

About TWAS - with a focus on the research grants programmes

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RISE WORKSHOP

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Establishment



- Founded 1983 in Trieste, Italy, by Abdus Salam and 40 other eminent scientists from the South (incl. 10 Nobel Laureates).
- Inaugurated 1985 by the Secretary General of the United Nations, Javier Perez de Cuellar.

Headquarters



- Located at the Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- Administered by the United Nations Educational, Scientific and Cultural Organization (UNESCO).



Membership

- **878 Members in 91 countries**
- 744 “Fellows” in 74 countries in the South.
- 134 “Associate Fellows” in 17 countries in the North.
- 16 Nobel Laureates.
- 15 Italian Members.



Objectives

- Recognize, support and promote **excellence** in scientific research in the South.
- Respond to the **needs of scientists** working under unfavourable conditions.
- Support **South-South** scientific exchange and collaboration.
- Promote **South-North** cooperation between individuals and centres of excellence.
- Promote **dissemination of scientific information** and sharing of innovative experiences.

Promoting Excellence



- Academy membership granted to the most distinguished scientists in the South.
- TWAS prizes given for significant contributions by scientists in the South.
- Prizes for young scientists awarded on behalf of TWAS by organizations in the South.

Promoting Excellence

TWAS Prizes to Young Scientists in Developing Countries

Awarded in collaboration with national science academies, scientific research councils, ministries of science & technology and other high-level research organizations in the South.

- Organizations in 42 developing countries participate.

EXAMPLE: 2006 TWAS/National Research Council of Malawi young scientists' prize winner:
John Chisi, Haematology Department, College of Medicine, University of Malawi, Blantyre.



Supporting South-South Collaboration

- Postgraduate and postdoctoral fellowships for young scientists
(Brazil, China, India, Mexico, Pakistan).
- Associateships for regular visits to centres of excellence in the South (with UNESCO).
- All expenses (except travel) covered by host country.

Promoting South-North Cooperation

- Support international meetings held in the South.
- Support visits of internationally renowned scientists to institutions in the South (with ICSU, UNESCO and UNU).
- Promoting Europe-Africa partnerships in ICT research: EuroAfrica-ICT EU-funded project. **New!**





TWAS General Conferences/Meetings

■ Characteristics

- **Purpose:** To review status and prospects of science in different regions of the South and promote strategies for South-South and South-North cooperation.
- **Participants:** Members of TWAS, S&T ministers and presidents of research councils from developing countries; presidents of academies from South and North; world-renowned scientists to give keynote talks (e.g. Nobel laureates); talented young scientists.
- **Invitation** by host country's ministry, research council or academy.
- **Inauguration** of event by the host country's head of state / government.

TWAS General Conferences/Meetings

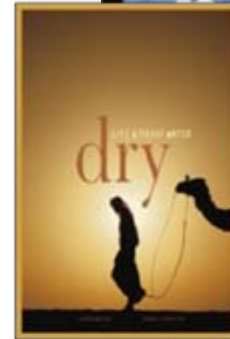
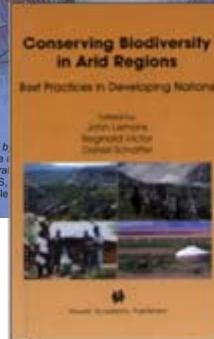
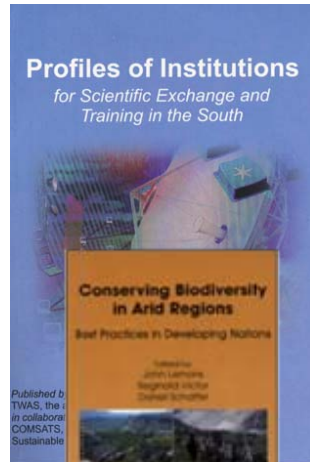
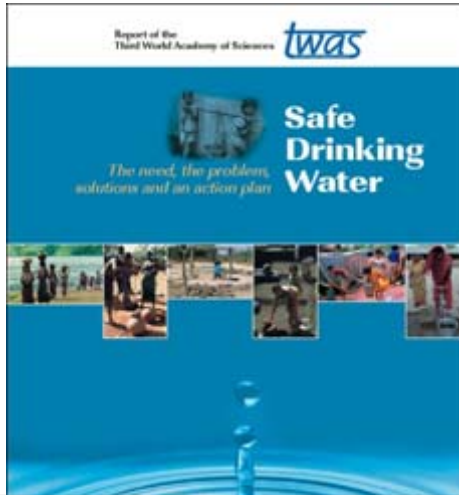


- China 1987
- Venezuela 1990
- Kuwait 1992
- Nigeria 1995
- Brazil 1997
- Senegal 1999
- Iran 2000
- India 2002
- China 2003
- Egypt 2005
- Brazil 2006
- Mexico 2008



Dissemination of Information

- Quarterly newsletter, TWAS Research Updates, proceedings.
- Reports.



Responding to Needs



- Merit-based competitive **research grants in basic sciences** given to young scientists.
- TWAS **research units in science- and technology-lagging countries.**
- Spare parts for scientific equipment supplied to laboratories in need.

