



### **Framework Document**

### Masters and Doctoral Scholarships for Full-time Studies

## Directorate: Human and Infrastructure Capacity Development (HICD)

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Higher Education and Training REPUBLIC OF SOUTH AFRICA DAAD

Deutscher Akademischer Austauschdienst German Academic Exchange Service



International Institute for Applied Systems Analysis



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#### 1. Background and Rationale

The (National Research Foundation) NRF is mandated by an Act of Parliament, the NRF Act (Act No. 23 of 1998) to: "Support and promote research through funding, human capacity development and the provision of the necessary research facilities, in order to facilitate the creation of knowledge, innovation and development in all fields of science and technology, including indigenous knowledge.

The purpose of this document is to outline the funding principles and implementation of the Masters and Doctoral Scholarships for full-time studies. The NRF awards bursaries and scholarships through three modalities *viz.* (i) competitive scholarships awarded as free-standing scholarships following an NRF merit review process; (ii) block grants to universities that nominate students for the bursaries following an institutional selection process; and (iii) grantholder-linked bursaries in which the grant-holder nominates students linked to his/her research project. This document also presents a unique opportunity for Doctoral scholarships for research using systems analysis methodology, with specific capacity development interventions provided through the Southern African Systems analysis in this context, is a problem-solving process that involves multiple sectors, countries and experts to develop integrated solutions for multidimensional challenges such as poverty, climate change, energy and rapid population growth in developing countries.

The Scholarships are funded by the NRF core grant allocation from National Treasury, the Department of Science and Technology (DST), the German Academic Exchange Service (DAAD) the International Institution for Applied Systems Analysis (IIASA) and the Department of Higher Education and Training (DHET) for Human Capital Development (HCD).

In addition, these scholarships also support **Persons with Disabilities** as defined by The Code of Good Practice on Employment of People with Disabilities and the Employment Equity Act, (Act No 55 of 1998). The act states that: only people who satisfy all the criteria in the definition: (i) long-term or recurring; (ii) having a physical or mental impairment; (iii) which substantially limits them, are considered as persons with disabilities

In the process of reducing the high volume of applications received yearly, duplication of applications into different programmes and increasing the turnaround time to informing successful applicants, the NRF has consolidated all the Masters and Doctoral scholarship programmes such as DAAD, Extension Support for Masters and Doctoral studies, Innovation, NRF Freestanding, Scarce Skill Development Fund (SSDF), The World Academy of Sciences (TWAS) Doctoral and The Southern African Systems Analysis Center (SASAC) in this framework document. Furthermore, in order to reduce the cost and burden of review of poor quality applications and/or applications that cannot be funded within the available budget and/or equity targets as stipulated in the Ministerial Guidelines on improving equity in the distribution of bursaries and fellowship (2013), the NRF will be setting a ceiling on the number of Masters and Doctoral applications that may be submitted by each institution.

#### 2. Objectives

- Support the development of a critical mass of globally competitive human resources in prioritised areas;
- Promote and advance science, research and innovation;
- Contribute towards the increase in the number and quality of South African postgraduate students in all areas of (i) Science, (ii) Engineering and (iii) Technology and in the (iv) Social Sciences and (v) Humanities, at Masters and Doctoral levels in South Africa;
- Build a pipeline of the next generation of skilled scientists and researchers in South Africa;
- Provide exposure to local, regional and international research programmes in order to build long-lasting collaborative contacts;
- Effect transformation in the percentage representation of postgraduate students from designated groups *viz.* black, female and persons with disabilities; and
- Support the development of postgraduate training to meet the specific needs of the country in collaboration with international partners, the higher education sector and industry.

#### 3. Areas of Support

Scholarships are intended to support Masters and Doctoral candidates to pursue research studies in all areas of Science, Engineering, Technology, Social Sciences, and Humanities,

including Priority Research Areas\* at public universities. Table 1 that follows presents the breakdown of the broad disciplines supported by the NRF.

