

## 3

### ASADI's Wider Impact

As discussed in chapter 2, the African Science Academy Development Initiative (ASADI) met and exceeded the stated aims for success set out in its formal objectives. In this chapter the wider effects are examined.

ASADI was principally intended to enhance the capacity of African science academies as trusted advisers to government, and, as part of this process, to increase government and societal awareness of academies as worthwhile sources of judgement and evidence. Other aspects of the work commonly undertaken by academies, such as public outreach, were regarded as important, but as less of a priority.

The original motivations for ASADI included the recognition that science academies have a “unique comparative advantage” of objectivity and expertise, including access to global as well as national experts. They can tackle issues of risk and uncertainty in an objective way and can be open and transparent about their actions. The panel was also sensitive to the fact that these academies each operate in a unique national political setting, and that independent advice to government may not be a well-established concept in all of them.

The chair of the review panel, Turner T. Isoun, has argued that many aspects of the western approach to science and technology development do not translate directly to the African context. An example is the assumption, often regarded as obvious in the North, that the private sector is the most appropriate home for high-technology innovation. In the same way, it is not clear that the western academy model is ripe for translation to Africa in every detail.

As one U.S. expert put it to the panel: “There are many ingredients to a successful, sustainable, service-oriented academy. Some were in ASADI’s control and some not so much. Money and training can't make up for weak leadership. Dealing with these leadership challenges required cultural sensitivity, diplomacy, patience, and firmness. My hope is that ASADI will be viewed as catalytic, but in the end the African academies control their own destinies.”

#### CRITERIA FOR EVALUATING WIDER IMPACTS

The panel decided to examine ASADI’s wider impact in terms of seven criteria, thinking in each case about whether ASADI had caused an increase in the capacity of the five primary academies. This capacity enhancement was especially apparent in the South African and Nigerian academies, which were “graduated” from ASADI and are now regarded as self-standing, capable organizations. However, big changes were noted in all five of the primary partner academies.

The seven criteria were:

- Organizational stability and effectiveness
- Financial sustainability
- Strategy development
- Engagement with government and other stakeholders
- Productivity in terms of activities and outputs
- The activity level of academy members, including council members

- Regional and international engagement

### **Organizational Stability and Effectiveness**

The training of academy staff was a principal ASADI activity, carried out in Africa and in Washington, DC. In addition, substantial ASADI resources were devoted to building up the secretariat strength of all five academies, and to expanding the academies' ability to use their staff effectively. This has involved training to enhance the skills and abilities of staff members in addition to increasing the number of academy employees.

The Ethiopian Academy of Sciences (EAS), a new and fast-developing organization, reports that before ASADI, it had a very small secretariat with no defined policies, structures, and procedures. It now has all of these. In addition, ASADI support for the EAS has been used for extensive staff training. The academy reports that the need for such expansion had been apparent for some time, but the academy did not have the resources to sustain it.

The most striking example is that of the Academy of Science of South Africa (ASSAf), whose staff grew in numbers from five to 35 (including part-time staff and interns) during ASADI. This expansion has been backed up by enhanced training and a more formal human resources system. As a result of these improved processes, staff turnover is much reduced, although personnel retention remains a problem area.

A similar story is apparent in the growth of the Ugandan National Academy of Sciences (UNAS) from one staff member to nine, and in the rapid expansion of the Nigerian Academy of Science (NAS). UNAS's situation is described in more detail in box 3-1. The exception is in Cameroon, which has only one member of staff and whose council and other members play vital roles in its day-to-day operations. Academy members rather than staff carry out most of the organization's activity.

However, it is worth remembering that even a body with perhaps 30 staff is only a medium-sized employer at best. ASSAf, the biggest of the academies, has 35 staff but has only recently hired a professional human resources manager, who has taken on duties previously shared among top management. UNAS reports that it still has difficulties in paying adequate salaries to the professional people it needs.

It is also notable that when asked about their "internal communications" work, the academies mainly mention activities for members and the wider stakeholding public. However, the team's site visits exposed a number of examples of good internal communications. As they grow in numbers, it may be valuable to develop further activities intended to keep staff informed and motivated, in part to help with staff retention.

While individuals have every right to career mobility, high levels of staff turnover among staff trained by ASADI may limit the permanent effect of ASADI's capacity-building work. Some of the academy secretariats supported by ASADI remain fragile in numbers and vulnerable to the loss of key people such as finance experts. This points to the need for continuing targeted support for institutional capacity-building, for example the construction of staff manuals that set out organizational policies and encapsulate individual academies' values and culture.

### **Financial Stability**

One way in which ASADI enhanced the financial stability of the five academies was by training for their finance officers. This training, some delivered in Washington, DC, by the U.S.

National Academy of Sciences (USNAS), was generally praised by those who had received it. ASADI also provided partner academies with backup financial management for their grants as needed.

