

Role of R&D in Development Practices

- Good Practice examples -

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Co-operation in R&D supports developing and emerging countries in

- strengthening the science landscape and higher learning opportunities in the partner countries,
- reducing the detrimental devastating impacts of brain drain,
- creating self-sustaining capacities for economic development,
- managing evidence based complex transformation processes towards stable societies,
- improving the participation of research staff and institutions in the referring countries in the global knowledge production (publications, patents, infrastructure development, etc.)
- creating enabling environments for entrepreneurship and the validation of knowledge into innovative products, services, etc.
- absorbing the increasing demand for high-end educational opportunities, resulting from the improved access and success in primary and secondary and, thereby,
- creating more and novel job opportunities in the partner countries.

Supporting R&D cooperation initiatives is an investment in sustainable socio-economic progress, social cohesion and stability in the partner countries. Thus, it allows for a more inclusive paradigm of development cooperation by acknowledging the potential role of intellectual and entrepreneurial forerunners in defining sustainable national development priorities and securing their responsible implementation. It addresses the well-educated segment of society which needs to play a crucial role in the transformation processes of their societies.

At the same time, cooperation in R&D that is based on principles of partnership and mutual benefit has positive impacts on the STI systems and societies of the ERA. It broadens its opportunities to engage with international partners, gives access to shared knowledge and facilities, especially with regard to the solution or mitigation of global challenges, establishes affiliations with European institutions as a fundament for longstanding collaboration, and inspires political dialogue and economic cooperation in other fields.

Practice Examples – Activities to learn lessons and to identify good practice

1. Joint Africa EU Strategy (JAES)

- **MAPPING STUDY**

Context and Objectives

Initiated by the EC the Mapping of best practice regional and multi-country cooperative STI initiatives between Africa and Europe was finalized in November 2013. The objective of the study was the assessment of existing bi-regional STI cooperation initiatives and the identification of successful best – practice models of Africa and Europe cooperation. In addition gaps and effective financial mechanisms should be identified.

Contribution to R&D

- Providing a non-comprehensive overview of regional and multi-country STI cooperation between Europe and Africa covering (time span covered 2008-12)
- Identifying well-working financial models for future STI cooperation
- Showing shortcomings in the strategic orientation as well as obstacles in the execution of complex funding schemes on bilateral as well as multilateral level

- Providing recommendations to policy makers, stakeholder and fundees with regard to potential most-suited research and funding models for their purposes

- **AFRICAN RESEARCH GRANTS**

Context and Objectives

ARGs, funded by the EC, but implemented and executed by the AUC are providing funds for joint collaborative research activities between European and African researchers. The new initiative for ARGs, starting in 2015, will provide funding for 4-6 partner consortia to work on joint research projects. Recent thematic priorities were amongst others, Post-harvest and Agriculture, Renewable and Sustainable Energy, and Water and Sanitation.

Contribution to R&D

- Empowering African researchers and research organisations/universities
- Establishing Pan-African networking activities since the participation of several African partners from different countries are obligatory as well as Africa-European networking
- Building capacities on institutional, regional level and beyond
- Allowing for a focus on Africa-borne/initiated STI priorities and needs

- **PANAFRICAN PROGRAMME OF DEVCO 2014-2020**

Context and Objectives

The PanAf will, in line with the JAES, address the external dimension of EU policies. Through the PanAf, the EU operationalizes Policy Coherence for Development (PCD) and puts into practice the principle of building synergies between EU policies and development cooperation. This is being done by widening the scope of the EU cooperation and by involving all concerned services in the programming and implementation processes. PanAf will support the Road Map 2014-2017, which was adopted during the summit and features the following cooperation areas: Peace and Security; Democracy, good Governance and Human Rights; Human Development; Sustainable and inclusive Development and Growth and Continental Integration; and Global and Cross-cutting Issues.

Contribution to R&D

- Building synergies between EU policies, like for STI, and development cooperation

- **HLPD-ROADMAPPING PROZESS ON FOOD AND NUTRITION SECURITY**

Context and Objectives

In the context of the renewal of the Joint Africa-Europe Strategy (JAES) a thematic priority setting, prepared by the High-Level-Policy-Dialogue Bureau, was done between African and European leaders. Food and Nutritional Security and Sustainable Agriculture (FNSSA) was identified as the first topic to be addressed in future bioregional STI-measures. In consequence an Expert Working Group (EWG) was installed, which is currently developing a roadmap for future specific activities, which the EC would like to develop into a platform for future activities (till end of H2020). The EC hopes for the roadmap to be partially implemented by the contribution of the Member States and the participation of the African countries.

