focus on science engagement through Quest magazine - Continued investigations for the NSL - Initiation of African Open Science/Data Platform

		<ul style="list-style-type: none"> - increasing public awareness of science through Quest science magazine - Support of SAYAS and young scientist activities 	<ul style="list-style-type: none"> - Stronger focus on networking of all young scientist leaders
Promoting Health	Promotion of evidence-based scientific advice through appropriate evidence-based studies	<ul style="list-style-type: none"> - Multiple consensus studies focused on health - Multiple workshops or symposia focused on health e.g. Social Determinants of Health, Multiple Morbidities - Standing Committee on Health - Actively participate in IAP for Health activities (e.g. Young Physician Leaders) 	<ul style="list-style-type: none"> - Continued activities as indicated under achievements - Continued execution of new relevant evidence-based studies and dissemination to promote uptake of recommendations
Social Protection	Promotion of evidence-based scientific advice through appropriate evidence-based studies	<ul style="list-style-type: none"> - Policymakers' booklet on Social Protection in Africa - Workshop on Measuring Deprivation 	<ul style="list-style-type: none"> - Continued execution of new relevant evidence-based studies and dissemination to promote uptake of recommendations
Building Safer Communities	N/A	N/A	-
Building a Capable State	<ul style="list-style-type: none"> - Provision and support of infrastructure needed for a knowledge-based economy - Provision of evidence-based science advice in support of policy development - Support of young scientist activities 	<ul style="list-style-type: none"> - OA platform Improving quality of research - Disseminating knowledge through dialogues/debates - Completion of various consensus studies aimed at provision of science advice - Raising awareness of science and science education 	<ul style="list-style-type: none"> - Continued activities as indicated under achievements - Continued execution of new relevant evidence-based studies and dissemination to promote uptake of recommendations - Promotion of networking of young scientist leaders

		- Support of young scientist activities and SAYAS	
Promoting Accountability and Fighting Corruption	N/A	N/A	
Transforming Society and Uniting the Country	Support of science diplomacy	- Hosting public dialogues (e.g. Sexual Diversity) and public lectures	- Support for science diplomacy activities

ASSAf's contributions to the triple challenges of poverty, inequality and unemployment are summarised in the table below.

ASSAf Contribution	Poverty	Inequality	Unemployment
Direct	In 2015, the Standing Committee on Science for the Reduction of Poverty and Inequality was reconstituted and renamed to align more closely with the NDP triple challenges of poverty, inequality and unemployment.	Transformation of the ASSAf membership in terms of race and gender. Ensuring that the membership of ASSAf panels and committees is fully representative in terms of race and gender.	Employment of DST/NRF interns and ensuring that they are equipped with marketable skills
Indirect	In November 2016, ASSAf hosted the Annual Meeting of African Science Academies (AMASA) conference themed Poverty Reduction.	The values of ASSAf, which was formed explicitly after the democratic elections in 1994, fully embrace the principles of the Constitution of SA. In September 2016, ASSAf hosted a Young Scientists' Conference themed Human Rights.	Raising of science awareness and providing information on science careers through the publication of Quest science magazine

4.4 Strategic outcome-oriented goals

The ASSAf Act, as amended, provides the framework for identifying the Academy's overarching goals, within which the strategic priorities and focus for the next 5-year period are outlined. Overarching goals of ASSAf are as follows:

1. Recognition and reward of excellence
2. Promotion of innovation and scholarly activity
3. Promotion of effective, evidence-based scientific advice
4. Promotion of public interest in and awareness of science and science education
5. Promotion of national, regional and international linkages

These are closely aligned with those of the NDP and the DST as shown in the following summary table.

The broad goals of government, applicable within the context of ASSAf activities, are as follows:

- Responsive, coordinated and efficient National System of Innovation (NSI)
- Increased knowledge generation
- Human capital development
- Using knowledge for economic development
- Knowledge utilisation for inclusive development

Strategic Outcome-oriented Goals	Activities	Government goal statements
1. Recognition and reward of excellence	<ul style="list-style-type: none"> • Targeted membership drives to increase and diversify Academy membership. • Award of up to 2 Science-for-Society gold medals per annum. • Award of Humanities Book Prize. • Support of South African Young Academy of Science. 	Human capital development
2. Promotion of innovation and scholarly activity	<ul style="list-style-type: none"> • Hosting of at least one Distinguished Visiting Scholar per annum. • Hosting of scholarly lectures. • Hosting of annual ASSAf Humanities lecture. • Publication of <i>SA Journal of Science</i>. • Convening of workshops/symposia on a wide variety of topics. 	Human capital development

	<ul style="list-style-type: none"> • Conducting project-related activities. • Implementation of Scholarly Publishing Programme. • Promotion of young scientists' activities. 	
3. Promotion of effective, evidence-based scientific advice	<ul style="list-style-type: none"> • Implementation of Scholarly Publishing Programme • Implementation of evidence-based studies in targeted areas such as health, education, climate change, energy etc. • Dissemination of study reports for improved uptake and impact of evidence-based studies 	<p>Increased knowledge generation</p> <p>Human capital development</p> <p>Using knowledge for economic development</p>
4. Promotion of public interest in and awareness of science and science education	<ul style="list-style-type: none"> • Publication and promotion of <i>Quest: Science for South Africa</i> magazine. • Participation in national science events. • Hosting of public lectures on a wide variety of topics. • Implementation of STEM Education Committee activities. 	Human capital development
5. Promotion of national, regional and international linkages	<ul style="list-style-type: none"> • Strengthening and initiating bilateral Academy agreements. • Strengthening and initiating science academies in Africa, particularly the SADC region. • Hosting and supporting ICSU ROA and TWAS ROSSA 	Increased knowledge generation

The triple challenges of the NDP, namely unemployment, poverty and inequality will be addressed largely through ASSAf's third goal related to the provision of evidence-based scientific advice. Through the Standing Committee on Science for the Reduction of Poverty and Inequality, appropriate studies will be identified and implemented. The NDP acknowledges the role that science, technology and innovation can play in addressing poverty, unemployment and inequality. ASSAf has begun to identify a transformation strategy and implementation plan in which its membership and work within the NSI could contribute to the reduction of inequality, poverty and unemployment. ASSAf's activities to promote international liaison will align with the NDP's Chapter 7 ("Positioning South Africa in the world"), and respond directly to the Medium-Term Strategic Framework outcome 11: "Creating a better South Africa and contributing to a better and safer Africa in a better world."

In line with the recommendations of the ASSAf institutional review, ASSAf's activities will also take into account the Sustainable Development Goals (SDGs).

Part B: Programme and sub-programme plans

5. Programme 1: Governance and Administration Programme

This programme is central to the efficient functioning of the Academy, providing essential, cross-cutting administrative and financial support to the Council and the secretariat, contributing to ASSAf's efficiency. The programme is also responsible for all reporting requirements and compliance matters, including the annual audits, the Strategic Plan, the APP and quarterly reports.

The monitoring and evaluation (M&E) component which was added to this programme's responsibilities in 2014/15 will be developed further. The M&E framework that has been developed for ASSAf will be fully implemented.

The recommendations of the institutional review conducted in 2016 will be implemented as far as is possible, taking account of funding constraints.

Sub-programme: Governance

The overall strategic objective is to ensure good governance of the Academy through the ASSAf Council. This includes execution of Council elections, support of Council meetings and committees, efficient and effective execution of Council resolutions and efficient and effective financial and human resource management activities.

Four Council meetings are held each year, with a fifth being held in the year of new Council elections (e.g. 2016). Council also holds a strategic planning session once a year. Standing committees of Council include the Audit and Risk Committee, the Human Resources Committee and the Executive Committee, which is tasked with taking decisions in the intervals between Council meetings. An Annual General Meeting is held in October of each year.

Academy governance activities are executed in accordance with the requirements as outlined in the ASSAf Act and the Science and Technology Laws Amendment Acts. A concerted effort, hampered by budgetary constraints, is being made to ensure compliance with applicable legislative frameworks and the Treasury regulations. Council is the highest decision-making body of the Academy entrusted with the responsibility to ensure smooth and effective governance in the execution of the Academy's mandate.

All activities relating to the ASSAf Council, ASSAf legislation and regulations fall under this sub-programme.

Goals for 2017/18 are as follows:

- Ensure a smooth transition from the old to the new Council;
- Induct new Council members, with the assistance of DST, to ensure familiarity with the policy context to enable them to provide strategic leadership to ASSAf;
- Oversee and drive the anticipated changes to the ASSAf Act.

Sub-programme: Finance and Risk

This sub-programme ensures that financial management systems are in place so that ASSAf's resources are prudently and optimally utilised. Compliance is central to all activities. Responsibilities include budgeting, financial reporting, procurement of goods and services, as well as risk management. With effect from mid-2015, there has been an increased focus on supply chain management and risk management.

Goals for 2017/18 are as follows:

- Efficient and effective implementation of the risk management strategy;
- Efficient, effective and compliant supply chain management
- Attainment of an unqualified audit.

Sub-programme: Human Resources

The Human Resources function provides ASSAf with human resources management services as follows: staff recruitment and retention; staff training and development; staff performance monitoring; staff disciplinary procedures; development and implementation of human resources systems; and development, implementation and monitoring of organisational policies and procedures.

Goals for 2017/18 are as follows:

- Implement the induction programme for all new employees;
- Address gaps in ASSAf's policies and procedures and compile relevant documentation;
- Ensure compliance with relevant policies and procedures;
- Provide opportunities for staff team building, taking account of budgetary constraints.

Sub-programme: Knowledge Management

This was a new function that was planned to be introduced in 2016/17. Due to budget constraints, it was not possible to develop fully the systems and processes for comprehensive records and documents management, both electronic and paper-based, to support decision-making and performance auditing. Plans to undertake activities in this sub-programme will be shelved until ASSAf's funding situation improves.

Sub-programme: Communication

The main purpose of this sub-programme is to provide effective and targeted communication with ASSAf stakeholders to support the vision of the Academy to be the apex organisation of science and scholarship in South Africa. It aims to build the ASSAf brand and to communicate the achievements of ASSAf and its Members to stakeholders. ASSAf stakeholders include Members, representatives of government and other science councils, universities, sponsors and the public.

The sub-programme is also responsible for the ASSAf website, the quarterly ASSAf newsletter, facilitating media communication and the production of reports.

Goals for 2017/18 are as follows:

- Implement the communication strategy for ASSAf;
- Achieve greater social media presence;
- Implement the e-publications strategy for ASSAf's study reports;

- Support ASSAf's activities through appropriate and timeous communication activities.

Strategic objectives

Strategic Objective	To increase the visibility and standing of ASSAf
Objective statement	To position the Academy effectively and appropriately through the website, increased use of electronic media, e-publication and dissemination of relevant study reports, stakeholder meetings, and release of press statements and promotion of Academy outputs.
Baseline	ASSAf's brand is entrenched in all its communication tools. ASSAf has a well-established internet presence with a professional website, and dedicated websites for the SAJS and the OWSD National Chapter, among others. The websites are regularly updated, press statements are regularly released and Academy activities publicised.
Justification	To ensure effective marketing of the Academy and to raise its profile amongst its target audience, which includes the SA science community, international academies of science, SA policy-makers and government departments and agencies.
Links	Supports ASSAf's overall strategic objectives and increases the visibility of ASSAf.

5.1 Strategic objective annual targets and performance indicators for 2017/18

Strategic objective	Strategic plan target	Performance indicator	Audited/Actual performance			Estimated performance	Medium-term targets			Five-year aggregated target
			2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2016 – 2020
To increase the visibility and standing of ASSAf	20	Number of media releases	20	27	29	20	20	20	20	109
	4	Number of issues of electronic Science for Society newsletter	4	4	4	4	4	4	4	20

5.2 Quarterly targets for 2017/18

Performance indicator	Reporting period	Annual target 2016/17	Quarterly targets			
			1 st	2 nd	3 rd	4 th
Number of media releases	Annual	20	4	6	6	4
Number of issues of electronic Science for Society newsletter	Quarterly	4	1	1	1	1

5.3 Reconciling performance targets with the budget and MTEF

Details	2017/18	2018/19	2019/20
	R'000	R'000	R'000
Governance & Administration Programme	9 696	9 248	9 353

6. Programme 2: Scholarly Publishing Programme

The Scholarly Publishing Programme (SPP) is regarded as a major intervention into the National System of Innovation (NSI) in South Africa. The strategic goal of the SPP is to enhance the national capacity to produce and publish research, on the one hand, and to increase the quality and visibility of South African research publications, on the other. It is also making a valuable contribution to improved access to international scholarly publications, an essential ingredient for human capital development in a modern, rapidly developing knowledge-based economy such as South Africa.