**BOX 3-1 Uganda: Organizational Stability and Effectiveness**

UNAS says that “capacity of the office and staff” has been transformed by ASADI. Its support has been used to develop staff skills, and to equip them to work effectively. Although other donors and partners, such as the Wellcome Trust and the Royal Society, were important to this step change in UNAS’s abilities, ASADI was the key player in a process that led to staff numbers growing from one at the start of ASADI to nine in 2014. They are supported by better training, a formal personnel manual, and annual staff development retreats. Resources of computers and other equipment have grown in line with staff numbers.

An example is the ASADI training for the academy’s financial officer. UNAS now has excellent financial controls and, perhaps uniquely, its fellows all pay their annual dues on time. This success has led to UNAS helping ASADI to provide finance training for the Nigerian academy.

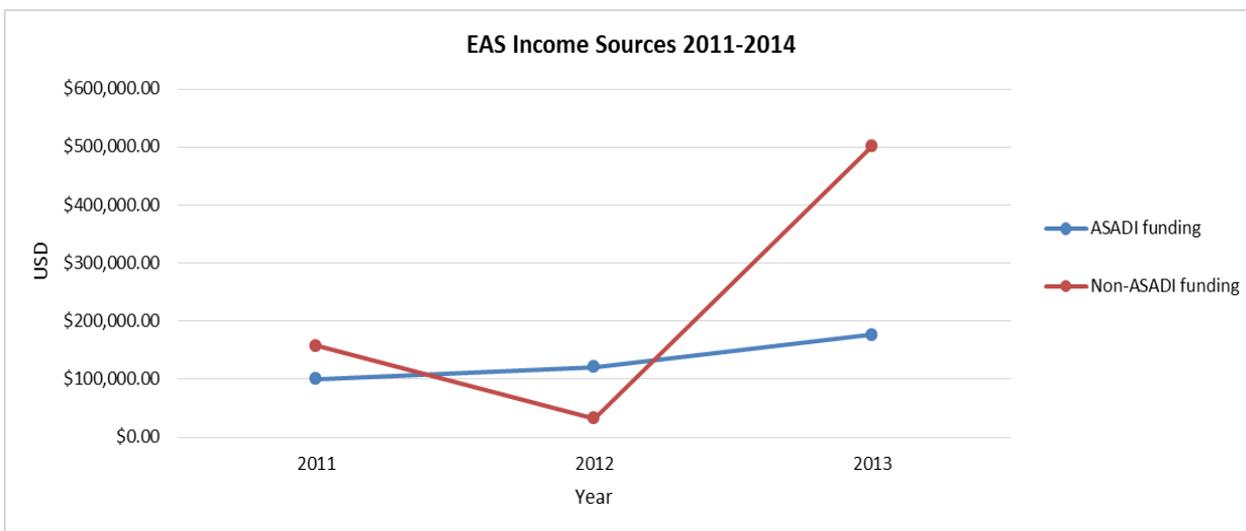
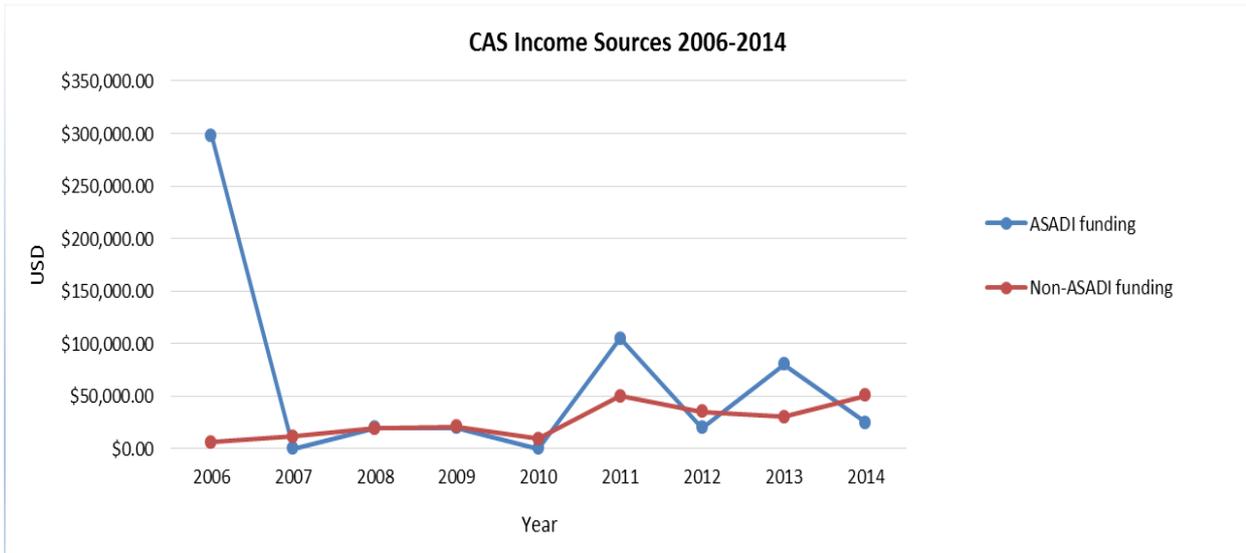
UNAS was founded only in 2000 and is not yet backed by an Act of Parliament, so it is important for it to demonstrate its value. ASADI’s backing allowed it to acquire a better headquarters (on the campus of Makerere University) and led to staff being trained in the production of consensus studies and other policy documents. A 2013 document on malaria reduction has been particularly influential, since malaria is Uganda’s leading cause of morbidity and death. Expansion has also allowed UNAS to host the scientific and professional activities of the Uganda AIDS Commission, a key national body. And although much of its work is connected to health, UNAS has been able to diversify into areas such as agriculture and science education. It now “has the ear of the prime minister” and other key figures in Ugandan policy circles, and its work on biosecurity and biosafety was a key input to national legislation. The panel was told by a Ugandan parliamentarian that UNAS has expanded parliament’s capacity to use scientific evidence and advice in its deliberations. This increase in UNAS’s scope has allowed it to become more effective as a leader and partner for other academies, including those of Ethiopia and Mauritius.

