German-African Cooperation in Education and Research

BMBF Africa Days
16 – 18 March 2014
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Africa is a continent of opportunity, a fact impressively demonstrated at the Africa Days hosted by the German Federal Ministry of Education and Research (BMBF) in Berlin from 16 to 18 March 2014. Of the 600 plus people who took up the invitation to attend, over a third came from Africa. This testifies to the great interest among the research communities in both Germany and Africa in working together on future-focused research topics.

Education and research cooperation between African states and Germany has gained in importance in recent years. In particular, contact between the two sides has been fostered by the German government’s Strategy on the Internationalisation of Science and Research launched in 2008.

The Africa Days were used to showcase current and future BMBF research initiatives conducted in cooperation with African partners. The event was also a forum for interdisciplinary exchange, with some 450 experts discussing research questions and evolutionary issues in workshops focusing on bioeconomy, health, the environment, education and transformation.

The close cooperation seen in recent years and the valuable input from the Africa Days provide the basis for a new cooperation approach in the form of Germany’s new Africa Strategy for Education and Research, which is to be announced soon. Working with partners in Africa will be one of the focal points of BMBF activities in the coming years – one that offers huge opportunity for all concerned.

I should like to thank the participants who attended this year’s Africa Days for their valuable input and for enriching German-African education and research cooperation in the process. This is certainly a course we intend to pursue.

Prof. Dr. Johanna Wanka
Federal Minister of Education and Research
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I. German-African Cooperation in Education and Research, and the BMBF Africa Days

The German Federal Ministry of Education and Research (BMBF) has cooperated with African partners for more than thirty years. And since the launch of the German government’s Strategy to Internationalise Science and Research in 2008, BMBF initiatives involving African partners have increased several-fold. The ministry’s engagement has expanded to take in 39 of Africa’s 54 countries, with 62 percent of its cooperation activities launched in the past seven years. Research work has seen the two sides focus on the environment and climate change, health, bioeconomics, societal development, resource management and raw materials, transformation and the cross-cutting issue of innovation. In education, work has concentrated on post graduate training and vocational initial and further education and training.

Cooperation between BMBF and its African partners has given rise to a range of flagship projects in research and education. These tackle global and regional challenges, and have a capacity-building effect.

The BMBF used the Africa Days to showcase and cement current flagship projects and planned research initiatives in cooperation with African partners in selected focus areas. Four workshops in which experts discussed the following topics formed the core of the event:

- **Bioeconomy with Africa**
- **Research networks for health innovation**
- **Regional Science Service Centres for Climate Change and Adaptive Land Management in Africa (SASSCAL and WACAL)**
- **Transformation of societies: How can education and research contribute?**

The aim of the Africa Days is to:

- Provide a platform for exchange between stakeholders in current BMBF initiatives
- Provide stimulus and draft implementation recommendations for meaningful networking on focal topics
- Identify knowledge gained from BMBF initiatives
Look at the future of common focal issues in education and research, draft recommendations from German and African experts, and assist in the formulation of the planned BMBF Africa Strategy on Education and Research.

The Africa Days take in a range of issues to enable dialogue both within and between disciplines. The workshops therefore also include cross-cutting, interdisciplinary topics alongside their main focus issues.

The workshop outcomes on cross-cutting issues were presented at a plenary meeting, and were also discussed as part of a panel discussion with representatives from the expert workshops.

They were then recorded in a final document which was presented at the closing event and handed as a set of joint recommendations to Johanna Wanka, German Minister of Education and Research.
Participants by region

African countries

* 172 participants from African countries

Participants by organisation

African countries

Germany*

* 444 participants from Germany
II. Workshop Results

Bioeconomy with Africa

Some 130 African and German participants from research partnerships under the BMBF GlobE Global Food Security initiative discussed the issue of a bioeconomy with Africa. The aim was to strengthen existing research cooperation with African countries and identify potential for extending such cooperation to take in the bioeconomy as a whole. Looking at the topics of resources, biomass and value creation, crop-yield stability and growth, and urbanisation, different working groups tackled different questions in respect of research needs across Africa.

On the topic of resources, the challenges of water use efficiency, water quality and water management were taken up. Ways to maintain and achieve sustainable soil fertility management as well as biodiversity conservation in farming were also discussed, with particular focus on potential additions to the range of crops and livestock farmed. Promoting neglected and under-used varieties played a key role in the talks.

Natural resources are also directly affected by other factors, including urbanisation, industrialisation, land and water use, and soil erosion. Global issues such as climate change, population growth, globalisation, poverty and governance also impact access to natural resources. If the diversity and systematic coupling of these influencing factors are to be taken into account, the resulting related research must take an holistic approach.

The working group on biomass and value creation looked at the use of renewable resources in Africa, taking in use conflicts, value chains, coupled and cascaded use, and biorefineries. Further discussions focused on bio-based economic growth and how non-food agriculture impacts food security. The role of intensified biomass production in regional economies was also addressed.

The findings showed that biomass production in Africa must be looked at with a view to its impact on food production and food security, local and global market conditions, and prevention of nutritional and health-related deficits. The possibility of using increased biomass production to achieve an intensification of food production while reducing nutritional and health deficits was cited as especially positive, as were the welcome effects on income and the labour market. Workshop participants also noted the beneficial impact on the environment if increased biomass production goes hand in hand with agricultural diversification.

To achieve optimal value creation, access to local and regional markets for commercial and subsistence farmers must be improved in order to create new markets. In addition, it was noted that value chains need to be established and extended in Africa through to the level of marketable products. This would see African countries moving away from their current status as raw material suppliers and integrate them into a global bioeconomy. As a result, the African bioeconomy would create new income sources and assist the fight against poverty. If this is to be achieved, a bioeconomy network must be created, capacities must be built and boosted, and relevant stakeholders included in these efforts.

The working group on crop-yield stability and growth looked at innovative technologies and improved processes for the reduction of post-harvest losses along the value chain. In-depth discussions were held on potential research approaches for crop-yield growth using locally adapted cultivation and harvesting methods, and taking into account climate change and the resilience of agricultural production systems.

Participants concluded that limited soil fertility, climatic conditions, poor agricultural practices, limited access to markets and low innovation rates have a negative impact on productivity in Africa’s farming systems. In the face of climate change, improved resilience in farming – such as drought stress tolerance
and resistance-building – is a key factor in reducing the risk of crop failure. Technical solutions such as special irrigation strategies and climate-related early warning systems were also put forward as ways to stabilise crop yield. Integration of local knowledge and of innovative cultivation methods and technologies can lead to demand-driven, sustainable yield growth.

Taking up the topic of urbanisation, issues surrounding the accelerated growth of urban settlements in Africa were discussed. This included both the opportunities that come with increased urbanisation and its associated problems. Options for agricultural resource use in urban regions and the role of physical infrastructure and technical innovation for food production in African conurbations were also discussed. Participants also looked at the potential for bio-based value creation in the face of continued change in the structure of demand.

Summing up, it was concluded that ongoing growth of urban conurbations in Africa poses a huge problem. One solution is the development of satellite towns and cities on the basis of a bioeconomy model. Settlement of crafts, trades and small businesses in urban and peri-urban regions along with knowledge exchange between rural and urban populations are vital to successful urbanisation, while innovative ideas are needed in the agricultural sector to establish new value chains. Also, new regulation and certification systems must take hold in order to create marketable, high-quality products and brands. Strengthening technical infrastructure at local level, further development of social infrastructures (such as empowering women and integrating them into the value creation process) and the improvement of communications and information systems could all have a positive effect on the urbanisation process.

The Bioeconomy with Africa workshop was the first step towards developing a research model. As a next step, the knowledge gained in that workshop will be built on to allow consideration of additional issues. One of these is the question of how greater industry involvement can be achieved. The social science aspects will be looked at as part of a subsequent process.

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Biography

**Joachim von Braun** currently co-chairs the Bioeconomy Council with Christine Lang. The Council was jointly established in 2009 by BMBF and the former BMELV as an advisory body to the German government. Braun is a professor of economic and technological change and Director of the Centre for Economic Development (ZEF) at the University of Bonn. From 2002 to 2009, he was Director General of the International Food Policy Research Institute (IFPRI) in Washington D.C. in the US.

His work currently focuses on:
- Agricultural and food policy
- World nutrition issues
- Natural resources (particularly water and land)
- Bioeconomy
- Development policy
- Research and technology policy

In 2005, Braun received an honorary doctorate from the University of Stuttgart-Hohenheim.

Other awards:
- Bertebos Prize from the Swedish Academy of Agricultural Sciences (2009)
- Justus von Liebig Award for World Nutrition (2011)
Research networks for health innovation

Health is a key development goal.
Research is a key development driver.

These two aspects shape the new BMBF initiative, Research Networks for Health Innovation in Sub-Saharan Africa. The overarching aim is to intensify health research cooperation with developing countries in Africa. The initiative contains both research and capacity-building components developed by national and international funding organisations, representatives from civil society and – first and foremost – African experts and decision-makers. The German National Academy of Sciences (Leopoldina) played an active role in all phases of the initiative’s development.

As a result of the selection process in the public call for tender announced in January 2013, eleven consortia are currently receiving funding in a six-month preparation phase. This gives the selected consortia the opportunity to further develop their respective models for an African-German health research network. The finalised models will be used to select the final candidates in early 2015. It is expected that between three and five consortia will receive funding for a period of five years.

The BMBF Africa Days were held at the start of the preparation phase involving the eleven consortia. This is why the workshop on health research largely focused on providing information and advice for those consortia in respect of the main requirements and the aims of the initiative. Apart from the immediate research questions, these involve issues regarding research management, building and boosting local capacities, and integration into the respective research and health environments in the African countries concerned. The workshop was organised into blocks which focused on associated topics, together with expert presentations and in-depth discussions. The consortia also had the opportunity to introduce themselves and talk about their planned activities.

The 108 workshop participants comprised German and African members of the research consortia, representatives from other ministries, research funding organisations and African embassies, and staff from development cooperation, multinational and non-governmental organisations.

