

International Science Programme – ISP



Objective

To strengthen research and postgraduate education
in basic sciences in developing countries

ISP

Focus:

*Research and postgraduate education in basic sciences
in developing countries*

- International Programme in Physical Science (IPPS) 1961
- International Programme in Chemical Sciences (IPICS) 1970
- International Programme Mathematical Sciences (IPMS) 2001

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ISP

Funding

Sida/SAREC

2 800 000 EUR

Uppsala University

140 000 EUR

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Why support research in developing countries?

..quality in higher education

..be part of the scientific community
acceptance, access to results

..third world problems
initiate, take part in and conduct research

..transfer of knowledge and technology
ability to find, understand, select, judge, transform

..people for the society
trained in analytical, critical, synthetic thinking

..contacts between nations, cultures, genders

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Sustainable research teams

- good leader
- critical mass
must be attractive and possible to stay
includes research students
- acceptable working conditions
functioning basic facilities
project feasible in view of local infrastructure
- long-term funding, 10-15-20 years
- external contacts
- long process

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How?

Support to selected research groups and to regional cooperation and networks

- *for* equipment, consumables, spares
- *for* literature, IT
- *for* collaboration with advanced research groups
- *for* postgraduate training of 'sandwich' type
- *for* attending and arranging courses, workshops, conferences

20 000 – 60 000 EUR per year

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Current scope

- 47 research groups in 18 countries in Africa, Asia, and Latin America
- collaborating groups at 10 universities in Sweden, 10 universities in the rest of Europe, and 30 universities in the regions
- 19 regional and 2 inter-regional networks

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Activites 2005, ISP

Activity	Number
PhD students	175
MSc/Mphil students	363
Scholarships within Sweden	61 (307 months)
Sholarships within rest of Europe	6 (20 months)
Scholarships within the Regions	47 (172 months)
PhD theses	18
MSc/Mphil theses	104
Publications in international Journals	131
Publications in regional/local Journals	83
Conferences and Workshops organised	57

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WHERE?

GNI per Capita USD 2003; World Bank Report 2005

LD as defined in "The Least Developed Countries 2002; UNCTAD/LDS/2002

AFRICA

Low Income Countries

LD	Burkina Faso	300
	Cameroon	640
LD	Ethiopia	90
	Ghana	320
	Kenya	390
LD	Malawi	170
LD	Mali	290
LD	Mauritania	430
	Nigeria	320
LD	Senegal	550
LD	Tanzania	290
LD	Uganda	240
LD	Zambia	380
	Zimbabwe	480

ASIA

Low Income Countries

LD	Bangladesh	400
LD	Cambodia	310
LD	Lao PDR	320

Lower Middle Income Countries

	Sri Lanka	930
	Thailand	2,190

LATIN AMERICA

Lower Middle Income Countries

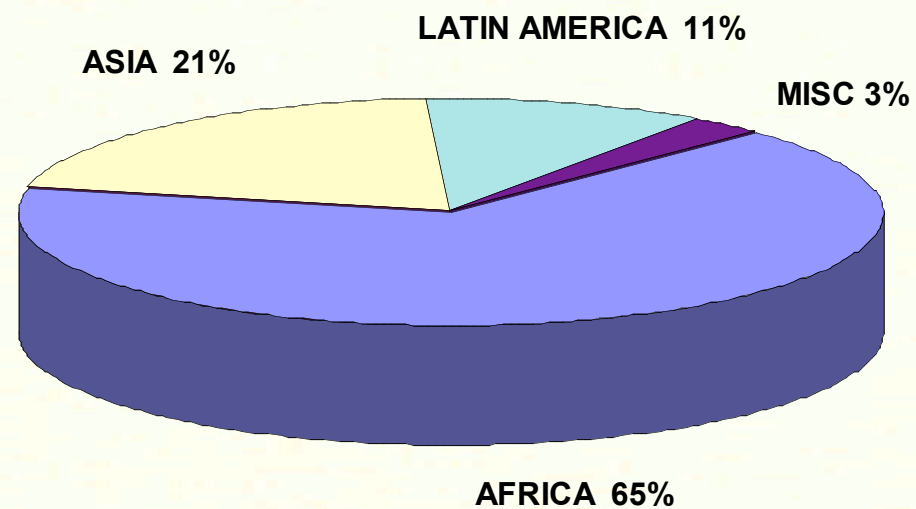
	Ecuador	1,790
	Peru	2,150

SWEDEN

28,840

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Distribution of funds by region, 2005



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Current/recent Asian projects in physics and chemistry

- Bangladesh** Chemical and biological studies of medicinal plants, 1977-2004
Development of magnetic materials, 1980-
Diabetes research, 1988-
Studies of organic pollutants in food and environment, 2003-
- Laos** Environmental analytical chemistry, 2006-
Geophysics, 2005-
Water quality research, 2006-
- Sri Lanka** Atmospheric physics and lightning research, 1978-
Biotechnology of starch and sucrose based products, 1985-
Instrumental Development, 2005-
Molecular desorption of biomolecules, 1981-
Nutritional biochemistry, 1995-
Syntheses and characterization of physical properties of technologically important new materials, 1984-
- Thailand** Geophysics, 1987
Neutron and ion beam technology, 1982-2004

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Chemical and biological studies of medicinal plants, 1977-2004, Bangladesh

- 71 MSc/MPhil
- 17 PhD
- 43 international papers
- 64 national papers
- 178 conference proceedings reports

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Experiences

- work within institutional frames
- projects proposed from the developing countries
- support and collaboration tailor-made to each individual project
- PhD training on sandwich basis – exam by parent university
- detailed plans – allow for flexibility
- yearly follow-up of accounts
- continuous on-site monitoring
- in depth evaluation after ~10 years of support

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ISP – university based organisation

- base for collegial co-operation
- recognition among foreign universities
- as direct co-operation as possible based on scientific criteria
- flexibility

- programs headed by senior scientists

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Reference Groups

- One scientist from **Africa**
- One scientist from **Asia**
- One scientist from **Latin America**
- 3 scientists from **Nordic** universities

Tasks

- Evaluate proposals
- Visit research groups
- Help identifying new projects
- Give strategic advice

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The Board of ISP

- The **Dean of Faculty of Science** of Uppsala Univ.
- Senior **Administrator** of Uppsala University
- **3 scientists** from Uppsala University
- **2 scientists** from other Swedish universities
- Representative of **developing countries**
- Representative of **IAEA**
- Representative of **student organisations**

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Other scientific administration for Sida/SAREC

- Univ of Addis Ababa, Ethiopia
PhD programmes
- Univ of Dar-es-Salaam, Tanzania
research at Faculty of Science
- Makerere University, Uganda
ICT for the university
- Asmara programme, Eritrea
staff development
- Bilateral projects in Sri Lanka,
Uganda, Vietnam

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