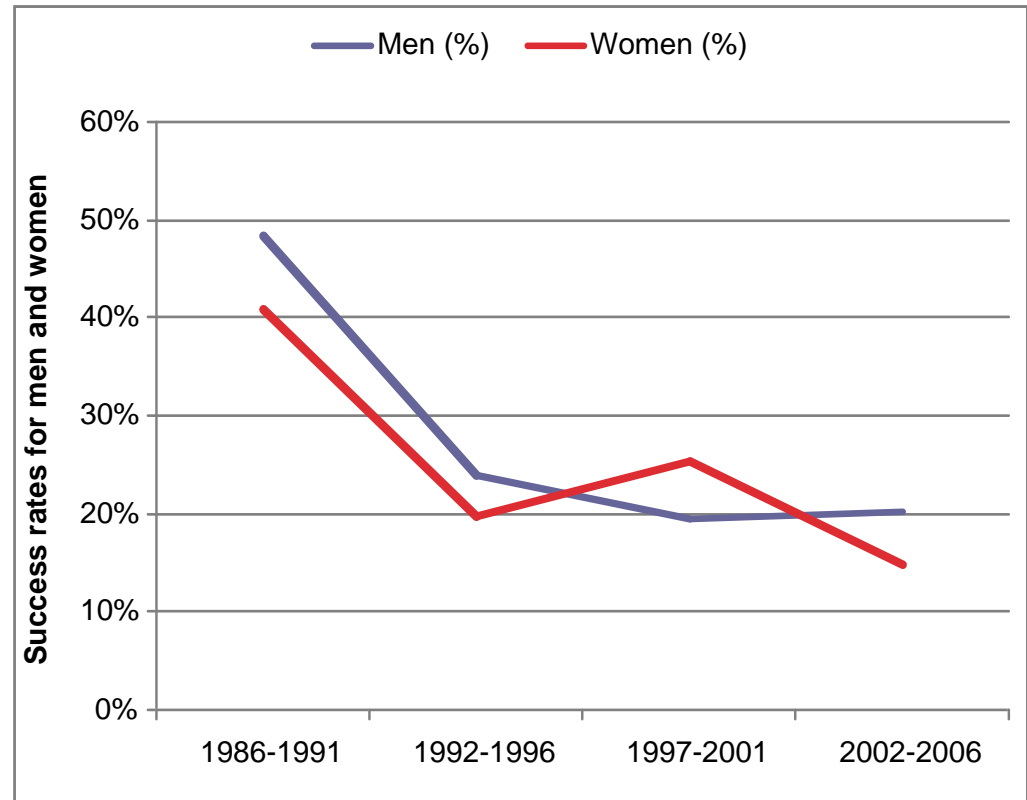
Grants to individuals

Top 10 countries (individual grants awarded by subject)

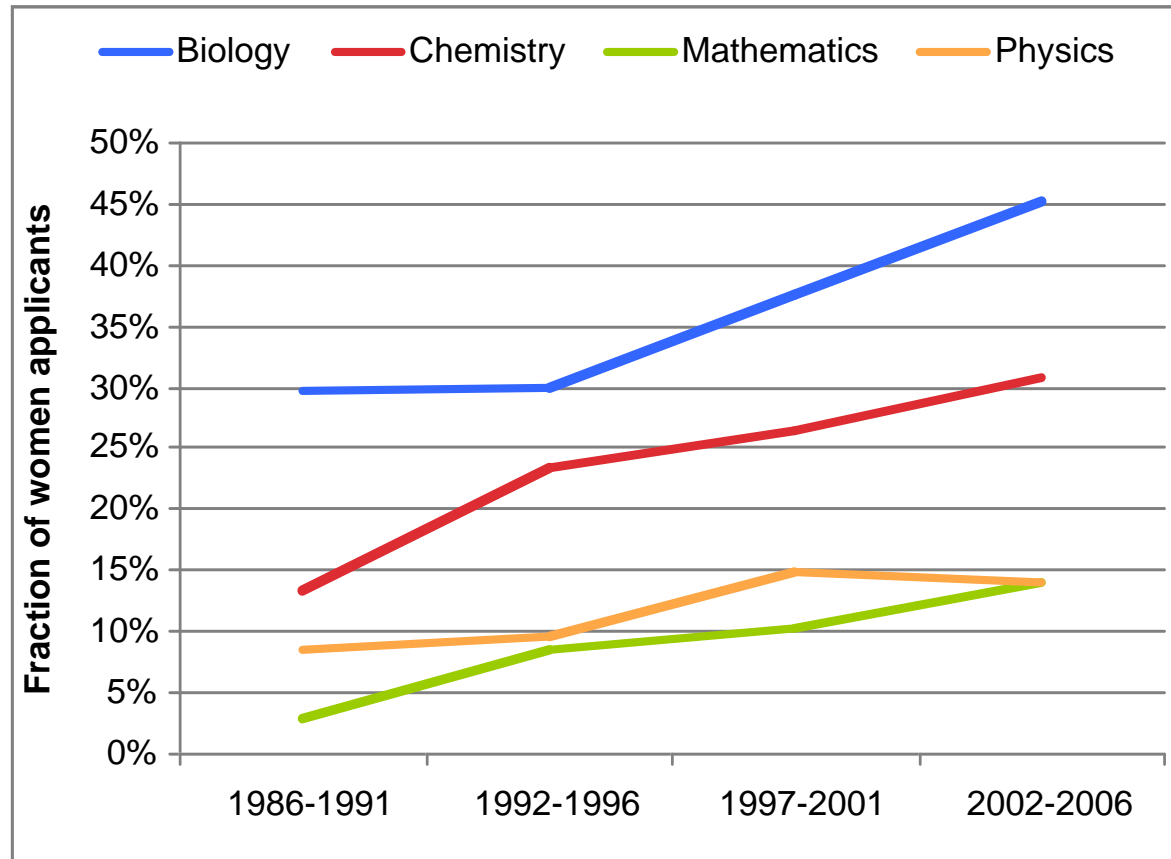
COUNTRY	BIOLOGY		CHEMISTRY		MATHEMATICS		PHYSICS		TOTAL	
	Received	Awarded	Received	Awarded	Received	Awarded	Received	Awarded	Received	Awarded
Argentina	1,009	122	222	39	19	7	288	38	1,538	206
Brazil	359	92	67	14	10	2	73	31	509	139
India	283	41	198	33	52	9	215	53	748	136
China	103	22	57	12	64	18	204	76	428	128
Mexico	321	71	69	16	10	3	44	17	444	107
→ Nigeria	274	45	122	16	78	20	123	23	597	104
Cuba	108	30	52	19	19	13	75	23	254	85
Chile	205	63	37	10	12	4	33	4	287	81
Pakistan	159	36	91	16	9	3	47	19	306	74
Morocco	55	20	38	15	18	15	25	9	136	59