One of the key components of the workshop involved the kick-off presentations made by Carel Ijsselmuiden of the Council on Health Research for Development (COHRED), Garry Aslanyan and Olumide Ogundahusni of the World Health Organization Special Programme TDR, and Jackie Olang from the Network of African Science Academies on:
- Building and boosting local capacities
- Cooperation and agreements between German and African project partners
- Sustainable integration of research consortia in their local environment
- Transfer of research knowledge to local and regional health systems in Africa

These topics were the subject of animated debate in the subsequent panel discussion. The main conclusions going beyond questions of health research were as follows:

- The research network takes in various levels and is not regionally restricted. It links North and South, giving them equal status and shared responsibilities, and requires ongoing effort and availability of resources. But to be successful it also requires not just networking between researchers, but cooperation between different types of funding organisations.
- Capacity building and boosting activities call for long-term commitment and engagement, and for common ethical principles among the research partners. Together with the research aspects and aims, this can lead to a broader impact and
integrate political and technical institutions at national level. Another factor for success involves affording the African members of the consortium a coordinating, responsible role.

The workshop was moderated by Volker ter Meulen (Co-Chair of the Inter Academy Panel (IAP), and ex-president of the German National Academy of Sciences (Leopoldina)). Debrework Zewdie (World Bank) collated and presented the workshop results.

Ethiopia-born Debrework Zewdie is a committed, dynamic and inspiring individual, who has spent the past 35 years working in international development, specialising in the cross-sectoral effects of AIDS. She has led increasingly complex development programmes, including national programmes in Africa and initiatives of international bodies such as the World Bank Group and the Global Fund to Fight AIDS, Tuberculosis and Malaria. For example, as Deputy Head of the Global Fund, Zewdie was co-responsible for its restructuring in 2012 which led to new donor pledges and strengthened the organisation to tackle future challenges. And as Chief Operating Officer, she tightened up the structures of the Global Fund and headed the far-ranging internal reforms that culminated in the current transformation programme.

In 2002, at a time when only a few donor countries supported the development of large-scale national programmes to combat AIDS, Zewdie headed the World Bank’s multinational anti-AIDS campaign with a USD 1 billion budget. The programme changed attitudes towards AIDS funding and enabled the first-ever universal and cross-cutting direct financing programme for civil society and the private sector. She was instrumental in getting the AIDS agenda into the arena of World Bank development activity, and played a key role in developing the first World Bank Global AIDS Strategy and the Global AIDS Action Programme. As the global founding coordinator of UNAIDS, Zewdie was instrumental in making the cooperation structure of the UNAIDS family a functioning reality, thus fostering strong partnerships between the organisations involved. She is committed to improving women’s health and was the founding vice president and member of the Society for Women and AIDS in Africa (SWAA). In her diverse roles as a researcher, strategist, manager and policy-maker, she has achieved ground-breaking success. She is highly thought of for her ability to bring many different stakeholders together with the aim of finding and implementing development solutions.
Regional Science Service Centres for Climate Change and Adaptive Land Use in Africa (SASSCAL and WASCAL)

The aim of the Regional Science Service Centres in West and Southern Africa (RSSC) initiative is to support Africa, the continent most affected by climate change, in establishing suitable research structures. African countries are to be placed in a position in which they can make sound decisions for themselves in respect of land use and water supply. Working with partners from ten countries in western Africa and five countries in southern Africa, BMBF has established a regional centre of excellence in each region.

The West African Science Service Centre for Climate Change and Adaptive Land Use (WASCAL) takes in Benin, Burkina Faso, Côte d’Ivoire, Germany, Gambia, Ghana, Mali, Niger, Nigeria, Senegal and Togo. Countries belonging to the Southern African Science Service Centre for Climate Change and Adaptive Land Use (SASSCAL) comprise Angola, Botswana, Germany, Namibia, Zambia and South Africa. The centres are designed to:

- Create sustainable infrastructures which boost Africa’s research and staffing capacities
- Enhance and combine available research capacities, closely integrate them with local structures and build new research capacities where needed
- Advise local, regional and national land users, planners and policy-makers in their decision-making processes
- Foster the exchange of scientific expertise between researchers in western and southern Africa, and between them and researchers in Germany

The BMBF Africa Days brought representatives from SASSCAL and WASCAL together for the first time, enabling intensive exchange between the two. Some 70 high-ranking representatives from African and German policy-making and research took part in an expert workshop to discuss current trends and opportunities to expand the two centres in a sustainable way. Talks on cross-cutting issues produced the following ideas for future cooperation:

**Networking**
Global trends such as climate change, resource conflict, food security and the associated land use conflicts pose ever-greater challenges for many regions, not least for Africa. These challenges cannot be tackled by a single country or nation alone. Rather, supra-regional, transnational approaches are needed. With the creation of the SASSCAL and WASCAL centres of excellence, an initial step has been taken towards intensifying and expanding climate research in Africa. Both centres will now work more closely together to pursue their goals, integrating new regional and/or supra-regional partners, and entering into new (strategic) partnerships. Cross-border integration of research in the two regions will enable effective use of their combined capacities, especially with regard to vocational education and training and use of existing infrastructures. It will also support international research networking activity.

The potential of the SASSCAL and WASCAL regional centres can only be fully exploited if the two are aligned in terms of their over-arching strategies and visions, and in respect of their specific research goals, methods, data management practices, and so on.

**Making the centres sustainable**
The two centres will provide robust infrastructures on which to build and boost Africa’s capacity to perform its own research. As a follow-up to the current funding provided by Germany, long-term financing from partner countries must be secured to ensure that research continues. Acting in a strategic partnership, the two centres will hold talks with African stakeholders and get them to agree to support them via substantive, financial and/or infrastructural means. In addition, common research areas will be expanded and established to generate third-party funds and other forms of support over time.
Excellence
Both centres are in the process of becoming outstanding centres of research excellence and will serve as think tanks with international reach to develop sustainable land management, climate change mitigation and climate change adaptation solutions. One of their key functions will be to act as service centres which process and distribute research findings for users and decision-makers in their regions.

Education
One of the centres’ main responsibilities involves the training of young scientists from partner countries. By building and boosting local capacities, skills and expertise will be developed and expanded to assist in the search for and implementation of climate change adaptation solutions, and to mitigate the impact of climate change on environmental and economic resources. The graduate schools housed in the two centres, along with expert workshops and training programmes for farmers, assist in building a knowledge society in Africa. This and the student exchange programmes between the partner countries will form an integral component of future cooperation activities at the two centres.

Memorandum of Understanding
With a Memorandum of Understanding signed at the end of the BMBF Africa Days, the two centres entered into a partnership in which they will pursue their goals jointly. Flying the banner of ‘research conducted with rather than in Africa’, the partnership takes in many promising projects, ranging from initial and further vocational education and training, to climate change consultation, to innovative research projects.

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Biography
Prof. Dr. Norbert Jürgens is the Director of the Herbarium Hamburgense and Head of the Research Group on Biodiversity, Evolution and the Ecology of Plants (BEE) at the University of Hamburg.

He is currently Coordinator of Research Activities at the Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASSCAL), whose work includes building infrastructure in Angola, Zambia, Namibia, Botswana and South Africa with BMBF support.

From 2000 to 2009, he coordinated a broad-based study, BIOTA AFRICA, on changes in and sustainable use of biodiversity in Africa. Jürgens also coordinates BMBF’s The Future Okavango project, which looks at ecosystem services and development opportunities in the Okavango Basin.

From 1994 to 2000, he held a professorship at the University of Cologne, where he co-initiated the Special Research Unit on Arid Climate, Adaptation and Cultural Innovation in Africa (SFB 398 ACACIA). His research work also takes in the evolution and ecology of drought-adapted plants, deserts, desertification and global diversity observation.
Transformation of societies: How can education and research contribute?

With the social transformation underway in north-African countries, BMBF’s existing cooperation activities have taken on a new role, with the German government adopting a strategic approach to promoting transformation processes in the region. The debate on reshaping cooperation activities in education, science and research was taken up at the BMBF Africa Days event. Some 90 national and international participants from the worlds of government and science, and also from research and funding organisations tackled related questions in a workshop entitled “Transformation of societies: How can education and research contribute?”

The aim of the workshop was two-fold: to highlight the diverse cooperation relations with African countries, and to enable interdisciplinary exchange on key cross-cutting issues. The idea was to generate stimulus and create chances for cooperation with north-African countries, especially as regards the new strategic approach in the region.

The workshop was split into three discussion blocks:

1. Social transformation: From theory to project practice
2. Challenges and opportunities in academic and vocational education cooperation using selected examples from practice
3. Excellence in (north) African research areas and knowledge transfer

The discussion blocks were designed to allow comparison of experience gained in education and research cooperation activities with north-African partners with the experience gained in cooperation activities with partners in Sub-Saharan Africa.

In a round of talks following the workshop, core topics were agreed and documented in a set of joint recommendations. These were then separated into the following cross-cutting topics (see also Section 3).

1) Networking and linkage of BMBF funding initiatives

The introductory presentations made by the Centre for European Integration Studies (ZEI) and the Centre for Modern Oriental Studies (ZMO) highlighted the rising importance of social science research. In both presentations, it became clear that social transformation is a global process. In the first presentation, made by ZEI, it was shown that transformation research starts with ourselves and our own development, leading us to ask common questions and develop common research programmes. The ZMO presentation highlighted the fact that to be successful, research partnerships in Africa must take account of African cultures and epistemologies.

