Science & Technology Cooperation with Developing Countries in Asia and Oceania

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1 Introduction

Funding programs for science & technology (S&T) collaboration of the Federal Ministry of Education and Research (BMBF) with countries in Asia and Oceania have focused so far on the heavyweights in the region such as India, China, Japan, and South-Korea, emerging countries, particularly Indonesia and Vietnam, and also, to a lesser extent, on industrialized countries like Singapore, Australia, and New-Zealand. Developing countries, depending on natural resource exploitation and low labor costs ("factor-driven") for economic growth, have not been considered as S&T partners until the recent past. These countries typically allocate little budget to higher education and research and development (R&D), resulting, among others, in poor infrastructure and a low number of researchers who lack incentives to engage in science. However, developing countries have to cope with a number of challenges such as natural resource depletion, environmental pollution, urbanization, climate change, and health problems, to name a few issues which can only be solved by conducting S&T. Moreover, these countries can offer access to a wide range of unique natural resources, e.g. biodiversity. Both, challenges of global scale as well as interesting subjects in the area of natural resource management and ecosystem research, make developing countries attractive as S&T partners in international cooperation projects.

In 2008, the Federal Government of Germany adopted the strategy for the internationalization of German science and research institutions. To strengthen the cooperation with developing countries in education and S&T is one of the four goals of the strategy. S&T collaboration can make a contribution to the economic, social and cultural development of these countries by eradicating poverty and solving issues of global scale. The coalition treaty (2014–2017) of the new government has reaffirmed the significance of international S&T cooperation.

2 Mobility Funding with Partners in Developing Countries

2.1 Scope and Objectives

The first mobility program targeting developing countries in Asia and Oceania was published by BMBF in May 2013. According to the regional portfolio of the BMBF-Division "Asia and Oceania" eligible partner countries were Afghanistan, Pakistan, Nepal, Bhutan, Bangladesh, Sri Lanka, Myanmar, Laos, Cambodia, the Philippines, Timor-Leste, Papua-New-Guinea and Pacific island states including Fiji.

The following research areas were given priority in the call:

- Health
- Biotechnology including biodiversity
- Environmental sciences with particular focus on environmental technologies, energy, water, climate change issues and marine sciences
- Engineering
- Information and communication technology

The call aims to foster existing partnerships between German universities and research institutions with developing countries. Researchers from developing countries are invited to learn state-of-the-art lab methods and to attend workshops in Germany where they can meet with peers in their field. German scientists will familiarize with specific research needs and working conditions in the host country, and/or are doing preliminary data collection with partners. These activities should eventually lead to the elaboration of joint research proposals. Small and medium enterprises (SME) are welcome to participate.
In addition, the German project coordinator is supposed to assess the specific S&T capacity in the partner country in order to judge the long-term perspective for cooperation.

2.2 Selection of Proposals

A total number of 47 proposals were submitted. Partner countries were rather evenly distributed over the three subregions, i.e. South Asia, Southeast Asia and Oceania. All countries listed above were represented with the exception of Timor-Leste. Thematically most proposals dealt with health issues, environmental technology, biotechnology, biodiversity and ICT with an application in either the health sector or to facilitate communication under natural hazards. 15 proposals, covering the range of topics mentioned above, have been selected for funding. Most countries are represented with a single successful project only, except for Nepal (3), Bangladesh and Fiji (2 each). Funding will start in mid-2014 for a two-year period.

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3 Conclusions und Outlook

In contrast to other mobility calls with emerging countries, funding covers all travelling costs and allowances for researchers from developing countries while staying in Germany. Together with the opportunity to learn state-of-the-art lab methods and the exchange of project ideas with the eminent scientific community in the individual field at workshops, researchers from developing countries are valued as such which may encourage their willingness for a long-term commitment in international networking, and project application and implementation. Once established networks should expand funding opportunities and lay the foundation for problem-oriented solutions and innovations to environmental and development issues in those countries. German scientists strengthen their expertise in development-oriented research capacity and SME will benefit from market access.

The funding program will be evaluated for impact by BMBF through the International Bureau in due course. In case of a positive feedback, the program will be relaunched.

— Dr. habil. Ludwig Kammesheidt