Grants to individuals

Success rates	Biology	Chemistry	Mathematics	Physics
1986-1991	52%	51%	37%	44%
1992-1996	22%	22%	26%	25%
1997-2001	20%	21%	31%	23%
2002-2006	14%	25%	33%	25%



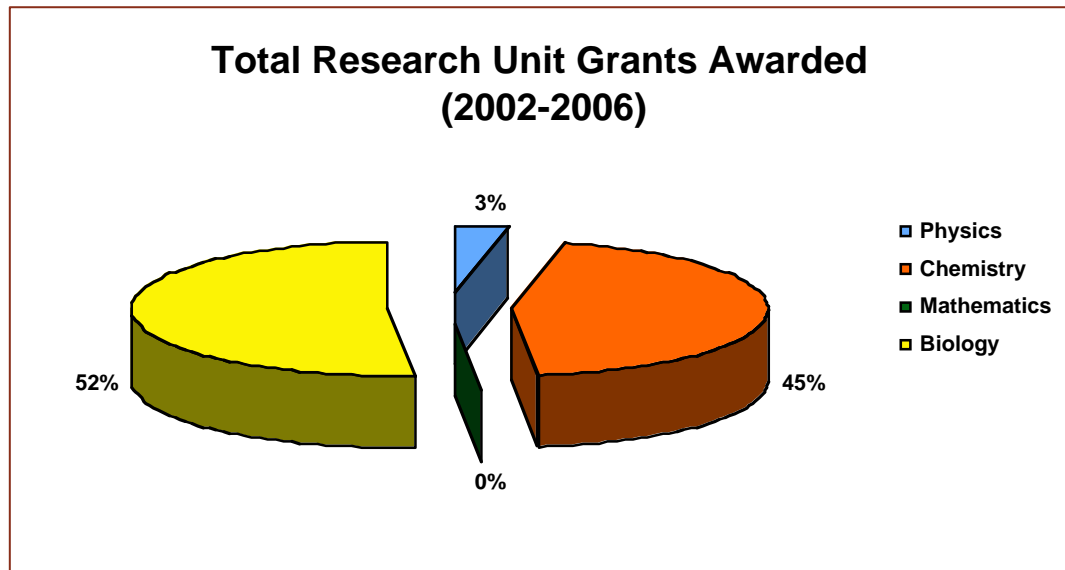
Grants to individuals



Responding to needs

Grants to Research Units

- programme launched in 2002,
- initially funded entirely by TWAS,
- initially limited to Least Developed Countries (LDCs),
- funded by Sida/SAREC, Sweden, since 2006,
- since then, expanded to 77 science- and technology-lagging countries, including most in sub-Saharan Africa.



Grants to Research Units

Total research units by region and subject

REGION	BIOLOGY		CHEMISTRY		MATHEMATICS		PHYSICS		TOTAL	
	Received	Awarded	Received	Awarded	Received	Awarded	Received	Awarded	Received	Awarded
Africa and Arab Region	133	13	30	11	6	0	22	1	191	25
Asia and the Pacific	26	2	8	3	1	0	7	0	42	5
Latin America and the Caribbean	4	1	0	0	0	0	1	0	5	1