This programme is also responsible for the publication of the *South African Journal of Science (SAJS)* and *Quest: Science for South Africa*.

This core and critical programme of ASSAf is expensive to operate. It is making a major nationwide contribution towards strengthening South African scholarly research outputs and improving the impact of South African research and was identified in the institutional review as ASSAf's flagship programme. It is not possible for ASSAf to continue to sustain and expand on this initiative with its limited budget. ASSAf will therefore continue to maintain the open access platform, but it will not be possible to continue to grow the number of journal titles on the platform within the current available budget. It is acknowledged that an injection of funding was received from the DST a few years ago to support this initiative, but as the number of journal titles on the platform grows, the operational costs associated with maintaining the open access platform increase. A critical point has been reached where we need to ensure that we are able to meet operational costs before expanding further.

Strategic objectives

Strategic Objective	To increase the visibility, accessibility and searchability of SA accredited journals
Objective statement	To increase the number of high-quality South African scholarly journals on the open access platform, Scientific Electronic Library Online (SciELO) - South Africa. In 2017/18, the objective will be changed to maintenance of the platform rather than growing it.
Baseline	There are currently (January 2017) 65 journals on the platform and the projected

	total number of titles on the platform is approximately 180.
Justification	Through optimising research access, the platform maximises visibility, usage, uptake, impact and hence research progress and it exposes research undertaken in developing countries to a global audience.
Links	Promotion of innovation and scholarly activity, as well as effective, evidence-based scientific advice. Supporting the transformation of South Africa's economy from a resource-based to a knowledge-based economy.
Strategic Objective	To improve the quality of SA journals and books
Objective statement	To implement a system for peer review of discipline-grouped SA scholarly journals and SA scholarly books in order to enhance their quality and establish the role they play in research in South Africa. Due to budget constraints no new discipline groups will be evaluated in 2017/18.
Baseline	<p>The evaluation (peer review) of six discipline groups of scholarly journals has been completed, viz. Social Sciences; Agriculture and Related Sciences; Law; Health and Related Sciences; Religious Sciences and Humanities: Classics, Languages and Literature. Three additional subject groups were rolled out in 2015/2016, viz. Humanities II: Visual and Performing Arts; Communications and Information Science; and Engineering and Architecture.</p> <p>A consensus study report on <i>A Strategic Approach to Research Publishing in South Africa</i> was published in 2006 and a consensus study report on <i>Scholarly Books: Their Production, Use and Evaluation in South Africa Today</i> was published in 2009.</p>
Justification	To enhance the production, visibility and impact of high-quality scholarly journals and books in SA. To bring peer review

	<p>standards for scholarly books and journals up to a high level. To improve public policy in respect of these mentioned materials and to enhance the impact of all scholarly research in the development of a new generation of researchers.</p>
Links	<p>Promotion of innovation and scholarly activity, as well as effective, evidence-based scientific advice. Supporting the transformation of South Africa's economy from a resource-based to a knowledge-based economy.</p>

Strategic Objective	To promote the visibility and impact of SA and African research through the publication of the <i>South African Journal of Science</i>
Objective statement	To publish high-quality original research from Africa or on African-relevant issues that are of interest to scholars in any discipline.
Baseline	The SAJS is a bi-monthly, multidisciplinary journal that was first published in 1905, and since 2002 has been published by ASSAf. It became an open-access publication in 2009 and since then its online presence and visibility has increased. Full issues have been published in digital, mobile friendly format since 2014 and are distributed electronically to approximately 12 000 recipients.
Justification	To provide a high-quality publication in which researchers can disseminate their original research; to showcase field-changing South African and African research; and to provide a forum for discussion of news and developments in research and higher education in South Africa
Links	Promotion of innovation and scholarly activity. Supporting the transformation of South Africa's economy from a resource-based to a knowledge-based economy
Strategic Objective	To promote awareness of science amongst the youth through <i>Quest</i> science magazine
Objective statement	To produce, publish and disseminate the high quality, periodical science magazine known as <i>Quest: Science for South Africa</i>
Baseline	<i>Quest</i> is a quarterly magazine that has been published by ASSAf since 2005. The print run of <i>Quest</i> will be reduced from 25 000 to 10 000 as a cost saving measure in 2017/18 and a targeted distribution strategy will be introduced to save on distribution costs. The number of science events at

	which <i>Quest</i> is marketed will decrease due to budget constraints.
Justification	<i>Quest</i> aims to promote awareness and create an interest in science amongst the youth.
Links	Promotion of interest in and awareness of science

<i>African Journal of Science</i>										
To promote awareness of science amongst the youth through <i>Quest</i> science magazine	4	Number of issues of <i>Quest</i> published	4	4	4	4	4	4	4	20

¹Peer review reports are defined as a review report evaluating books or a peer review of discipline-grouped scholarly journals.

6.2 Quarterly targets for 2017/2018

Performance indicator	Reporting period	Annual target 2017/2018	Quarterly targets			
			1 st	2 nd	3 rd	4 th
Number of new journal titles on SciELO SA open access platform	Annual	0	-	0	0	0
Number of peer review reports published	Annual	1	-	-	1	-
Number of National Scholarly Publishers' Forums hosted	Annual	0	-	0	-	-
Number of National Scholarly Editors' Forums hosted	Annual	0	-	0	-	-
Number of issues of SAJS published	Annual	6	1	2	1	2
Number of issues of <i>Quest</i> published	Annual	4	1	1	1	1

6.3 Reconciling performance targets with the budget and MTEF

Details	2017/18	2018/19	2019/20
	R'000	R'000	R'000
Scholarly Publishing Programme	8 680	8 220	8 443

6.4 Scholarly Publishing Programme Activities

Key activities of the SPP are described in more detail below.

6.4.1 Open access platform

The Scientific Electronic Library Online (SciELO) SA Collection (www.scielo.org.za) was started in 2009 as a full-text searchable database of selected, high-quality South African scholarly journals. During the past financial year, good progress was made in the implementation of the open access platform.

A total of 65 journals (November 2016) is now available on the SciELO SA platform and the platform is fully managed by ASSAf. It includes approximately 1 268 issues and 19 694 articles. Criteria for inclusion on the platform are (i) recommendations of peer review panels, and/or (ii) internationally indexed journals, and/or (iii) journals with a good citation record in the Thomson Scientific ISI system.

Some of the major achievements have included: (1) the inclusion of SciELO SA on the Web of Knowledge (WoK) platform; (2) certification of SciELO SA through the SciELO Network; (3) the inclusion of SciELO SA as an index for automatic accreditation under the *new Policy and Procedures for the Measurement of Research Output of Public Higher Education Institutions* (2014); (4) inclusion of all SciELO articles in the Science Open platform – a platform that recognises the importance of integrating research from across Latin America and South Africa, providing an extra layer of search functionality, additional discovery and filter options, as well as functions for sharing, recommending and commenting; (5) the addition of the SciELO SA collection to the OCLC World Share Platform, which now also makes the collection available to the World Cat Discovery community.

The impact of the SciELO SA open access platform is routinely monitored. The collection has been viewed more than 4.5 million times since its inception in 2009, compared with 3 million times in November 2015. Details of countries with the highest access rates provide strategic guidance on the potential sphere of influence of South African publications as well as serve to highlight opportunities for future partnerships. Detailed statistics on the number of times a particular journal and even a particular article have been accessed are available. For example, in the case of the SAJS, an average of about 80 articles per day are downloaded.

With effect from May 2015, a connection to SANReN has been established, significantly improving access to broad bandwidth. Continued hosting of the platform by SABINET is taking place, and an agreement has been signed with Portico to ensure long term preservation of all the issues on the SciELO SA platform.

Publishing agreements with all the editors of the journals on the SciELO platform have now been concluded.

ASSAf subscribes to the CrossRef digital object identifier (DOI) service for scholarly journal articles. In cases where South African journals do not assign DOIs, ASSAf assists and makes this service available at no cost. Seventeen of the SciELO SA indexed journals make use of the ASSAf DOI service.

ASSAf also aims to promote the growth in the number of South African researchers using the unique ORCID identifier and therefore provides this service at no cost and encourages editors to require authors of scholarly papers, to include their ORCID IDs when submitting papers for possible publication.

Notwithstanding the steady progress that has been made in adding new titles to the SciELO SA platform and the impact that has been felt in terms of reach of South African scholarly articles, it has become necessary to cut back on activities due to budget constraints and shift the focus to solely maintenance.

Goals for 2017/18 are as follows:

- Seek additional funding to support this strategic endeavour;
- Maintain the SciELO SA open access platform but do not add any new journal titles due to budget constraints;
- Prepare (mark up and conversion) of newly published issues of current (65) journals to the SciELO SA platform;
- Introduce a new version of the SciELO SA platform, with enhanced statistics and discovery tools;
- Continually monitor and evaluate the impact of the open access platform;
- Provide continued support for long term preservation (Portico);
- Continue advocating for SciELO SA journal editors to require their authors to include their ORCID identifiers at the time of submission; and,
- Provide a service to journal editors to add DOIs to their published journal articles.

6.4.2 Peer review of discipline groupings of South African scholarly journals

This activity addresses the second strategic objective, viz. improving the quality of South African journal publications through the evaluation of journals and supporting the professional development of journal editors.

Specific activities include: constitution of the peer review panels; training of panel chairs; discussion of reviewer reports at panel meetings; completion of the draft review reports; approval of review reports by ASSAf Council; and publication of reports.

Due to budget constraints, no new peer review panels will be constituted in 2017/18. The focus will be on completion of those where work has already begun. Various other activities such as the hosting of the National Scholarly Editors' Forum and the National Scholarly Book Publishers' Forum will be curtailed. The service currently offered to editors to assist with online hosting and managing of SciELO SA-listed journals using Open Journal Systems (OJS) software will be stopped, as will the updating and expansion of the database of South African scholarly journals, currently being undertaken in collaboration with the Centre for Research on Evaluation, Science and Technology (CREST), and the updating of the ASSAf scholarly publishing Help Page.

Goals for 2017/18 include the following:

- Continued peer review of journals to inform editors and other stakeholders regarding the quality of SA journals;
- Utilise webinar technology to continue offering relevant and informative seminars to the scholarly research community to improve the quality of SA research and SA research publications. Four such webinars will be held in 2017/18;

- Assist journal editors to comply with the Directory of Open Access Journals (DOAJ) criteria.

6.4.3 Improving the quality of South African books

This activity addresses the second strategic objective, viz. improving the quality of South African scholarly books through a peer review evaluation and supporting the professional development of book publishers.

ASSAf had a formal agreement with the Department of Higher Education and Training (DHET) to evaluate conference proceedings and books submitted to DHET by tertiary institutions for subsidy purposes. The adoption of a standard Academy methodology based on discipline-grouped panels comprising experts serving in a volunteer capacity has given credibility and transparency to the process and greatly enhanced researchers' understanding of the process. With effect from 2016/2017, the DHET has incorporated this methodology into their own workflow and it is no longer the responsibility of ASSAf.

Goals for 2017/18 are as follows:

- Monitor the implementation and impact of the new Research Output Policy of the DHET, which was implemented in 2016.
- Offer advice to institutions implementing the new policy.

6.4.4 National site license for scholarly journals

A significant barrier to improvement in the scholarly performance of South Africa's researchers is lack of access to international literature. To address this problem, a national site license/s for access to high cost, commercial electronic full text and other journal databases is under investigation. The business case was submitted to DST and DHET at the end of November 2015. A final business case was submitted at the end of March 2016. Any further work by ASSAf on this project will require new funding.

Goals for 2017/18 are as follows:

- Negotiate a possible Phase 3 of this project with both DHET and DST to further deepen the business case, establish criteria for top-slicing and modelling thereof, establish cost models, and to lobby with universities and research institutions.

6.4.5 A study of scientific journal and book publishing in SA: 2005 – 2014

The last systematic studies of scientific journals and scholarly publishing in South Africa were done in 2006 and 2009 respectively (both by CREST under commission by ASSAf). Both of the studies previously completed are now seriously outdated, particularly considering the revisions to the DHET research policy, which has influenced scholarly publishing in South Africa. In 2016, ASSAf commissioned an updated study by CREST, the results of which will be available in late-2016. Thereafter a process will be followed to engage with different stakeholders to test and adjust the findings and recommendations of the report.

