



Supporting developing countries with weak scientific infrastructure

Günther Hahne

IRD – Institut de Recherche pour le Développement



IRD

Institute of research for development

A short introduction



Missions



3 main missions

- Research
- Expertise
- Capacity building : support and training



Thematic priorities



- Public policies and fight against poverty and for development
- International migrations and development
- Emerging and infectious diseases
- Climate change and natural hazards
- Water resources and access to water
- Ecosystem and natural resources



Presentation



IRD key figures

- 2 235 employees:
 - ✓ 825 researchers
 - ✓ 1 026 engineers and technicians
 - ✓ 384 local and other non-tenured staff
- A budget of € 230 million
- 72 research and service units
- 30 centres around the world

*Source : 2007



reseARch

Capacity building :
support and training



traininG

exPErtise

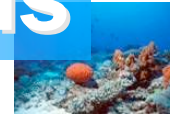
Support



CONSULTiNG



DSF: programs



- Fellowships
- Grants for teams
- Targeted actions with structuring effect, enhancing measures: e.g. training and workshops on transversal research aspects



DSF: programs



**Support for teams:
JEAI – Emerging IRD partner Teams**

**Chaires croisées:
High level scientific exchange program**

Targeted actions:

- Reinforcing partnerships with universities (N & S)
- Contributing to the emergence of S-S networks
- Training in transversal skills



National Research Strategies Example Morocco



Vision for the country: Build a society of

- **Prosperity**
- **Security**
- **Public order**
- **Democracy**
- **Solidarity**
- **Wellbeing**



National Research Strategies Example Morocco



Vision for the country: Build a strong economy

- **Build human resources**
- **Construct an economy of knowledge**
- **Connect to international networks**
- **Consolidate the macro-economic balance**
- **Modernize the public governance**
- **Pay attention to social demands**

➡ Use scientific research as a motor for development



National Research Strategies Example Morocco



Vision for the country: the challenges

- Globalization of the economy
- Growing importance of new technologies
- Urbanization and changes in land use
- Changing work environment
- Scarcity of natural resources and water
- Organization of commerce, service, public infrastructure, tourism ...

➡ Use scientific research as a motor for development



National Research Strategies Example Morocco



Vision for the country: towards an economy of knowledge

- Education and higher education
 - ✓ 60% literacy in 2009 – 100% in 2025
 - ✓ Higher education: 12% in 2009 - >50% in 2025
- Life expectancy: today, 9% will not live up to age of 40
- Multiply number of doctors by 5 before 2025
- Reduce poverty: 14.3% today, 0% in 2025



National Research Strategies Example Morocco



Vision for the country: towards an economy of knowledge

Some specific challenges

- Drought
- Forestry
- Employment in rural areas
- Supply of water and energy
- Public health (VIH-AIDS, mother-and-child health issues, malaria, infectious and chronic diseases, ...)



National Research Strategies Example Morocco



Vision for the country: use science as an engine for development

How to move forward

- Increase attractiveness of scientific research, create a specific professional statute
- Attract young talents to universities and research organizations
- Increase remuneration and career opportunities, job mobility, index salary to performance



National Research Strategies Example Morocco



Vision for the country: necessary evolution of governance

- Provide financial resources at suitable level
- Evaluation of structures and individual performance
- Stimulate multidisciplinary, sharing of resources, scientific exchange and networks
- Provide the necessary human resources (including technical and administrative staff)
- Create technical platforms for sophisticated equipment
- Increase research capacities in SSH



National Research Strategies Example Morocco



Vision for the country: What the government can do

- Future-oriented recruitment policy
- Increase percentage of GNP devoted to S&T and innovation (0.43% -> 3%)
- Provide mechanisms for mobility between universities, research institutes, and the socio-economic world
- Stimulate exchange and interaction between national research and socio-economic world
- Develop a culture of communication and information , increase public literacy and acceptance for scientific issues



National Research Strategies Example Morocco



Vision for the country: New roles of universities

- **Add socio-economic competences to the academic agenda**
- **Provide education modules for professionals**
- **Facilitate technology transfer operations**
- **Provide research services for private companies**
- **Elaborate applied research programs**
- **Promote an entrepreneurial culture in the academic world**



National Research Strategies Example Morocco



Vision for the country: The role of international cooperation

with whom?

- The North (European countries, European Commission, Mediterranean area ...)
- Sub-Saharan Africa: Mauritania, Guinea, Comorian Islands, Senegal, Niger, Mali, ...



National Research Strategies Example Morocco



Vision for the country: The role of international cooperation

what?

- Student exchange (7000 foreign students), co-diplomation
- Scientific capacity building through joint research programs, exchange of scientific documents and publications, joint seminars and internships
- Mutualization of structures for technology transfer
- Evolve from status of subcontractor to full partnership



Role of emerging countries



The same as that of countries of the North

- Student exchange
- Sharing of scientific infrastructure
- Collaborative research projects
- Establish research, education and capacity building projects
- Solving of common problems through joint scientific approaches



Role of emerging countries



Example of Brasil

Calls for projects (CNPq)

- **PROSUL – South America**
- **PROAFRICA – African countries**



Some specific tools (IRD)



- Individual fellowships
- Grants for emerging teams (JEAI)
- Research grant programs at different levels, topics
- *Chaires croisées* (2 high-level scientists, research and training partnership)
- Associated laboratories (LMI)
- Joint research units (UMI)



Some specific tools (IRD)



Joint research units (UMI): example UMMISCO

- Thematic, not “national” approach to scientific problem
- Mathematic modeling of complex systems
- IRD, University Paris 6, 4 African universities (Morocco, Senegal, Cameroon), 1 Asian university (Vietnam)
- 2009: 49 joint publications in intl. journals



In conclusion



Don't act FOR.....

..... but work WITH

..... and construct a common future

clsf@irdl.fr



Thank

you



for



attention

your