Accounting	Actuarial Science	Agricultural Sciences	Astronomy
Auditing	Bioinformatics*	Biotechnology	Cellular and Molecular Biology
Chemistry	Climate Change*	Computer science	Demography
Drug Discovery and Development*	Earth Sciences	Earth Observation*	Ecology
Economic Sciences	Education Engineering Environme Sciences		Environmental Sciences
Financial Management	Functional Genomics*	Geology	Global Change, Society and Sustainability*
Health Sciences	Information Science	Information Systems	Indigenous Knowledge Systems*
Law	Mathematical Sciences	Marine Sciences*	Medicinal Plant *
Medical sciences	Nanotechnology*	Nuclear Technologies in Medicine and Biosciences*	Palaeosciences*
Polar Science*	Physics	Renewable Energy*	Social Science and Humanities

Table 1: Broad disciplines supported for Masters and Doctoral Scholarships

Space Science*	Statistics	Transportation Studies	Tourism	
Space Science	Statistics	Transportation Studies	Tourism	

Priority Research Areas\*

#### 4. Eligibility Criteria

## The eligibility criteria listed below apply to all first time applicants for Masters and Doctoral scholarships:

- Scholarships are open to South African citizens, South African permanent residents as well as a limited percentage of foreign nationals who will register at a South African public university in 2019 on a **full-time basis**.
- NRF Masters scholarship-holders who wish to register for Doctoral degrees in 2019 must apply for funding.
- With respect to SASAC Doctoral scholarships, details of the proposed research must demonstrate clear alignment with IIASA's research programmes and national <u>research priority areas</u>. IIASA's nine research areas are Advanced Systems Analysis; Ecosystems Services and Management; Energy; Evolution and Ecology; Air Quality and Greenhouse Gases; Risk and Resilience; Transitions to New Technologies; World Population and Water.

#### The eligibility criteria listed below apply to applicants applying for Extension Support

- Applicants for Extension support must be current recipients of NRF scholarships for the current degree in 2018. Extensions will only be provided under exceptional circumstances and will only be granted for six (6) or twelve (12) months as the NRF expects all students to complete their qualifications within regulation time.
- Applicants applying for extension support at Masters level should have commenced their degree in 2017.
- Applicants applying for extension support at Doctoral level should have commenced their degrees in 2016.
- Only students pursuing **full-time** Masters or Doctoral studies in South Africa are eligible to apply.

#### The eligibility criteria listed below apply to all NRF-TWAS Doctoral applicants:

- Applicants must register at a South African public university in 2019 on a full-time basis and may be based at any South African public research institution including Higher Education Institutions (HEIs), Science Councils and National Research Facilities. For details of Recognised HEIs and other Public Research Institutions <u>click here</u>.
- The NRF-TWAS Doctoral Scholarships are only open to citizens and permanent residents from developing countries in and outside Africa. South Africans are not eligible to apply. Refer to Table 8 for the list of eligible developing countries and Table 9 for the list of 66 priority countries for TWAS funding.
- Applicants may not be living, studying or working in South Africa at the time of application.
- Applicants who were previously employed or studying towards a degree or undertaking research in South Africa, and have returned to their country of origin but have been in their country of origin for less than two (2) years are not eligible to apply.
- Applicants must be thirty five (35) years of age or younger on the 31<sup>st</sup> of December of the year of application for the Doctoral scholarship.
- Visa and immigration laws of the applicant's home country and South Africa must be met by the applicant. The applicant must secure his/her own Visa or study permit under the programme for study in South Africa. Neither NRF nor TWAS will be responsible for assisting with visa requirements.
- Upon completion of the studies, all successful applicants must return to their country of origin. Students who fail to return to their home country will be liable to pay back the amount to the NRF equal to the number of years of study support they have received.
- Applicants who wish to pursue research under Science, Engineering and Technology (SET) disciplines will be supported through the Scholarship.

#### 5. Students not eligible for support

 Students who already hold NRF funding for Masters (in 1<sup>st</sup> year of funding) or Doctoral studies (in 1<sup>st</sup> or 2<sup>nd</sup> year of funding) must not apply, they should submit a Progress Report (PR) to renew funding for the following year as per the Conditions of Grant.