Goals for 2017/18 are as follows:

- Engage with various stakeholder groups to disseminate findings of the CREST study;
- Publish a report on the impact of the DHET policy;

- Establish the impact of the ASSAf's activities in scholarly publishing in South Africa.

6.4.6 South African Journal of Science

The *South African Journal of Science (SAJS)* is now in its 112th year of publication. There has been significant growth in the number of formal submissions to the journal. Ongoing efforts to increase the reach and impact of research published in the SAJS, particularly through electronic distribution and social media, are producing results. Article-level metrics for all articles published are providing useful metrics for determining the impact of an article.

The SAJS is playing a leading role in shaping scholarly publishing in South Africa through the many interventions that have been introduced to monitor and evaluate impact and through assisting editors of other South African journals to do likewise. This leadership role will be difficult to sustain given the budget constraints that ASSAf faces. It will be important that ASSAf highlights and communicates this role to all relevant stakeholders so that the full value proposition of the SAJS to the scholarly publishing community in South Africa is appreciated.

Goals for 2017/18 are as follows:

- Continue to publish high-quality research with a regional focus and interdisciplinary interest;
- Continue to deliver a high-quality product and service to authors and readers, by following best practice guidelines;
- Expand and enhance the SAJS website and social media to continually improve searchability, visibility and readability of published research;
- Focus on improving the openness and transparency of the Journal, through publication of journal statistics and open data sets;
- Communicate the value proposition of the SAJS in order to secure additional funding to enable the journal to continue to play its leadership role.

6.4.7 Quest

ASSAf's popular science magazine, *Quest: Science for South Africa*, is a full-colour, quarterly science magazine directed at a target audience comprising learners, educators and the general public. With a print run of 25 000 and a postal circulation of 21 650 copies per issue, the magazine is distributed to schools, public libraries, universities, government departments, embassies, media houses and subscribers. The balance is used for science promotion and career guidance.

In 2015, Quest created a Facebook and Twitter presence. The reach is still very limited but presents a base from which to increase impact.

Volume 12(2) has included African language and curriculum boxes for one article and this new development will be continued for more articles in the future.

Due to budget constraints, the print run of *Quest* will be reduced from 25 000 to 10 000 and the distribution adjusted accordingly to focus on achievement of greatest impact. It will also be necessary to cut back on participation at events and visits to districts and schools. This is a necessary step notwithstanding the significant progress that has been made in improving the engagement with teachers and learners in the past year.

Goals for 2017/18 are as follows:

- Develop the social media presence of *Quest*;
- Ensure improved and targeted dissemination of *Quest* to take account of budget constraints;
- Include abstracts for articles in at least one indigenous language;
- Develop article linkages to science, geography and mathematics school curricula where possible;
- Undertake a fund raising drive in order to sustain publication and dissemination of *Quest* at levels of past years.

7. Programme 3: Liaison Programme

The **Liaison Programme** is structured into a number of sub-programmes, each of which is designed to establish and strengthen partnerships and engagement with key stakeholders and organisations, with the overall purpose of promoting and recognising excellence and scholarly achievement; strengthening and enhancing international scientific linkages; and advancing engagement with key policymakers in government, including parliament and relevant national scientific organisations.

The internal structure of the programme is as follows:

- (1) **Member Liaison**, which includes all aspects pertaining to Academy Member elections and communication with Members.
- (2) **National Liaison**, which is divided into strategic partnerships; scholarly lectures; prizes and awards; and science engagement.
- (3) **International Liaison**, which is divided into Strategic Partnerships; Africa Collaboration; and Overseas Collaboration.
- (4) **Young Scientists' Liaison**, which ensures young scientists' participation in STI activities nationally, regionally and globally. It also provides the secretariat for the South African Young Academy of Science (SAYAS).
- (5) **Gender and Science, Technology and Innovation**, which aims to promote gender mainstreaming.

Strategic objectives

Strategic Objective	To increase and diversify the membership of the Academy
Objective statement	To increase the proportions of women and black Members By the end of the financial year 2019/20, ASSAf will have raised awareness, assessed its transformation status and prepared annual reports on the diversity of membership
Baseline	Women currently comprise 25% and blacks 29% of the membership (November 2016)

Justification	Transformation of Academy membership is essential to ensure legitimacy, to enable full participation by all potential candidates and to avoid perpetuating past historical imbalances. The full diversity of South Africa's population is required to address the challenges of the nation
Links	In line with the national transformation process, ASSAf aims to increase the proportion of black and female Members, which will not only help achieve the targets, set by the ASSAf Council, but will increase the diversity of Members
Strategic Objective	To recognise and reward excellence in science and promote scholarly activity
Objective statement	To award up to two gold medals per annum for outstanding achievement in scientific thinking for the benefit of society; to award prestigious Sydney Brenner postdoctoral fellowships, to host up to two Distinguished Visiting Scholars per annum; and to increase the number of regions in which scholarly lectures are held. In 2017/18, due to funding constraints, the Sydney Brenner fellowship programme will be discontinued and the number of Distinguished Visiting Scholars will be reduced to one per annum. The focus of scholarly lectures will be on hosting webinars, rather than physical lectures, in an effort to reach a wider target audience.
Baseline	ASSAf awards up to two gold medals annually; hosts up to two annual Distinguished Visiting Scholars from abroad; and hosts scholarly lectures in two regions. This will change with effect from 2017/18.
Justification	Gold medals are the apex awards of the Academy and the South African science system and are awarded in recognition of outstanding achievements by individuals. Lectures provide an opportunity for SA scholars to engage with leading

	international scholars. Public lectures promote the profile of the Academy and relations with other organisations.
Links	Promotion of innovation and scholarly activity, as well as recognition and reward of excellence.
Strategic Objective	To collaborate with and strengthen African science academies
Objective statement	To enhance collaboration with African academies through joint activities and to assist with capacity development together with NASAC.
Baseline	ASSAf plans to play a major role in strengthening African science academies and NASAC through collaborative activities. ASSAf has served on the executive of NASAC since NASAC's founding. A major thrust of ASSAf international liaison is focused on Africa.
Justification	African countries face many common development challenges and issues and are bound by pan-African policies of the African Union Commission. Academies have a major role to play in collectively addressing these challenges.
Links	Promotion of innovation and scholarly activities and international linkages
Strategic Objective	To increase participation of young scientists in science-related activities
Objective statement	To provide opportunities for young scientists to participate in science-related activities both within SA and abroad
Baseline	ASSAf has hosted annual conferences of young scientists since 2010, disseminated fellowship/scholarship opportunities, nominated leading young scientists for international events, presented

	awards/prizes for young scientists, and collaborated with the South African Young Academy of Science (SAYAS).
Justification	ASSAf is mindful of its responsibility to foster the next generation of leading scholars and to involve young scientists in Academy-related activities as much as possible. The annual Young Scientists' Conference provides an opportunity for young scientists to network and showcase their work. The establishment of the Young Academy provides young scientists with a platform to contribute nationally and even participate in international scientific activities. SAYAS is positioned as an apex young scientist organisation to coordinate all other young scientist activities in partnership with ASSAf.
Links	Promotion of innovation and scholarly activity, as well as recognition and reward of excellence.
Strategic Objective	To increase participation of women in science-related activities and promote the application of a gender lens in Academy activities
Objective statement	To increase participation of women in science-related activities and promote the application of a gender lens in Academy activities
Baseline	A national chapter of the Organisation of Women Scientists for the Developing World (OWSD – formerly TWOWS) and an executive committee have been established. With the ending of the external funding received from the GenderInSITE contract, all specific activities will cease in 2017/18, but where possible the application of a gender lens in ASSAf's other studies will continue.
Justification	The activities will provide women scientists with a networking platform and an

	opportunity to contribute to science development in the country.
Links	To promote scholarly activities and international linkages

To increase participation of young scientists in science-related activities	1	Number of young scientist conferences hosted	0	1	1	1	1	1	1	5
To increase participation of women in science-related activities and promote the application of a gender lens in Academy activities	8	Number of new members of OWSD National Chapter	-	-	-	8	8	8	8	32

¹A joint meeting is defined a workshop/conference/symposium that is organised by ASSAf in partnership with one or more African science academies or NASAC

7.2 Quarterly targets for 2017/18

Performance indicator	Reporting period	Annual target 2017/18	Quarterly targets			
			1 st	2 nd	3 rd	4 th
Proportion of women Members	Annual	27%			27%	

Proportion of black Members	Annual	29%			29%	
Number of Science-for-Society gold medals awarded	Annual	2	-	-	2	-
Number of Distinguished Visiting Scholars hosted	Annual	1	-	-	1	-
Number of regions hosting public lectures	Annual	2	-	-	1	1
Number of joint meetings hosted with an African science academy	Annual	1			1	
Number of young scientists' conferences hosted	Annual	1	-	-	1	-
Number of new members of OWSD National Chapter	Annual	8			8	-

7.3 Reconciling performance targets with the budget and MTEF

Details	2017/18	2018/19	2019/20
	R'000	R'000	R'000
Liaison	8 957	7 182	6 306

7.4 Liaison activities

7.4.1 Sub-programme: Membership liaison

The core asset of science academies is their membership and their ability to draw on highly qualified scientists from a large range of disciplines to assist in the science advisory role.

In its criteria for membership, ASSAf places particular emphasis on the application of scientific thinking to the problems and challenges facing South African society. It draws its membership from all population groups and from all scientific disciplines. Although Academy membership has increased, there is still underrepresentation of blacks, women and certain disciplines. Each year in its membership call, ASSAf strives to reflect more accurately the changing profile of South African scholars. The current (November 2016) gender and racial profile of ASSAf is 25% female and 29 % black.

The anticipated amendments to the ASSAf Act in terms of membership will improve the possibility for the Academy to meet its transformation targets more effectively.

Goals for 2017/18 are as follows:

- To increase the proportions of women and black Members through a targeted drive;
- To maintain an up-to-date and accurate data base of Members;

7.4.2 Sub-programme: National liaison

There are five major thrusts in this sub-programme: strategic partnerships; scholarly lectures; prizes and awards; engagement with the business sector; and science engagement.

1. Strategic Partnerships

ASSAf's strategic national partners include organisations in the National System of Innovation (NSI), particularly science councils and industry. ASSAf is the secretariat for the Committee of Heads of Organisations of Research and Technology (COHORT) and has a MoU with NACI.

Engagement with parliament is a focus of activity, primarily to ensure that ASSAf's many and varied study outputs are brought to the attention of the country's policymakers.

2. Scholarly lectures

The key objective is to contribute to scholarly activity through the Distinguished Visiting Scholar (DVS) Programme and the hosting of Regional Scholarly Lectures.

• Distinguished Visiting Scholar Programme

Traditionally, the Academy has annually brought two outstanding international scholars to South Africa for approximately two weeks each for nationwide lecture tour. The purpose is to promote scholarly activity and to contribute towards strengthening scientific endeavour in South Africa. Due to budget constraints, the number will be reduced to one in 2017/18.

Goals for 2017/18 are as follows:

- To create opportunities for the visiting scholars to engage with the public to enhance science awareness and to increase the reach of the programme through introducing webinars.

- **Regional Scholarly Lectures**

ASSAf co-hosts scholarly lectures that are open to the public. The most successful regular series are those co-hosted with the Royal Society of South Africa in Cape Town. ASSAf also partners with other organisations (e.g. The South African Academy of Engineering, South African Young Academy of Science and the *Suid Afrikaanse Akademie vir Wetenskap en Kuns*) as and when appropriate to host scholarly lectures and to publicise such lectures as widely as possible. The ASSAf Humanities Lecture is due to be held for the first time in 2016/17.

The regional scholarly lectures will be replaced, where possible, by webinars in order to curtail the costs of hosting and simultaneously expanding the reach to other regions in South Africa. Through webinars and/or live streaming, the reach can be nationwide.

Goals for 2017/18 are as follows:

- To host a high-profile annual ASSAf Humanities Lecture as part of ASSAf's commitment to scholarly debate in the Humanities;
- To explore the option of hosting scholarly lectures via webinars and/or live streaming in order to expand the reach.

3. Prizes and Awards

Central to the purpose of an Academy is the recognition and reward of outstanding contributions to the advancement of knowledge and to society. While ASSAf has embraced the working Academy model, the value of celebrating scholarly achievements speaks directly to the Academy's mandate.

As the apex body in the science system, election to membership of the Academy is in itself a great honour. Each year, ASSAf conducts membership elections and annually elects between approximately 20 to 30 new Academy Members.