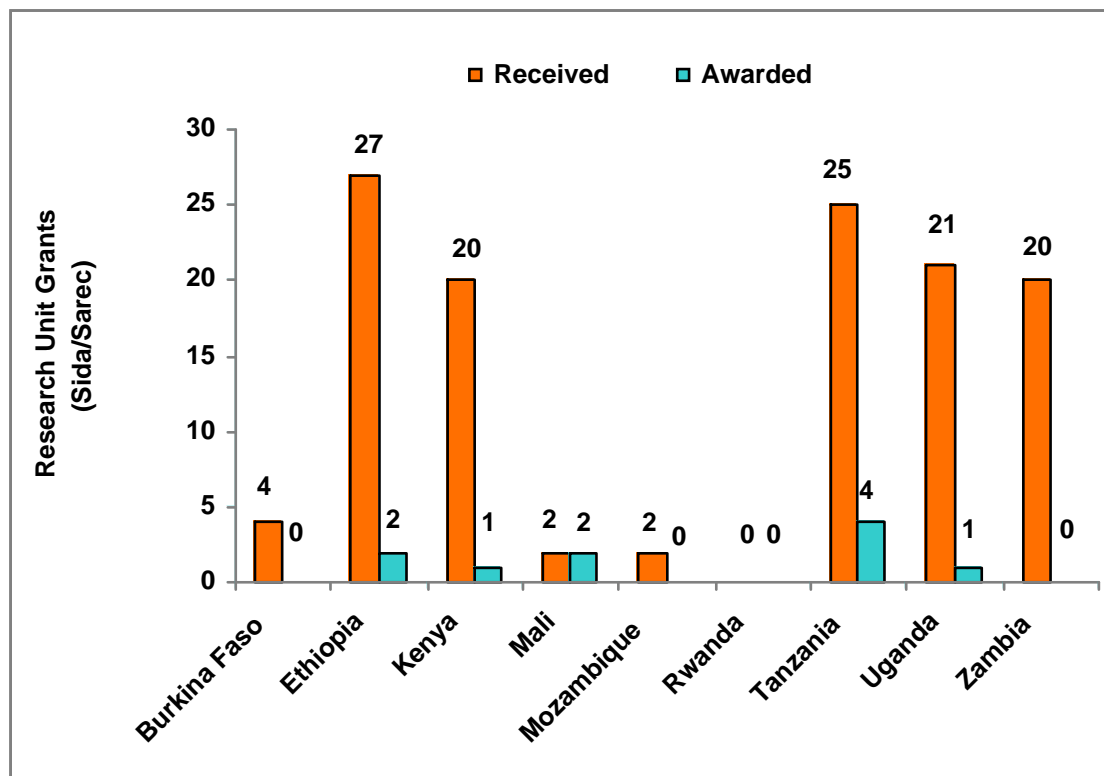


Grants to Research Units

Top 4 countries with research units awarded

COUNTRY	BIOLOGY		CHEMISTRY		MATHEMATICS		PHYSICS		TOTAL	
	Received	Awarded	Received	Awarded	Received	Awarded	Received	Awarded	Received	Awarded
Tanzania	19	3	4	1	0	0	2	0	25	4
Senegal	4	0	6	3	4	0	3	0	17	3
Sudan	10	3	1	0	0	0	2	0	13	3
Bangladesh	17	2	3	1	0	0	2	0	22	3

