

# Scientific collaboration with Ethiopia

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## Scientific collaboration

**In a globalised world collaboration between countries, societies or science communities is of ever increasing importance to improve**

- **general knowledge exchange**
- **tolerance among people in the world**
- **awareness of socio-cultural particularities**
- **value systems**
- **economic-political systems**
- **institutional / structural status**
- **agro-ecological particularities**
- **development policies, and**
- **the general intercultural understanding**

## Scientific collaboration

**... is not a one-way road but a broad multi-flow relation**

- **to develops human abilities**
- **to deal with todays and tomorrows problems**
- **to build capacity to build capacity**
- **to improve flow of knowledge**

## Scientific collaboration

**On the German side it is linked to aggregate goals of the society related to**

- Improve human livelihoods
- Strengthen democracy
- Secure peace
- Drive for equity
- Maintain sustainable environments
- Secure human rights
- Maintain fair economic relations, and
- contribute to the UN-Millennium goals

## **Sector preferences for Scientific collaboration**

- **Agricultural Education and Research competes**

  - with other important sectors**

  - (i.a. Health, Law, Human sciences)**

  - with secondary and tertiary sectors of the economy system**

  - ( i.a. Processing, Manufacturing, Civil-Engineering, Construction, E- and I-Technologies, etc.)**

- **Preference setting is extremely complex**

  - involves needs assessment by all members of the society,**

  - (assisted by congruence analysis, and economic planning models)**

# Importance of the Agricultural Sector in Ethiopia

**86 % of the Ethiopian population in rural areas**

**45 % of the gross domestic product from agriculture**

**85 % of labour opportunities**

**75 % of total export ( Coffee, livestock)**

# Opportunities for Ethiopian Agriculture

- **Large diversity in production conditions and products**
- **Large improvement opportunities**
  - for policies, resource tenure, supply infrastructure
  - for productivity increases (yield, loss mitigation, resource use)
  - for adding value to the food chain (processing)
- **Policies for rural development**
  - institutions, market and price policies,
  - resource tenure (land, water, forest)
  - service and supply infrastructure (credit, information, inputs)

# Opportunities for Ethiopian Agriculture

## ➤ **Technological innovations**

**In relation**

**to existing problems,**

**to the level of technological development and market linkages, and to future market opportunities**

## ➤ **Vocational Education**

**of farmer, extension staff, field scientist**



# Scientific Challenges in Ethiopian Agriculture

**Conclusions Workshop „Build Africa’s institutional and scientific capacity“**

[BASIC-Workshop, IRA, Sept. 2004, Addis Ababa]

- 1. Globalisation and economic competition increases demand for knowledge driven economic development**
  
- 2. The agricultural sector along the food chain and its lateral sectors are still engine of economic development and requires well trained people**

## Scientific Challenges in Ethiopian Agriculture

- 3. Endogenous research and development capacity to focus on specific situation for which foreign technologies and policies are not well adapted**
- 4. Education and scientific development should not be limited to „*the agricultural-only model*“ but needs to address all aspects of *rural development* at all levels of the system hierarchy in research, education and development**

# Scientific Challenges in Ethiopian Agriculture

## 5. The effectiveness of agricultural scientists is dependent on

- **multidisciplinary approaches**  
combining production – ecology – economics – policies
- **involvement of stakeholders in the research process**  
(participatory research, action research)
- **linking knowledge systems across all levels**  
education – research – extension,  
science and business (PPP)

# Scientific Challenges in Ethiopian Agriculture

## 6. Implementation action need a focus

- **on overall rural development,**
- **sustainable natural resource management,**
- **poverty reduction**
- **curricula with relevance**
  - **to needs and problems**
  - **to enhance technical, methodical and social skills**

# Scientific Challenges in European Agriculture

- **Socio-political relevance of Ag-research currently low**
- **Ag-research is a system science and requires attention by natural, technological and socio-economical disciplines**
- **Ag-research problems demands inter-disciplinary and trans-disciplinary approaches**

# Scientific Challenges in European Agriculture

- **Ag-research comprises the continuum of basic, strategic, applied and adaptive research**
  