ASSAf has instituted prestigious Science-for-Society Gold Medal awards to recognise outstanding scientific achievements in the service of society. Each year up to two Science-for-Society Gold Medals are awarded. Provision is made for awarding, on an irregular basis, a Gold Medal for Outstanding Meritorious Service, of which only two have been awarded to date.

In previous years, through the award of the prestigious postdoctoral fellowship, named after the former South African Nobel Laureate, Sydney Brenner, ASSAf has aimed to attract excellent young scientists in the field of molecular and cellular biosciences to undertake postdoctoral study at a South African institution. This fellowship became widely known in South Africa as an 'apex' award in its field. The original funding for this award from Sydney Brenner and then from the Oppenheimer Memorial Trust has ceased and the ASSAf Council has taken the decision not to continue with these awards due to funding constraints.

Goals for 2017/18 are as follows:

- Implement the Science-for-Society Gold Medal awards;

- Plan for the implementation of the Humanities Book Prize in 2018/19.

4. Engagement with the Business Sector

ASSAf's relationship with the business sector is under-developed and it is planned to strengthen this relationship in 2017/18 through the development of a strategy that initially will be modest due to budget constraints, but will be developed in time.

5. Science Engagement

The goal of ASSAf's science engagement strategy is to develop a relationship between science and society, and thus create 'a scientifically-engaged South Africa' through:

- Providing high-level science-based scholarly advisory reports to the Government (including parliament), through fostering relationships with science organisations, non-government organisations (NGOs) and industry groups, and stimulating community thinking on the big national challenges;
- Increasing public scholarly input into scientific research and policy agendas through ASSAf awards, scholarly lectures, workshops and conferences;
- Encouraging young South Africans to take up careers in science and engineering, through *Quest* and to initiate partnerships and links in order to support a number of young scientist initiatives nationally.

Goals for 2017/18 are as follows:

- Finalise and implement ASSAf's science engagement strategy.

7.4.3: Sub-programme: International liaison

The purpose of the International Liaison sub-programme is to establish, strengthen and sustain productive collaborations with African and overseas academies of science and like-minded organisations with a view to enhancing capacity in science and technology, and its application within the NSI. The sub-programme also aims to strengthen and enhance interactions with relevant stakeholders in key national government departments, other public entities of the DST, such as the National Research Foundation (NRF) and policy-makers in government whose work has an international focus. The sub-programme also engages in science diplomacy and profiling of South African scientists who are contributing at international levels.

The international responsibilities of ASSAf have increased markedly over the years as ASSAf's reputation has grown abroad. It is no longer possible for ASSAf to maintain these engagements without increased funding. In recognition of the value that the international liaison team has added to both ASSAf's and South Africa's reputation, a concerted effort will be made to seek funding for these important activities. Until such time as additional funding is secured, engagements will be limited to those that have associated funding or those that can be achieved without incurring travel costs.

The sub-programme is structured as follows:

1. Strategic partnerships

Strategic partners of ASSAf include the global network of academies, which in 2016 was renamed the InterAcademy Partnership (IAP), with three branches renamed as IAP for Health, IAP for Science and IAP for Research. Based in Trieste, Italy, ASSAf plays a major role in the executive of this body representing the developing nations. In February 2016, ASSAf hosted the triennial General Assembly and Conference of the IAP.

The World Academy of Sciences (TWAS) is another strategic partner of ASSAf and since 2015, ASSAf has hosted the TWAS Regional Office of sub-Saharan Africa (TWAS ROSSA). The main objective of TWAS ROSSA is to promote the goals of TWAS in the region, which have a strong focus on the award of prizes and supporting young scientist activities.

A third strategic partner is the International Council for Science (ICSU) and ASSAf hosts the ICSU Regional Office for Africa (ICSU ROA). There is a close alignment between the goals of ASSAf and ICSU ROA, particularly in terms of Africa collaboration, thematic areas of interest and promoting young scientists, all of which present significant opportunities for synergistic partnerships on activities. It is anticipated that full effect will be given to these partnerships in 2017/18, especially around the Future Earth initiative and the "Leading Integrated Research for Agenda 2030 in Africa" programme, which will be run by ICSU ROA in partnership with the Network of African Science Academies (NASAC) and the International Social Science Council (ISSC). The programme is supported by the Swedish International Development Cooperation Agency (SIDA) and will run until December 2020.

It is also planned to position ASSAf to play a role in engagements with key strategic partners such as the World Science Forum, G20 and the BRICS academies of science. There will also be engagements with the pan-African Parliament Committee on Science and Technology, the European Union, the Southern African Development Community (SADC) Science Desk, UNESCO and the African Union (AU), among other multilateral organisations as key partners.

Goals for 2017/18 are as follows:

- To promote TWAS-ROSSA and related opportunities within the region;
- To promote the nomination of African scientists as TWAS fellows;
- To undertake a joint activity with ICSU-ROA;
- To position ASSAf as a key player in the BRICS grouping of science academies.

2. Africa collaboration

A major thrust of ASSAf's international liaison is focused on Africa cooperation. It includes building and maintaining relationships with African academies of science, of which there are currently 22, and supporting NASAC. ASSAf has MoUs with academies in Benin, Nigeria, Uganda and Mauritius and partners with these and other academies on both a bilateral and multilateral level.

Cooperation within Africa is implemented under the merged Africa's Science Academy Development Agenda (ASADA), developed under ASSAf's guidance, and the NASAC strategic plan. ASSAf has a critical role to play in cooperation with other African science academies as despite its own funding constraints, it is relatively better resourced.

Specific objectives for ASSAf are to focus on academy development in the SADC region, assisting in particular, the newly-established Botswana Academy of Sciences, and to

strengthen bilateral agreements with academies in countries in Africa where the DST already has bilateral agreements. ASSAf will also work with the Science, Technology and Innovation (STI) hub of New Partnership for African Development (NEPAD) in enabling academies in the continent to participate in the implementation of the Science, Technology and Innovation Strategy for Africa (STISA-2024) and will strengthen links with the pan-African Parliament Committee on Science and Technology, UNESCO Regional Office for Africa and the African Union.

Goals for 2017/18 include:

- Play a leading role in the implementation of the NASAC Strategic Plan;
- Strengthen collaboration with science academies in SADC;
- Strengthen links with the Ugandan and Nigerian science academies;
- Explore activities with Benin so that ASSAf can support academies in Francophone countries in partnership with NASAC;
- Implement the Leopoldina/NASAC Project and others that focus on Africa, with specific attention to the SADC region;
- Continue to play a role in the executive board of NASAC.

3. Overseas collaboration

This covers bilateral agreements with overseas academies of science, support for overseas strategic partnerships, and engaging with multilateral organisations such as the EU Commission and others. This sub-programme brings overseas academies to support African collaborations, Gender in Science and Technology, Young Scientist Liaison including SAYAS and TWAS-ROSSA as flagships. It also links overseas academies and partners with other programmes within ASSAf for collaborative activities.

On a *bilateral level*, the Academy has been actively engaging with the German National Academy of Sciences – Leopoldina to undertake a number of joint activities. ASSAf desires to work with other overseas academies especially where DST has ongoing or future bilateral cooperation.

ASSAf also plans to give effect to the MoU with the Austrian Academy by seeking funding for collaborative activities.

Particular attention will be paid to establishing links with the BRICS group of academies.

Goals for 2017/18 include:

- Finalise and start to implement the overseas collaboration engagement framework
- Profile African Collaboration, Gender in STI, Young Scientist Liaison and TWAS-ROSSA as flagship programmes for collaboration with overseas academies and partners
- Strengthen collaboration with Leopoldina;
- Seek funding for a collaborative activity, potentially involving young scientists, with the Austrian Academy of Sciences;
- Play a leading role in the establishment of a BRICS grouping of academies;
- Mobilise overseas embassies for events with ASSAf programmes.

7.4.4 Sub-programme: Young scientists' activities

Since 2010, ASSAf has hosted an annual Young Scientists' Conference, aligned to the International Year themes of the UN or AU, as part of its commitment to supporting the development of young scientists. ASSAf intends to host such a conference in 2017 and to grow this annual Young Scientists' Conference as a key event that is able to attract partners with similar interests.

Due to ASSAf's budget constraints, ASSAf will not be able to provide funding to SAYAS for its operational activities but in its quest to support the growth of the South African Young Academy of Science (SAYAS), ASSAf will continue to provide secretariat support to the young academy and will assist them to raise funding for their activities. ASSAf will continue to assist SAYAS to raise their profile with the Global Young Academy and with African science academies, and to create opportunities for joint activities and for SAYAS members to participate in ASSAf's Standing Committees and study panels.

ASSAf also actively supports the nomination of young scientists for awards and leadership opportunities and acts as the implementing agency for some of these. These include the following:

- TWAS Young Affiliates
- TWAS Regional Young Scientist Prize
- Young Physician Leaders Programme
- Lindau Nobel Laureates Programme

Goals for 2017/18 are as follows:

- Host the annual young scientists' conference;
- Assist SAYAS with a fund raising drive;
- Implement young scientist activities under TWAS ROSSA and the Lindau Nobel Laureates programme.

7.4.5 Sub-programme: Gender and STI activities

All gender-related activities in ASSAf have been coordinated by the Organisation for Women in Science for the Developing World (OWSD) South Africa National Chapter, which is hosted by ASSAf. ASSAf has also hosted the focal point for GenderInSITE for the southern African region since 2015. GenderInSITE is a global initiative to raise the awareness of decision-makers on the gender and SITE dimensions of development, aimed at both men and women. Funding from this initiative provided ASSAf with the opportunity to consolidate and strengthen its gender-related activities over the past few years. With the external funding for GenderInSITE ending in March 2017, and in the absence of certainty about a dedicated DST allocation to women in science activities, ASSAf has had to curtail significantly its activities in this sub-programme.

Goals for 2017/18 are as follows:

- Seek funding to ensure sustainability of this programme;
- Increase the number of OWSD National Chapter members through a targeted membership drive;
- Maintain the electronic distribution of appropriate calls, announcements and opportunities to the women in science data base;
- Where applicable, apply a gender lens to ASSAf's consensus studies and convening activities.

8. Programme 4: Science Advisory Programme

In order for ASSAf to fulfil its science advisory role in support of policy development regarding key challenges facing the nation, a variety of consensus studies is undertaken. In addition to the in-depth consensus studies, ASSAf produces concise policymakers' booklets and workshop/symposium proceedings reports; the latter represent the products of various convening activities of the Academy, which in 2016/17 included topics such as poverty reduction, social determinants of health, multiple morbidities and mathematics. ASSAf also localises international Academy reports, as such reports represent considerable investment of human and financial resources. For a relatively small marginal investment on the part of the 'recipient' Academy the study can be made relevant for the local context.

Over and above their role in supporting policy development, evidence-based study activities provide an important mechanism for establishing and strengthening international links, securing external project-related funding, and in mobilising ASSAf Members to volunteer their service on committees and panels. Studies generally fall into broad categories related to: health; education; humanities; climate change; energy; the science-policy nexus; biosafety and biosecurity; and poverty reduction. Once concluded, considerable effort is expended in disseminating the findings and ensuring effective uptake of the recommendations. A concerted effort will be made in 2017/18 to adopt a more inclusive approach to identifying potential studies. ASSAf Members will be invited to submit suggestions for studies together with suggestions of potential funders.

In addition to evidence-based studies on various topics, ASSAf also undertakes policy commentaries and produces authoritative statements when appropriate.

With effect from 2017/18, due to budget constraints, studies and workshops will be limited to those already underway or those that have received dedicated external funding.

Strategic objectives

Strategic Objective	To facilitate scholarly engagement on key national and global challenges
Objective statement	To provide fora to facilitate scholarly engagement amongst a wide variety of stakeholders on relevant and key national and global challenges.
Baseline	ASSAf convenes workshops/symposia and conferences on a wide variety of topics, in collaboration with other partners such as science academies and on its own. As of January 2017, 20 proceedings reports have been published.
Justification	To promote increased sharing of ideas, scholarly debate and improved

	understanding of key national and global challenges.
Links	Promotion of effective, evidence-based advice and raising public awareness of science and science education.
Strategic Objective	To provide evidence-based science advice to support policy development
Objective statement	To undertake in-depth consensus studies and produce reports in line with the Academy's mission and the priorities of the country, with a view to fulfilling the science advisory role of the Academy.
Baseline	As of January 2017, ASSAf had completed a total of 20 consensus study reports on a wide variety of topics.
Justification	To ensure that the Academy accomplishes its mission and remains both relevant and responsive to the needs of the country.
Links	Promotion of effective, evidence-based advice.