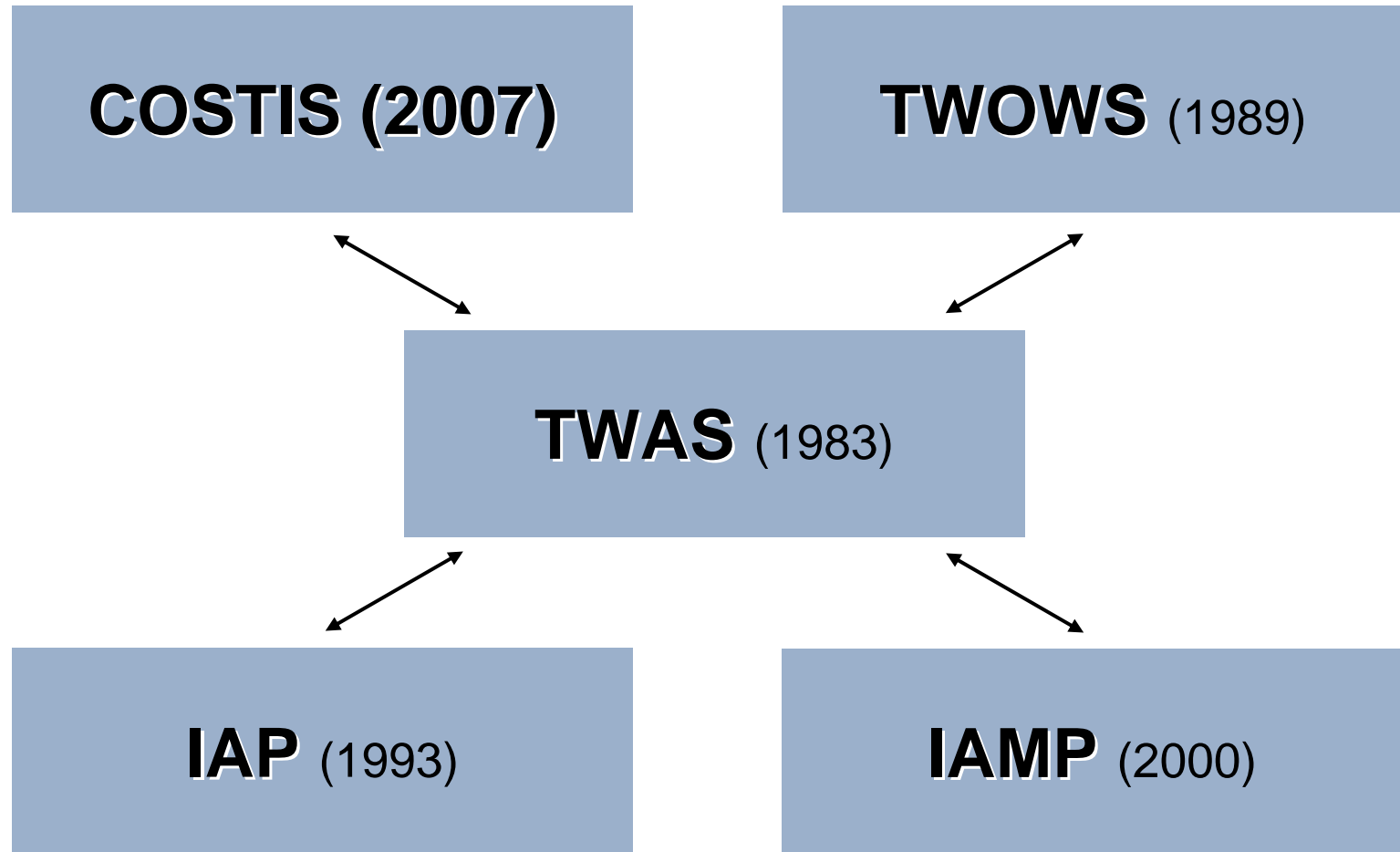
Grants to Research Units



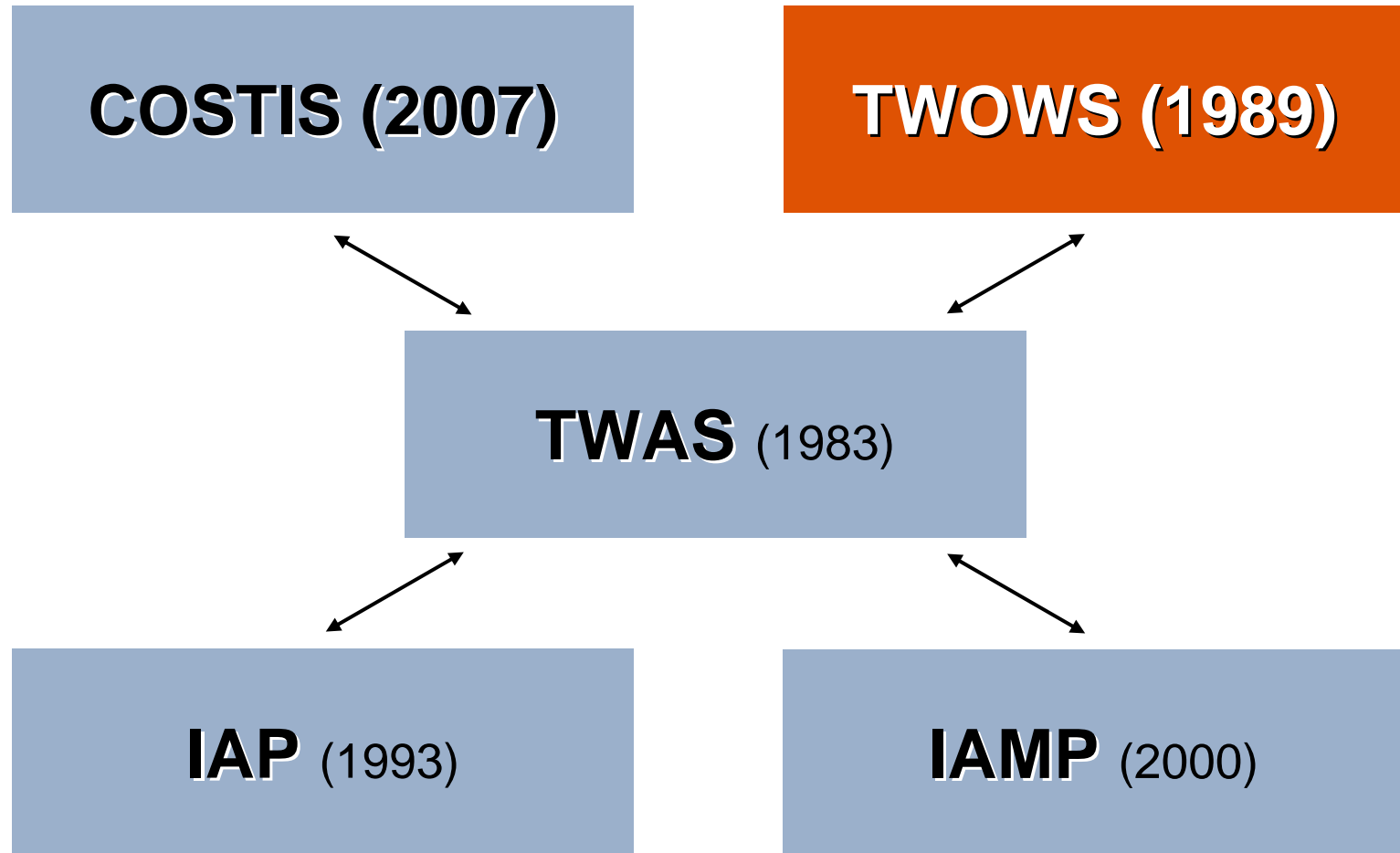
Note:

- Some countries have submitted a good number of applications, other countries very few or none at all.