- Individuals that already hold a degree at the level at which they intend studying, are not eligible to apply, .e.g. individuals already holding a Master's degree, may not apply for a scholarship for Masters Studies.
- Students who are intending to register for or that are studying for a 100% Masters by Coursework-, Professional Masters- or Doctoral degree, may not apply for any of these scholarships.
- Students pursuing Masters studies who commenced their degree before 2018.
- Students pursuing Doctoral studies who commenced their degree before 2017.
- Individuals that will be in full-time salaried, contractual or permanent employment while pursuing Masters or Doctoral studies may not apply.
- Individuals that are on Sabbatical leave from their employment (including those without paid sabbatical leave) may not apply.

#### 6. Application Process

Applications in this **open call for applications** for funding in 2019 must be submitted through the NRF Online Submission System <u>https://nrfsubmission.nrf.ac.za/</u>. Further instructions on the application process will be made available in the **Application and Funding Guide** for the Masters and Doctoral Scholarships for Full-time studies.

**Note that Institutional Nomination Scholarships awards for Masters Studies** will be administered as a block grant to the universities at which the students will be registered for a postgraduate degree and are not included in this call for applications (Table 2).

Table 2: Process for block Grant Administration at Universities

Category of Students	New	Continuing
Masters Block Grant	Institutional nominations	Submit APR on NRF online system

All continuing students that are eligible for a second or third year of funding must submit an Annual Progress Report (APR) and not a new application.

#### 7. Attachments

**First time and extension support applicants** must attach the following documents on the Attachment section of online application:

- i. Certified South African Identity Document or Passport in the case of foreign nationals;
- ii. Certified academic record;
- iii. In the case of applicants with outstanding fees due to the university, applicants are required to attach an official letter from the university confirming their first year of registration for the degree and indicates that the student still has outstanding fees owed to the university;
- iv. Proof of National Student Financial Aid Scheme (NSFAS) or University Financial Aid funding for applicants who have indicated that they were previously funded by NSFAS; and
- v. In the case that an applicant has indicated disability under the application, the applicant is required to upload proof of the disability

**All NRF-TWAS Doctoral applicants** must attach the following documents on the Attachment section of the online application:

- i. Certified copy of their Passport;
- Proof of evaluation of all foreign qualifications (obtained from non-South African universities) evaluated by the South African Qualification Authority (SAQA) or proof that the applicant has submitted his/her qualifications for evaluation to SAQA.
   Failure to submit proof will result in the application being rejected. Further information on the process can be accessed by logging on to www.saqa.org.za;
- English language proficiency certificate (if available at the time of the application). If not available, this will be required before NRF funds are released to the student.
   Applicants must meet the following requirements of the English Language Proficiency Academic test: IELTS 6.5 (no band less than 6.0); or TOEFL (paper) 575 (TWE 4.5); or TOEFL iBIT (min. 20); or Cambridge minimum 58. Information on the IELTS tests can be obtained from the British Council in applicant's home country or accessed at: <a href="https://www.ielts.org">www.ielts.org</a>. Further information on the TOEFL test can be accessed at: <a href="https://www.toefl.com">www.toefl.com</a>. Applicants may consult the British Council in their home country for assistance;
- iv. Acceptance letter from the South African university: Applicants must provide an official acceptance letter from their South African institution, department or laboratory and a motivation from the prospective Doctoral supervisor. It is the responsibility of the applicant to contact the respective institution to apply for acceptance and to secure a supervisor for the study; and

#### v. Certified academic record

It is the responsibility of the applicant to ensure that all attachments are translated into English as a medium of communication. Applications without supporting documents will be rejected.

#### It is the responsibility of the applicant to ensure the following:

- Identify a suitable supervisor and co-supervisor;
- Masters Students: ensure that letters of support from the identified Masters supervisor and referee are submitted on the NRF Online system; and
- Doctoral students: ensure that letters of support from the Masters Supervisor, identified Doctoral supervisor and referee are submitted on the NRF Online system.

#### 8. Institutional Screening and Approval Criteria

In order to reduce the cost and burden of review of poor quality applications and/or applications that cannot be funded within the available budget and/or equity targets as stipulated in the Ministerial Guidelines on improving equity in the distribution of bursaries and fellowship (2013), the NRF will be setting a ceiling on the number of Masters and Doctoral applications that may be submitted by each institution.