Contribution to R&D

- The overarching topic jointly identified by Africa and Europe, represents one of the most pressing issues on the African continent and is a step forward to a renewed JAES
- FNSSA as thematic priority of the AUC in 2014 unites the individual countries' efforts on the African continent to tackle this problem, thereby strengthening Pan-African cooperation
- FNSSA represents a pressing issue also for European countries, even if approaching it from a different angle and therefore offers partnerships to be built and expertise to be shared between both continent (knowledge transfer and knowledge gain)

- Capacity is built in Africa; local specific requirements can be considered for the development of intervention measures
- The implementation of a longer-term platform offers the potential to develop a broader bandwidth of interlinked measures and activities
- Funding and implementation models suitable for the African continent and which are not known in Europe enrich the options for joint activities
- The impact of FNSSA and food scarcity on the African continent is measurable much easier than on a developed continent (where food is destroyed). It provides hard KPIs to be applied, in consequence it can be a showcase for outcomes to be measured (evidence-base) as a result of the activities undertaken to secure food provision and allow for a sustainable agriculture.

2. IncoNets and further EU projects relevant for developing countries

• ERAFRICA AND FOLLOW-UP

Context and Objectives

ERAFrica (ending in November 2013), as a network of funding organisations promoting joint funding activities in order to tackle global STI priorities, started as an ERA-Net that allowed for the inclusion of also African countries. 10 European and 5 African countries (Egypt, Burkina Faso, Côte d'Ivoire, Kenya, South Africa) agreed on launching a joint funding for topics relevant for both continents. These were put under three main call pillars, namely Renewable Energies, Interfacing Challenges and New Ideas. Out of more than 100 applications submitted, 17 research consortia each encompassing research groups from both continents are currently being mutually funded with European and African government grants for a period of up to 3 years.

Contribution to R&D

- Showcase for a multilateral, Europe-Africa-funding measure, where no in-kind provision is made by the partners, but cash is provided instead.
- A research infrastructure (secretariat) as support for the call activities was set up, based on mutually developed ideas and guidelines; discussion on the continuation of this structure on the basis of the national states budgets are ongoing.
- Research activities with a high focus also on Africa specific needs and research priorities are being funded
- The “proof-of-model” is available for a multilateral Africa-Europe joint cash funding activities, which could become the gold standard for future similar research funding activities (rather independent of the selected thematic areas)
- Approval and support by both commissions (EC and AUC) as well as the States involved exists, which opens opportunities for further development and a relaunch of activities

• CAAST-NET PLUS

Context and Objectives

CAAST-Net Plus (CN+) is a network project of 25 partner organisations from all over Europe and sub-Saharan Africa, working together to support bi-regional cooperation in research and innovation. The project will run from 2013 to 2016 and is supporting the development of the Joint Africa-EU Strategy (JAES) and the Africa-EU High Level Policy Dialogue (HLPD). CN+ is encouraging more and better bi-regional STI cooperation for enhanced outcomes around topics of mutual interest, and particularly in relation to the global societal challenges of climate change, food security and health. It's fostering discussion among stakeholders for gathering informed opinion and experience about the bi-regional cooperation process, formulating and disseminating it in such a way as to be admissible to the formal bi-regional STI policy dialogue process and to programme owners.

Contribution to R&D

- informing the bi-regional policy dialogue for mutual learning and awareness

- building support for coordinated and innovative approaches to bilateral funding of bi-regional cooperation around global challenges for development
- providing dedicated mechanisms to encourage bi-regional research partnerships addressing global challenges of mutual interest
- brokering the public-private relationship to foster improved uptake and translation of bi-regional research partnership outputs into innovative technologies, goods and services

- **RESEARCH AND INNOVATION NETWORK FOR EUROPE AND AFRICA (RINEA)**

Context and Objectives

In response to the challenges of the call for proposals for a joint EU-Africa coordination and support project in the field of research and innovation, and addressing the STI priorities of the 2014 Summit, RINEA proposes three specific, measurable and complementary objectives, each addressing a core component of the bi-regional STI partnership which when achieved contributes to the overall goal of reinforcing and enriching the Africa-EU partnership in STI. The consortium encompasses those European and African countries which also actively participate in the HLPD-bureau, the implementing office for the HLPD, thereby allowing for a direct translation of political discussions on the HLPD level into measures to be developed and implemented by the RINEA consortium upon request by the HLPD.