- **Ag-research does focus on**
  - **food safety and product quality**
  - **rural development**
  - **natural resource management**
  - **rural eco-systems / landscape management**

# Differences in Scientific Challenges

## Europe:

- **Agriculture is highly specialised and integrated in global market,**
- **Problems are very production specific and related to consumer protection and environmental health, product and process quality , food safety**

## Scientific collaboration

### Ethiopia:

- **Agriculture is diversified with growing market integration and requires productivity growth**
- **Technology needs are related to production factor endowment**
- **Problems are related to integrated rural development processes, specific institutional problems (Resource tenure, farmers organisation, service and market infrastructure)**



# Differences in Scientific challenges

**Basic science education is of universal importance**

**Problems of the agricultural and rural sectors however are related to the development phase of the whole society**

**Problem related education and research tends to have different foci in different societies**

**How to secure the interest of a developing country?**

**Careful assessment of appropriateness of Education, Research and Development is of utmost importance**

**Tasks of importance in developing countries may not be part of the curriculum in Industrial countries**

## Scientific collaboration

Support institutions	Individ. People	Research projects	Research programs
Foundations of political parties KAF, FEF, NF, HSF of less importance in agric. sciences	+		
KAAD 80 scholarships in agric. (10 yrs) Ethiopia focus	+		
DAAD largest scholarship provider, more than 35 Doc. Students at LGF	+		+
DFG/BMZ one project on biodiversity one project LGF/Alemaya Agr. Univ.		+	+
VW-Foundation scope within Africa/focus			+
EU INCO-DEV scope not fully used			+

# Scientific collaboration

## DAAD five strategic program goals

- 1. Scholarships for foreigners to promote young elites as a means of gaining future leaders**
- 2. Scholarship for Germans to promote young scientists in their studies and research abroad**
- 3. Internationalisation of higher education institutions in Germany through internationally attractive programs**
- 4. Promotion of German studies and German language**
- 5. Educational cooperation with developing countries through scholarships for young university teachers partnerships with German H.E. institutions**

## **DAAD programs with relevance for Ethiopia**

- **postgraduate study programs in development related areas**
- **bilateral scientist exchange**
- **research grants for doctoral students and young scientists**
- **group excursion of foreign students**
- **university partnerships**
- **special program DAAD-Leibnitz stipends for doctorals and post doctorals**
- **special program Helmholtz-DAAD for doctorals and post doctorals**
- **stipends for special study projects**
- **Re-invitation of previous stipend holder**

# Scientific collaboration

## own experiences

### *Scholarships for doctoral students*

- normal program versus sandwich program
- young scientists can implement research projects of relevance to home country
- limited interdisciplinarity
- young scientist benefits from academic exchange and working environment at German university
- participants are exposed to
  - new cultural circumstances and value systems
  - to existing ways of scientific discussion
  - to strengthening not only scientific methods but also social skills
- most young scientist return to their home country

## Scientific collaboration

### Own experiences

#### **Reinvitation of previous stipend holder**

- **increases base for collaboration**
- **is of mutual benefit**
- **can lead to broader research programs**

## Scientific collaboration

### Own experiences

#### **Study tours of German based students (study projects)**

- **improves socio-cultural understanding**
- **realizes difficulties in (rural) development**
- **increases partnership abilities**
- **allows for exchange of ideas among students (guest – host)**

## Scientific collaboration

### Own experiences

#### *Institutional partnership*

- **common study program – the case of MSc Trop. Vet. Med. with guest lectures, guided research projects**
- **attempts to build a research partnership – the case of Alemaya Agric. University**
- **attempts to derive at an agreement of understanding – the case of EARO- for a systematic multidisciplinary collaboration to support the capacity building of EARO young scientists**



# Future Challenges in Scientific Collaboration

## **More Institutional arrangements to foster**

- **the implementation of interdisciplinary research projects which could involve several disciplines and institutions *(linkage with stipend program)***
- **pro active collaboration to support research projects/programs at institutional level providing scope for capacity building of young scientists  
*(linkage with Worldbank programs)***
- **the modification of curriculum innovations to fit the needs for a rural development concept  
*(linkage with DAAD University partnership)***

## Scientific collaboration

**THANK YOU  
FOR YOUR ATTENTION**