Institutions are therefore required to carefully screen and select applications for submission to the NRF. Each university must give preference to students that meet the following criteria:

- Students that obtained an average mark of 65% and above in their previous degree(s);
- Students that have received an NRF scholarship for Honours' or Masters studies **and/or** who are currently funded for postgraduate studies by the NRF; and
- Students that have completed their previous degree within regulation time **and/or** that will be completing their current postgraduate degree within regulation time.

Institutional Designated Authorities (DAs) must ensure that the **proportion of Masters and Doctoral applications** submitted by each institution meets the targets set in the Ministerial Guidelines namely:

- 87% South African citizens and permanent residents.
- 80% black (African, Coloured and Indian).

- 5% students from the Southern African Development Community (SADC) region; 4% students from the rest of Africa; 4% students from non-African countries
- 55% Female
- 4% students living with a disability

The race and citizenship targets stipulated above are applicable to all categories of Masters and Doctoral scholarships excluding the NRF-TWAS Doctoral scholarships. For TWAS eligible and priority countries refer to Appendix 1 and Appendix 2 respectively.

#### 9. Merit Review of Applications

All first time applicants for Masters and Doctoral studies including TWAS Doctoral applicants will be assessed under the merit review process using the scorecard in Table 3.

Table 3:	Scorecard	for th	e assessment	of	proposals	for	Masters	and	Doctoral
Scholars	hips (exclud	ing Ext	ension Suppor	t)					

Criteria	Criteria Description		Doctoral Weight %
Academic Merit	Average cumulative percentage mark for previous degree or cumulative percentage for major subjects.	15	15
Problem Statement	Description of the problem statement informing the proposal.	5	5
Rationale and Literature Review	25	20	
Aims and Description of the aims and objectives of the study.		5	5
Methodology and proposed research plan Research methodology, work plan and project organisation.		25	25
Anticipated Anticipated realistic outputs of the research such as publications, poster and/or oral conference presentation.		10	10
Potential impact	Potential for socio-economic impact of the research in South Africa. Doctoral applicants must <b>in addition</b> demonstrate the novelty and scientific contribution to new knowledge. Where applicable, multi-disciplinary aspect of the project must be described.	5	10

Criteria	Description	Masters Weight %	Doctoral Weight %
Alignment to National Research Strategies	Alignment with one or more National Research Strategies.	10	10
Total		100	100

**All Extension Support applicants** will be assessed based on the scorecard in Table 4. Reviewers will consider the following information provided by applicants.

- A completed supervisor's report that includes the following:
  - i. Intended thesis submission date;
  - ii. Envisaged graduating date;
  - iii. Reasons for extension;
  - iv. Work plan to ensure that the student will finish in six (6) or 12 months; and
  - v. Whether funding is required for six (6) or twelve (12) months.
- A completed student work plan for the six (6) or twelve (12) months period detailing the following:
  - i. Start and end dates for the six (6) or twelve (12) months' work plan;
  - ii. Proposed date for submission of the Masters or Doctoral Dissertation for examination;
  - iii. Proposed graduation date;
  - iv. Activities for completing outstanding research, indicating the start and completion date for each activity;
  - v. Plan with timelines for completion of the Masters or Doctoral dissertation;
  - vi. Details of manuscripts to be drafted and submission timelines; and
  - vii. Timelines for corrections to dissertation from reviewers.

# Table 4: Scorecard for the Assessment of Extension Support for Masters and DoctoralStudents Funding

Category	Description	Weight %
Problem statement	Describe the problem statement informing the proposal.	5
Aims and Objectives	Provide clear aims and objectives for your study.	5
Methodology and proposed research plan	<ol> <li>Progress to date;</li> <li>Reasons why the study could not be completed in regulation time;</li> <li>Work plan to complete the degree with the defined timeframes; and</li> <li>Indicate whether funding is required for 6 or 12 months.</li> <li>Supervisory report supporting the extension (If the supporting report is not attached, application for extension will be rejected)</li> </ol>	60
Anticipated outputs	<ol> <li>Anticipated outputs of the research such as dissertation, manuscripts for publications, poster and/or oral conference presentation; and</li> <li>Where possible, give an indication of the outputs produced.</li> </ol>	15
Potential impact	Potential for socio-economic impact of the research in South Africa.	
Alignment to National Research Strategies	Alignment with one or more National Research Strategies	10
Total		100

All applicants' for Extension Support are strongly advised to consult their supervisors before they apply for extension support in order to determine if extension support is indeed desirable. The NRF expects all the students to complete their qualifications within regulation time, hence extension will only be provided under exceptional circumstances. If the supporting report from the supervisor is not attached, applications for extension will be rejected.