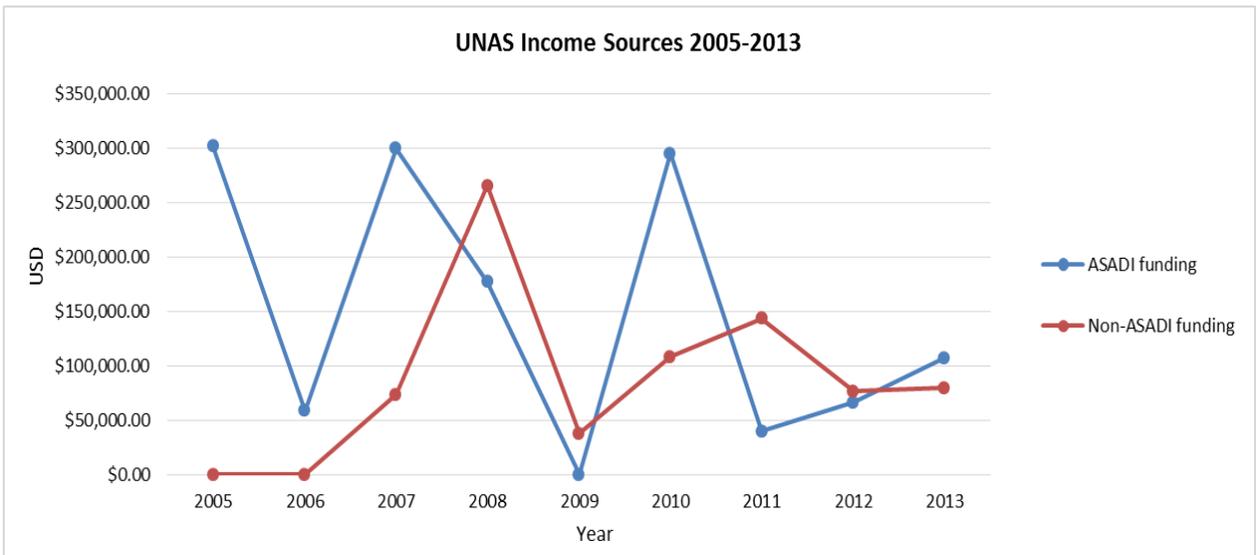
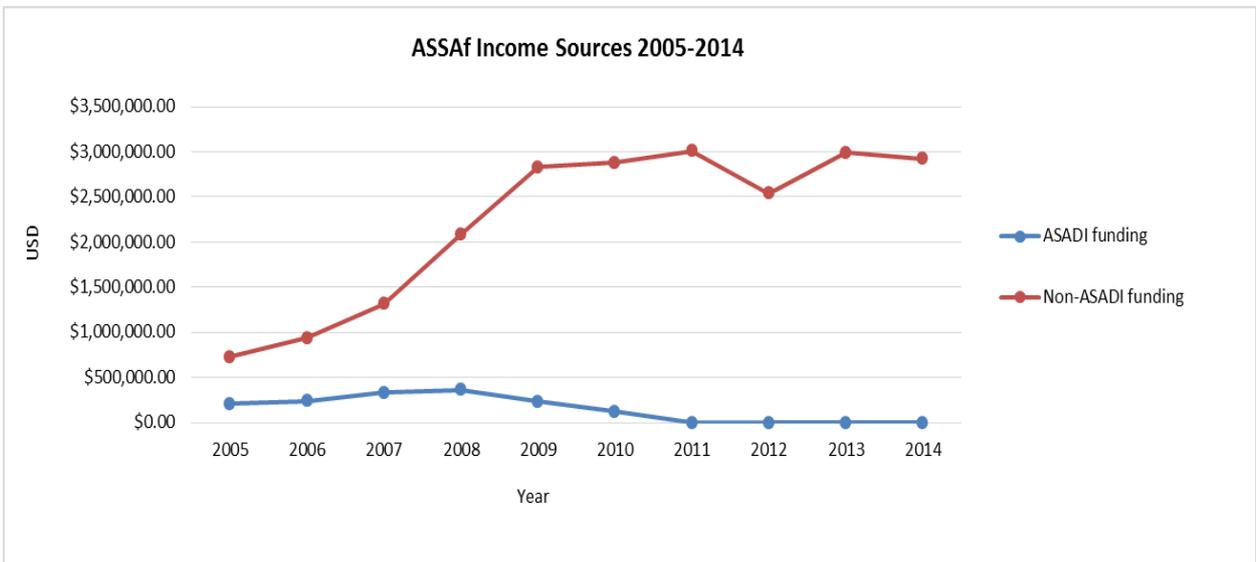
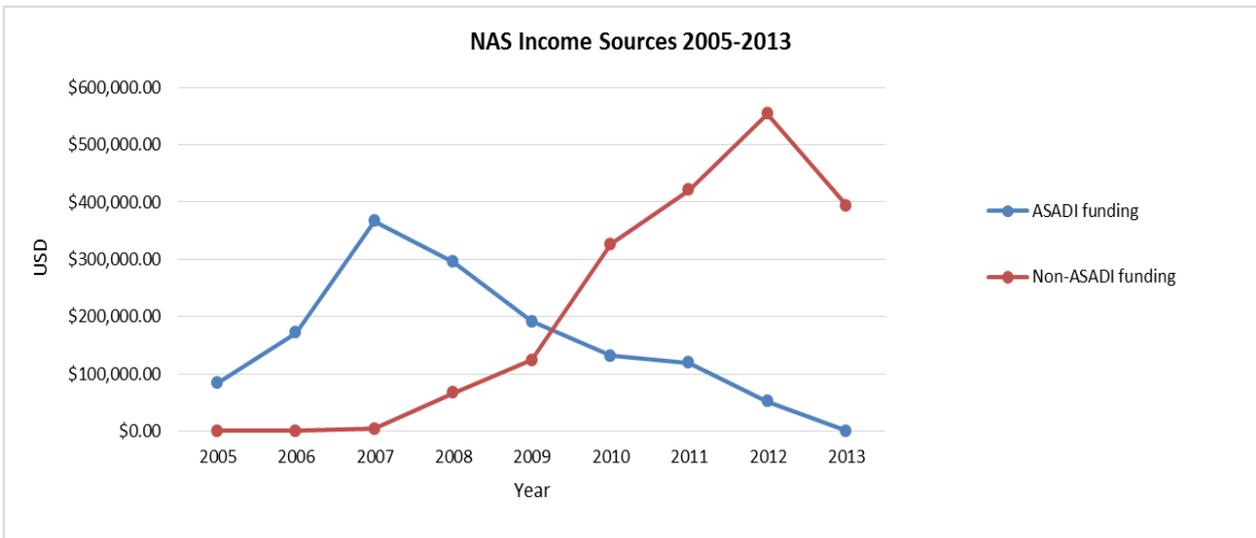
ASADI was also intended to develop the academies’ abilities to draw financial support from new sources once the initiative itself ended. Here there are signs of success, as figure 3-1 demonstrates. Figure 3-1 shows the ASADI and non-ASADI income at a broad level. Some of the apparent volatility results from transfers to academies during the years that they hosted AMASA meetings and other factors that influenced the timing of payments. The most striking case (see box 3-2) is EAS, which has used ASADI support to establish itself as a formally-structured organization with government financial support, official legal standing, and an important and recognized national role.