Planned Contribution to R&D (2015-2017)

- Strengthening the quality and quantity of partnerships between research and innovation actors in EU Member states, in Associated Countries and in countries in Africa.
- Encouraging transnational coordination of programmes and policies for international cooperation in STI for greater coherence, joint ownership and resource efficiency.
- Supporting and enriching formal and informal processes of bi-regional STI policy dialogue between the EU and Africa

- **INCO-NET MEDSPRING**

Context and Objectives

The INCO-Net MEDSPRING (FP7), as its precursor MIRA (FP6), aims at strengthening the bi-regional dialogue on research and innovation between the EU and its MENA neighbourhood region. Consisting of 28 consortia members from 18 countries, the network informs the High Level Policy Dialogue between the two regions on common interests in STI and opportunities for strategic cooperation. It focuses on the three major 'societal challenges' for the MENA region, i.e. (renewable) energy, water scarcity, and high quality affordable food, and their inherent nexus. Cross-cutting activities relate to capacity building for international cooperation management, brokerage events for knowledge transfer, and policy and mapping initiatives. The project also vigorously facilitates the dialogue between science and civil society, especially through its online fora.

Contribution to R&D

The network contributes to evidence based strategic decisions of policy makers, optimizes the matching of identified common research interests, and ensures coherence of cooperation agendas with strategic priorities in the partner region and its countries. MEDSPRING builds capacities in the scientific subject areas (Energy, Water, Food) as well as in research management; and it initiates bi-regional and private-public market-oriented cooperation by brokerage events for researchers and young entrepreneurs ("idea carriers").

- **EURO-MEDITERRANEAN WORKING GROUP INNOVATION: FRAMEWORK AND ELEMENTS OF A JOINT REGIONAL ACTION ADDRESSING THE EURO-MEDITERRANEAN INNOVATION AGENDA**

Context and Objectives

As proposed in the FP 7 funded project Inco-Net MIRA/Medspring, a Euro-Mediterranean an "Innovation Working Group" has been established. First meetings and preliminary talks have been organized (Euro-Mediterranean Innovation Workshop, held on 28 April 2014 in Brussels as well as a

follow-up meeting with the international financial institutions) and led to a draft paper called "Framework and elements of a joint regional action addressing the Euro-Mediterranean innovation agenda". The paper/action plan has been approved by the EU-MED GSO, that met on 25 September 2014 in Brussels. The EU-MED GSO agreed that a follow-up event with all stakeholders (particularly industry ministries and representatives, including SMEs) should be organized.

Contribution to Development Cooperation

The idea behind the Innovation Agenda/Action Plan is to guide and further develop the high innovation potential of the youth in the Southern Mediterranean region as economical and social innovation will have an impact on overcoming societal challenges. The need for developing the components of the innovation ecosystem is widely known, closer linkages to the fields of applied research and academia-industry partnerships are necessary. The Action Plan focuses on four activity schemes, two of which directly address activities that could be funded through European Development cooperation: (1) Structural regulatory measures and (2) SME funds and private sector development.

• BILAT SHERACA PLUS

Context and Objectives

Considering Egypt's research and political landscape, and with the aspiration to address the current challenges of STI cooperation, ShERACA+, is designed to support the institutional dialogue and foster the collaborative activities between Egypt and the EU in the fields of research and innovation. ShERACA+ builds on the activities and the lessons learned from the first BILAT project (ShERACA) while taking the EU-Egypt partnership a step further towards a sustained partnership in Horizon 2020. ShERACA+ denotes the continuation of the existing efforts while complementing it with broader ranges of activities anticipating future needs.

ShERACA+ overall objective is to support the policy dialogue and contribute to the definition and implementation of joint strategic agendas for research, development and innovation between the European Union and Egypt. The specific objectives of the ShERACA+ derive primarily from the analysis and recommendations of the recent review study of the EU-Egypt S&T cooperation, the lessons learned from the first BILAT project (ShERACA), and the priorities identified in this call for proposals.

