



**science
& technology**
Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA



International Institute for
Applied Systems Analysis



National
Research
Foundation

Call for Proposals

to host the

Southern African Systems Analysis Centre (SASAC)

Closing date: 15 September 2015

BACKGROUND AND CONTEXT

South Africa joined the International Institute for Applied Systems Analysis (IIASA) in 2007, with the National Research Foundation (NRF) as its National Member Organisation (NMO), supported by the Department of Science and Technology (DST). Since becoming a member, a range of research and capacity building activities have been developed by South African research partners and IIASA. The most notable activity is the Southern African Young Scientists Summer Program (SA-YSSP) that was launched by the Minister of Science and Technology in November 2011. The SA-YSSP was conceptually based on the Young Scientists Summer Program (YSSP) that has been hosted annually at IIASA since 1977.

IIASA is an international research organisation with its headquarters in Laxenburg, Austria conducting research into critical issues of global environmental, economic, technological, and social change. IIASA has a membership of 23 NMOs¹, collectively serving as the primary source of funding and governance for the organization (<http://www.iiasa.ac.at/>).

THE SA-YSSP FRAMEWORK

The SA-YSSP initiative has contributed to the establishment, growth and enhancement of high level strategic research networks internationally, whilst at the same time developing capacity in systems analysis at the PhD, postdoctoral and supervisory levels through research conducted in the areas of the DST's grand challenges. The SA-YSSP has targeted advanced doctoral candidates from South Africa, Southern Africa and IIASA member nations to ensure a rich international mix of participants. Since its inception, the SA-YSSP has developed systems analysis research skills among over 80 doctoral students from 30 countries including 35 young scholars from South Africa. Using applied systems analysis approaches, participants conducted research in areas related to environment, energy, risk, population, food, water, and climate change, linked to policy studies.

The University of the Free State (UFS), Bloemfontein, South Africa has successfully hosted the SA-YSSP during 2012-2013, 2013-2014 and 2014-2015. During these three iterations, the SA-YSSP was conceptualised as an annual three-month (December to February) education, academic training and research capacity building program, jointly organised by the NRF, DST and IIASA, hosted by a South African higher education institution. Supervisors collaborated on research projects of the SA-YSSP based on common research interests falling within the scope of the IIASA programs and the DST Grand Challenges.

Following the success of this program, the DST/NRF has taken a strategic decision to continue investing in and expanding activities around systems analysis, including this

¹ The NMOs fall into three general categories: non-governmental national academies, government agencies, and autonomous organizations or committees. The five nations represented by National Academies are Austria, Pakistan, Russia, Ukraine, and the USA. Those represented by agencies within the national government include Australia, China, India, Malaysia, Norway, Republic of Korea, South Africa, Sweden, United Kingdom and Vietnam; in addition, Brazil and the Netherlands are represented by institutions closely linked to government agencies. The remaining five NMOs, representing Egypt, Finland, Germany, Indonesia, and Japan, are autonomous organizations or committees, with close ties to agencies.

capacity building program over the coming decade in the context of the pivotal role that this type of research plays in addressing global challenges. A revised model has been conceptualised, taking cognisance of a wider framework of engagement, additional and multi-level systems analysis capacity interventions, and a comprehensive approach to policy-related activities in South- and Southern Africa – now known as the **Southern African Systems Analysis Centre (SASAC)**. The new model will take into consideration various contextual factors in South Africa and the region, including:

- Maximising the return on investment for DST/NRF within the South African context,
- An approach aimed at increasing the participation of students in the South African context (policy related as well as practical institutional considerations), and
- A more considered education, training and research program to strengthen systems analysis capacity.