TWAS and Associated Organizations



TWAS and Associated Organizations



Associated Organizations: TWOWS

- Established in 1993, the **Third World Organization for Women in Science** unites more than 2,700 women scientists in 89 developing nations and 21 countries in the North.



Trieste Conference 1988



Cairo Conference 1993



Cape Town Conference 1999



Bangalore Conference 2005

Associated Organizations: TWOWS

- With funds from the Department for Research Cooperation (SAREC) of the Swedish International Development Cooperation Agency (Sida), TWOWS offers **fellowships** for postgraduate training to young **women** scientists from **sub-Saharan African and Least Developed Countries** (LDCs) at centres of excellence in the South.



Associated Organizations: TWOWS

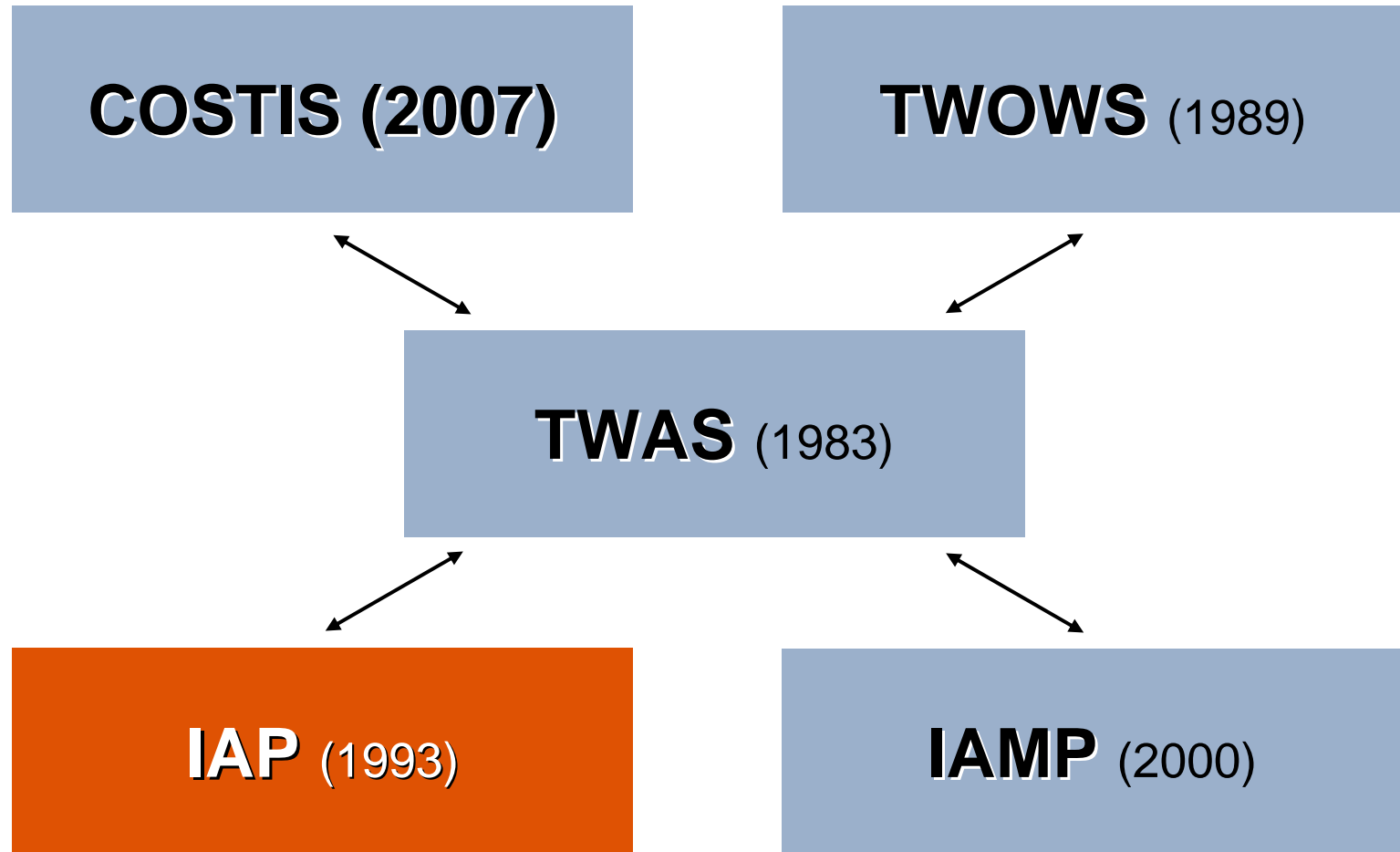
To date, TWOWS has awarded fellowships to more than **250** young women scientists from some **40** countries.