Contribution to R&D

Through its various activities, ShERACA+ will positively impact EU-Egypt STI cooperation capitalizing on the existing partnerships and programmes and paving the way towards new joint collaborative activities based on specific mutually identified societal challenges. ShERACA+ aims to emphasize the importance of maximizing the results and impact of collaborative efforts by focusing on several specific societal challenges and industrial technologies as defined in H2020.

• BILAT TUNISIA

Context and Objectives

The EU-financed project with Tunisia (FETRIC-Future European Tunisian Research Innovation Cooperation) - aims at strengthening the bilateral cooperation between the EU and Tunisia, by enhancing synergies between S&T EU and Tunisian actors, projects, and programs. FETRIC adopts the Horizon 2020 challenge-based approach to respond to societal problems in both Tunisia and the EU, especially in these fields:

- Water resources
- renewable energy and energy efficiency
- high quality affordable food

The project objectives are:

- Paving the ground for the future STI Cooperation Agreement between Tunisia and the EU and building synergies among existing S&T projects and programs between EU and MPC

- Tackling the Horizon 2020 societal challenges: bringing together resources and knowledge across different fields and innovation chain
- Reaching relevant public authorities, funding bodies, researchers, research managers, innovation-oriented SMEs and industry, other relevant EU organizations and the public at large.

Contribution to R&D

The FETRIC project is expected to contribute to the further development of R&D in Tunisia as follows:

- Benchmarking national STI policies and strategies, Mediterranean governance reforms and cooperation,
- Organizing roundtables and working groups focused on RD&I issues in order to identify successful models for supporting innovation and coping with the main societal challenges,
- Strengthening Tunisian researchers and innovative entrepreneurs' capacities.

• INCONET EECA, INCONET CASC, INCONET CA

Context and Objectives

The EU-projects IncoNET EECA, CASC and CA underline the need that the STI policy should be embedded into other policies in order to ensure coherence of the respective implementation instruments, and to exploit the synergies of complementary actions, in particular with DCI.

Contribution to R&D

Although DCI does not include support to STI as main target, the projects' results show that it could be used to improve the STI system, i.e. via capacity building (e.g. infrastructure and human potential development; support of the NCP systems). The *White Paper* prepared under the projects already includes a large number of priorities for actions in the field of capacity building that could possibly be supported by DCI, for example:

- Training activities
 - In national and international policy making;
 - In managing research institutions;
- Setting up/improving procedures
 - For STI statistics;
 - In addressing societal challenges.

Joint activities such as IncoNET projects can act as facilitators in setting up capacity building actions under the DCI: The policy dialogue supported by these projects can contribute to the inclusion of STI related activities in the national priorities to be supported by DCI; in addition and moreover, these type of projects can mobilize the necessary expertise for setting up eligible DCI actions.

• ENSOCIO-LA – STRATEGIC, SUSTAINABLE R&I COOPERATION WITH LATIN AMERICA (CLIMATE ACTION, RESOURCE EFFICIENCY AND RAW MATERIALS)

Context and Objectives

As a Coordination Action funded by FP7, the ENSOCIO-LA project aims at establishing sustainable and integrated research and innovation cooperation between the EU and Latin American Countries (also including the Caribbean region) in the environmental field, namely in climate change, resource efficiency and raw materials; ENSOCIO-LA will also help improve dissemination and the exploitation of research results in this area by different user groups. This will be achieved through networking and twinning of existing multilateral and bilateral projects funded by different sources, through the development of efficient interaction schemes between science, industry and users and the joint elaboration of future research priorities and joint activities.

Contribution to R&D

The project objectives will be pursued with the following actions:

- Identification of tools and instruments for enhancing cooperation at a more strategic level and exploitation of results
- Concrete proposals for upgrading the joint research and innovation agenda at more strategic levels
- Linking major EU projects or clusters with projects/networks in the region and with users
- Initiation of new, innovative bi-regional initiatives, which address societal challenges with high bi-regional relevance. This activity includes the identification of potential sources of funding and mobilisation of financial means from various sources. In this context, especially funding programmes for development will be carefully analysed and where appropriate, matched with the planned initiatives.

