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# International Science Programme Uppsala University

## The International Science Program at Uppsala University

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## How we work

### **Strengthen domestic capacity for research and postgraduate education in basic sciences in developing countries**

- Founded in 1961 by Nobel prize winner in physics: Kai Siegbahn
- Three programs: chemistry, mathematics and physics
- Long term institutional support (15-25 yrs)
- Strong ownership
- Low brain drain
- Funded by the Swedish International Development Cooperation Agency (Sida).

Support to about 55 groups and networks (2013).



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## ISP operation – Outcomes (example)

Share of international, peer-reviewed publications by ISP-supported activities, of numbers reported in UNESCO Science Report 2010. (In Africa, only countries with ISP-supported research are considered).

Region/ Country	Physics 2002	Chem. 2002	Math. 2002	Physics 2008	Chem 2008	Math 2008
Africa	30%	14%	0%	29%	15%	65%
Bangla- desh	11%	6%	N/A	9%	3%	N/A
Sri Lanka	36%	6%	N/A	62%	2%	N/A



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- **These statistics show that the basic sciences are extremely poorly funded in low-income countries, and that minor support like that of ISP can have a major impact.**
- Expenditure on basic sciences is low, both by developing country governments and their development partners
- **So, why support basic sciences?**
  - Basic sciences are the pillars of all other sciences.
  - Basic sciences are extremely weak in many low-income countries.
  - Many of the flagship breakthroughs in development and poverty reduction have science and technology at their core.
  - Research in the basic sciences is a global “public good” and an international venture.



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## Some examples of the impact of ISP supported activities in 2013.

- Air quality and atmospheric research activities in 2012 and before have enlightened the Ministries of Environment and Nairobi Metropolitan to plan/implement investments in air quality monitoring in Nairobi and other major towns in **Kenya**
- ISP supported researchers are members of the **Kenyan** Nuclear Electricity Board.
- The group in seismology in **Ethiopia** were consultants for the Ministry of Public Works: this resulted in that a seismic assessment is now mandatory for all new large construction projects.
- In **Zimbabwe**, the effects of the drugs efavirenz (HIV drug) have been reanalysed in perspective of human genetic variations that affect drug pharmacokinetics. This has resulted in more specific dosing guidelines.



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## DFID impact review report (July 2014)

- Investment in public research in low-income countries is unlikely to lead to substantial levels of direct commercialisation of research outputs in the short to medium term.
- The ability to adapt and make use of existing research knowledge will be a vital driver of growth and interventions which would increase this absorptive capacity (e.g. strengthening of tertiary education) are likely to have large impacts.
- *For LICs, the ability to take up and use knowledge and technology is a better predictor of growth than the ability to generate new knowledge and technologies.*