8.1 Strategic objective annual targets and performance indicators for 2017/18

Strategic objective	Strategic plan target	Performance indicator	Audited/Actual performance			Estimated performance	Medium-term targets			Five-year aggregated target
			2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2016 – 2020
To facilitate scholarly engagement on key national and global challenges	2	Number of workshop reports ¹ published	3	2	3	2	2	2	2	11
To provide evidence-based science advice to support policy development	2	Number of consensus study reports ² published	2	4	3	2	2	2	2	11

¹A workshop report is a published report summarising the presentations and discussions at a workshop/symposium hosted by ASSAf.

²A consensus study report is a substantial evidence-based report that follows the standard Academy consensus study methodology, is peer-reviewed, approved by the ASSAf Council and contains a set of strong recommendations.

8.2 Quarterly targets for 2017/18

Performance indicator	Reporting period	Annual target 2017/18	Quarterly targets			
			1 st	2 nd	3 rd	4 th
Number of workshop reports published	Annual	2	1		1	
Number of consensus study reports published	Annual	2	1			1

8.3 Reconciling performance targets with the budget and MTEF

Details	2017/18	2018/19	2019/120
	R'000	R'000	R'000
Science Advisory Programme	7 199	4 948	4 343

8.4 Science Advisory Programme Activities

General goals for 2017/18 are as follows:

- Implement internal systems to allow for effective and accurate record keeping of all activities in the Science Advisory Programme;
- Consolidate the number of programmatic activities in line with the Academy's mission and the priorities of the country, particularly those contained in the NDP;
- Ensure greater alignment of programmatic activities with the priorities of the NDP and the Sustainable Development Goals (SDGs) agenda as identified in the institutional review;
- Convene workshops/symposia/dialogues to promote scholarly debate on topics of critical national, regional and global importance;
- Execute a call to ASSAf Members for suggestions on proposed studies;
- Prepare study proposals for ASSAf Council approval and for submission to potential funders;
- Execute all studies effectively within the set time-frames;
- Engage with relevant stakeholders and policymakers;
- Improve dissemination and uptake of study reports; and
- Monitor, evaluate and report on the impact of study reports.

8.4.1 Health

The Health Standing Committee provides strategic direction to ASSAf's health-related studies.

Goals of the Committee for 2017/18 are as follows:

- Publish and disseminate findings and monitor and evaluate impact of the consensus study on Reconceptualising Education and Training of an appropriate Health Workforce for the Improved Health of the Nation;
- Continuation of the consensus study on Mental, Neurological and Substance Use (MNS) Disorders;
- Publish and disseminate findings of the consensus study on Ethical, Legal and Social Issues related to Human Genetics and Human Genomics in South Africa;
- Continued dissemination and impact evaluation of the consensus study on Diversity in Human Sexuality: Implications for Policy in Africa;
- Plan and implement a collaborative study with African science academies on Urban Health.

8.4.2 Education

The Standing Committee on Science, Technology, Engineering and Mathematics (STEM) Education provides guidance to ASSAf on matters related to STEM education. Inquiry-based science education (IBSE) is a strong focus of the committee.

Goals for 2017/18 are as follows:

- Disseminate the findings and monitor and evaluate the impact of the consensus study on Revitalising Agricultural Education and Training;
- Initiate a consensus study on Mathematical Sciences for the Future;
- Finalise the consensus study on the Status of Postgraduate Research Training in Engineering.

8.4.3 Science for the Reduction of Poverty and Inequality

In 2015, the Standing Committee was reconstituted and renamed to align more closely with the NDP triple challenges of poverty, inequality and unemployment. The focus of the Annual Meeting of African Science Academies (AMASA), hosted by ASSAf in November 2016, was Poverty Reduction.

Goals for 2017/18 are as follows:

- Disseminate and monitor and evaluate the impact of the policymakers' booklet on Social Protection;
- Publish and disseminate the AMASA conference proceedings report;
- Initiate a consensus study on a topic aligned with the NDP and SDGs.
- Host a workshop on the transition of youth into the work force, and produce a proceedings report or policy-makers booklet

8.4.4 Humanities

The Standing Committee on Humanities was formed in response to the recommendations contained in the consensus study report on The State of Humanities in South Africa, published in 2011. The committee provides strategic guidance to ASSAf on matters pertaining to the Humanities.

Goals for 2017/18 are as follows:

- Host the annual ASSAf Humanities Scholarly Lecture;
- Plan a consensus study on a topic relevant to the Humanities.

8.4.5 Biosafety and Biosecurity

The Standing Committee on Biosafety and Biosecurity oversees all components of biosafety, including bioethics, bio-risks and good laboratory practice, as well as biosecurity.

Goals for 2017/18 are:

- Disseminate the consensus study report on The State of Biosafety and Biosecurity in South Africa and monitor and evaluate impact;
- Finalise the consensus study on New Genetic Engineering Technologies;
- Host a meeting on The State of Biosafety and Biosecurity in Southern Africa with SADC academies and partners;
- Collaborate with African science academies on biosafety and biosecurity.

8.4.6 Climate Change

ASSAf has completed a number of reports relevant to climate change, viz. a consensus study report on "Towards a Low Carbon City: Focus on Durban", published in 2011; a workshop proceedings report on Technologies for a Low Carbon Society, published in collaboration

with the German national science academy, Leopoldina in 2013; and a consensus study report on The State of Green Technologies in South Africa in 2014. ASSAf also hosted an official United Nations media event on climate change impacts in 2014, hosted a communication event on climate change impacts in collaboration with NASAC in 2016, and completed a report on the Mid-Term Assessment of the Global Change Grand Challenge for DST in 2016/17.

Goals for 2017/18 are as follows:

- Disseminate and monitor and evaluate the impact of the report on the State of Green Technologies in South Africa;
- Seek opportunities to partner with African science academies in order to localise the ASSAf report on the State of Green Technologies;
- Initiate planning for the second Biennial Review of Climate Change Science and Technology Research in South Africa.

8.4.7 Energy

ASSAf has a track record of studies in the energy field, having published a policymakers' booklet on energy access; completed consensus studies on the State of Energy Research in South Africa and the Technical Readiness of South Africa for Hydraulic Fracturing; and hosted two workshops on nuclear energy, one focusing on risk and a second on economics.

Goals for 2017/18 are as follows:

- Disseminate, monitor and evaluate the impact of the consensus study on the Technical Readiness of South Africa for Hydraulic Fracturing;
- Host a conference/dialogue on Hydraulic Fracturing;
- Finalise the consensus study on The State of Energy Efficiency in South Africa and disseminate the findings.

8.4.8 Ocean Sciences

This is a new focus area for ASSAf and will be initiated following a planning workshop held in Mauritius in July 2016 and to link with South Africa's Operation Phakisa. ASSAf will partner with African science academies to strengthen ocean sciences and raise awareness of the blue economy in Africa.

Goals for 2017/18 are as follows:

- Plan and host a scientific workshop in collaboration with partner African science academies on ocean sciences and the blue economy;
- Produce a workshop proceedings report or policymakers' booklet aimed at raising awareness about the importance of ocean sciences and the blue economy in Africa.

9. Summary of High-level Performance Indicators

The following list consolidates the performance indicators that exist in each of the programmes into high-level performance indicators that accord with those in the ENE.

Number of workshop reports published per year

Number of consensus study reports published per year

Number of new journal titles added to SciELO SA open access platform per year

Number of issues of *South African Journal of Science* produced per year

Number of issues of *Quest* produced per year

Number of Distinguished Visiting Scholars hosted per year

Number of joint meetings hosted with an African science academy per year

ANNEXURE



*Applying scientific
thinking in the
service of society*

**Academy of Science of South Africa
Revised Strategic Plan
for the
fiscal years
2015/16 – 2019/20**

January 2017

Foreword

This revised Strategic Plan is included as an annexure to the Annual Performance Plan as a result of revisions which were made to the performance environment after the 2015/16 audit.

The Academy of Science of South Africa (ASSAf) is the officially recognised national science academy of South Africa through the ASSAf Act, *Act No. 67 of 2001*, which came into operation in May 2002. ASSAf is also governed by the Science and Technology Laws Amendment Act, *Act No. 16 of 2011*. In addition, ASSAf is subject to the Public Finance Management Act (PFMA), *Act No. 1 of 1999*, as well as a set of Treasury Regulations.

The dual mandate of the Academy is to:

- Promote and inspire outstanding achievements in all fields of scientific enquiry and to grant recognition for excellence;
- Proactively or upon request undertake studies on matters of public interest with a view to providing evidence-based scientific advice to government and other stakeholders.

ASSAf's strength resides in the quality and diversity of its membership; internationally renowned scholars elected by their peers, who give of their time voluntarily in the service of society. ASSAf is able to use its membership as a collective resource for evidence-based solutions to national problems.

The ASSAf Act provides the framework for identifying the Academy's overarching goals, within which the strategic priorities and focus for the next 5-year period are outlined. Overarching goals of ASSAf are as follows:

1. Recognition and reward of excellence
2. Promotion of innovation and scholarly activity
3. Promotion of effective, evidence-based scientific advice
4. Promotion of public interest in and awareness of science and science education
5. Promotion of national, regional and international linkages

These are closely aligned with those of government and the Department of Science and Technology (DST), in particular.

The activities of the Academy are structured into four programmes to meet the overarching goals. These are: Governance and Administration Programme; Scholarly Publishing Programme (SPP); Liaison Programme; and the Science Advisory Programme.

The **Governance and Administration Programme** is central to the efficient functioning of the Academy, providing essential administrative, finance and human resource support services. This programme is also responsible for all reporting requirements and Council activities. Communication is an important component of this programme and aims to provide effective and targeted communication with ASSAf stakeholders to support the vision and mission of the Academy to be the apex organisation of science and scholarship in South Africa. ASSAf stakeholders include Members, representatives of government and other science councils, universities, sponsors and the public.

The **Scholarly Publishing Programme** is regarded as a major intervention into the National System of Innovation (NSI) in South Africa, the strategic goal of which is to enhance the national capacity to produce and publish research, on the one hand, and to increase the quality and visibility of South African research publications, on the other. In order to achieve this goal, the SPP is responsible for, *inter alia*, the peer review of South African scholarly journals, the implementation of the open access platform for scholarly journals, the hosting of a National Scholarly Editors' Forum and a National Scholarly Book Publishers' Forum. A major thrust of this programme is the production and dissemination of the Academy's flagship journal, the *South African Journal of Science*, and the science magazine, *Quest: Science for South Africa*.

The **Liaison Programme** is structured into a number of sub-programmes, each of which is designed to establish and strengthen partnerships and engagement with key stakeholders and organisations, with the overall purpose of promoting and recognising excellence and scholarly achievement; strengthening and enhancing international scientific linkages; and advancing engagement with key policymakers in government, including parliament and relevant national scientific organisations. The internal structure of the programme includes (1) Member Liaison, which includes all aspects pertaining to Academy Member elections and communication with Members; (2) National Liaison, which is divided into strategic partnerships; scholarly lectures; prizes and awards; and science engagement; (3) International Liaison, which is divided into strategic partnerships; Africa collaboration; and overseas collaboration; (4) Young Scientists' Liaison; and (5) Gender and Science, Technology and Innovation.

The **Science Advisory Programme** aims to assist ASSAf in the fulfilment of its science advisory role in support of policy regarding key challenges facing the nation. A variety of relevant consensus studies is undertaken. Studies generally fall into broad categories related to: health; education; climate change; energy; the science-policy nexus; biosafety and biosecurity; and poverty reduction. Once concluded, considerable effort is expended in disseminating the findings and ensuring effective uptake of the recommendations. In addition to evidence-based studies on various topics, ASSAf also undertakes policy commentaries and produces authoritative statements when appropriate. ASSAf also regularly hosts workshops/symposia on a variety of topics.

ASSAf faces challenges in fully implementing all the compliance requirements of the PFMA and the Treasury regulations as a result of its small budget. The budget also constrains the range of activities in which ASSAf can engage. There is potential to utilise to a far greater extent the Member resource base in service of society if additional budget was available for secretariat support services.

A key imperative over this planning cycle is to secure a permanent home for ASSAf rather than to be dependent on rented premises.

Official sign-off

It is hereby certified that this Strategic Plan:

Was developed by the management of the Academy of Science of South Africa under the guidance of the Executive Officer

Takes into account all the relevant policies, legislation and other mandates for which the Academy of Science of South Africa is responsible

Accurately reflects the strategic outcome-oriented goals and objectives which the Academy of Science of South Africa will endeavour to achieve over the period 2015/16 to 2019/20.