Recommendations:

- Base funding instruments on bottom-up networking activities, such as workshops and supra-regional and interdisciplinary forums
- Promote interdisciplinary research, especially by means of stronger inclusion of social science research which looks at social challenges and transformation issues

2) Sustainably designed research structures

In almost all the presentations, the speakers referred to the potential of ‘change agents’, meaning highly qualified young researchers, to assist in shaping social transformation. They are thus a key target group for activities aimed at achieving sustainably designed research structures. Another common thread was seen in the discussion regarding ownership and the importance of joint funding programmes. These points were especially stressed in the presentation on the German-Egyptian Masters degree course on Integrated Urbanism and Sustainable Design (IUSD) and the best-practice projects conducted by the German-Egyptian Research Fund (GERF).
Recommendations:

- Capacity building and boosting to utilise research results
- Consultation and advice services to strengthen research and innovation systems
- Capacity building and boosting among research managers at universities and research institutes
- Strengthening intercultural skills among researchers
- Develop culture and context-sensitive funding schemes

3) Excellence and African research areas

A central component of the talks on this cross-cutting issue involved the importance of trilateral funding structures to enable North-South-South cooperation. Ideas on this core topic of the workshop came from the presentation on the situation in Egypt and from those on the Arab German Young Academy (AGYA) and the African Institute for Mathematical Sciences Next Einstein Initiative (AIMS NEI) project. The discussions which ensued in response to these presentations showed that structural measures to link and build research excellence in Africa are intrinsically connected and thus support project sustainability.

Recommendations:

- Strengthen North-South-South collaboration, especially regarding intraregional cooperation
- Establish and expand excellence-promoting instruments such as fellowships and visiting professorships
- Step up cooperation in the use of research infrastructure

4) Education

One widely discussed aspect of this cross-cutting topic was the importance of improved cooperation between industry and science, with participants looking at opportunities for cooperation between research networks and technology clusters. The experience reported in connection with and the ensuing discussions on three projects – one on research cooperation between German industry and the Libyan University, the BRIDGE project on education and training as a remote service for the automotive supply industry in Tunisia, and a project on entrepreneurship and management skills for Egyptian graduates – gave rise to a range of ideas. These projects are all located at the interface between industry and science. Important stimulus came from the presentation on the Euro-Mediterranean University (EMUNI): Integrated Euro-Mediterranean Studies and Research Areas, which outlined the efforts of the EMUNI in creating a Mediterranean research area and the approaches involved in doing so.

Recommendations:

- Strengthen the interface between industry and science using demand-based, jointly-developed funding schemes
- Support knowledge and technology transfer
- Capacity building and boosting in the partner countries by means of dual study programmes
- Foster entrepreneurial spirit and start-up activity as part of the curriculum

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Dr. Mona El Tobgui is the Fraunhofer Senior Adviser Egypt and works closely with the Fraunhofer Headquarters in Munich. In this role, she supports the Fraunhofer Institute and its partners in establishing both business and cooperation relations. Her work focuses on research and innovation management as well as research and technology policy and strategy. This includes the promotion of coaching and mentoring in science, research and technology.

Tobgui has been involved in numerous national and international projects in the course of her research career. Working at Egypt’s National Research Centre (NRC), she developed research and development programmes in various science and technology sectors.

She played an active role in the development of the German-Egyptian Research Fund (GERF) and in the Egyptian Science and Technology Development Fund (STDF), which BMBF was also involved in. This latter fund is currently the most important pillar of German-Egyptian research cooperation.

In her current role as Fraunhofer Senior Adviser in Cairo, Tobgui paves the way for Fraunhofer institutes to enter into partnerships with Egyptian business and research organisations.

She is also actively involved in activities conducted by a range of organisations, not least the DAAD Cairo Academy and the Nile University with its NU100 entrepreneurship competition.
III. Outcomes Concerning the Cross-Cutting Issues

In addition to the expert exchange on the four focus topics, four cross-cutting issues were discussed in depth at the BMBF Africa Days. These four issues are not linked to any particular research questions, and are of key importance in the design of German-African education and research cooperation. The following areas had been identified in advance, which the experts then discussed both in their respective expert workshops and in a shared panel discussion and plenary session:

1. Networking and linkage of BMBF funding initiatives
2. Sustainably designed research structures
3. Excellence and African research areas
4. Education

Despite the broad range of research disciplines, the discussion on cross-cutting issues highlighted many similarities. On the whole, it can be said that Africa has some considerable catching up to do in respect of research and tertiary education because, for example, the gross university entrance rate is currently only eight percent.

What the four expert workshops showed is that in its cooperation activities with Africa, BMBF is currently focusing on the most important issues of the day. These global issues are of great significance, both for Africa and for Germany.

Info Box: Cross-cutting issues

1. Networking and linkage of BMBF funding initiatives
   • Where does it make sense to network and share research approaches and knowledge beyond the various BMBF funding topics, and how can cross-linkage be achieved?
   • Where is the greatest leverage for achieving a research network that goes beyond the focal topics being funded?
   • What structures could foster and promote this kind of networking?
   • Should exchange activities to promote networking be implemented within the various focal topics?
   • Are there any socio-economic issues that might be relevant beyond the various thematic areas? Are there any examples?

2. Sustainably designed research structures
   • How can existing research structures and knowledge transfer be further secured and expanded?
   • How might sustainable management of research results look once projects have been completed?
   • What role do research projects play in national, regional and pan-African development strategies?
   • What instruments would be useful in fostering dialogue between research and policy-making?
   • What instruments would serve the transfer of research results?
   • What options are available to maintain funded structures beyond the funding period?
   • Which fund-raising models are there?

3. Excellence and African research areas
   • How can African excellence in education, science and research be promoted and is regional integration (South-South) of research efforts a practicable approach?
OUTCOMES CONCERNING THE CROSS-CUTTING ISSUES

Info Box: Cross-cutting issues (continued)

- Are there any best-practice examples of systematic promotion of excellence?
- How can regional integration assist the creation of centres of excellence?
- How can a balance be drawn between achieving excellence and the necessary building of a solid research and education platform without the one detracting from the other?
- What role do research projects play in fostering regional research cooperation (South-South)?
- Which funding instruments are useful in promoting regional research integration (networking, mobility, data networks, use of shared infrastructures, etc.)?
- We want to link German researchers with the world’s best here in Africa. What role does policy-making play, and what role science?
- Thinking out of the box: what are the biggest future-focused issues in cooperation between science and research?

4. Education

- How can education structures in Africa be supported over time other than via the usual tertiary education cooperation instruments available to BMBF?
- What role can German-African research cooperation play in improving tertiary education?
- How can the transfer of research results be guaranteed in university education? How can the transfer of knowledge be secured? How can knowledge transfer structures be integrated into existing research activities?
To be successful, research partnerships must rely on:

- **Networking and exchange (research spans national borders)**
  - Greater international and regional exchange and networking between research institutes, especially to strengthen the as-yet poor South-South cooperation. International and regional networking should be seen as an opportunity for political integration (research diplomacy)
  - Interdisciplinary networking as a catalyst for innovative research outcomes, especially when it comes to fostering joint research on genuinely interdisciplinary topics such as the environment and climate change, urbanisation, demographic change and socio-economic issues
  - Strengthening cross-sectoral cooperation in research done with Africa

- **Research relevance (platform for broad political and social acceptance and support)**
  - Practice-related research (including in terms of policy consultation, support for development activities, and cooperation with industry)
  - Integration of academic research and training (knowledge and technology transfer, including the teaching of technical, administrative and soft skills)

- **Ownership by the African partners from the outset (a key prerequisite for sustainability)**
  - Timely securing of political support and sustainable institutional integration in the African partner countries. This includes a significant financial contribution from the partner countries themselves
  - Securing qualified staff through the creation of adequate career options (brain gain)

The results of the discussions were set out in a final document together with a set of joint recommendations. Klaus Müller (KfW Development Bank) assumed the role of speaker to announce the recommendations at a policy-making event the following day.

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**Biography**

**Dr. Klaus Müller** is head of the East Africa and African Union department at the KfW Development Bank.

His career began in 1995, when he joined the KfW Development Bank as a project manager. He moved to the Export and Project Financing department in 2000, where he was responsible for the energy sector. In the following year, he was appointed head of the KfW Office in Vietnam. On his return to KfW in Germany in 2005, he was assigned to the Strategy Department and took over as department head in 2006. A year later, he was made head of the business policy department at the KfW Group. From 2009 to early 2014 Müller was Regional Head of the East and West Africa/Sahel department.

Müller studied agriculture at the universities of Bonn in Germany, Kuala Lumpur in Malaysia and Edinburgh in the UK, and received a PhD on the subject of Agricultural Trade in ASEAN States.
**Info Box: Final Document**

The BMBF Africa Days provided a platform for representatives of German-African education and research activities to present their work and link up with one another. The event also gave the experts an opportunity to express and exchange their conceptual thoughts and ideas and look at how they might be integrated into future Africa activities. In four expert workshops, participants discussed the topics of climate change, bioeconomics, health, transformation and education. In those workshops, interdisciplinary recommendations were drafted on four cross-cutting issues. As a result, special focus will be placed on the following:

**The networking concept**
- Increase support for South-South activities at individual and institutional level
- Strengthen interdisciplinary dialogue – identify cross-linkages
- Support networking activities, for example with transnational research infrastructures, parallel socio-economic research, fellowships and visiting professorships
- Coordinate sectoral activities – make better use of synergies

**Sustainably designed research structures**
- Provide for sustainable structures through meaningful involvement of African partners early on (ownership)
- Establish inner-Africa utilisation strategies
- Encourage industry partners to invest in science and research
- Use research results for policy advice/consultation

**Excellence and African research areas**
- Strengthen regional integration of academic research and study
- Create appropriate career options (brain gain)
- Provide scope for research, especially for young scientists

**Education**
- Integrate education components in research funding initiatives (scientific, technical and administrative skills, soft skills)
- Include non-university research institutions in teaching and research
- Support knowledge and technology transfer in partner countries, for example through dual study programmes
IV. Closing Event

The BMBF Africa Days were rounded off with a closing event held on 18 March 2014. With over 600 participants, the aim of the event was to showcase the diversity of German-African research and education cooperation, take up ideas from the expert dialogue and focus on the future.

Speeches were held by Johanna Wanka, German Minister of Education and Research, former German President Horst Köhler and African Union Commissioner for Human Resources, Science and Technology Martial De-Paul Ikounga.

In her speech, Minister Wanka stressed the importance of education and research in social development:

“On being nominated for the Nobel Peace Prize in 1993, Nelson Mandela said “education is the most powerful weapon which you can use to change the world.” I think education and research are not just the key to solving many of society’s problems. We know that – it’s something we tell ourselves every day. They also provide a foundation for progress and further development, especially for a continent like Africa.