#### **10. Equity and Redress**

In line with the national imperative of enhancing equity of postgraduate student access, success and throughput using funding, all scholarships must prioritise support for appropriately qualified applicants from designated groups *viz*. black, female and persons with disabilities, while ensuring that only applications that meet the NRF merit review and selection criteria are supported.

All postgraduate bursaries across the NRF funding landscape will be allocated as follows:

- 87% South African citizens and permanent residents; and
- 5% students from the South African Development Community (SADC) region.
- 4% students from the rest of Africa.
- **4%** students from non-African countries.

The South African targets are further disaggregated in terms of **race** as follows:

- 80% Black (African, Coloured, and Indian); and
- **55%** Women (African, Coloured, Indian and White).

In all the scholarship categories, (except for the NRF-TWAS Doctoral), priority will be given to financially needy, yet academically capable applicants who were previously funded by the NSFAS and/or University Financial Aid. This does not exclude applicants who were not previously funded by NSFAS and/or University Financial Aid from receiving postgraduate funding from the NRF.

#### NRF-TWAS eligible countries

NRF-TWAS Doctoral applicants' must note the following:

- Refer to Appendix 1 for the list of eligible developing countries;
- Priority will be given to applicants from the 66 Science and Technology lagging countries highlighted by TWAS as a priority in capacity development in Science and Technology. Refer to Appendix 2 for the list of these countries; and
- Priority will also be given to female applicants and the target is to award at least 50% of scholarships to female scholars.

#### 11. Value of support

The period of support for all scholarships is calculated from the first year of registration for the study, regardless of the years of NRF funding. Scholarship values for full-time postgraduate students are indicated in Table 5 below.

Level of study	Institutional nomination -Value Scholarship (p.a)	Merit review-Value Scholarship (p.a)	Maximum Funding period
Masters	R50 000	R90 000	2 years
Doctoral	R70 000	R120 000	3 years

#### Table 5: Bursary and Scholarship values for full-time Masters and Doctoral studies

#### Assistive devices for students living with disabilities

All Scholarship-holders with disabilities may apply for additional funding for an assistive technology device of up to **R20 000**. This is the maximum amount allowed during the tenure of the scholarship. As defined by the Individuals with Disabilities Education Act Amendments of 1997 (IDEA), an assistive technology device is "*any piece of equipment, or product system, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities*".

#### Travel grants for Masters and Doctoral scholarship-holders

In addition, Masters and Doctoral scholarship-holders may apply for a travel grant (Table 6) that may be used to (i) attend local conferences or workshops; (ii) visit to a laboratory abroad; or (iii) any other activity that supports the current research progression. The maximum amount allowed during the tenure of the scholarship is presented in **Table 6**.

Masters and Doctoral scholarship-holders under the NRF-DAAD and Extension support programme are not eligible for travel grants through the NRF. Students that are funded under the NRF-DAAD programme may apply directly for travel to DAAD for any travel to German institutions.

Category	Local		Internation	Mobility		
	Masters	Doctoral	Masters	Doctoral	meshity	
Institutional nominations Scholarships	R10 000	R10 000	-	-	-	
Merit review Scholarships	R15 000	R15 000	-	R50 000	-	
TWAS Scholarships	-	R25 000	-	R25 000	R30 000**	

Table 6: Travel Grants values\* per study level.

\* These values represent the maximum award during the tenure of the scholarship. Actual awarded values depend on the available budget and quotations submitted by the applicant.

\*\* NRF-TWAS Scholarships holders qualify for a Single economy airfare to South Africa and return to the home country upon completion of the degree; and visa cost, based on proof of expenditure.