3. The German AIM initiative: Facilitating implementation & market dissemination of innovative R&D project sustainability solutions for developing and emerging countries

Context and Objectives

International sustainability R&D funded by the German Federal Ministry of Education and Research (BMBF) is often supposed to contribute to the improvement of the living conditions of local population beyond excellent scientific results. Such projects should also opening up new opportunities for German environmental technologies and the multidisciplinary cooperation between science, government and business. The practical implementation of the innovative technical and conceptual solutions developed in the partner countries is decisive to achieve these objectives. To support the chances of implementation and dissemination, BMBF associated the assignment “Assistance for Implementation – AIM” to two of its funding programmes for international cooperation on natural resources management and protection.

Contribution to R&D

AIM experts are accompanying and guiding the scientists to remind them of side aspects that are important for market introduction, e.g., (i) relevant governmental policies on different planning levels, (ii) enabling regulatory framework, (iii) system technical permitting, (iv) facilitating system management and operation by identification of possible operators and by capacity building, (v) finance mobilization for market based application, etc. Furthermore, they encourage the projects to orient some of their R&D activities in science based tasks that can be enabling for market introduction of new innovative solutions: regulatory agencies often needs scientific proof to revise a standards or certify a technical solution and financiers require proof that the technology will work well at full scale and in a market context.

4. German cooperation with developing countries

- **SUSTAINABLE MANAGEMENT OF LAND AND WATER RESOURCES IN UZBEKISTAN -THE BMBF-FUNDED ZEF/UNESCO PROJECT IN THE ARAL SEA REGION**

Context and Objectives

In view of the Aral Sea crisis, from 2001-2011 a BMBF-funded research and education project was implemented by the Center for Development Research (ZEF) in close cooperation with UNESCO, University of Wuerzburg, and the state University of Urgench, Uzbekistan (UrDU), to provide sound science-based policy recommendations for sustainably improving the natural resource use in Uzbekistan.

Contribution to R&D

- Necessary infrastructure (office, library, research and GIS labs) was set up at the premises of UrDU
- 53 Ph.D. students (50% from UZB), 105 local M.Sc. and 90 B.Sc. students completed their research in the project.
- 1 PhD graduate from Uzbekistan was awarded a junior professorship.
- The project assisted in the establishment of a UNESCO Chair for Sustainable Development at UrDU.

- The project contributed to governmental declarations, received letters of intent from national institutions as well as invitations from national organizations and international donors to collaborate further with the project consortium and implement some of its findings.
- The project initiated the founding of a local NGO KRASS with project alumni staff (www.krass.uz), which continues offering science-based rural support services, now that the project ended.

- **FORMULA C – INTERNATIONAL CENTERS OF EXCELLENCE IN PERU**

Context and Objectives

In January 2014, the Peruvian government launched the FORMULA C Program, an initiative to implement international centers of excellence in science and research. By the collaboration of Peruvian and international STI-Institutions and involving economic stakeholders, these centers are meant to contribute to meet fundamental social, economic and environmental challenges of the country.

The Federal Ministry of Education and Research (BMBF) supported the elaboration of concepts for several Centers of Excellence applications providing mobility funds for German-Peruvian researcher groups. The aim is to increase the participation of German research institutions in the activities of the future Centers of Excellence in the priority areas Biodiversity, Biotechnology, Marine Research and Water-Management focal. Those topics are closely related to conventional Development (Aid) issues like sustainable use of biodiversity, water supply or natural disaster protection.

Contribution to R&D

- Networking between STI and Development institutions
- Social, environmental and economic challenges lead to scientific questions and applied solutions
- Generation of added value for Peruvian enterprises by research-based knowledge
- Combine forces and create interfaces between different governmental areas, like Development, Education and Research, Environment etc.
- Improvement of bi-regional and interdisciplinary research partnership

- **THE BIODIVERSITY NETWORK BONN “BION”**

Context and Objectives

Since 2013, BION – the Biodiversity Network Bonn connects 55 organizations located in Bonn and surroundings including UN organizations, Federal and State Ministries and Agencies, Universities and Research Institutions, NGOs, , as well as e.g., the City of Bonn. Funded by the German Federal Agency for Nature Conservation with Funds from the Ministry for the Environment, the interdisciplinary partners address topics such as Basic Research, Monitoring and Assessment, Capacity Building, Ethics, Societal Impact, Biodiversity and Human Development, or Public Awareness. In September 2014, the 1st international BION conference brought together 300 participants from academia and practice from 38 countries and 112 institutions.