Morakeng Chiloane
Financial Manager



Roseanne Diab
Executive Officer



Jonathan Jansen
President and Chair of Council

Naledi Pandor
Minister of Science and Technology



Date 08-03-2017

Signature:

Table of Contents

Part A: Strategic overview

1. Vision
2. Mission
3. Values
4. Legislative and other mandates
5. Situational analysis
 - 5.1 Performance environment
 - 5.2 Organisational environment
 - 5.3 Description of the strategic planning process
6. Strategic outcome-oriented goals of the institution

Part B: Strategic objectives

7. Programme 1: Administration and Governance Programme
 - 7.1 Strategic objectives
 - 7.2 Resource considerations
8. Programme 2: Scholarly Publishing Programme
 - 8.1 Strategic objectives
 - 8.2 Resource considerations
9. Programme 3: Liaison Programme
 - 9.1 Strategic objectives
 - 9.2 Resource considerations
10. Programme 4: Science Advisory Programme
 - 10.1 Strategic objectives
 - 10.2 Resource considerations
11. Risk management

PART A: Strategic Overview

1. Vision

The Academy of Science of South Africa (ASSAf) aspires to be the apex organisation for science and scholarship in South Africa, recognised and connected both nationally and internationally. Through its membership which represents the collective voice of the most active scholars in all fields of scholarly enquiry, ASSAf aims to generate evidence-based solutions to national problems.

2. Mission

The mission of the Academy is to:

- Recognise scholarly achievement and excellence in the application of scientific thinking for the benefit of society;
- Mobilise Members to ensure that they are available to contribute their expertise in the service of society;
- Conduct systematic and evidence-based studies on issues of national importance, producing authoritative reports that have significant impact on policy-making;
- Promote the development of an indigenous system of South African research publications, increasing their quality, visibility, accessibility and impact;
- Publish science-focused periodicals that will showcase the best of southern African research to a wide national and international audience;
- Develop productive partnerships with national, regional and international organisations with a view to building our capacity in science and its application within the National System of Innovation (NSI);
- Create diversified sources of funding for sustainable functioning and growth of a national academy;
- Communicate effectively with relevant stakeholders through various media and fora.

3. Values

ASSAf's strength resides in the quality and diversity of its membership; internationally renowned scholars elected by their peers, who give of their time voluntarily in the service of society. The Membership could be regarded as the 'brains trust' of the nation. ASSAf is able to use its Membership as a collective resource for evidence-based solutions to national problems.

Policy advisory activities are a common feature of academies around the world, all using an evidence-based approach based on the convening of experts with diverse perspectives to discuss and illuminate issues.

Key universal elements of Academy advice are that it is:

- Authoritative
- Independent
- Objective and free of vested interests
- Trusted
- Based on voluntary involvement
- Based on rigorous analysis of evidence and peer review
- Transparent
- Multi-disciplinary and able to address complex issues that transcend disciplinary boundaries.

4. Legislative and other mandates

The Academy of Science of South Africa (ASSAf) is the only national science academy to be officially recognised by the South African government through the passage of the ASSAf Act, *Act No. 67 of 2001*, which came into operation in May 2002.

The mandate of the Academy is to:

- Promote and inspire outstanding achievements in all fields of scientific enquiry and to grant recognition for excellence;
- Proactively, or upon request, undertake studies on matters of public interest with a view to providing evidence-based scientific advice to government and other stakeholders.

ASSAf is governed by the following statutory and other requirements:

- Academy of Science of South Africa (ASSAf) Act (*Act No. 67 of 2001*);
- Science and Technology Laws Amendment Act (*Act No. 16 of 2011*);
- ASSAf constitution comprising a set of 14 Regulations.

Additional policies that are taken into account when identifying strategic priorities of ASSAf are:

- Public Finance Management Act (PFMA) (*Act No.1 of 1999*);
- National priorities outlined in the Medium-term Strategic Framework (MSTF)
- White Paper on Science and Technology (1996);
- Ten-Year Innovation Plan for Science and Technology (2008-2018)
- New Growth Path (2010);
- National Skills Development Strategy (2011);
- National Development Plan (2012).

5. Situational analysis

5.1 Performance environment

ASSAf's science advisory role is informed by key national challenges and is executed in both a responsive and proactive manner. ASSAf strives to address cross-cutting and complex issues that suit the particular convening strength and niche of an Academy. ASSAf also seeks to implement projects in association with other science academies in Africa and abroad, in its efforts to influence regional and global policy. Linkages with other academies in the Southern African Development Community (SADC) and Africa are regarded as particularly important, as are the collaborations with key partners in the United Kingdom (UK), United States (US), Germany and France, and the BRICS countries of India, China, Russia and Brazil.

Challenges faced by ASSAf include its dependence on volunteer contributions by its Membership, and its inadequate budget, which limits the number of staff it can employ and the range of activities in which it can engage.

The overarching goals of the Academy of Science of South Africa (ASSAf) are informed by the ASSAf Act and set out as follows:

1. Recognition and reward of excellence
2. Promotion of innovation and scholarly activity
3. Promotion of effective, evidence-based scientific advice
4. Promotion of public interest in and awareness of science and science education
5. Promotion of national, regional and international linkages

These broad goals remain unchanged but the performance indicators aligned to these goals have been revised in this Strategic Plan, both as a result of the recent introduction of an externally commissioned Monitoring and Evaluation (M&E) framework for ASSAf, and as a result of experience gained in ASSAf's first performance audit in 2014/15.

ASSAf's science advisory role in support of policy development is informed by key national challenges, particularly those outlined in the National Development Plan (NDP), and is executed in both a responsive and proactive manner. ASSAf strives to address cross-cutting and complex issues that suit the particular convening strength and niche of an Academy. The Academy's strength lies in undertaking in-depth, evidence-based studies, ASSAf also seeks to implement projects in association with other science academies in Africa and abroad, in its efforts to influence regional and global policy.

ASSAf has been the host organisation of the International Council for Science (ICSU) Regional Office for Africa (ROA) with effect from May 2015, for a planned period of five years. Since March 2015, ASSAf has also hosted The World Academy of Sciences Regional Office of subSaharan Africa (TWAS ROSSA). The responsibilities attached to these two offices align closely with ASSAf's strategic goals and strengthen co-operation with Africa.

ASSAf supported the founding of the South African Young Academy of Science (SAYAS) and continues to provide secretariat support and funding to support their activities. Office space

and support services are provided to the South African Academy of Engineering (SAAE) at no cost.

5.2 Organisational environment

As a membership-based organisation, the key intellectual resources of the Academy reside in its membership, which currently comprises 504 Members. A total of 38 new Members was elected in 2016. Members, who volunteer their service, are supported in their science-advisory role by the fulltime staff of the secretariat, which currently numbers 34. Part-time staff includes the editors of the Academy's periodical publications.

The composition of the ASSAf secretariat is 62% black and 59% female. The Executive Officer is a white female and the management team of six comprises three white female and three black male staff.

ASSAf is governed by a Council, comprising 12 elected members and a thirteenth member appointed by the Minister as a representative of the National Advisory Council on Innovation. The current Council was elected in October 2016. The composition of the current Council, including advisors, is 71% black and 43% female.

The activities of the Academy are structured into four programmes as follows: Governance and Administration Programme; Scholarly Publishing Programme; Liaison Programme; and Policy Advisory Programme.

ASSAf is currently accommodated in rented premises in Persequor Park, Lynnwood, Pretoria. The lease has been renewed until June 2017. The purchase or construction of a building remains a key imperative for ASSAf in order to avoid escalating rental costs and to cater for expansions in the number of staff and programmatic activities. A permanent Academy home is important, given ASSAf's prestige, both nationally and internationally.

Changes to ASSAf's Strategic Plan were made in 2016/17 to include changes in the organisational environment as a result of an organisational design exercise. The main outcome was a change from six to four programmes, which are described above.

As a result of the recent audit findings, a number of new responsibilities and systems are in the process of been introduced in order to address compliance issues. These include supply chain management, risk management and information management. Due to budgetary constraints ASSAf has to rely on existing staff to fulfil these roles but this will not be sustainable. ASSAf is engaging the DST and the National Treasury as a matter of urgency in order to obtain clarity on the exact nature of the compliance issues that are applicable to it as an unlisted entity. If indeed, ASSAf needs to comply in the same manner as other listed entities, the cost that comes with such compliance requirements would be a major concern which will need to be factored into its budget in the future,

Changes made to this Strategic Plan are also as a result of audit findings which require the inclusion of performance tables in the Strategic Plan.

5.3 Description of the strategic planning process

As a young and small organisation that was involved in an intensive capacity development exercise led by the US National Academies over the period 2004 to 2010, ASSAf's operations were guided by a Strategic Plan and annual business plans prepared in consultation with the US National Academies. These plans have subsequently been replaced by the Strategic Plan and Annual Performance Plans submitted to DST each year.

Strategic planning is an ongoing process in ASSAf. The ASSAf management team meets regularly to discuss strategic planning issues and how ASSAf can respond to, and influence, developments in broader society. The Council of the Academy also engages in strategic planning exercises; the most recent one in February 2016 has informed this strategic plan.

This strategic plan is the product of consultation with the Council of the Academy. It has been revised and updated as a result of an organisational design exercise commissioned by Council in February 2015 and the development of a Monitoring and Evaluation framework for ASSAf. Both these exercises have resulted in changes to ASSAf's Strategic Plan, necessitating an update.

6. Strategic outcome-oriented goals of the institution

The ASSAf Act provides the framework for identifying the Academy's overarching goals, within which the strategic priorities and focus for the next 5-year period are outlined. Overarching goals of ASSAf are as follows:

1. Recognition and reward of excellence
2. Promotion of innovation and scholarly activity
3. Promotion of effective, evidence-based scientific advice
4. Promotion of public interest in and awareness of science and science education
5. Promotion of national, regional and international linkages

These are closely aligned with those of government and the Department of Science and Technology (DST) as shown in the summary table overleaf.

The broad goals of the NDP, applicable within the context of ASSAf activities, are as follows:

- Responsive, coordinated and efficient NSI
- Increased knowledge generation
- Human capital development

- Using knowledge for economic development
- Knowledge utilisation for inclusive development

Strategic priorities of ASSAf over the next five-year period are described in further detail below.

1. Recognition and Reward of Excellence

This prime function of ASSAf is an ongoing activity that involves election to membership of the Academy; the award of up to two Science-for-Society gold medals for outstanding achievement in scientific thinking for the benefit of society; and the ASSAf Humanities Book Prize.

In the next strategic planning cycle, further initiatives are as follows:

- Secretariat support for the South African Young Academy of Science (SAYAS), linked to the Global Young Academy in order to promote the recognition of promising young scientists;

2. Promotion of Innovation and Scholarly Activity

Ongoing activities include the hosting of an annual ASSAf Distinguished Visiting Scholars, the ASSAf regional scholarly lectures hosted at various universities, the publication of the *South African Journal of Science* and *Quest*, and the evidence-based, science advisory activities conducted by ASSAf (described in more detail below). The Scholarly Publishing Programme (SPP), which is regarded as a major intervention into the NSI in South Africa, has made substantial progress in, *inter alia*, the peer-reviewed assessment of South African scholarly journals; the publication of the Scholarly Books report; the establishment and implementation of the open access SciELO South Africa platform for scholarly journals; and the establishment of a National Scholarly Editors' Forum (NSEF) and the National Scholarly Book Publishers' Forum (NSBPF). The SPP will embark on additional new initiatives in the next few years.

In the next strategic planning cycle, the following initiatives are planned:

- Further implementation of SPP activities including:
 - Improvement of quality, quantity, accessibility and visibility of SA scholarly publications through the completion of the peer review of SA journals; dissemination and implementation of the report on access to journals in core commercial databases.
 - Establishment of a fully functional open access national publishing forum that includes full in-house management of the SciELO platform; inclusion of an electronic content management system; national publication facilities with the

necessary training; help desk facility and a citation indexing system in place; completed investigation of appropriate business models for open access publishing.

- Improvement of accreditation for journals and books and changed funding policies.
- Promotion of young scientists through SAYAS; the hosting of an annual Young Scientists' Conference to provide a forum for young scientists to showcase their research and network among others in similar discipline fields; and an on-line scientific writing course for graduate students;
- Promotion of women in science initiatives through the implementation of the Organisation for Women in Science in the Developing World (OWSD, formerly TWOWS) National Chapter activities.