#### **11. NRF-DAAD Questionnaire**

DAAD and NRF would like to strengthen and maintain contacts with former In-Country scholarship-holders. Therefore, every NRF-DAAD scholarship-holder who is about to complete his / her Master or Doctoral degree will receive a questionnaire, requesting information on the result of the degree acquired, the future address and intended

employment. The scholarship holder is obliged to respond to the questionnaire truthfully and to forward a certified copy of the degree certificate to the NRF as per the Condition of Grant award. All scholarship-holders will be required to give consent for the questionnaire and certificate to be forwarded to the DAAD for their records. The university should ensure that this information is submitted to the NRF as soon as the scholarship ends. The scholarship holder is expected to uphold contact with the DAAD and join its extensive Alumni family. Please contact the DAAD Information Centre, Johannesburg for further information (daad@wits.ac.za).

#### **Relevant documents on National Priority Research Areas:**

- 1. <u>http://www.dst.gov.za/index.php/resource-center/strategies-and-reports/143-the-ten-year-plan-for-science-and-technology</u>
- 2. <u>http://www.dst.gov.za/index.php/resource-center/strategies-and-reports/174-national-research-a-development-strategy-2002</u>
- 3. http://www.gov.za/sites/www.gov.za/files/Science Technology White Paper.pdf
- 4. <u>http://www.gov.za/sites/www.gov.za/files/Bioeconomy%20Strategy\_a.pdf</u>
- 5. <u>http://www.gov.za/sites/www.gov.za/files/PALEO\_STRATEGY\_DST\_Final\_.pdf</u>
- 6. http://www.gov.za/sites/www.gov.za/files/DST\_Nanotech\_18012006\_0.pdf
- 7. <u>http://www.gov.za/document?search\_query=strategy&field\_gcisdoc\_doctype=All&fiel</u> <u>d\_gcisdoc\_subjects=518&start\_date=&end\_date=&=Search</u>
- 8. <u>http://www.gov.za/about-sa/science-technology</u>

#### **12. NRF Contact Persons**

For inquiries, applicants are encouraged to contact the Research / Postgraduate offices at their universities. Should there still be a need to contact the NRF, below are the contact persons and details:

For programme related enquiries, please contact: **Ms Fulufhelo Malamatsho:** Professional Officer – HICD. Telephone: 012 481 4166. Email: fulufhelo.malamatsho@nrf.ac.za

**Ms Zethu Ntsoane:** Professional Officer – HICD. Telephone: 012 481 4105. Email: <u>zethu.maseko@nrf.ac.za</u>

For Reviews and Evaluation related enquiries, please contact: **Mr Sello Moloi:** Professional Officer – RE. Telephone: 012 481 4249. Email: <u>sello.moloi@nrf.ac.za</u>

**Mr Sam Sibiya:** Professional Officer – RE. Telephone: 012 481 4307. Email: <u>sam.sibiya@nrf.ac.za</u>

For SASAC related enquiries, please contact: **Dr Priscilla Mensah:** Director-HICD. Telephone: 012 481 4396. Email: <u>Priscilla.mensah@nrf.ac.za</u>

#### ELIGIBLE DEVELOPING COUNTRIES FOR NRF-TWAS PROGRAMMES

	151 ELIGIBLE DEVELOPING COUNTRIES							
1	Afghanistan	52	Guatemala	103	Palau			
2	Albania	53	Guinea	104	Palestine, State of			
3	Algeria	54	Guinea-Bissau	105	Papua New Guinea			
4	Angola	55	Guyana	106	Paraguay			
5	Antigua and Barbuda	56	Haiti	107	Peru			
6	Argentina	57	Honduras	108	Philippines			
7	Armenia	58	Hong Kong, SAR	109	Qatar			
8	Aruba	59	India	110	Romania			
9	Azerbaijan	60	Indonesia	111	Rwanda			
10	Bangladesh	61	Iran, Islamic Rep.	112	Samoa			
11	Bahamas	62	Iraq	113	São Tomé and Principe			
12	Bahrain	63	Jamaica	114	Saudi Arabia			
13	Barbados	64	Jordan	115	Senegal			
14	Belarus	65	Kazakhstan	116	Serbia			
15	Belize	66	Kenya	117	Seychelles (Transitional)			
16	Benin	67	Kiribati	118	Sierra Leone			
17	Bhutan	68	Korea, Dem Rep.	119	Solomon Islands			
18	Bolivia	69	Kosovo	120	Somalia			
19	Bosnia and Herzegovina	70	Kuwait	121	South Sudan			
20	Brunei	71	Kyrgyz Republic	122	Sri Lanka			
21	Brazil	72	Lebanon	123	St. Vincent and the Grenadines			
22	Bulgaria	73	Lesotho	124	Sudan			
23	Burkina Faso	74	Liberia	125	Suriname			
24	Burundi	75	Libya	126	Swaziland			
25	Cabo Verde	76	Macedonia, FYR	127	Syrian Arab Republic			
26	Cambodia	77	Macau	128	Taiwan, China			
27	Cameroon	78	Madagascar	129	Tajikistan			
28	Central African Republic	79	Malawi	130	Tanzania			
29	Chad	80	Malaysia	131	Thailand			