I firmly believe that by intensifying cooperation between international stakeholders in science and research, and in government and industry, and by combining our skills and expertise to form international knowledge networks, we will arrive at reliable results and workable solutions much faster. These are the prerequisites for effective and consistent policy-making. […]

The aim in all of this is the same one we strive for in education and research policy in Germany: for the most part, it’s about creating individual life chances. It’s about personal opportunity and perspectives for the future. This must be the benchmark in all we do. But of course it’s also about social capabilities, capacities and sustainable development.”

In his keynote speech, On the Impossibility of Speaking of Africa, former German President Horst Köhler suggested breaking free from stereotypes and working towards a new form of dialogue and cooperation:

“The impossibility of speaking of Africa cannot be allowed to silence our voices but must produce the will to find new ways to engage in dialogue and to cooperate. What German-African relations need is a new humility in our attitudes and a new passion in our actions. We need nothing short of a cultural shift in our Africa policy, a shift that reflects the historic transformations that Africa is currently undergoing and that gives a long-overdue acknowledgement to the continent’s global significance. A cultural shift of this kind requires effort from us: self-criticism, differentiation, patience, a little courage – and the political will to translate attitudinal change into action.”

Martial De-Paul Ikounga, African Union Commissioner for Human Resources, Research and Technology, emphasised the importance of integrating Africa’s education and research agenda:
“The African Union Commission welcomes Germany’s Africa Strategy on Education and Research, which takes account of Africa’s own structures, both in education and research and in science, technology and innovation. The support offered by the strategy will thus foster initiatives launched under the African Union’s STISA 2024 Strategy on Science, Technology and Innovation, the Action Plan for the Second Decade of Education in Africa with the creation of the Pan African University, and the Post 2015 Agenda. This is a welcome change from the existing practices applied by international agencies and donor countries which develop and promote programmes that do not necessarily match Africa’s collective vision of peace, prosperity and integration.”

The active participation of the Federal Ministry for Economic Cooperation and Development with a welcoming address from Parliamentary Secretary Thomas Silberhorn underlined the common willingness throughout the German government to achieve coherent, cross-cutting policy structures.
V. Outlook

The BMBF Africa Days provided an impressive showcase for the diversity of existing activities and the huge potential harboured in German-African cooperation on education and research.

With the guiding principles of its Africa policy, the German government has set out the future policy framework for cooperation with African countries. Germany’s Africa policy is based on the conviction that Africa must be seen both as a continent of the future and as a continent of opportunity.

Education and research are priority topics in implementing this policy. With its Africa Strategy, BMBF offers the many active German research and funding organisations, other German, European and multilateral organisations, and its African partners a stable framework in which to focus and draw inspiration.
The BMBF Africa Strategy has the following objectives:

- Overcoming common challenges through joint effort
- Creating high-quality and sustainable scientific cooperation structures
- Strengthening regional and continental cooperation
- Strengthening innovative potential and developing markets
- Raising Germany’s visibility in Africa as a key partner in education and research

Implementation of the Africa Strategy involves an action plan, with the first of the initiatives already having been launched.

Together with the education, research and funding organisations in Germany and the African partners, BMBF intends to:

- Step up support for contributions from German stakeholders in education and research in the establishment and expansion of centres of excellence which use regional synergies. The idea is to increase access to the initiatives and generate added value in the form of expertise and networking activities, financial contributions and visibility
- Develop measures to tackle global challenges to enable German universities, research institutes and businesses operating in African countries and regions with great research potential to cooperate closely and sustainably with their research partners in a problem-solving way
- Systematically integrate innovation and market potential into BMBF cooperation activities and into those between African countries themselves to improve activities and take cooperation with African countries to a new level. The aim is to secure the future, allow market-focused use of research results and improve local living conditions
- Improve capacity building and boosting activities in the research and education sector and also in the policy-making environment in the partner countries to create constantly reliable, quality-focused cooperation structures
- Following the principle of scientific diplomacy, use BMBF education and research activities to foster stabilisation in African countries and regions
- Use the European framework and bi-regional initiatives in partnership activities to achieve mutual benefit
VI. Annex

VI.1. Speeches

Speech held on 18 March 2014 by Johanna Wanka, German Minister of Education and Research, on the occasion of the BMBF Africa Days in Berlin

On being nominated for the Nobel Peace Prize in 1993, Nelson Mandela said “education is the most powerful weapon which you can use to change the world.” Education and research are not just the keys to solving many of society’s problems, but the basis for progress and further development. I firmly believe that by intensifying cooperation between international stakeholders in science and research, and between government and industry, and by combining our skills and expertise to form international knowledge networks, we will arrive far faster at reliable results and workable solutions.

We have a variety of modern communication channels available to us, we know how to use them and we do so. But I think that if people in the research community are to really work well together, there is an urgent need for them to sit down face to face and maintain direct contact with one another. This is one of the reasons why we organised this Africa Days event and we are delighted at the tremendous response – especially from Africa.

I.

The foundations for cooperation between the Federal Ministry of Education and Research and partners in Africa were laid more than thirty years ago. For much of that time, BMBF activities focused on South Africa and Egypt, but the focus has broadened since 2000. This has to do with dynamic political processes and with the African partners’ increased interest in education and research. Another key factor was the German government’s prioritisation of certain topics, with the Strategy to Internationalise Science and Research launched in 2008 and the Africa Plan adopted in 2011. On the African side, new impetus came with the New Partnership for African Development and the African Union’s Consolidated Action Plan for Science and Technology published in 2005, which has since been replaced by the African Union Science, Technology and Innovation Strategy.

Today, Germany maintains research contact with 39 countries in Africa. These are not ad hoc cooperation projects, but are firmly embedded in a defined structure put in place on the German side and in the African Union. Around two-thirds of these research cooperation efforts have emerged in the past seven years, with over 500 education and research activities implemented with African partners. Germany is now among Africa’s top three cooperation partners in the education and research sectors.

Our aim in all of this is the same one we strive for in education and research policy in Germany. For the most part, it’s about creating individual life chances. This must be the benchmark in all we do. But of course it’s also about social capabilities, capacities and sustainable development. When it comes to cross-cultural research transfer, cooperation and networking, the opportunities available to the science community are greater than those available to policy-makers.

It is thus extremely pleasing to see that interest in working with African colleagues has grown significantly among research and funding organisations in Germany. These organisations conduct their own German-African projects and programmes, and work on strategies with their partner organisations and also with research institutes, other institutions and universities. My heartfelt thanks go to all concerned. This is a tremendous achievement.

These developments are reflected in the BMBF Africa Days. The work performed in the working groups was very intensive, with the topics focusing on the five biggest areas in which we cooperate. These are climate change, bioeconomics, health, political and social transformation, and education cooperation, with transformation and education receiving increasingly more attention due to the social upheaval seen in Africa in recent times.
You have all discussed these topics and, among other things, have developed recommendations and ideas, and agreed on priority issues. This will all flow into the Africa Strategy we have developed by drawing on the experience gained over many years. It is important that those who want to work with us have the opportunity to influence both our ideas and our programmes.

We know that further research topics will need to be addressed and are already on the horizon. Take research on raw materials and resource management. This has the potential to become an additional priority cooperation topic. The same goes for education, the second cooperation pillar, and especially tertiary education. This primarily involves promoting talented young people and promising young scientists. In vocational education and training, we are concentrating for the most part on policy consultation. These examples show that cooperation in education and research cannot be seen as development aid in the traditional sense.

II.

We have welcomed the progress seen in the cooperation arena in recent years. What we now need to do is draw on that work and look to the future. This is why we are pleased to announce that we might be in a position to present our strategy for the coming years at the EU Africa Summit in April. Part of that strategy will contain the recommendations drafted by the working groups over the past few days.

Joint research forms the core of our cooperation activities. When working together, it is important that both partners have an interest in the topic involved and that each side makes a contribution. Many of the research topics go way beyond German-African relations and are crucial in tackling global challenges.

We want to give research institutes the opportunity to cooperate with the world’s best. And we would like to see well-organised networks forming around these centres of excellence simply as a matter of course. By this I mean networks of qualitative cooperation. That’s why we aim to invest in these centres. We want to build bridges and we want to strengthen local self-help capacities.

We want regional synergies to be used. And we want German stakeholders in education to assist in fostering and supporting promising approaches and to develop measures and formats to allow cooperation activities with African partners to develop over time. Cooperation activities must stretch beyond strict project lifecycles.

III.

But BMBF is not the only ministry actively engaged in Africa. The Federal Ministry for Economic Cooperation and Development (BMZ) is also heavily involved. While we have differing priorities as defined by the German government’s policy framework, we coordinate our activities and aim to further intensify collaboration between our departments.

One example is the BMBF funding activity on food security, in which BMZ promotes the integration of international agricultural research centres and thus the availability of research infrastructures in Africa.

Another important activity involves the creation of two African centres of excellence on climate change. These will focus on climate trends and land use, both of which are topics of great global importance. Local researchers are far more advanced than us in these research areas, both in practice and in the theory behind it.

I am pleased to see that we will work with the African Union as part of the EU-Africa Partnership. But what we must remember is that the African Union works in a different way to the European Union, and that many of our ideas cannot simply be transferred to Africa one-to-one. Local conditions and local experience must be taken into account in defining common research tasks and in finding solutions.

IV.

I should like to thank Mr. Ikounga, the African Union Commissioner, for his efforts as an education and research policy-maker in using the opportunities that science offers. We want to create research structures at continent level which allow not just Germany, but also other countries, the chance
to contribute to sustainable development on the fascinating continent of Africa.

The fourth EU-Africa Summit of the Heads of State and Government will take place soon. And as the Federal Ministry of Education and Research, we are working hard to prepare the summit documentation on research and innovation. We aim to bring in the vast experience we have gained over the past thirty years, and especially that of the past seven. I trust that the summit will produce great results, both for Africa and for Europe.

In a speech held before the German Bundestag, former German President Horst Köhler once said: “In my view, the humanity of our world can be measured against the fate of Africa.” We thus share the notion that education and research are crucial to Africa’s destiny. They are the key to self-directed development in Africa and to achieving progress there.