THE SASAC STRUCTURE

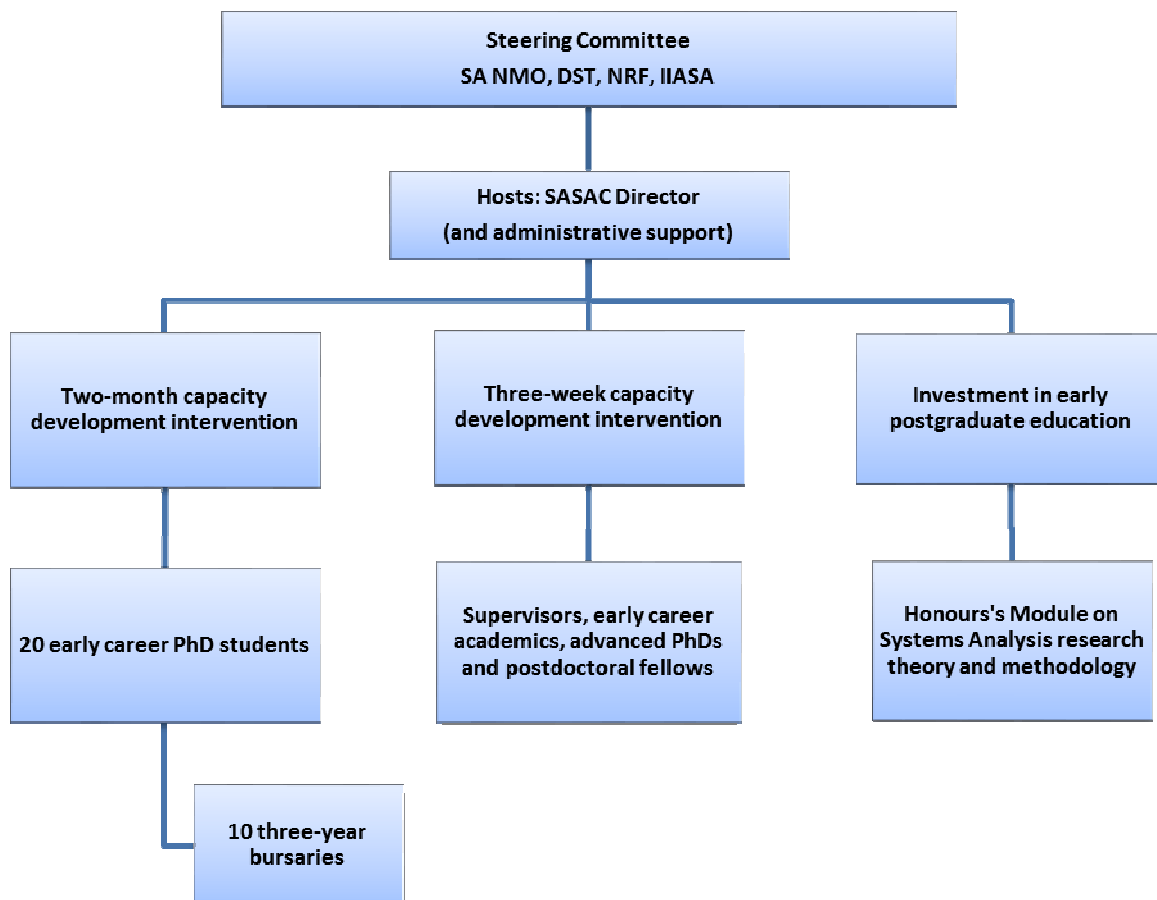
SASAC provides an opportunity for young, emerging doctoral candidates to advance their research under the supervision of senior IIASA and South African researchers/scientists, and at the same time contribute to the development of a globally competitive science system. Systems analysis will be used as a driver to identify strategies that gain multiple benefits across sectors and regions, as well as avoid policies that lead to negative side effects in remotely connected activities. The SASAC approach will focus on the following areas:

- 1. Three-year Systems Analysis Bursary Program:** South African students who are registered for new PhD studies at a South African university will qualify for this bursary. This part of the program will be supervisor-driven. The intervention will ensure that an adequate number of students in the South African higher education system are fully incorporated into the program. Students will be required to have a supervisor from South Africa who is recognised as an expert in systems analysis methodology, and ideally a co-supervisor associated with IIASA or an IIASA alumnus. Initially 10 PhD bursaries will be offered, possibly increasing in the second year.
- 2. Two-month Systems Analysis Capacity Development Program:** Twenty students in the early stage of their PhD studies will be identified to take part in a two-month capacity development program to be held during May and June at the host institution(s). The students' PhD research should be supported by systems analysis-related research methodology, and focussed to address the DST Grand Challenges. This group of students will include those who have received bursaries (as described above), but also students from NMO member countries and from Africa. Supervisors (from South Africa and IIASA) will be expected to spend up to 10 days at the beginning of this period on-site with the students, and together participate in an intensive, high-level, systems analysis capacity development intervention.
- 3. High level Systems Analysis Capacity Strengthening Program:** A three-week capacity strengthening program will be held at the host institution(s). This program will target supervisors, early career academics and postdoctoral fellows from South Africa, Southern Africa and other NMO countries. A target of 30 participants per annum is

anticipated. The program will include high level lectures and capacity development workshops related to systems analysis capacity.