151 ELIGIBLE DEVELOPING COUNTRIES							
30	Chile	81	Maldives	132	Timor-Leste		
31	China	82	Mali	133	Trinidad and Tobago		
32	Colombia	83	Marshall Islands	134	Тодо		
33	Comoros	84	Madagascar	135	Tonga		
34	Congo, Dem. Rep	85	Mauritania	136	Tunisia		
35	Congo, Rep.	86	Mauritius	137	Turkey		
36	Costa Rica	87	Mayotte	138	Turkmenistan		
37	Côte d'Ivoire	88	Mexico	139	Tuvalu		
38	Cuba	89	Micronesia, Fed. Sts.	140	Uganda		
39	Djibouti	90	Moldova	141	Ukraine		
40	Dominica	91	Mongolia	142	United Arab Emirates		
41	Dominican Republic	92	Montenegro	143	Uruguay		
42	Ecuador	93	Morocco	144	Uzbekistan		
43	Egypt, Arab Rep.	94	Mozambique	145	Vanuatu		
44	El Salvador	95	Myanmar	146	Venezuela		
45	Eritrea	96	Namibia	147	Vietnam		
46	Ethiopia	97	Nepal	148	Western Samoa		
47	Fiji	98	Nicaragua	149	Yemen, Rep.		
48	Gabon	99	Niger	150	Zambia		
49	Gambia, The	100	Nigeria	151	Zimbabwe		
50	Georgia	101	Oman				
51	Ghana	102	Pakistan				

#### Appendix 2

#### **TWAS LIST OF 66 PRIORITY COUNTRIES**

LIST OF 66 TWAS ENDORSED COUNTRIES						
1. Afghanistan	23. Ghana	45. Rwanda				
2. Angola	24. Guatemala	46. São Tome and Principe				
3. Bangladesh	25. Guinea	47. Senegal				
4. Benin	26. Guinea-Bissau	48. Sierra Leone				
5. Bhutan	27. Haiti	49. Solomon Islands				
6. Bolivia	28. Honduras	50. Somalia				
7. Burkina Faso	39. Kenya	51. South Sudan				
8 Burundi	30. Kiribati	52. Sri Lanka				
9. Cambodia	31. Lao PDR	53. Sudan				
10. Cameroon	32. Lesotho	54. Swaziland				
11. Central African Republic	33. Liberia	55. Syrian Arab Republic				
12. Chad	34. Madagascar	56 Tajikistan				
13. Comoros Islands	35. Malawi	57. Tanzania				
14. Congo	36. Mali	58. Timor-Leste				
15. Côte d'Ivoire	37. Mauritania	59. Togo				
16. Congo, Dem. Rep	38. Mongolia	60. Tuvalu				
17. Djibouti	39. Mozambique	61. Uganda				
18. El Salvador	40. Myanmar	62. Vanuatu				
19. Equatorial Guinea	41. Nepal	63. West Bank & Gaza Strip				
20. Eritrea	42. Nicaragua	64. Yemen				
21. Ethiopia	43. Niger	65. Zambia				
22. Gambia	44. Paraguay	66. Zimbabwe				

TWAS has recently identified 66 developing countries whose capacity in science and technology is still lagging, these include the 48 UN-listed Least Developed Countries, some low income countries and other countries with specifically low research capacity. For this reason, TWAS is focusing special attention on capacity-building efforts in these countries.