3. Promotion of effective, evidence-based scientific advice

In order for ASSAf to fulfil its science advisory role regarding key challenges facing the nation, a variety of consensus studies and policy commentaries are undertaken. Over and above their scientific advisory function, evidence-based study activities provide an important mechanism for establishing and strengthening international links, securing external project-related funding, and in mobilising ASSAf Members to volunteer their service on committees and panels. Studies generally fall into broad categories related to: health; education; climate change; energy; the science-policy nexus; biosafety and biosecurity; and poverty reduction. Once concluded, considerable effort is expended in disseminating the findings to ensure effective uptake of the recommendations and enhance their impact.

Their alignment with government priorities and DST's grand challenges are shown in the following table.

DST Grand Challenges	ASSAf Evidence-based Study Activities	Government Priorities
From Farmer to Pharma (Biotechnology)	GMOs in African Agriculture: Challenges & Opportunities Regulation of Agricultural GM Technology Clinical Research & Related Training in SA	Improvement of rural development and food security Improvement of health profile of society Strengthening of the skills and resource base of SA

	<p>Improved Nutritional Assessment</p> <p>Long-term Strategy for HIV/AIDS</p> <p>State of Biosafety & Biosecurity in SA</p> <p>New Technologies and Policy Implications for SA</p>	
Space Science and Technology	-	
Energy	<p>Improving Access to Energy in Sub-Saharan Africa</p> <p>Nuclear Energy Safety</p> <p>State of Energy Research in SA</p> <p>Technical Readiness of SA for Hydraulic Fracturing</p> <p>State of Green Technologies in SA</p>	Improvement of rural development and food security
Global Change	<p>Low Carbon Cities</p> <p>Science, Water and Sanitation</p> <p>State of Green Technologies in South Africa</p> <p>Technological Innovations for a Low Carbon Society</p> <p>Environment and Health</p>	Improvement of environmental assets and natural resources

Human and Social Dynamics	PhD Study State of the Humanities in SA STEM Education Scholarly Publishing Programme	Strengthening of the skills and resource base of SA
---------------------------	--	---

In the next strategic planning cycle, the following initiatives are planned:

- Convening of workshops/symposia on a variety of topics of relevance to South Africa and Africa;
- Introduction of new evidence-based studies in line with the Academy's mission and the priorities of the country. Potential key themes include Mathematics Education; Revitalising Agricultural Education and Training; and Non-communicable Diseases.

4. Promotion of public interest in and awareness of science and science education

In accordance with objectives outlined in the ASSAf Act, as amended, and the goals of most science academies around the world, ASSAf is engaged in a wide range of science education activities. These include the publication of the highly acclaimed science magazine, *Quest: Science for South Africa*, which is widely disseminated free of charge to secondary schools in South Africa and other key stakeholders, and actively promoted at key national science events. Other activities are conducted under the auspices of the ASSAf Standing Committee on Science, Technology, Engineering and Mathematics (STEM) Education, which, to date, has focused on Critical Issues in Science and Mathematics Education in South African Schools, and in collaboration with the Uganda National Academy of Sciences (UNAS), a project on Promoting Best Practices in Science Education in sub-Saharan Africa. A further initiative has focused on promoting Inquiry-based Science Education (IBSE) for girls in conjunction with the academies of science in Zimbabwe and Zambia.

In the next strategic planning cycle, the following initiatives are planned:

- Improved and targeted dissemination of *Quest*;
- Initiation of a new consensus study aimed at addressing mathematics education in South Africa.

5. Promotion of National, Regional and International Linkages

ASSAf is currently an active member of and a collaborator with a number of international networks including the InterAcademy Partnership (IAP), The World Academy of Sciences (TWAS), and the Network of African Science Academies (NASAC). The President of ASSAf currently serves on the executive board of the IAC and has recently been elected President of the Network of African Academies of Science (NASAC).

The international linkages bring opportunities ranging from funding of project-related activities (e.g. IAP), promotion of young scientists (TWAS), capacity development of academies (NASAC, the German science academy, viz. Leopoldina), to participation in global and continental policy advisory activities.

ASSAf currently has bilateral agreements with the Uganda National Academy of Sciences (UNAS), The German Academy of Sciences, Leopoldina, the Russian Academy of Sciences (RAS), the Chinese Academy of Sciences (CAS), the Indian National Academy of Sciences (INSA), the Nigerian Academy of Science (NAS) and the Mauritius Academy of Science and Technology (MAST). To date, UNAS and ASSAf have partnered on science education and water activities, RAS and ASSAf have held a joint workshop to strengthen links in the fields of biotechnology, nanotechnology and cyberinfrastructure, MAST and ASSAf have collaborated on GMOs and energy, and Leopoldina and ASSAf have collaborated on low carbon technologies and environment and health.

ASSAf has also collaborated with NASAC to strengthen science academies in the SADC region and is actively engaged in joint initiatives with the science academies in Mozambique, Mauritius, Sudan, Zambia and Zimbabwe.

In the next strategic planning cycle, the following initiatives are planned:

- Strengthen the current bilateral agreements through appropriate and relevant initiatives;
- Increase the number of South African scientists elected as TWAS fellows through a concerted drive to increase the nomination of candidates meeting the high expectations of that body;
- Increase the applications for TWAS Fellowships by young South African scientists through targeted dissemination of fellowship announcements;
- Strengthen the activities and impact of TWAS ROSSA and ICSU ROA;
- Play a leading role in the initiation and implementation of Africa's Science Academy Development Agenda (ASADA) which has been endorsed by all science academies in Africa.

Strategic Outcome-oriented Goals	Indicators	National Development Plan goal statements
1. Recognition and reward of excellence	<ul style="list-style-type: none"> • Targeted membership drives to increase and diversify Academy membership. • Award of up to 2 Science-for-Society gold medals per annum. • Award of AU-TWAS Young Scientist Prize. • Award of Humanities Book Prize. • Support of South African Young Academy of Science. 	Human capital development
2. Promotion of innovation and scholarly activity	<ul style="list-style-type: none"> • Hosting of up to 2 Distinguished Visiting Scholars per annum. • Hosting of regional scholarly lectures. • Hosting of annual ASSAf Humanities lecture. • Publication of <i>SA Journal of Science</i>. • Convening of workshops/symposia on a wide variety of topics. • Conducting project-related activities. • Implementation of Scholarly Publishing Programme. • Promotion of young scientists' activities. • Promotion of women in science activities. 	Human capital development
3. Promotion of effective, evidence-based scientific advice	<ul style="list-style-type: none"> • Implementation of Scholarly Publishing Programme • Implementation of evidence-based studies in targeted areas such as health, education, climate change, energy etc. • Dissemination of study reports for improved uptake and impact of evidence-based studies • Provision of policy commentaries 	Increased knowledge generation Human capital development Using knowledge for economic development

<p>4. Promotion of public interest in and awareness of science and science education</p>	<ul style="list-style-type: none"> • Publication and promotion of <i>Quest: Science for South Africa</i> magazine. • Participation in national science events. • Hosting of public lectures on a wide variety of topics. • Implementation of STEM Education Committee activities. 	<p>Human capital development</p>
<p>5. Promotion of national, regional and international linkages</p>	<ul style="list-style-type: none"> • Strengthening and initiating science academies in Africa, particularly the SADC region. • Taking a leadership role in Africa's Science Academy Development Agenda (ASADA). • Hosting and supporting ICSU ROA and TWAS ROSSA 	<p>Increased knowledge generation</p>

Part B: Strategic objectives

7. Programme 1: Administration and Governance Programme

7.1 Strategic Objectives

This programme is central to the efficient functioning of the Academy, providing essential, cross-cutting administrative and financial support to the Council and the secretariat, contributing to ASSAf's efficiency. The programme is also responsible for all reporting requirements and compliance matters, including the annual audits, the Strategic Plan, the APP and quarterly reports. A monitoring and evaluation (M&E) component was added to this programme's responsibilities in 2014/15.

A major focus over the next five-year period will be to ensure the establishment and implementation of systems and procedures in various support functions, such as finance, human resources, information technology and information management, to assist with compliance requirements.

Sub-programme: Governance

The overall strategic objective is to ensure good governance of the Academy through the ASSAf Council. This includes execution of Council elections, support of Council meetings and committees, efficient and effective execution of Council resolutions and efficient and effective financial and human resource management activities.

Four Council meetings are held each year, with a fifth being held in the year of new Council elections. Council also holds a strategic planning session once a year, generally in February. Standing committees of Council include the Audit and Risk Committee, the Human Resources Committee and the Executive Committee, which is tasked with taking decisions in the intervals between Council meetings. An Annual General Meeting is held in October of each year.

Academy governance activities are executed in accordance with the requirements as outlined in the ASSAf Act, the Science and Technology Laws Amendment Act, as well as the Public Finance Management Act (PFMA) and Treasury regulations. Council is the highest decision-making body of the Academy entrusted with the responsibility to ensure smooth and effective governance in the execution of the Academy's mandate.

All activities relating to the ASSAf Council, ASSAf legislation and regulations fall into this sub-programme.

Sub-programme: Finance and Risk

This sub-programme ensures that financial management systems are in place so that ASSAf's resources are prudently and optimally utilised. Compliance is central to all activities.

Responsibilities include budgeting, financial reporting, procurement, and risk management. With effect from mid-2015, there will be an increased focus on supply chain management and risk management.

Sub-programme: Human Resources

The newly introduced Human Resources function provides ASSAf with human resources management services as follows: staff recruitment and retention; staff training and development; staff performance monitoring; staff disciplinary procedures; development and implementation of human resources systems; and development, implementation and monitoring of organisational policies and procedures.

Sub-programme: Knowledge Management

This is a new function, the need for which has been identified as a result of ASSAf's increased activities and an increased focus on reporting and compliance. It will involve the development of systems and processes for comprehensive records and documents management, both electronic and paper-based, to support decision-making and performance auditing. Initially, this function will likely be outsourced.

Sub-programme: Communication

The main purpose of this sub-programme is to provide effective and targeted communication with ASSAf stakeholders to support the vision of the Academy to be the apex organisation of science and scholarship in South Africa. It aims to build the ASSAf brand and to communicate the achievements of ASSAf and its Members to ASSAf stakeholders. ASSAf stakeholders include Members, representatives of government and other science councils, universities, sponsors and the public.

The sub-programme is also responsible for the ASSAf website, the quarterly ASSAf newsletter, facilitating media communication and the production of reports.

7.2 Resource considerations

It is important that the capacity in this support programme is enhanced urgently in order for compliance issues to be addressed. Urgent needs are in finance in the form of supply chain management and management accounting.

Other needs are for a communication officer to assist with enhanced marketing functions; two administrative officers to take responsibility for information management, risk management, and M&E. There is also a need for a receptionist.

8. Programme 2: Scholarly Publishing Programme

8.1 Strategic Objectives

The Scholarly Publishing Programme (SPP) is regarded as a major intervention into the National System of Innovation (NSI) in South Africa. The strategic goal of the SPP is to enhance the national capacity to produce and publish research, on the one hand, and to increase the quality and visibility of South African research publications, on the other. It is also making a valuable contribution to improved access to international scholarly publications, an essential ingredient for human capital development in a modern, rapidly developing knowledge-based economy such as South Africa.

The responsibilities for the publication of the *South African Journal of Science (SAJS)* and *Quest: Science for South Africa* have recently been included in this programme to consolidate all ASSAf's activities related to scholarly publishing in a single programme.

Strategic objectives

Strategic Objective	To increase the visibility, accessibility and searchability of SA accredited journals
Objective statement	To increase the number of high-quality South African scholarly journals on the open access platform, Scientific Electronic Library Online (SciELO) - South Africa
Baseline	There are currently (November 2015) 60 journals on the platform and the projected total number of titles on the platform is approximately 180.
Justification	Through optimising research access, the platform maximises visibility, usage, uptake, impact and hence research progress and it exposes research undertaken in developing countries to a global audience.
Links	Promotion of innovation and scholarly activity, as well as effective, evidence-based scientific advice. Supporting the transformation of South Africa's economy from a resource-based to a knowledge-based economy.
Strategic Objective	To improve the quality of SA journals, books and conference proceedings
Objective statement	To implement a system for peer review of discipline-grouped SA scholarly journals and SA scholarly books and conference

	proceedings in order to enhance their quality and establish the role they play in research in South Africa.
Baseline	<p>The evaluation (peer review) of six discipline groups of scholarly journals have been completed, viz. Social Sciences; Agriculture and Related Sciences; Law; Health and Related Sciences; Religious Studies; and Humanities; Languages and Literature (November 2016). Three additional subject groups will be rolled out, starting in 2015/2016.</p> <p>A consensus study report on <i>A Strategic Approach to Research Publishing in South Africa</i> was published in 2006 and a consensus study report on <i>Scholarly Books: Their Production, Use and Evaluation in South Africa Today</i> was published in 2009.</p> <p>Since 2014, ASSAf has been conducting the peer review of books and conference proceedings on behalf of DHET for subsidy purposes to SA universities.</p>
Justification	To enhance the production, visibility and impact of high-quality scholarly journals and books in SA. To bring peer review standards for scholarly books and journals up to a high level. To improve public policy in respect of these mentioned materials and to enhance the impact of all scholarly research in the development of a new generation of researchers.
Links	Promotion of innovation and scholarly activity, as well as effective, evidence-based scientific advice. Supporting the transformation of South Africa's economy from a resource-based to a knowledge-based economy.