- 4. Early Postgraduate Education Program in Systems Analysis:** Four to five South African institutions where there is currently systems analysis capacity will be identified to incorporate a systems analysis component or module into selected Honour's-level programs.

The figure below provides a summary of a proposed SASAC structure:



CALL TO HOST SASAC

The NRF is pleased to announce a Call for Proposals for a South African consortium of up to three institutions to host SASAC for 2016 - 2018. The lead institution will be liable for the overall coordination and reporting of the program to the NRF. Responsibilities for lead and co-host institution(s) should be clearly stated in the proposal. The successful institutions will host SASAC as per the criteria, guidelines and requirements listed below (focusing on activities 1 – 3 above) and as may be determined in consultation with the DST and the NRF.

A next Call for Proposals will be published in 2018 for the next hosting institutions of SASAC during 2019 to 2021.

The following are requirements to be met by the hosting institutions:

Expected requirements during the SASAC 2016 – 2018 period
<ul style="list-style-type: none"> • Serve as a co-administrative hub for SASAC, supporting the NRF and the DST in advertising for the SASAC and ensuring the participation of high quality doctoral candidates – details as per Submission Form below.
<ul style="list-style-type: none"> • Offer discounted rates for accommodation (single rooms), meals and other consumables for the 20 candidates participating in the two-month Systems Analysis Capacity Development program – details as per Submission Form below.
<ul style="list-style-type: none"> • Offer discounted rates for accommodation, meals and other consumables for the 10-20 supervisors who will be in attendance of the two-month Systems Analysis Capacity Development program at any one time during the two months.
<ul style="list-style-type: none"> • Advertise for and administer 10 PhD bursaries based on NRF PhD rates. Students should be enrolled at a range of South African institutions.
<ul style="list-style-type: none"> • Provide computer facilities with access to broadband to candidates and researchers, supervisors and mentors.
<ul style="list-style-type: none"> • Where possible, provide high speed computing time for running IIASA models where necessary.
<ul style="list-style-type: none"> • Provide telephone and video conferencing facilities.
<ul style="list-style-type: none"> • Provide lecture and seminar rooms -- details as per Submission Form.
<ul style="list-style-type: none"> • Provide for heritage, cultural and field-trip events which will enhance the SASAC program.
<ul style="list-style-type: none"> • Provide for interaction with the broader public, local academics, public figures and community leaders which will enhance the overall program.
<ul style="list-style-type: none"> • Submit, in accordance with the above, a draft Implementation Plan for the full period, including suggestions for extra-mural activities.
<ul style="list-style-type: none"> • Submit, in accordance with the above, a costing estimate at current rates. For the years 2017/18 and 2018/19 an inflationary adjustment of 6% may be applied. This would include estimates for the extra-mural activities.

Submission Guidelines, Requirements & Criteria SASAC 2016 - 2018

Southern African Systems Analysis Centre

The closing date for complete submissions is Tuesday, 15 September 2015
Late submissions will not be considered.

Enquiries may be directed to Dr Sepo Hachigonta
(sepo.hachigonta@nrf.ac.za) or tel: +27 12 481 4180

Notes:

- Please be as concise but complete as possible when providing responses to the questions. Additional information may be provided in appropriately marked attachments.
- Please read through the entire submission requirements before responding to individual items.
- *You may use a format of your choice which speaks to the questions set here.*
- ***Submit the full submission, in the correct order, as ONE Pdf file.***

- 1) A covering letter endorsed by the Vice-Chancellors of the submitting institutions should accompany the submission, including the name and position of the main contact persons.
- 2) Please describe the research focus areas at the institutions which converge with the DST Grand Challenges, and how this can relate to systems analysis.

Additional information is to be provided in an appendix.

- 3) Please provide the titles, names, discipline(s), and speciality area(s) of such researchers / scientists involved in the above-mentioned research focus areas and who are associated with your institutions.

In addition, a selection of concise, narrative CVs are to be provided.