Agnes Mangwela, PhD



TWAS and Associated Organizations



Associated Organizations: IAP

- IAP promotes:
 - cooperation between member academies on science-related issues of global concern.
 - the role of academies as independent, credible advisors to governments on policies and critical decisions based on S&T.

Associated Organizations: IAMP

- Established in 2000, the **InterAcademy Medical Panel** is a global network of the world's medical academies or the medical divisions of science academies.

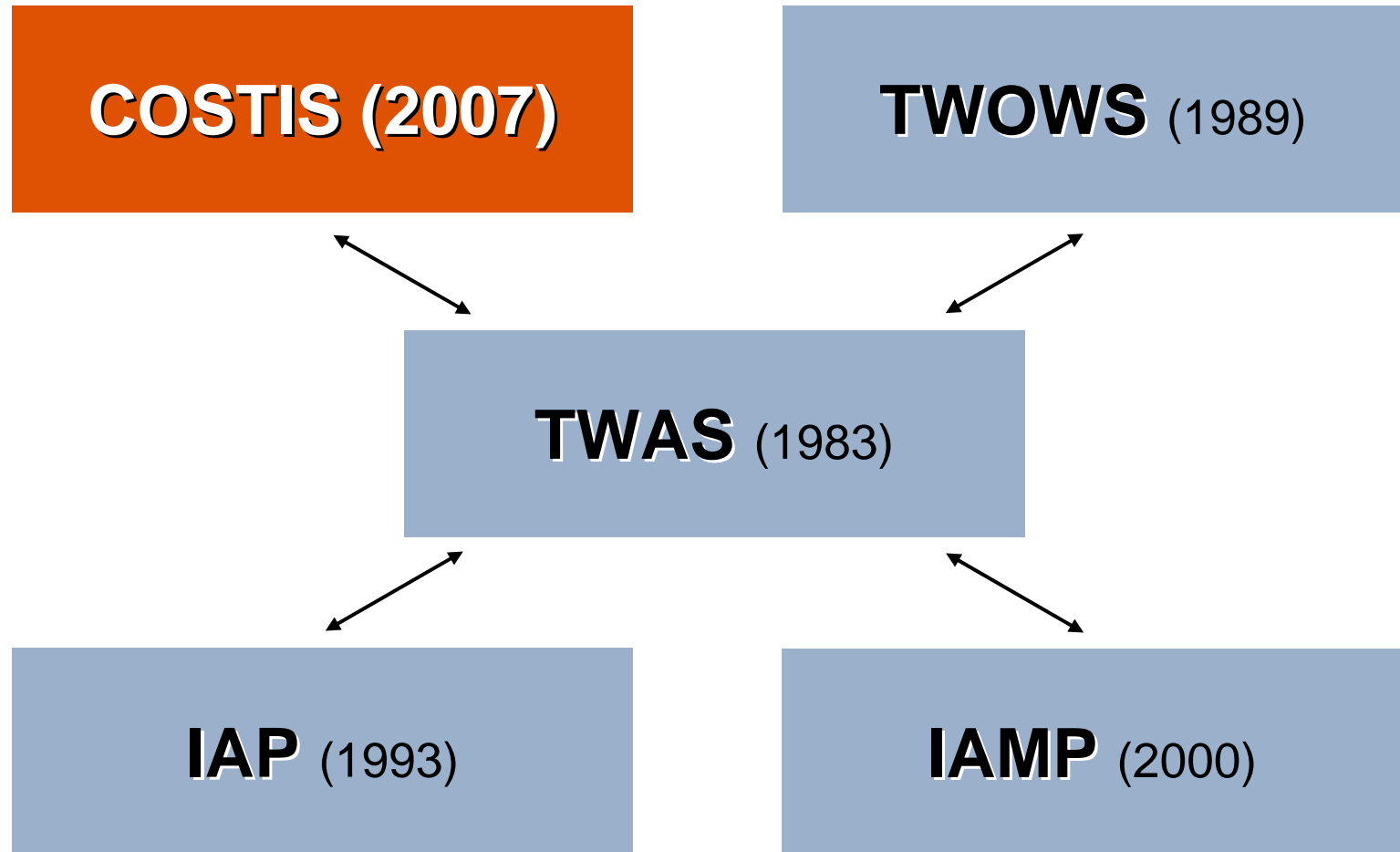


INTERACADEMYMEDICALPANEL

Associated Organizations: IAMP

- The 64 members of IAMP seek to:
 - Improve global health, especially among the world's poorest nations.
 - Build capacity of academies to address health-related issues.
 - Provide independent scientific advice to national governments and international bodies for the promotion of health science and health care policy.

TWAS and Associated Organizations



Associated Organizations: COSTIS

- Established in September 2006 by Ministers of S&T and Ministers of Foreign Affairs of G77 as successor to the Third World Network of Scientific Organizations (TWNSO).



