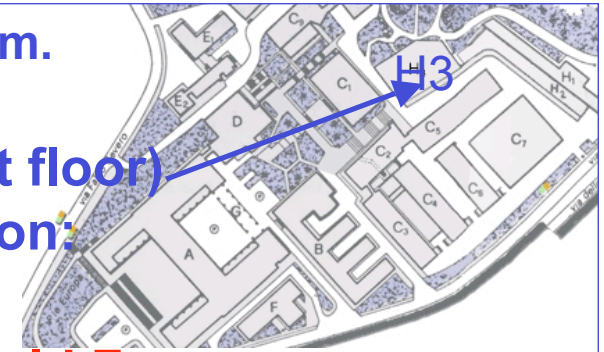




Monday 28 May 2007, 4.00- 6.00 p.m.  
University of Trieste  
Building H3, Lecture Room 1A (first floor)  
Special International Presentation:



**HIGHLIGHTS of the G8-UNESCO World Forum**  
**on 'Education, Research and Innovation: New Partnership for**  
**Sustainable Development', held in Trieste, May 2007**  
**(In English) All students, researchers, lecturers are cordially invited**

Program

- 16,00 Introduction: Education-Research-Innovation - **Gianrossano GIANNINI (TS/Italy) (10')**  
16,10 Why UNESCO? Why Africa? Why Trieste?- **Paolo ALESSI (TS/Italy+UNESCO) (10')**  
16,20 Education in the Knowledge-Based Society - **Gabriele GARBIN (TS/Italy+UNESCO)(10')**  
16,30 Environment: Global Challenges - **Gianrossano GIANNINI (TS/Italy) (10')**  
16,40 Innovation and Society - **Rachel OBED (Nigeria+ICTP) (10')**  
16,50 Sustainable Development and Health - **Omer A. Ali (Sudan+ICTP) (10')**  
17,00 Sustainable Development and Energy - **Gabriele GARBIN (TS/Italy+UNESCO) (10')**  
**& Anna Maria Novello (TS/Italy) (5')**  
17,15 Research and Innovation: Role of Governments-**Patrizia TIBERI VIPRAIO (UD/Italy) )(5')**  
**& Rachel OBED (Nigeria+ICTP) )(5')**  
17,25 Knowledge and Sustainable Development **Gianrossano GIANNINI (TS/Italy) (10')**  
17,35 Science/Technology/Innovation: Perspectives for Africa-**Elie SIMO (Cameroon+ICTP) (15')**  
17,50 Knowledge for Sustainable Development:The future **Patrizia TIBERI VIPRAIO(UD/Italy)(10')**  
18,00 End

# Science, Technology and Innovation: Perspective for Africa

**Dr. Elie SIMO**

**Faculty of Sciences, Department of  
Physics, University of Yaounde I - ICTP  
CAMEROON**

- I - ZOOM ON AFRICA:  
THE SAD REALITY
- II – SCIENCES – TECHNOLOGY:  
THE LINK
- III - PERSPECTIVES FOR AFRICA/  
PROPOSALS
- IV – FINAL WORDS

# I - ZOOM ON AFRICA: THE SAD REALITY

- Africa is a large continent (size) of about 700 M inhabitants exposed to a severe poverty
- Half of its population lives on less than 1 Euro per day
- 169 M inhabitants live in islands
- 42% has no access to drinkable water
- 73% has no access to electricity

- Malaria kills 900 000 Africans each year
- Africa is the most vulnerable continent to climate change, because of its fragile ecosystem

# II - SCIENCES – TECHNOLOGY: THE LINK

- **Sciences** refer to
- conception
- Theory
- definition of concepts
- Sometime long term actions.

Sciences are divided into two groups:

- The **macro-science**, accessible to a large number of scientists and dealing with
  - Construction of roads, houses, buildings, bridges
  - Food production...

- The **micro – science**; For high resolution.

This category of science includes:

The microstructure of the matter involving

fine structure

atom and radiation

laser production

nuclear physics

Astrophysics ...