‘On the impossibility of speaking of Africa’

Speech by former German President Horst Köhler

I.

I would like, if I may, to clear up one misunderstanding right away: Horst Köhler is not an Africa expert. My first visit to Africa was in 2000, when I was brand new in my post as managing director of the International Monetary Fund. I went armed with files bulging with facts and concepts prepared by my staff. But as I had discussions with heads of state or government and members of national parliaments, with the small business community, farmers and artists, and with ordinary men and women, I gradually had to acknowledge two truths – indeed, I became able to acknowledge two truths. First, the reality on the ground in Africa is so much more complex than written accounts suggest. And second, in nine cases out of ten, calling someone an ‘Africa expert’ is either flattery or hubris. Every single person I talked to knew so much more about Africa than I would ever be able to grasp. And the more I learned about Africa, the more I realised how much there was still to learn. I still feel that today – and I am glad I do. I would, therefore, like to use the time available to me today to … well, to contradict Ludwig Wittgenstein. Almost a century ago, in the conclusion to his seminal work, the Tractatus, Wittgenstein wrote, ‘Whereof one cannot speak, thereof one must be silent.’ I have entitled my speech today ‘On the impossibility of speaking of Africa’. But 30 minutes of silence would be extremely boring for you, so I would like instead to use the time to address the difficulties I have with our discourse on Africa and our image of Africa.

Our mental images are our starting point for thinking about Africa, and the images that spring most readily to mind represent a litany of negatives: corruption and crisis, conflict and carnage, disaster and disease. Henning Mankell has said, ‘If we take our cue from the images in the mass media, then too
often we learn everything about how an African dies, but nothing about how he lives.’ And journalist Veye Tatah laments that ‘The unspectacular, everyday lives of Africans seldom find their way into reporting; the ‘helpful’ West is always the active protagonist, while the Africans are generally the passive recipients of aid.’ The average German Africa correspondent is responsible for covering 33 countries and has to contend with inaccessible regions, a limited travel budget and equally limited language skills. Given these limitations, how much precision, understanding and differentiation can we really expect in media reports?

Movies, too, frequently fall back on the clichés of vast plains and spectacular sunsets, reducing Africa to a backdrop for white heartache in which, to quote the US/Nigerian writer Uzodinma Iweala, Africans are ‘used as props in the West’s fantasy of itself.’ Iweala’s great compatriot, Chinua Achebe, warned against seeing Africa solely as the recipient of European projections, as the ‘setting and backdrop which eliminates the African as a human factor.’

It is self-evident that we can – and must – break free of these stereotypes of Africa. But are we really able to escape our Eurocentric paradigms? Our definition of Africa can only ever be partial, our interpretation of Africa can only ever be distorted, and we have no alternative but to acknowledge that our image of Africa says more about us than it does about Africa itself.

And even those among us who consciously seek to find out about Africa rather than merely perpetuating the old, familiar myths find that we cannot shake off the history that weighs so heavily on our European shoulders. Our white discourse about Africa has long since lost its innocence. That is something we need to become aware of again.

Awareness of history means knowing about the Berlin conference that opened on a snowy day in November 1884 – exactly 130 years ago – here in Berlin’s Wilhelmstraße. Under the chairmanship of Bismarck, it laid the groundwork for the colonial division of Africa. And it ensured that the King of Belgium acquired a vast area of 2.3 million square kilometres – the Congo – as his personal domain where, it is estimated, up to 10 million people sub-sequently lost their lives in one of the worst crimes against humanity of modern times.

Awareness of history means focusing on the history of Rwanda, where first German and then Belgian colonial powers turned loose social groupings into the hierarchy of Hutus and Tutsis to enable them better to manage their hegemony. In 1994 – exactly 20 years ago – that culminated in the brutal genocide of more than 800,000 men, women and children.

Awareness of history means remembering the genocide against the Herero peoples, unleashed in 1904 – exactly 110 years ago – on the orders of the Prussian officer Lothar von Trotha.

Awareness of history means acknowledging that during the Cold War, Africa was used as a plaything by the super-powers, only to be abruptly and brutally dropped once the Cold War came to an end.

There is no escaping the fact that, from a historical perspective, the defining characteristic of Europe’s relationship with Africa has not been partnership, let alone friendship, but rather objectification. Please don’t misunderstand me: I am not calling here for self-flagellation by the West nor, perhaps, for guilt and certainly not for a crude allocation of blame in identifying the root causes of Africa’s current problems. No, what I am calling for is an awareness of our shared, fraught history and awareness of the possibility that many colonial and post-colonial attitudes persist to this day, sometimes latent and unsuspected but sometimes quite overtly. Have we really moved on from perceiving and treating Africa as an object? Have I moved on from that?

No, I am not an Africa expert, nor could I be. Our European, our Eurocentric discourse about Africa is, therefore, always one of imperfect memory, of distortion, of constraint – and that is the first reason why it is impossible to speak of Africa.

II.

The second reason, ladies and gentlemen, has been identified by the legendary Polish Africa correspondent, Ryszard Kapuściński. He said, ‘The
continent is too large to describe. It is a veritable ocean, a separate planet, a varied, immensely rich cosmos. Only with the greatest simplification, for the sake of convenience, can we say ‘Africa’. In reality, except as a geographical appellation, Africa does not exist.’ Indeed, even as a geographical appellation, the concept of ‘Africa’ is unclear – do we mean the entire continent, including North Africa? Or do we mean sub-Saharan Africa? Can we really expect a single word – Africa – to encompass the contrasts between such vast countries as the Democratic Republic of Congo and such tiny ones as Burundi, between resource-rich coastal states and resource-poor landlocked nations, between desert states and ocean islands? Beyond mere geography, can our concept of ‘Africa’ really embrace the complex social reality of this continent? Every single one of the world’s 20 most ethnically diverse nations is in Africa. No continent has more religions than Africa – and no continent has more languages than Africa.

Our awe at its sheer diversity must prompt us to show humility when we speak of Africa.

Without that humility, any attempt at sweeping statements and generalised judgements about Africa will end up in a hopelessly incoherent version of a selective truth. Africa simply does not lend itself to the clear-cut divisions and absolute judgements that we crave, particularly in politics and the media. Those who prize clarity and unambiguity above all else will not find it in Africa.

This becomes clear when we listen to the current clashing narratives about Africa.

In recent years, for example, there is a discourse that has shifted away from portraying Africa negatively as a ‘continent of crisis’ and towards a more positive image, as a ‘continent of opportunity’. And yes, there is some truth in images of Africa as a new global growth region and in narratives of the continent of opportunity, the new “lions”, and the African economic miracle. Between 2000 and 2010, six of the ten most rapidly growing economies in the world were in Africa; many had growth rates of 7% or more, the kind of economic growth of which Europe can only dream. Africa’s foreign debt fell from 63% of GDP in 2000 to 25% in 2010, an indicator of macro-economic stability that would long since have consigned the Eurozone crisis to history. Yet these statistics tell only part of the story: many African countries are not, of course, booming economically but stagnating. And even in countries with rapid economic growth, the fruits of that growth rarely trickle down to the people. Despite a growing middle class, it is estimated that just 4% of Africans earn more than USD 10 a day.

What is growing, by comparison, is extreme inequality. What, then, is ‘Africa’?

Yes, those who claim that modern-day Africa is more urban than it has ever been are right. Its urban population is growing at more than twice the rate of the rural population. The list of the world’s large metropolises – those with a population of more than a million – includes 32 cities in Europe but 46 in Africa. Just take the Nigerian capital, Lagos: over the past 60 years, its population has grown 40-fold. Official estimates put its population at up to 21 million, making it one of the largest mega-metropolises on the planet. Yet it is also the case that 70% of Africans still live on the land and that the rural population accounts for an even higher percentage of the poorest people in Africa. So, it is also true to say that rural areas still pose the greatest challenges in terms of education, health care, energy and so on. What, then, is ‘Africa’?

Of course those who stress that Africa is still home to most of the world’s fragile states, and that many African countries are chronically over-burdened, unstable and fragmented, are right too. Of course Africa has its share of war criminals, of despots, of the terminally greedy who have no interest in putting an end to poverty and every interest in the state of their offshore bank accounts. And of course marginalisation, repression and recent abhorrent legislation against sexual minorities exist, plucking at our heartstrings and causing us to despair of the humanity of this human race. But the courageous exist too, champions for human rights, anti-corruption campaigners, a civil society growing in strength and self-confidence – women campaigning for peace, people with disabilities becoming increasingly vocal on the issue of inclusion, and small groups of farmers defending their rights. All these people are Africa, and they are not all chasing after a crude Western model of prosperity but fighting
for their vision – an African vision – of a dignified life. And there are African politicians, too, in the mould of Nelson Mandela, whose far-sightedness and capacity for reconciliation were an example not just to Africa but to the entire world. What, then, is ‘Africa’?

Ultimately, anything we say about the Africa of today must reflect the fact that the Africa of tomorrow will be different: Africa’s population is growing more rapidly than that of any country in the world. If I allow myself one general statement, it is that Africa is the continent of the youth. It is already the youngest continent in demographic terms, with half of all Africans aged 18 or below (its ‘median age’ – ours here in Germany is 45.7). And Africa’s population is set to double by 2050, to more than two billion. Africa will then once more account for one fifth of the world’s population as it did until 1500, after which the slave trade, imported pandemics and, later, colonialism, drastically reduced its population. Having called Wittgenstein into question, I would like here also to contradict Hegel. He once wrote that Africa is ‘no historical part of the world’ and ‘has no movement or development to exhibit’. This ludicrous sentiment was wrong – utterly wrong – even then, and it could hardly be more wrong now. Africa today is a continent of perpetual motion and permanent change. Take a closer look and you will see transformation on a historic scale: it will be this part of the world that determines the history of the twenty-first century. But this transformation is full of ambivalence. Speaking of Africa means confronting contradictions and paradoxes. Speaking of Africa means acknowledging that Africa is changing much more rapidly than our image of it.