- 4) **Should the consortium of institutions be successful in its bid to host SASAC, please nominate at least two persons who could serve as Director of SASAC who would be responsible for the *overall administrative, financial and program* coordination. The Director would be called upon for occasional duties, interventions and meetings and would serve in an engaged capacity for May to June of each respective year, but also with the overall responsibility for the program. The Director could be assisted by part-time administrative support, and an indicative budget for part-time support of the management function at the institutions should be indicated.**

Please include narrative, concise CVs.

- 5) **A total of 20 doctoral candidates will participate in the SASAC program between May and June between 2016 and 2018. Furthermore a three-week capacity strengthening program will be hosted for 40 participants (supervisors, early career academics, advanced PhDs and postdoctoral fellows)**

- Please describe the type of postgraduate accommodation on offer at your institution, and how the SASAC participants will be housed;
- Indicate the proposed cost structure for such accommodation;
- Describe the nature and cost of short-term insurance cover for participants;
- Please provide information about on-campus and residence security detail;
- **NOTE: An on-site inspection of the successful institutions will be conducted by the NRF.**

- 6) **SASAC would have 10 – 15 senior research experts, mentors and supervisors participating at any one time during the period of two months.**

- Please describe the type of accommodation for senior academics / visiting fellows on offer at the institutions;
- Indicate a proposed budget for this accommodation;
- Describe the nature and cost of short-term insurance cover for participants;
- **NOTE: An on-site inspection of the successful institutions will be conducted by the NRF.**

- 7) **It would be to the advantage of the application to include digital images to accompany the descriptions provided. At most three images per item would be**

adequate as there will also be an appropriate site visit to the successful institutions.

8) The following section should include further physical requirements for the successful hosting of SASAC.

- Please provide details of auditorium facilities for public lectures, and the availability of audio-visual equipment
- Please provide details of lecture room facilities for 50 persons
- Please provide details of working group room facilities for 5 – 10 persons
- Please provide details of facilities (office space, internet access, telephone, etc.) available for 10 – 20 senior researchers / scientists for individual mentoring and supervision sessions
- Please provide details of computing facilities for both the mentors and researchers, e.g. computer labs
- Do you have access to CHPC facilities?
- Do the institutions have video-conferencing facilities?
- Is there anything else in the above regard which you wish to make specific mention of?
- Please provide a campus map on which above-mentioned facilities are indicated and referenced appropriately.
- **NOTE: An on-site inspection of the successful institutions will be conducted by the NRF.**

9) Please provide appropriate information as and where this may apply to the following categories.

- On campus catering facilities, canteens, staff dining facilities, restaurant, etc. which will be available during the hosting periods.
- On campus recreational facilities which will be available during the hosting period.
- Extra-mural activities on and / or in the vicinity of the Campuses which normally take place during this time of the year.
- The nature and extent of on- and off -campus safety and security measures available during the periods.

10) Indicate a broad outline of the type and nature of extra-mural, cultural and heritage excursions / field-trips / visits which could be provided for during the hosting periods.

11) Provide a three-year budget projection showing expenditures aligned with anticipated annual program expenses. The budget should include: direct costs,

potential overhead costs (limited to 10%), administrative costs as well as other projected costs related to the program.

Please provide budget projections for the following:

- Administration costs for SASAC - Serving as joint organizers for the program, supporting the NRF and the DST in ensuring the participation of PhD candidates and supervisors, including all management, quality assurance and coordination responsibilities.
- Part-time salaries for the Director, support and administrative staff.
- Hosting Training/ Seminar/Workshops, etc.
- Furnished accommodation and meal allowance for 20 PhD students for two months annually.
- Accommodation, meals and other consumables for 20 supervisors for 10 days during the two months annually.
- Short-term insurance for 20 PhD students for 2 months annually, as well as for the visiting scientists/ supervisors if applicable.
- Heritage, cultural and field-trip events.
- Monitoring and Evaluation.
- Travel costs for staff, students and South African supervisors to enable participation.
- Indirect Costs (Overhead).
- **What contribution(s) the hosts will provide towards the program, both monetary and in-kind, cognisant of the advantage of being engaged in this high level international program.**

12) Any other comments which you consider of importance for the Steering Committee in its deliberations may be inserted here.

Please check:

- **Have you produced a full Implementation Plan according to the above?**
- **Have you developed a costing and full budget for the above?**
- **Have you provided photo's images where these may be useful?**
- **Have you included a campus map as required above?**
- **Have you included a letter from the Vice-Chancellors?**
- **Have you clarified and explained the responsibilities for lead and co-host institution(s)?**