This category is reserved mostly to developed countries.

The quality of the research and the productivity of the scientists in Africa is very low: 1,37%

### **Reasons:**

Sciences of creativity and originality is very costly

- Brain drain is a critical problem: best Africans' scientists, best talents, best students are attracted by the best universities in the world.



# Technology

- Technology on its part referees to:
  - practical phase
  - implementation of concepts
  - “touchable” aspect of sciences
  - “physical” aspect of sciences

# III -PERSPECTIVES FOR AFRICA/ PROPOSALS

- The **training program** in technology should be able to overcome all these crucial problems facing by Africans. We must recognize that, most of the time these program primarily need a lot of investments; infrastructures that African government can not afford without the contribution of developed countries.

- 1)First of all Africa needs a **vaccine against malaria**: 900 000 deaths/year is enough. The contribution of scientists from developed countries is urgently awaited.
- 2)Africa needs mechanized farming to **feed is population**. No archaic farming with hoes, hand-crafted fishing: Those practices belong to antiquity. We are in 2007!

- 3) The **technology program** should be adapted to the transformation of their natural resources in Africa before exporting them.
- 4) **INDUSTRIALISATION**: There must be a strong correlation between the technology's training program and the needs of industries. Africa must urgently imagine new strategies for jobs.

- At the time being, you can find a number of young people well trained, well qualified, with professional certificates,
- Nurses, medical doctors, engineers
- GCE, Bachelors, Masters.....  
.....seeking for a job!
- One of the serious Africa's problem is the unemployment. No program of sciences and technology can work if we don't think seriously about **EMPLOYMENT**.

- Primarily, by the years 70s, sending a child to school meant that at the end of the training, he shall be employed by the government. Today, the situation is completely different. All our respective administrations experience a quasi-saturation. They can not more recruit people!
- Developed countries: why not come in Africa and create new industries. All what attract you in China can be found in Africa...

- **5) African scientists** must **improve their productivity** in sciences of creativity, innovation, production of original ideas.
- We can not continue supporting the idea that African's science should lead to production of food, buildings, construction of roads, bridges....FULL STOP
- African scientists must go beyond such considerations, involving themselves very strongly to sciences of high resolution. Despite their extremely difficult conditions, African scientists must dare.
- Really speaking, to succeed they need to be connected to some laboratories in developed countries !!!

- **6) Communication:** Africa should start thinking seriously about a system of communication thoroughly on its control.
- Africans see exactly what western media want them to see !
- Africans hear exactly what western media want them to hear !
- We don't have a total control of our destiny



- We don't belong to ourselves
- We belong to others
  - A SATELLITE.....

# IV - FINAL WORDS

- I urgently ask to our respective governments in Africa to:
- **STOP** with **CORRUPTIONS** and
- **MISAPPROPRIATION OF FUNDS**
- These two diseases kill more than malaria and HIV/AIDS
  
- FINALLY
- Let's recall that, G8-Forum was under the High Patronage of the President of Italy.
- I want to seize this opportunity to kindly ask to **President Romano PRODI**, to invite its Colleagues of the G8-countries to
- **CHOOSE AFRICA AS THEIR NEXT INDUSTRIALISATION DESTINATION.**

**Saturday, 12 May**

**Knowledge for Sustainable Development: The Future**

*This session will focus on outstanding issues for the future, taking into account, in part, the past perspectives and developments.*

**Chair**



**Professor Werner BURKART**  
Deputy Director General  
International Atomic  
Energy Agency  
VIENNA

**Keynote Speakers**



**Professor  
Édouard BRÉZIN**  
Former President of French  
Academy of Sciences  
Département de Physique  
Laboratoire de physique théorique de l'École  
normale supérieure FRANCE

**Rapporteur**



**Sir David KING, KB ScD FRS**  
Chief Scientific Advisor to H.M.  
Government  
and Head of the Office of  
Science and Technology U.K.



**Hon. Mr. Roger H. SCHJERVA**  
Deputy Minister  
Ministry of Finance  
Norway