This is why we need to break free from understanding development as a cultural yardstick – a hangover from colonialism, when the criterion for judging the extent of development in an African culture was how similar it was to European culture. Has much actually changed? The more familiar the patterns of development in Africa are to us and the more of ourselves we recognise in Africa, the readier we are to have confidence in its future. But development is not linear and it does not function like a photocopier. Nor can development serve as a moral judgement. Can we really imagine an African modernity that is defined not as the culmination of a linear development towards technology-based prosperity measured by GDP – the way in which we in the West understand prosperity – but as something pluralistic, evolving in multiple directions, a juxtaposition of the local and the global, of tradition and innovation – in short, an African modernity sui generis? And then, to go further still, could that perhaps give rise to a concept of development that no longer divides the world into ‘developing countries’ and ‘developed countries’ but that shows clearly that all societies need to develop and be transformed, regardless of whether they are in the North or the South, the East or the West? A new concept of development of this kind, oriented to the huge transformation that resource scarcity and climate change are imposing on us all, could then also transform our view of Europe’s relationship with Africa. We could have a relationship that, for all the existing asymmetries, would facilitate a partnership of equals, free of paternalism and condescension. The question would no longer be just ‘What can Africa learn from the Europeans?’ but also ‘What can Europe learn from the Africans?’

And so we move from the impossibilities to the possibilities: if it is impossible to speak of Africa – because our view of the continent is invariably confined by being Eurocentric and because Africa does not exist beyond a mere geographical unit – then what can we do? What we can do is to speak not of Africa but of ourselves and of our side of the partnership with Africa. And we can speak not of Africa but with the Africans – something I shall return to shortly.

III.

But let me turn first to us and the task in hand. I am not the only speaker here today, so I will limit myself to just a few examples.

First, I believe that our policy on Africa must also be seen in the context of positively forming globalisation. It must form an integral part of a values-oriented foreign policy of Germany. Nations and peoples have never been as interdependent as they are today. Anything that hurts the world and anything that hurts Africa will, in the long term, hurt us in Germany and
in Europe – and vice versa. We must, therefore, finally regain control over the structural factors that are hampering positive development in Africa: our current system of production and consumption frequently relies on outsourcing our social and environmental costs to Asia and Africa. Africa is bearing the brunt of our contribution to climate change. Our agricultural policy is making it difficult for Africa to ensure its own food security. Our energy policy needs a global perspective. And we need to invest much more political capital in finally achieving a fair and development-friendly international trading system. Many of these issues are also being discussed as part of the debate about the future of the UN’s Millennium Development Goals – the Post-2015 Agenda, as it is known. I am delighted that Germany’s Chancellor Merkel and also all ministries involved in this process are giving it a high priority. I really hope for a profiled and coordinated position of the Federal Government in this decisive question for our common future.

Second, we should be stepping up partnership between Germany and Africa specifically in those areas where we can contribute with positive experiences. I am, of course, thinking primarily of education and training, the most vital of the vital issues for Africa’s future. I congratulate you, Professor Wanka, for getting so involved here, along with your Ministry. We need to refocus on the quality of primary education but also on secondary and tertiary education and, in particular, of vocational education and training. I am very much looking forward to the initiatives of the Federal Ministry of Education and Research and of the Federal Ministry for Economic Cooperation and Development. The massive growth in Africa’s youth population is placing huge demands on its education and training system, yet not even the best training in the world is much use if there are no jobs. The private sector is playing an unprecedented part in driving Africa’s development. I would like to see Germany’s private sector taking more risks and getting more involved, especially small and medium-sized businesses; they enjoy an outstanding reputation in Africa, but their locally-rooted and socially responsible model of entrepreneurship could also generate vital momentum for creating an inclusive economic system for Africa. I am often amazed to see what can be achieved through a combination of German expertise and African entrepreneurialism, for example in the area of decentralised energy supply.

And third, there is an African proverb: ‘Beware of the naked man who offers you clothes.’ And my goodness, we Europeans are naked, with our double standards and our comfortable hypocrisy vis-à-vis our past and present contribution to Africa’s problems. It is high time we regained our credibility.

Take corruption: combatting corruption is not a one-way street. Corruption in Africa also comes in the guise of representatives of Western corporations and European bank accounts, so we cannot ignore the global kleptocratic model of capitalism that is sucking obscene amounts of capital out of Africa in particular – and certainly more than is being invested in the continent as development assistance. Chief among the beneficiaries of this flight of capital are the European banks where African despots and tax-evading corporations stash their billions. If we finally brought order to the international financial system and allowed the tax havens to wither away, that would be credible!

Or take environmental pollution: for all the discourse surrounding green growth in Africa, the waste is also coming from foreign companies. To cite just one example, take the disaster in the Niger Delta, where leaking oil has polluted entire areas, but at the same time huge oil firms are taking the giant share of their profits out of the continent. If we finally took environmental standards seriously and created sustainable and transparent supply chains, that would be credible!

Our dealings with Africa are a prime example of double standards in international policy-making. And Africa is an excellent place to dismantle those double standards. Africa has long been aware that the emperor has no clothes. And it has long been building a new sense of self-confidence – economic, political and cultural – rather than merely accepting being politically stultified. This new Africa is in search of credible, honest and serious interlocutors. Is Europe ready for that? Is Germany ready for that?
And this brings me to the second possibility, the possibility of speaking not of Africa but with Africa. We must stop lecturing and making judgements and must learn to listen and develop a culture of equal discussion and debate. After a past of European acquisitiveness, Africa now needs a future of European inquisitiveness – it needs not so much our answers as our questions, also questions to ourselves. And that means being much more pro-active in bringing African voices into our debates here in Germany - that is why I am so pleased that this is happening today in terms of cooperation in educational and research policies with such high-level participants from Africa like Commissioner Ikounga and Minister Broohm. I would urge us all, that we in Germany get to know more about African literature, art and culture; that we talk not only with politicians but also with artists, activists, rural women and those on the margins; and that we travel to Africa – hopefully also on high-level political visits – so that we can experience this contradictory, pluralistic and, ultimately, indescribable African renaissance where it is actually happening.

We might then be in a position to witness the birth of an entirely new concept of partnership. Terms like ‘helping people to help themselves’, ‘autonomy’ and ‘ownership’ must not be allowed to be mere empty rhetoric, even less a pretext for indifference towards Africa. No, they must be the starting point for dialogue and a yardstick for our own actions. Autonomy for Africa is, first and foremost, a commitment on our part, a commitment not to ride roughshod over our partners’ priorities in the way we organise cooperation and support, and a commitment to take African solutions seriously and to support Africa’s own strengths. We simply don’t have all the answers. And that applies to development cooperation as much as to security policy.

A culture of dialogue does not mean that we have no expectations. Listening does not mean that we have to remain silent. Of course African governments must themselves make greater efforts to protect the rule of law, combat corruption and achieve social justice; of course the West must defend itself when people attempt to scapegoat it for Africa’s own shortcomings; of course it is true that ‘All human beings are born free and equal in dignity and rights.’ Yet only when we underpin these expectations with our own credibility and only when respect and equality are more than hollow phrases will our partners convincingly be able to claim self-determination. Precisely because Europe does not take partnership with Africa seriously enough and because, out of arrogance or ignorance, it often under-estimates its partners, we make it far too easy for some governments in Africa to assume the stance of passive victim and to use condemnation of our hypocrisy as a smokescreen for their own hypocrisy.

What I would like, therefore, is for us to acknowledge the distortion in the way the West sees things. To be shaken in our prejudices. Not to apply our own yardstick as universal measurement. To learn to understand Africa in its own context. To turn the irritation and friction that entails into a constructive force. To listen, and to listen over and over again. And: to put some clothes on.

If we take this message to heart, then we will engender respect – respect for each other and respect for the past. And we will engender trust – trust in each other and trust in the future.

Ladies and gentlemen,

You may recall that I set out to contradict Wittgenstein. ‘Whereof one cannot speak, thereof one must be silent’? No. The impossibility of speaking of Africa cannot be allowed to silence our voices but must produce the will to find new ways to engage in dialogue and to cooperate. What German-African relations need is a new humility in our attitudes and a new passion in our actions. We need nothing short of a cultural shift in our Africa policy, a shift that reflects the historic transformations that Africa is currently undergoing and that gives a long-overdue acknowledgement to the continent’s global significance. A cultural shift of this kind requires effort from us: self-criticism, differentiation, patience, a little courage – and the political will to translate attitudinal change into action.

Wittgenstein wrote in his diary that one cannot wish without acting.

I think he was absolutely right.
Speech on behalf of the President of the African Union, Her Excellency Nkosazana Dlamini Zuma, held by His Excellency Martial De-Paul Ikounga, Commissioner for Human Resources, Science and Technology

Minister Wanka,

The President of the African Union, Her Excellency Nkosazana Dlamini Zuma, would like to thank you for your kind invitation and has asked me to pass on her best wishes. She would very much have liked to attend this important event herself given that the focus is on Germany’s funding programme for Africa. It is thus a great honour for me to represent her here and to tell you how delighted I am at the friendly reception and the courtesy shown to me since arriving in this historical city of Berlin.

President Köhler,
Minister Wanka,
Secretary Silberhorn,
Ladies and Gentlemen,

I am extremely pleased that the German government’s strategy to promote education and research in Africa builds on the strategy adopted by the African Union and on the partnership between Africa and the EU. Germany has moved away from the practice of early years, in which donor countries conducted their own programmes alongside one another in Africa without considering local priorities.

By inviting the Commission of the African Union to this event, you have signalled that Africa is not only able to express the continent’s collective visions and wishes with a single, authentic voice, but that it can also shape authentic conditions for development. These Africa Days clearly show beyond any shadow of doubt that Germany is a friend of Africa and is willing to take the African approach and develop funding programmes based on mutual respect and trust. Mutual respect means that the one side does not allow the other to continue along the wrong path if they have experience and knowledge that could prevent their partner from making beginner’s mistakes.

As you probably know, parallel and uncoordinated funding programmes on the part of our partners have led to a tremendous waste of resources, and this has stopped them from achieving the kind of progress hoped for.