Contribution to R&D

Several project initiatives have been developed such as ...

- a Biodiversity Conservatory for on-farm conservation of local genetic resources,
- a program for joint practical formation of “conservation horticulturalists” targeted at applicants from South America and Africa,
- the development of automated multi-sensor biodiversity monitoring stations and
- a scientific study on Biodiversity and Cultural Heritage in NW Peru.

- **BILATERAL RESEARCH PROGRAMMS AND RESEARCH FUNDS**

Context and Objectives

Bilateral Calls for Proposals of the BMBF are designed to strengthen Germany’s and the partner countries cooperation in research Programmes focus on key topics of mutual interest (particularly in

subject areas that are addressed in the Federal Government's High-Tech Strategy and internationalization strategy and the relevant matching strategy of the partner countries; furthermore, the programs should be in line with the priority areas of the EU Framework Programme for Research and Innovation Horizon 2020). Thus mutual benefit is created. The programmes are bilaterally designed, the projects are chosen through bilateral evaluation processes (external evaluation in both countries, bilateral evaluation committees) and are also funded by both countries. The focus of the research programmes usually lies in interconnecting researchers and their institutions and supporting their mobility. Also integration of SMEs in the R&D consortia is expressly desired in order to link up with the innovation chains. One successful example is the GERF (German-Egyptian Research Funds) that has been established in 2006/07.

Contribution to R&D

The bilateral research programs are designed in a way that they contribute to Germany's research priorities and strategies on the one side, but also to strengthening the research capacities and human capital of the partner countries as well. Research topics and outputs with results that are visible and palpable for the local community have priority. All programs designed and executed in line with the principles of co-ownership. In addition to the direct benefits on the research level, capacity building on the level of program management is carried into effect.

• TRANSNATIONAL EDUCATION: JOINT UNIVERSITIES, MASTER-/PHD-PROGRAMMS, CENTRES OF EXCELLENCE

Context and Objectives

Joint bi-national programmes and branch campus initiatives of GER Universities with developing countries pursue a distinct approach of partnership and matching with national and local development agendas.

Joint Master-/PhD-Programs are financially supported by two GER ministries (BMBF, BMZ) and the relevant ministry of the partner country.¹ Usually, the programs target nationals and students from third countries in the region, plus GER. Curricula are adopted to local / regional development agendas, with emphasis on employability.

Several GER university run international branches that offer undergraduate and, some, postgraduate courses.² While operating as private or public legal entities under the host country's legislation, curricula and part of the management are provided by the GER institution. They are usually geared towards applicable skills and employability, and often include practical trainings with GER companies.

GER universities also maintain institutional partnerships with universities in the Global South, forming Centres of Excellence that attract students from the macro-region (e.g. SSA). Funding: GER Federal Foreign Office.

Contribution to R&D

- Raising the next generation of researchers and academics for the national HE and STI systems
- Strengthening QA in national STI systems
- Skills transfer in HE and R&D management, curricular development, research policy formulation
- Capacity building on mid / high level employment segment
- Providing basis for entrepreneurial initiatives in the host countries, creation of job opportunities
- Internationalising HE and STI for mutual benefit (approximation of marginalised science systems to global knowledge production)

¹ e.g. IUSD - MSc Integrated Urbanism and Sustainable Design (MENA region)

² e.g. GUC in Egypt, GJU Jordan, GUTech Oman, VGU Vietnam, DKU Kazakhstan, DMHT Mongolia, Pan-African University Algeria

• SUPPORT OF ACADEMIES OF SCIENCES

Context and Objectives

BMBF supports bilateral networks between German academies of sciences and those of the developing world. Activities reach from network funding, over capacity building to the establishment of new joint academies of sciences.

Contribution to R&D

The linking up of high-class researchers, that are members of the relevant institutions, and of strengthening the institutions themselves are main steps towards the advancement of science and research capacity and excellence in the developing world. Academies of Sciences are 'think tanks' on ethical and scientific values in a society, the pool knowledge independent from ideologies (political or religious) constraints. Through supporting the role and standing of these institutions can help to lead development into a fruitful direction.

Examples are the support for the Arab-German Young Academy of Sciences and Humanities (AGYA), the support of the Inter Academy Panel (IAP) and the cooperation between the Network of African Science Academies (NASAC) and the German Leopoldina.