Strategic Objective	To promote the visibility and impact of SA research through the publication of the South African Journal of Science
Objective statement	To publish high-quality original research from Africa or on African relevant issues that is of interest to scholars of any discipline.
Baseline	The SAJS is a bimonthly, multidisciplinary journal that was first published in 1905, and since 2002 has been published by ASSAf. It became an open-access publication in 2009 and since then its online presence and visibility has increased. Full issues have been published in digital, mobile friendly format since 2014 and are distributed electronically to almost 9000 recipients.
Justification	To provide a high-quality publication in which researchers can disseminate their original research; to showcase field-changing South African research; and to provide a forum for discussion of news and developments in research and higher education in South Africa
Links	Promotion of innovation and scholarly activity. Supporting the transformation of South Africa's economy from a resource-based to a knowledge-based economy
Strategic Objective	To promote awareness of science amongst the youth through Quest science magazine
Objective statement	To produce, publish and disseminate the high quality, periodical science magazine known as <i>Quest: Science for South Africa</i>
Baseline	Quest is a quarterly magazine that has been published by ASSAf since 2005. It has a print run of 25 000 and is distributed free to SA high schools and university education departments and is promoted at science events.
Justification	<i>Quest</i> aims to promote awareness and create an interest in science amongst the youth.

Links	Promotion of interest in and awareness of science
-------	---

8.2 Resource considerations

Additional resources are required for the SAJS in the form of a fulltime copy editor and an increase in the time commitment of the part-time Editor-in-Chief.

There are ambitious plans for increased engagement with schools by Quest magazine. This will require an additional Education Liaison Officer to give effect to these plans.

As a result of the additional services that the SPP is introducing, two additional project officers are required.

<i>African Journal of Science</i>										
To promote awareness of science amongst the youth through <i>Quest</i> science magazine	4	Number of issues of <i>Quest</i> published	4	4	4	4	4	4	4	20

¹Peer review reports are defined as a review report evaluating books or a peer review of discipline-grouped scholarly journals.

9. Programme 3: Liaison Programme

9.1 Strategic Objectives

The **Liaison Programme** is structured into a number of sub-programmes, each of which is designed to establish and strengthen partnerships and engagement with key stakeholders and organisations, with the overall purpose of promoting and recognising excellence and scholarly achievement; strengthening and enhancing international scientific linkages; and advancing engagement with key policymakers in government, including parliament and relevant national scientific organisations.

The internal structure of the programme is as follows:

- (6) Member Liaison**, which includes all aspects pertaining to Academy Member elections and communication with Members.
- (7) National Liaison**, which is divided into strategic partnerships; scholarly lectures; prizes and awards; and science engagement.
- (8) International Liaison**, which is divided into strategic partnerships; Africa collaboration; and overseas collaboration.
- (9) Young Scientists' Liaison.**
- (10) Gender and Science, Technology and Innovation.**

Strategic objectives

Strategic Objective	To increase and diversify the membership of the Academy
Objective statement	To increase the proportions of women and black Members
Baseline	Women currently comprise 25% and blacks 29% of the membership (November 2016)
Justification	Transformation of Academy membership is essential to ensure legitimacy, to enable full participation by all potential candidates and to avoid perpetuating past historical imbalances. The full diversity of South Africa's population is required to address the challenges of the nation
Links	Promotion of innovation and scholarly activity, as well as recognition and reward of excellence
Strategic Objective	To recognise and reward excellence in science and promote scholarly activity

Objective statement	To award up to two gold medals per annum for outstanding achievement in scientific thinking for the benefit of society; to award a prestigious Sydney Brenner postdoctoral fellowship every year, to host two Distinguished Visiting Scholars per annum; and to increase the number of regions in which scholarly lectures are held.
Baseline	ASSAf awards up to two gold medals annually; hosts two annual Distinguished Visiting Scholars from abroad; and hosts scholarly lectures in two regions.
Justification	Gold medals are the apex awards of the Academy and the South African science system and are awarded in recognition of outstanding achievements by individuals. Lectures provide an opportunity for SA scholars to engage with leading international scholars. Public lectures promote the profile of the Academy and relations with other organisations.
Links	Promotion of innovation and scholarly activity, as well as recognition and reward of excellence.
Strategic Objective	To collaborate with and strengthen African science academies
Objective statement	To enhance collaboration with African academies through joint activities and to assist with capacity development together with NASAC.
Baseline	AS one of the architects of ASADA, ASSAf plans to play a major role in strengthening African science academies and NASAC through collaborative activities. ASSAf has served on the executive of NASAC since NASAC's founding and a major thrust of its international liaison is focused on Africa.
Justification	African countries face many common development challenges and issues and are bound by pan-African policies of the African Union Commission. Academies

	have a major role to play in collectively addressing these challenges.
Links	Promotion of innovation and scholarly activities and international linkages
Strategic Objective	To increase participation of young scientists in science-related activities
Objective statement	To provide opportunities for young scientists to participate in science-related activities both within SA and abroad
Baseline	ASSAf has hosted annual conferences of young scientists since 2010, disseminated fellowship/scholarship opportunities, nominated leading young scientists for international events, presented awards/prizes for young scientists, and collaborated with the South African Young Academy of Science (SAYAS).
Justification	ASSAf is mindful of its responsibility to foster the next generation of leading scholars and to involve young scientists in Academy-related activities as much as possible. The annual Young Scientists' Conference provides an opportunity for young scientists to network and showcase their work. The establishment of a Young Academy provides young scientists with a platform to contribute nationally and even participate in international scientific activities.
Links	Promotion of innovation and scholarly activity, as well as recognition and reward of excellence.
Strategic Objective	To increase participation of women in science-related activities and promote the application of a gender lens in Academy activities
Objective statement	To increase participation of women in science-related activities and promote the application of a gender lens in Academy activities

Baseline	A national chapter of the Organisation of Women Scientists for the Developing World (OWSD – formerly TWOWS) and an executive committee has been established. Appropriate activities will be conducted under the auspices of the national chapter.
Justification	The activities will provide women scientists with a networking platform and an opportunity to contribute to science development in the country.
Links	To promote scholarly activities and international linkages

9.2 Resource considerations

The range of activities in this programme has increased dramatically in recent years. Additional staff to take responsibility for international activities have been appointed. Further capacity is needed in the form of two Liaison Officers to take responsibility for increased national liaison functions, such as parliamentary engagement, scholarly lectures and young scientists' activities.

science academies		science academy ¹								
To increase participation of young scientists in science-related activities	1	Number of young scientist conferences hosted	0	1	1	1	1	1	1	5
To increase participation of women in science-related activities and promote the application of a gender lens in Academy activities	8	Number of new members of OWSD National Chapter	-	-	-	8	8	8	8	32

¹A joint meeting is defined a workshop/conference/symposium that is organised by ASSAf in partnership with one or more African science academies or NASAC

10. Programme 4: Science Advisory Programme

10.1 Strategic Objectives

In order for ASSAf to fulfil its science advisory role in support of policy development regarding key challenges facing the nation, a variety of consensus studies are undertaken. In addition to the in-depth consensus studies, ASSAf produces concise policymakers' booklets and workshop/symposium proceedings reports; the latter represent the products of various convening activities of the Academy, which in 2015/16 included topics such as environment and health, health professionals education and measuring deprivation to promote human development. ASSAf also localises international Academy reports, as such reports represent considerable investment of human and financial resources. For a relatively small marginal investment on the part of the 'recipient' Academy the study can be made relevant for the local context.

Over and above their role in supporting policy development, evidence-based study activities provide an important mechanism for establishing and strengthening international links, securing external project-related funding, and in mobilising ASSAf Members to volunteer their service on committees and panels. Studies generally fall into broad categories related to: health; education; climate change; energy; the science-policy nexus; biosafety and biosecurity; and poverty reduction. Once concluded, considerable effort is expended in disseminating the findings and ensuring effective uptake of the recommendations.

In addition to evidence-based studies on various topics, ASSAf also undertakes policy commentaries and produces authoritative statements when appropriate.

Strategic objectives

Strategic Objective	To facilitate scholarly engagement on key national and global challenges
Objective statement	To provide fora to facilitate scholarly engagement amongst a wide variety of stakeholders on relevant and key national and global challenges.
Baseline	ASSAf convenes workshops/symposia/conferences on a wide variety of topics, in collaboration with other partners such as science academies and on its own. As of March 2015, 12 proceedings reports have been published.
Justification	To promote increased sharing of ideas, scholarly debate and improved

	understanding of key national and global challenges.
Links	Promotion of effective, evidence-based advice and raising public awareness of science and science education.
Strategic Objective	To provide evidence-based science advice to support policy development
Objective statement	To undertake in-depth consensus studies and produce reports in line with the Academy's mission and the priorities of the country, with a view to fulfilling the science advisory role of the Academy.
Baseline	AS of March 2015, ASSAf had completed a total of 17 consensus study reports on a wide variety of topics.
Justification	To ensure that the Academy accomplishes its mission and remains both relevant and responsive to the needs of the country.
Links	Promotion of effective, evidence-based advice.

10.2 Resource considerations

Currently, the programme is structured such that the four Programme Officers each takes responsibility for projects and advisory activities in themed areas. The four Programme Officers are operating at full capacity and so if additional studies are introduced, dedicated staff will be appointed on a contract basis using external funding. The programme is also supported by an Administrative Officer and a Communication Officer who assist with logistical arrangements in respect of meetings and events.

The key challenge for this programme is that the position of Policy Advisory Programme Manager has been vacant for some years and the responsibilities have been assumed by the Executive Officer. After the last Council strategic planning session and Organisational Design exercise, it was recognised that this position should be a high level appointment, equivalent to that of a university senior professor, who would be able to quality assure the study reports that ASSAf is producing. Given ASSAf's current financial constraints, Council has recommended a part-time position for the immediate future.

Strategic objective annual targets for 2017/18

Strategic objective	Strategic plan target	Performance indicator	Audited/Actual performance			Estimated performance	Medium-term targets			Five-year aggregated target
			2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2016 – 2020
To facilitate scholarly engagement on key national and global challenges	2	Number of workshop reports ¹ published	3	2	3	2	2	2	2	11
To provide evidence-based science advice to support policy development	2	Number of consensus study reports ² published	2	4	3	2	2	2	2	11

¹A workshop report is a published report summarising the presentations and discussions at a workshop/symposium hosted by ASSAf.

²A consensus study report is a substantial evidence-based report that follows the standard Academy consensus study methodology, is peer-reviewed, approved by the ASSAf Council and contains a set of strong recommendations.

11. Risk Management

ASSAf has developed a risk management strategy and it is being used to guide its operations.

ASSAf's risk profile relates to three broad areas, viz. financial, human resources and reputational.

Financial risk is due to its dependence on external revenue sources, predominantly government, for its operation, but also on external project-related funding sources. The risk in terms of human resources relates to the retention of staff. In view of the small number of staff, the loss of even a single staff member from a key position for a brief period creates a void that is difficult to fill as there is no surplus human capacity in the system. The third item, reputational risk, relates to the vision of the Academy to be an independent, authoritative voice in evidence-based science for policymakers. Although heavily dependent on government for funding, it is imperative that the Academy maintains its independence. With increasing dependence on external sponsors for funding, there is the risk of ASSAf's values and objectives being compromised.

Plans to manage these risks are as follows:

- Financial – vigorously pursue options to secure, not only project-based funding which has been successful to some extent, but unfettered funding that could supplement ASSAf's core grant from government.
- Human Resources – ensure that retention of staff is assured through appropriate remuneration, good working conditions, and human resource policies that support and facilitate their development.
- Reputational – ensure that ASSAf's independence is upheld in all commissioned work by government or other agencies and ensure the delivery of high quality products endorsed by the ASSAf Council.