We can now look back on 50 years of African unity and our vision for 2063 is one of a united Africa in which people live in freedom and prosperity. An Africa in which African citizens have a say – and an Africa that plays a dynamic role in the international community. That means that we must exploit the opportunities afforded by our natural capital. An indispensable instrument in embarking on such endeavours has always been education, which we must use to design both the present and the future we want. Science, technology and innovation are the best tools with which to process the vast amount of material available and so introduce change and development.

Africa has made considerable progress in developing education, science, technology and innovation in everyday life. More children and teenagers go to school, and gender equality is a reality in many African countries. More and more countries have introduced science, technology and innovation policies, and are investing increasing amounts in research and development. Africa’s universities and research institutes now work closer together in implementing pan-African platforms, increasing the adaptability of their programmes and making African organisations more attractive as international partners.

The Commission of the African Union would like to see intensified international cooperation in tertiary education, vocational education and training, and in scientific research in order to cement and build on what has been achieved so far. Further education and training for teachers will remain one of the key priorities in Africa beyond 2015 because teachers play a decisive role. More than anything else, their skills and abilities, their behaviour, their education, their values and attitudes determine the outcome of the education and training process.
Here, I’d like to mention the unfortunate fact that we are losing considerable intellectual capital. The reasons for this can be apportioned to a combination of brain drain and a lack of further education and training at university level, especially in science and technology. This situation is exacerbated by the fact that research institutes and opportunities to develop innovation and entrepreneurship are only available to a limited extent.

The common African position on the international agenda post-2015 cites science, technology and innovation, and also human development, as the key pillars. For this, action plans are needed which can only be effective at local level if Africa conducts an analysis during this final year 2014/2015 and is allowed to act on its findings. As regards Education for All, the group of African UNESCO Ambassadors took an ambitious step by calling upon the African and EU heads of state and government who are due to meet at the upcoming EU-Africa Summit to promote mechanisms which enable such self-analysis based on the evaluation of the Second Decade of Education.

The latest UNESCO study shows that progress is being made in Africa because university education is no longer a luxury. Lack of investment in the tertiary sector can be blamed on the delay in the international community’s recognition of this fact.

At the most recent meeting in Kigali, it was again pointed out that university and tertiary education must be integrated into the overall national research and development system if we are to meet the needs of our countries where science, technology and innovation are concerned.

This is neither the right place nor the right time to present a detailed overview of the activities conducted by the African Union Commission. But I would like to make one point: in a few days’ time, on 18 April 2014, the African science and technology ministers will meet in Brazzaville to discuss and adopt the African Science and Technology Strategy, STISA-2024.

With six focal areas – combating hunger, healthcare, communication, land use, coexistence and achieving prosperity – STISA-2024 provides an arena for action, among other things through the creation of an African Council for Scientific Research and Innovation. In cooperation with the production sector, the Council will serve as the voice of African science to ensure that research programmes take account of policy priorities that link people and structures.

At their meeting in Yaoundé on 25 April 2014, the education ministers of the African Union will face the difficult question of assessing the partners they work with in African education and also in the science, technology and innovation sectors. The aim is to find out who does what where. What works and why. What common mechanisms need to be created to allow evaluation of what has been achieved so far, and what criteria must be defined for objective analysis of the results. But ultimately, the want to see how the experience gained so far can be used jointly to prevent duplication of effort because the African continent has no resources to give away.

It is for this reason that Germany’s approach in aligning its own funding strategy to the African vision is invaluable. When it comes to organising partners, we are convinced that Germany has vast experience and we know that we can rely on the fact that our German friends will be sharing their knowledge with us very soon. This is something we look forward to very much. With regard to managing the Pan-African University (PAU), I would like to thank you for your support, both in the administration of this new establishment and in the areas of water management and energy, which cover issues related to climate change.

The PAU will stretch across the tertiary, research and innovation sectors in Africa. It serves as a model and best-practice example for issues such as the ability of tertiary education and research to adapt to industry needs. Against this backdrop, contacts and dynamic cooperation with the big German organisations are of key importance in the process of learning and internationalisation. Because I believe that in implementing the STISA strategy, the Pan-African University and associated initiatives, the partnership with Africa is also beneficial to Germany, I would like to be involved in implementing Germany’s Africa Strategy on Education and Research – a strategy that matches the African vision and is of mutual benefit to us all.
Talking with our German partners in research and development is like opening a door so wide that we run the risk of the content of those talks being blown away on the wind. Nonetheless, I believe it is important at events like these Africa Days to consider how far science has come in the developed world and how big the gap is between them and Africa. I would thus like to end my speech by calling for an improvement in the availability of science, technology and innovation in Africa.

I could have spoken about science culture and science management, or about technology and innovation.

I could have spoken about perspectives, describing the opportunities with which the hoped-for development could easily be achieved.

I could have spoken about entrepreneurism and initiative in exploiting the available options that no-one expects or sees.

I could have spoken about the statistics that are lacking everywhere but are urgently needed in order to pursue a policy based on data which is collected by Africans in Africa.

I could have focused on assessing the current situation. It appears unimportant as an instrument, but is used day in, day out by our big partners in order to identify what measures are being conducted where, why and – most importantly – to what extent.

I know that you understand us completely without the need for many words, because dignity and tact are integral to our African culture.

And I know that events like these Africa Days open a window on Germany’s relations with Africa as a continent.

President Köhler,
Minister Wanka,
Secretary Silberhorn,
Ladies and Gentlemen,

This only leaves me to thank you once again for the invitation and for your untiring cooperation and support. I believe that by strengthening our partnership, the future will be bright.
VI.2. Programme

**Day 1**  
16 March 2014

**Afternoon**  
Workshop: Bioeconomy with Africa

**Day 2**  
17 March 2014

09:00  
**Welcome** Address by moderator Conny Czymoch

09:05  
Welcome and introduction to the cross-cutting issues by Maximilian Metzger, Director for International Cooperation in Education and Research, BMBF

09:30  
Workshops with separate timetables
- Bioeconomy with Africa
- Research networks for health innovation
- African-German Regional Science Service Centres for Climate Change and Adaptive Land Use
- Joint Meeting of SASSCAL and WASCAL

17:00  
**Plenary session:** Brief presentation of the results of the workshops and presentation of recommendations on the cross-cutting issues by the respective workshop speakers

17:45  
**Panel discussion on the cross-cutting issues**

Joachim von Braun,  
Center for Development Research (ZEF), Bonn

Norbert Jürgens, Scientific Coordinator SASSCAL,  
Hamburg University

Hazem Mansour,  
Egyptian Research Ministry, Cairo

Debrework Zewdie,  
World Bank, Washington D.C.

**Day 3**  
18 March 2014

09:30  
Moderator Conny Czymoch opens the event

09:30  
Welcoming address by Johanna Wanka, Minister of Education and Research

09:30  
Speech by former German President Horst Köhler

17:00  
Report by Klaus Müller, KfW Development Bank: Outcomes from the workshops from the previous day

17:45  
Hand-over of the final document (recommendations) to Minister of Education and Research Johanna Wanka

18:30  
Informal get-together

18:30  
Speech by Martial De-Paul Ikounga, African Union Commissioner for Human Resources, Science and Technology

18:30  
Welcoming address by Parliamentary Secretary Thomas Silberhorn, Ministry for Economic Cooperation and Development (BMZ)

18:30  
Closing Address by Johanna Wanka, Minister of Education and Research

**Joint Recommendations (final document)**  
Lead Speaker, Klaus Müller, KfW Development Bank
VI.3. BMBF Priority Topics

GlobeE – Securing Global Food Supply

Objectives

The aim of the GlobeE – Securing Global Food Supply funding initiative is to promote agricultural development in Africa. As part of the BMBF’s National Research Strategy BioEconomy 2030, it promotes the switch to a bio-based, sustainable economy. Funding is provided to German-African research networks involving interdisciplinary and multidisciplinary cooperation that focuses on regional needs. Key components of GlobeE comprise:

• Participative design of German-African research networks which focus on the food system
• Identifying and solving central problems of the over-arching food system in African countries
• Development of regionally-adapted research approaches which take in sound needs-analysis in the respective target region
• Support and further development of research capacities in Germany and the partner countries

GlobeE has two funding phases. The first funding phase involved the development of a model during the first six months of 2012. In the second funding phase, which began in April 2013, funding was provided for the implementation of the six research models over a period of three to five years. BMBF has allocated up to €45 million to cover the maximum five-year lifecycle. Part of that amount is provided by BMZ.

Priority topics and regions

• **Consortium: Trans-SEC** – Innovating Strategies to safeguard Food Security using Technology and Knowledge Transfer: A people-centred Approach
  Start 1st of May 2013
  • **Priority region:** Tanzania
  • **German coordinators:** Stefan Sieber and Frieder Graef (both from Leibniz Centre for Agricultural Landscape Research (ZALF), Institute of Land-Use Systems)
  • **African coordinators:** Khamaldin Mutabazi and Siza Tumbo (both from Sokoine University)
• **Consortium: Wetlands in East Africa** – Reconciling future food production with environmental protection
  • **Priority region:** Kenya, Uganda, Rwanda, Tanzania
  • **German coordinator:** Mathias Becker (University of Bonn, Institute of Crop Science and Resource Conservation (INRES))
  • **African coordinator:** Joy Obando (Jomo Kenatta University)
• **Consortium: HORTINLEA** – Institutional Arrangements in Horticulture and Collective Action along the Value Chain – Improving Nutrition and Livelihoods in Rural and Urban regions of East Africa through Innovation and Localised Learning
  • **Priority region:** Kenya, Tanzania, Ethiopia
  • **German coordinators:** Wolfgang Bokelmann and Zoltán Ferenczi (Humboldt University, Berlin, Faculty of Agriculture and Horticulture)
  • **African coordinator:** John Wesonga (Jomo Kenatta University)
• **Consortium: RELOAD** – Reduction of Post-Harvest Losses and Value Addition in East African Food Value Chains
  • **Priority region:** Ethiopia, Uganda, Kenya
  • **German coordinators:** Oliver Hensel (University of Kassel, Faculty of Environmental Agri-Science), Michael Hesse (University of Kassel, Faculty of Environmental Agri-Science)
  • **African coordinator:** Catherina Kunyanga (University of Nairobi)
• **Consortium: BiomassWeb** – Improving Food Security in Africa through Increased System Productivity of Biomass-based Value Webs (BiomassWeb)
  • **Priority region:** Ghana, Nigeria, Ethiopia
  • **German coordinator:** Manfred Denich and Detlef Virchow (University of Bonn, ZEF)
  • **African coordinator:** Ifidon Ohiomoba (Forum for Agricultural Research in Africa, FARA)
• **Consortium: UrbanFoodPlus** – African-German partnership to enhance resource use efficiency and improve food security in urban and peri-urban agriculture of West African cities
  • **Priority region:** Burkina Faso, Ghana, Mali, Cameroon
  • **German coordinator:** Andreas Bürket (University of Kassel, Organic Plant Production and
Agroecosystems Research in the Tropics and Subtropics (OPATS)