The Cameroon Academy of Sciences (CAS) now receives support from the Cameroon science ministry, MINRESI, the German National Academy of Sciences, Leopoldina, and by

foundations such as Helen Keller International. The Nigerian Academy of Sciences (NAS) has an even broader range of support, from actors such as federal and state governments, international agencies, and nongovernmental organizations (NGOs), as well as income derived from an endowment.

**FIGURE 3-1:** Income Sources of ASADI-Supported Academies (data provided by CAS, EAS, NAS, ASSAf and UNAS)





### **BOX 3-2 Ethiopia: Financial Sustainability**

EAS is a new organization, established in 2010 and enshrined in legislation as an independent organization in 2013. It has 77 fellows and other members and covers all disciplines, including the natural sciences, mathematics, the health sciences, agricultural sciences, engineering, social sciences and humanities, fine arts, and letters.

It has used ASADI's resources to establish itself as a significant force in Ethiopian public life, and recognizes that ASADI has allowed it to enhance its capacity and influence at a key point in its history. It is the only nongovernment body with a seat on Ethiopia's cabinet-level Science and Technology Commission.

EAS was founded five years after ASADI began and was not an ASADI intensive partner from the beginning. It received only \$305,000 from the program. However, this money was of vital importance to a new organization that had to prove its value. Its president has said that "because of ASADI, people had evidence that the young academy could perform. ASADI was the nucleus for the development of the academy."

EAS reports that ASADI's financial support and experience-sharing have allowed it to hire staff and get dedicated office space, and to carry out research which has demonstrated its value to policymaking. It has also allowed EAS to demonstrate the "convening power" of a science academy. In particular, it has been influential in helping the government to consider its policies on biotechnology, which lean heavily on EAS's recommendations.

This progress has allowed EAS to make a strong case for consistent, long-term support from government, multiplying the effect of ASADI's investment. The government sees a growing role for EAS in areas including the expansion of science education, the growth of astronomy and space activities, the expansion of agricultural research, and the development of an industrial museum. These developments may involve expanded government funding for EAS.

The result is that EAS has established itself as a trusted adviser to government, capable of challenging policy with objective evidence. There is now a memorandum of understanding with the Ministry of Health covering 10 key areas of EAS support for government, including immunization and demographic surveillance.

EAS now has a budgetary subvention from government and stable financial policies and procedures, as well as a resource mobilization strategy. This suggests that despite its small size, it has positioned itself for future sustainability. However, it does not yet have definitive long-term support from the government.

The Academy of Science of South Africa (ASSAf) is perhaps the most akin to a developed country academy in its funding model, with core funding from government alongside a wider range of funders for specific projects. EAS also received core government funding for the establishment of an academy endowment.

However, financial sustainability remains a challenge to these academies, and indeed to others around the world. UNAS recognizes it as a key issue. CAS makes the point that donors who part-fund projects, with the best of intentions, may not realize that it is a problem for the

academy to find matching funds, or to secure the resources needed to maintain the professional staff required for such projects.

## Strategy Development

Strategy development is important for academies because it helps with their thinking, planning, and execution; and because it helps other institutions to be effective partners for them. It also allows metrics of academy success to be developed and monitored, a measure whose adoption the review panel would support. UNAS cites “potential donors and partners” as a key audience for its strategic plan, saying that the plan helps put it on an equal footing with other academies and networks in the eyes of external organizations.

The idea of strategic planning is not a new one for African science academies. Of the five main ASADI partners, only one, CAS, lacked a strategic plan at the start of the ASADI process. As box 3-3 explains, its introduction of strategic planning, supported by ASADI, has been widely noticed and is of national significance.

Of the remaining academies, even the newest, EAS, is a user of strategic planning. It reports that ASADI resources have allowed it to carry through its plan and to bring in more support for new activities. It also audits progress on the plan annually. Strategic planning was among the EAS’s first activities upon its foundation in 2010.

### **BOX 3-3 Cameroon: Strategy Development**

CAS has used resources made available through ASADI to develop its own strategic thinking, and in the process has helped to spread the idea of strategic planning to universities and research organizations in Cameroon.

ASADI financed the production of a strategic plan that articulates “the vision, mission, core values, and goals” of CAS. CAS has existed since 1991 and the idea of a strategic plan had been discussed before ASADI, but the small scale of its operations made this difficult to achieve.

The plan has been especially valuable because Cameroon’s public sector is based on the French model and respects bureaucratic processes. Indeed, the University of Yaoundé I, one of the country’s main centers for higher education, adopted the idea of a strategic plan as a result of the lead taken by CAS.

This higher level of planning has allowed CAS to be effective despite its small staff resources. Most of its work is carried out by the members and it is accepted that some members also work in staff roles, being paid to do so as project funding allows. This way of working has allowed CAS to produce three tangible outputs with substantial impact. They are a consensus study on *Onchocerciasis* research and its implications for control of this disease, which can cause blindness; a report on combatting Cameroon’s nutrition and health crisis; and a forum on food security in the Sudano-Sahel region of Cameroon.

The *Onchocerciasis* work has been acclaimed in and beyond Cameroon and has influenced *Onchocerciasis* control strategies. The food and nutrition activities have led to the launch of a new food fortification program backed by the United Nations Children’s Fund (UNICEF), and a national program on food security. CAS adds that the *Onchocerciasis* work also shows “that good science can come out of Africa.”

Because of the larger scale and greater maturity of the South African system, ASSAf is called upon to produce annual performance plans, quarterly performance reports, and other documents, including a “shareholder compact,” and all these documents are in the public domain. They are a legal necessity, but their completion adds significantly to the workload of senior ASSAf personnel.

A strategic plan written by an academy’s staff and members is also a way of asserting its independence from government, even if it has to be submitted to a government ministry. The Uganda academy adds that a properly structured strategic plan helps convince government that the academy is worth supporting financially. This might also apply to other donors and supporters.

Strategic planning was regarded as the second most successful ASADI activity by the African and U.S. academy participants interviewed for this report, with secretariat strengthening the biggest success.

### **Stakeholder Engagement**

ASADI’s main aim was to grow the ability of African academies to be advisers to government.