COSTIS Membership

- Ministers responsible for S&T
- National Research Councils
- National Science Foundations
- National Science Academies
- Science-based private sector institutions



COSTIS Goals

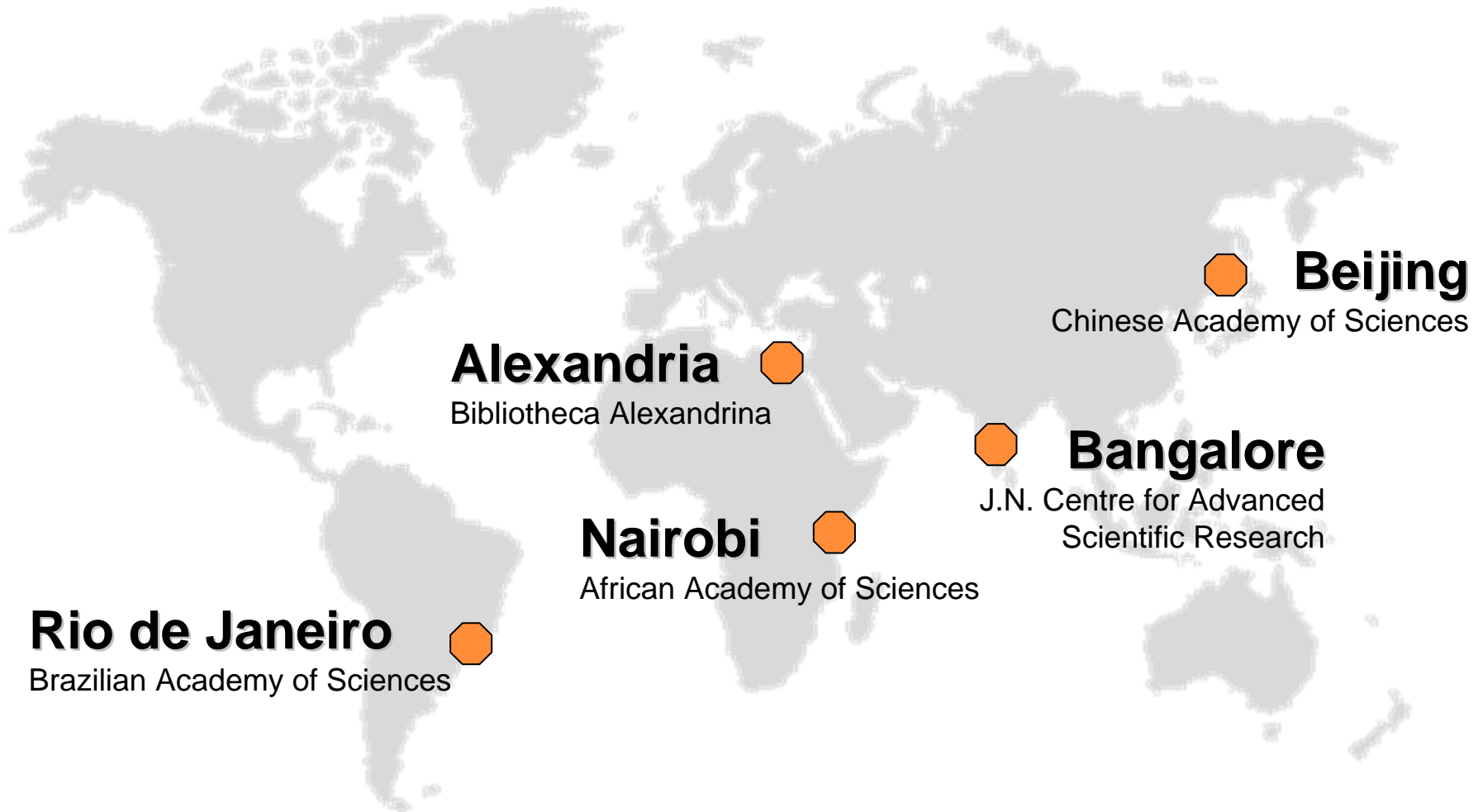
- Provide unique platform for governmental agencies responsible for policy and for funding research to interact strongly with leadership in academies and science-based industry.
- Exchange information on best practices in integrating science policy into national development plans.
- Organize periodic fora on STI addressing specific topics of major concern to developing countries.
- Example: Development and diffusion of simple affordable technologies for safe drinking water and renewable energy.



Main Sponsors

- Ministry of Foreign Affairs, Government of Italy.
- Department for Research Cooperation (SAREC), Swedish International Development Cooperation Agency (Sida).
- United Nations Educational, Scientific and Cultural Organization (UNESCO).
- Kuwait Foundation for the Advancement of Sciences (KFAS).
- OPEC Fund for International Development.
- United Nations Development Programme (UNDP).
- United Nations University (UNU).
- European Union (EU).
- Developing countries (CNPq, Brazil; CAS, China; CSIR, DBT, SN Bose NCBS and IACS, India; CEMB and ICCBS, Pakistan).

TWAS's Regional Offices



TWAS's Regional Offices: Objectives

- Promote regular activities of TWAS in the region and assess their vitality and effectiveness.
- Strengthen collaboration between TWAS Members and facilitate their contacts with young scientists in the region.
- Organize annual conferences for best and brightest young scientists in the region.
- Promote public awareness and understanding of science in the region.

Thank you

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www.twnso.org

www.twows.org

www.interacademies.net

www.iamp-online.org