- **African coordinators:** Sedogo P. Michel (Environment and Agricultural Research Institute (INERA), Burkina Faso) and Gordana Kranjac-Berisavljevic (University for Development Studies, Ghana)

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Initiative:
Research Networks for Health Innovation

Objectives

BMBF is planning an initiative to Establish and Expand Research Networks for Health Innovation in Sub-Saharan Africa. The aim is to strengthen German research cooperation in the health sectors in the countries concerned. Building on a carefully thought-out plan and taking account of key interest groups, a funding directive was published in January 2013 to provide a framework which allowed the German-African consortia to present their research network ideas. From March 2014, the eleven best research models will receive funding for a six-month period in which they can further develop their networking ideas. It is anticipated that three or four of these networking models will be selected for subsequent funding.

The aim of the workshop on health conducted during the Africa Days was to inform project developers and other interested parties about the requirements of the BMBF initiative, especially regarding the implementation phase (policy integration, sustainability, capacity building and boosting).

Priority topics and regions in the preparatory phase

The selected preparatory activities take in a range of research areas and are located in various parts of Sub-Saharan Africa:

- Network for Evidence-Based Healthcare Provision and Public Health in Africa (South Africa, Uganda, Rwanda, Burundi, Zimbabwe, Ethiopia, Malawi)
- Prevention and Management of Heart Disease in Africa (South Africa, Mozambique)
- The Impact of Secondary Disease, Risk Factors and Long-Term Complications on Tuberculosis Treatment and its Impact on Public Health (South Africa, Mozambique, Tanzania)
- Optimising Affordable Intervention to Control Malaria (Gabon, Benin, Democratic Republic of Congo)
• Changes in Disease in Sub-Saharan Africa: Capacity Building and Boosting for Research and Diagnostics in the Control of Non-Transferrable and Transferrable Disease through Improved Treatment of Secondary Disease (Ghana, Burkino Faso, Germany, Madagascar)

• Cysticercosis Network Sub-Saharan Africa (Ghana, Burkino Faso, Madagascar, South Africa)

• Causes, Diagnosis and Treatment of Acute Fever-Inducing Disease – Basis for Evidence-Based Medical Provision for Children in Africa (Benin, Democratic Republic of Congo, Gabon)

• Network to Overcome Barriers in Combating Filariasis (Ghana, Cameroon, Tanzania)

• From Pregnancy to Adolescence: Monitoring the Development of HIV-exposed Children in Sub-Saharan Africa – Combining Research and Expert Networks (Malawi, South Africa, Uganda, Zambia)

• African Network for Improved Diagnostics, Epidemiology and Management of Frequently Occurring Infectious Disease (Côte d’Ivoire, Burkina Faso, Democratic Republic of Congo, South Africa)

The preparatory activities are funded by BMBF in an amount of some €640,000. For the implementation of a maximum of three network activities, BMBF will provide up to €50 million.

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**Activity: Regional Science Service Centres for Climate Change and Adaptive Land Use in Africa (RSSCs)**

**Political importance**

Global trends such as climate change, conflicts of interest in resource use, food security and the ensuing land use competition pose a series of ever-growing challenges for the global community, not least for Africa. Many researchers expect that Africa will be the hardest hit by the effects of climate change even though it has contributed least to its causes. Science, technology and tertiary education are the keys to economic and social development. They also provide the tools with which to tackle these large-scale trends. It is thus important to activate globally available knowledge to aid development in African countries and to establish African expertise in the generation, transfer and application of local knowledge. The German government accepts the responsibility borne by the industrialised nations in respect of developing and emerging countries. One specific, substantive and structural measure in these efforts is the establishment of regional science service centres for climate change and adaptive land use. They make a key contribution to the policy-promoting goals of the BMBF Research for Sustainable Development programme.

**Brief description of the initiative and its objectives**

The aim of the Regional Science Service Centres in West and Southern Africa initiative is to help the regions hardest hit by climate change in building appropriate scientific structures so that the countries themselves can reach informed decisions regarding land use and water supply. In July 2012, following a twelve-month preparatory phase and in cooperation with partners from ten countries in western and five in southern Africa, BMBF began work on establishing two regional services centres for climate change and adaptive land use (RSSCs). The West African Science Service Centre for Climate Change and Adaptive Land Use (WASCAL) takes in Benin, Burkina Faso, Côte d’Ivoire, Germany, Gambia Ghana, Mali, Niger, Nigeria, Senegal and Togo. Countries belonging to the Southern African Science Service Centre for Climate Change and Adaptive Land Use (SASSCAL) comprise Angola, Botswana, Germany, Namibia, Zambia and South Africa.

The centres are designed to:

- Create sustainable infrastructures which boost Africa’s research and staffing capacities
- Enhance and combine available research capacities, closely integrate them with local structures and build new research capacities where needed
- Advise local, regional and national land users, planners and policy-makers in their decision-making processes
- Foster the exchange of scientific expertise between researchers in western and southern Africa, and between them and researchers in Germany

The ultimate aim is to use science and research results to develop robust, adaptable land-use systems so as to better equip people and the environment to deal with the negative effects of climate change. These systems should allow sustainable societal development while safeguarding functioning ecosystems and their stocks of natural resources for future generations. In addition, capacities in the countries involved will be boosted, for example to enable them to make their own climate change forecasts and develop related scenarios, identify suitable courses of action and represent their own interests in international climate change negotiations (UNFCC, CBD, etc.). BMBF is investing up to €100 million in the two centres.

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Transformation of societies: How can education and research contribute?

For the past three years, North African countries have been in a phase of political transition, social transformation and economic modernisation – albeit to different degrees.

Education, science and research are key factors for the future design of socio-economic transition, long-term perspectives and constructive, mutually beneficial partnerships – both within the region itself and in cooperation with Germany and the EU.

BMBF thus sees bilateral and multilateral cooperation in education, science and research as effective instruments with which to strengthen the region’s societies. First and foremost, this involves cooperation in tertiary education, between research institutes and increasingly in vocational and further education and training. Applied research lies at the centre of these cooperation activities. Given the new social and political forces of change in the region, intensified cooperation in sciences and the humanities plays an ever-increasing role.

Objectives

Using presentations and discussions, the workshop looked at the question of transformation of societies: how can education and research contribute? Selected cooperation projects conducted in the education, science and research sectors were also used to illustrate the numerous bilateral and multilateral cooperation activities already underway in North African countries.

To ensure that the workshop took account of the scope and depth of the topic under question, experience gained in related areas was shared and analysed for its transferability to the transformation issues.

Priority topics and regions

- **The Arab German Young Academy (AGYA)** is a network for young German and Arab scientists. Its main objective is to provide a platform for interdisciplinary exchange on common areas of research, interdisciplinary and transnational research projects and initiatives, work on issues concerning science organisation and academic managements, and the initiation of projects at the interface between science, society and politics.
- **Euro-Mediterranean Universität**: Integrated Euro-Mediterranean tertiary education and research areas.
- **German-Egyptian Masters degree course in Integrated Urbanism and Sustainable Design (IUSD)**: this bicultural Masters course takes an interdisciplinary and integrated approach. Along with issues concerning integrated urbanism and sustainable design, studies involve the economic, political and cultural dimensions of the Arab-Islamic cultural region.
- **Cooperation between German industry and Libya's Zawiyah University – initial outcomes and experience in Libya after the revolution**: to design and build functioning structures in the aftermath of the revolution, Libya is reliant on the availability of well-trained university graduates. Businesses operating in the country need skilled workers. Managers of the numerous universities in Libya are very open about their lacking labour market-focus. As a result, Ferrostaal, Zawiyah University (the second largest in the country), DAAD and the Libyan Education Ministry have joined forces with a view to closing this gap.
- **The BRIDGE project**: education and training as a remote service for the automotive supply industry in Tunisia. The project aims to build bridges between the requirements and needs of German and Tunisian industry. In cooperation with partners from Bildungswerk Berlin, the German Plastics Centre (SKZ) and the automotive supply sector, vocational training for management and skilled workers is to be redesigned.
- **African Institute for Mathematical Sciences – Next Einstein Initiative (AIMS-NEI)**: The African Institute for Mathematical Sciences (AIMS) is a pan-African network of centres of excellence for post-graduate study, research and consultation in the mathematics and applied sciences sectors.
- **Entrepreneurial Spirit and Management Expertise for Egyptian University Graduates**: the Philipps University in Marburg (Faculty of Technology and Innovation Marketing) places great importance on research and teaching cooperation with businesses and institutions. This is underlined in their active cooperation with the German University in Cairo (GUC) and associated Egyptian companies.
• Solar-powered generation of absorption cooling for building climate control: housing settlements in hot climates need modern heating and cooling systems. To prevent a further rise in the dramatic increase in electricity consumption already seen, alternative, energy-efficient, sustainable technology solutions are needed.

• Boosting the properties of herbal drugs through optimised cultivation and post-harvest treatment, taking special account of the targeted application of stress: in this research project, both the effect of stress during cultivation and the impact of varying dry conditions on plant properties will be studied using Tropaeolum majus, Salvia officinalis and Petroselinum crispum.

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