All five of the principal ASADI partners report progress in this area. There are improved relations with national and local government, and with a range of ministries including those responsible for science, finance, health, education, agriculture, and the environment. These links give the academies a new level of policy influence, and open up welcome new possibilities for funding and support. Some academies report good relations with the offices of cabinet members and prime minister or president. The building of personal relationships with people in government is a vital, and time-consuming, aspect of this process. NAS’s situation is described in detail in box 3-4.

Assessing the impacts of policy advice is not always easy or straightforward. The panel puts significant weight on the testimony of the government and other stakeholders who were interviewed during the site visits and who attested to the quality and influence of academy work. Each of the primary partners can cite examples of influential policy advice to government that are referred to throughout the report. CAS’s report, “Nutrition and Health in Cameroon: Combating the Crisis,” was influential in the government, UNICEF, and Helen Keller International launching Cameroon’s Food Fortification Program in 2011. The UNAS’s report on malaria has had a major impact on the country’s anti-malaria program. The EAS has helped shape national policy on biotechnology, an important part of its food and agriculture system. ASSAf has carried out many studies which have influenced policy, for example on revitalizing clinical research in South Africa. However, these initiatives have a range of financial support and are not all directly attributable to ASADI.

The presence of an effective academy can lead to the growing involvement of scientists in government roles, and this effect has been observed in Ethiopia. Several academies, including EAS, NAS, and ASSAf have been commissioned by government to carry out specific projects.

In addition, ASADI has enabled these academies to build relations elsewhere in society. This has meant better relations with universities and research institutes, with the private sector, and with NGOs and other civil society bodies.

NAS has built relations with business through which oil services company Schlumberger is supporting work in science education, while pharmaceuticals group GSK is backing an evidence-based health forum there.

Despite this success, these relations remain more problematic for the academies, and less strategically central, than their dealings with government. CAS, EAS, and UNAS report that this part of their portfolio remains underdeveloped. Building these relations is a long-term project that requires substantial member and secretariat resources, and these are not readily available to smaller organizations. UNAS is not yet recognized by statute, making its position in the Ugandan polity less secure than for the academies in South Africa and Ethiopia. NAS and CAS are also not recognized by statute.

#### **BOX 3-4 Nigeria: Engaging Government and Other Stakeholders**

NAS has used ASADI support to expand its ability to offer effective policy advice. This has involved growing its links with Nigeria's federal health and science ministries, and with its important state government structure.

The NAS secretariat has undergone what it terms a "significant upgrade over the years" of ASADI. This has led to "corresponding willingness to be engaged by local and international partners."

NAS's Integrated Disease Surveillance and Response activity is a case in point. NAS held a stakeholder meeting on this topic, and this was the first time that Nigeria's experts on human and animal health had discussed these issues together. NAS led this activity, and involved the ministries of health and of science and technology as participants.

NAS's increased capacity also allowed it to perform a 2012 analysis on breastfeeding in Nigeria. This project was supported by Save the Children, which asked NAS to carry it out as a respected and objective source of evidence-based advice. Its advice was one input to legislation on the provision of workplace crèches and is influencing discussion on maternity leave and on national food and nutrition policy.

NAS has also been an important source of advice to the Lagos state government's Ministry of Health, which is responsible for the wellbeing of 21 million people. The ministry initially supported the PREVIEW (Policy Research Evidence for Effective Working of the Nigerian Health Systems) initiative, which was designed to enhance the use of evidence in healthcare policymaking. As a result of its success, the ministry then established a fund for research to support policy development. There is a memorandum of understanding between NAS and the ministry, and there have been retreats at which ministry officials have been trained by NAS in the use of research evidence in policymaking as part of the PREVIEW project. A senior ministry official said that as a result of this positive experience, the ministry has "an open door policy relationship with the NAS."

#### **New Products and Activities**

The availability of ASADI funding has allowed the academies to generate a vast wealth of new products, activities, and outputs in areas such as science education, activities for youth and young scientists, public communications, and gender. Of these, the most central to ASADI's mission was the flow of consensus reports and other policy advice for government. As discussed

in chapter 2, the number produced far exceeded the target set at the start of ASADI. ASSAf's situation is described in box 3-5.

Other activities that ASADI has helped create include:

- A science journalism prize in Nigeria
- Public lectures on topics including biotechnology, agriculture, and nutrition
- In South Africa, a visiting distinguished fellows program and a science magazine for young people

Perhaps most significant is the vast expansion of externally-facing communications undertaken by the ASADI partner academies. Many now have improved and informative web sites, regular print and online publications, and a global presence in social media channels. In addition, their leaders are in demand as expert interviewees in the print and broadcast media. Several academy staff members interviewed for the review regarded external communications as the most successful ASADI activity after secretariat strengthening and strategic planning.

#### **BOX 3-5 South Africa: Products and Outputs**

South Africa has been shown (for example in the Thomson Reuters Global Research Report for Africa) to be the continent's leading producer of research. ASADI has helped ASSAf to ensure that its research is noticed and valued around the world. This is important because international visibility makes South Africa more attractive to globally mobile scholars, and to researchers seeking collaboration and joint working. It also reduces South African scholars' incentive to emigrate.

The mechanism for this process is the ASSAf Scholarly Publishing Programme, which began in 2006 with a consensus report on a Strategic Approach to Research Publishing in South Africa. ASSAf was asked by the Departments of Science and Technology and of Higher Education to implement its findings.

Support from ASADI made it possible to set up a peer review mechanism for accredited national journals. Publishing in them brings extra money to universities. Any South African journal indexed in the Web of Science database is automatically regarded as accredited in the ASSAf system, and other journals have been given five years to reach this level of international recognition. ASSAf's own publication, the South African Journal of Science, is itself indexed in the major world repositories.

ASSAf is now leading on wider African approaches to these issues, including the establishment of an open-access platform for South African journals.

This success has pointed to the need for qualified media professionals, and even media teams, in a modern academy of sciences. Tasks that need to be carried out on a regular basis include website maintenance, a flow of material into social media, a wide range of print publishing, media monitoring, the issuing of press releases, and the assurance of a consistent brand identity for the academy and its activities.

An additional initiative of several African academies that is closely tied to how science engages with society is the effort to foster and promote young academies. This was not an aspect

of the ASADI program, but rather an activity that several academies have taken the lead on. Young academies are self-elected bodies of outstanding young scientists, typically at the beginning of their independent research careers. Young academies and their members are interested in increasing the impact of science on policy, improving science education, and strengthening the research enterprise. The Global Young Academy was founded in 2010, and there has been a rapid growth in the number and activity of national young academies around the world.<sup>9</sup> The panel met with young academy members in Nigeria and South Africa. Ghana, Kenya, Zimbabwe, Sudan, and Egypt also have young academies. Other academies are supporting young scientists in other ways, such as fora.

These are all tasks that can be difficult to fund, especially because of the perception that media in African nations are uninterested in science. However, the fact that academies are close advisers to government on issues such as health, agriculture, and education means that there is scope for their communication activity to become steadily more influential and newsworthy. Success here will increase the importance of the academies in the eyes of government, of funders and partners, and of the public whose funds are used to support their activities.

### **Engagement of Members and Council Members**

Membership of a national academy is an honor extended to distinguished individuals. One measure of the academy's effectiveness is its ability to involve these people, who are inevitably busy, in its activities. NAS cites "lack of commitment to voluntary services by members" as one of its key challenges. This is an issue for academies around the world, not just in Africa. People who become academy members tend to have heavy workloads in teaching, research, management, and policy. And in Africa especially, even these important people can lack infrastructure support.

ASSAf used ASADI to support the introduction of human resources, audit, and executive subcommittees of its council, recognizing that these bodies would improve governance and make it simpler to comply with legislation. ASSAf points out that approximately 40 percent of its 426 members are involved in academy activity in some way, a figure which is impressive by any standard. However, as government and other stakeholders ask it to do more, the volunteer capacity of members available to ASSAf becomes a steadily larger issue. ASSAf and other academies also report that the gender and racial balance of academy members remains unsatisfactory.

NAS has a large and active membership. Members made the point that ASADI training in fields such as finance might have been extended usefully to members and council members. This would expand their skills, and would also allow them to take on a bridging role when staff left and replacements needed to learn about the academy's systems.

UNAS used ASADI to develop induction courses for new members, in the hope of diversifying membership further and increasing interest in the academy among possible members. It adds, too, that ASADI training in areas such as project management and academy business models would have been valuable. UNAS's expanded membership base has already allowed it to involve more members in volunteer activity. However, it regards member involvement as a continuing concern. It sees a need to involve more members in the search for new membership candidates, which might help expand diversity.

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<sup>9</sup> See <http://www.globalyoungacademy.net>.

The newest academy, EAS, has been expanding its membership to add to its expertise across the full range of subject specialisms. Its working groups, in fields such as technology or agriculture, are made up of members and are the basic functional unit of the academy. The EAS makes the point that working groups made up of members need staff input if they are to function effectively. This support is always a scarce asset and the EAS hopes to provide more in future years.

CAS, as noted elsewhere, faces a range of challenges. It is exceptionally reliant on its members to carry out most academy activities, including basic logistics and other tasks that would be carried out by staff in other organizations.

## **Regional and International Engagement**

ASADI promoted international discussion between the African academies with which it has worked, and has involved other partner academies such as the Royal Society, KNAW (Netherlands) and the Leopoldina (Germany) in this dialogue (see box 3-6). In addition to general discussion of best practice and program content, ASADI encouraged academies to provide training and other material help to each other. EAS suggested that capacity-building to help African academies to learn from each other remains an important issue. But this flow is not exclusively towards or within Africa. At least some lessons from the UNAS have been adopted by the USNAS.

One positive force for international discussion has been the Annual Meeting of African Science Academies (AMASA), which has been held in all five of the primary ASADI nations, and in Ghana, Kenya, Senegal, and the United Kingdom. These meetings have led the African academies into closer participation in the global inter-academy networks. There have also been over 20 ASADI workshops, almost all of which have drawn international participants.

While ASADI helped the academies to become more effective international organizations, most of their international activity understandably remains regional rather than global. UNAS reports that it has used technical and financial support from ASADI to build up its work with groupings such as the Network of African Science Academies (NASAC) and its participation in the AMASA meetings. Despite the cost of these interactions, it also intends to build closer direct links with other academies. CAS has similar experiences and priorities.

Of the larger academies, NAS and ASSAf have taken on a role mandated by NASAC to help grow academies in their respective regions of Africa (see box 3-7). ASSAf has used ASADI to raise its profile in Africa and around the world. It had decided even before ASADI that it wanted more international visibility, which it has now achieved. But it warns that this higher level of activity has called for more secretariat support than had been anticipated. ASSAf is on the Executive Committee of IAP, NAS and ASSAf are on the Executive Committee of IAMP, and NAS is on the Board of IAC, with the President of ASSAf serving as Co-Chair of IAC. Further examples of the improved international connections of the primary partners within and beyond Africa are given in the Evolution Tables which comprise Appendix I.

### **BOX 3-6 Capacity-Building Partnerships Involving African and Non-African Academies**

During the course of the ASADI program, several other efforts were launched to build the capacity of African science academies. While they are smaller than ASADI, they have focused on different institutions and topics, and should be seen as part of the broader story of how African academies have developed over the past decade.

#### IAP—The Global Network of Science Academies

IAP provides support for regional academy networks, including NASAC. It has supported NASAC's Capacity-Building Grants Program, in which modest grants are provided to individual academies to support secretariat capacity and information technology infrastructure.

#### Royal Netherlands Academy of Arts and Sciences (KNAW)

Starting in 2010, KNAW has undertaken a program to strengthen African science academies with support from the Ministry of Foreign Affairs of the Netherlands. Cooperation with NASAC has been central to the program. Activities have included a series of workshops on issues related to climate change, and focused work with several individual academies (Mauritius, Mozambique, Kenya, and the African Academy of Sciences). The involvement of young scientists has been a priority. In 2012, KNAW worked with the French and Swiss academies to organize a training workshop on communications for staff members of African academies. Although the program is ending, KNAW is looking for ways to continue working with African academies, most likely in partnership with other developed country academies and the European Academies Science Advisory Council (EASAC).

#### The Royal Society Pfizer African Academies Program

Started in 2009, the current program runs from 2012 under a five-year Memorandum of Understanding. Its scale is more modest than that of ASADI. Academy development is one of its emphases, alongside early-career development and UK/African collaborative research. Three African academies are involved, in Ethiopia, Ghana, and Tanzania. They have been supported to hold meetings and policy forums, to engage the public via science communications, and to enhance staff skill by training, secondment to the Royal Society, and other activities. One interesting finding is that effective policy interventions do not have to be expensive. A small meeting—or even a simple letter—can be surprisingly effective. It has been suggested that NASAC could be a repository for this type of learning from ASADI, the Royal Society Pfizer program, and other sources. This program has suffered from a lack of consistent funding, which highlights the benefits of long-term funding for academy development. The organizers also make the point that, as with ASADI training delivered in Washington, DC, secondments to the Royal Society need to have a specific remit agreed in advance if they are to provide long-term benefit.

#### German National Academy of Sciences Leopoldina

The Leopoldina's cooperative program with NASAC was launched in late 2011 and is projected to end in 2015, although there is some possibility of follow-up work. One major component of the program has been building the capacity of NASAC itself. Another focus has been the development of a series of reports for policymakers on water management, climate change adaptation, health and biotechnology. These are intended to enhance dialogues among NASAC, NASAC member academies, policymakers in African states, and other stakeholders such as the African Union and the UN Economic Commission for Africa. The Leopoldina program has also supported capacity building grants to about half of NASAC's member academies, which ran in 2012-2013 and 2013-2014. Another activity was fundraising training for staff from NASAC member academies held in August 2014.

**BOX 3-7 International and Regional Activity**

Most of the ASADI-supported academies have become capable of supporting new or nascent academies in other countries. This assistance has included “documentation on status and creation” of academies as well as workshops on academy creation, for example in Togo and Benin.

ASSAf has taken on a similar role in southern Africa, by agreement with NASAC. It has facilitated dialogue in Namibia, Angola, and Botswana on the possibility of establishing academies there, and has partnered with academies in Zimbabwe, Mozambique, Zambia, and Mauritius on academy development. NASAC has also asked the Nigerian academy to spearhead an academy development initiative in West Africa. Academies such as the German National Academy of Sciences, Leopoldina, have been involved in this activity.