

**5th Session of the World Commission on the Ethics of Scientific
Knowledge and Technology
(COMEST)**

Hotel Le Méridien Président, Dakar, Senegal, 5th to 9th December 2006

Description of the sessions

Tuesday, 5th of December, 2006

**Session reserved for COMEST members
9.00 – 18.00**

Wednesday, 6th of December, 2006

**Session reserved for COMEST members
9.00 – 12.30**

**Forum of Young African Researchers: Social responsibilities of scientists in Africa, organized in cooperation between UNESCO, IDRC and the Ministry of the Scientific Research
9.00 -18.00, Room B12**

Issues for discussion

The Forum of Young African Researchers aims at providing an opportunity for young scientists to share their views and ideas on the ethics of science and technology. The central theme of this forum is the ethical and social responsibilities of scientists with specific reference to Africa. Indeed, ethical and moral considerations are at the heart of debate on scientific research, particularly in the context of developing countries. The rapid rate of scientific and technological progress brings ethical issues to the fore for both scientists and society. All scientists should therefore evaluate the potential effects of their research field on the future of their society.

Africa is currently confronting many different challenges: to feed, care for, train and house its growing population; to protect the natural environment; to increase its influence in terms of world trade; to make itself heard and respected on the international stage. Faced with such challenges, what kind of contribution should Africa expect from its young scientists? What kind of responsibilities should young scientists assume, not only in terms of their research, but also in terms of their local area, their village, town or country? Are they fully aware of the conditions of their continent? Are there opportunities for them to participate in the decision-making process regarding what is 'appropriate, useful, urgent or top priority' for the sustainable development of the continent?

Today, economic factors play a decisive role in scientific research. Often, many young African scientists are obliged to work on subjects prompted by financial circumstances. They may also be pressured into research by superiors who are concerned with prominence and scientific, social and political recognition. A significant number of young scientists have no choice but to emigrate to developed countries in order to pursue and fulfil their professional and personal goals. How can we reduce these pressures on scientists and increase their freedom of choice? These questions may be put forward individually, but also collectively. In this regard, it seems appropriate to establish a framework for dialogue, exchange and debate among young scientists about the future of their countries and of Africa as a whole. This gives rise to the idea presented to forum participants of examining ways and means of developing a network of young scientists, in the hope that the Forum of Young African Researchers will diversify exchanges between participants. Debate will focus on the following themes:

1. Social, economic and cultural pressures, as well as ethical challenges, for researchers.

2. Agendas for research (e.g. engaging young scientists in the decision-making process, increasing access to resources, establishing networks of young researchers) and future prospects of young people in Africa.
3. Young scientists facing the issue of emigration to developed countries
4. Interdisciplinary collaboration for greater awareness of ethical issues in the research field.

Chairs:

- Mr. Pierre Sane, UNESCO Assistant Director General for Social and Human Sciences (morning session)
- A Representative of the Young African Researchers (morning session)
- Mrs Pilar Armanet Armanet, President of COMEST (afternoon session)
- Mr. Ben Sikina Toguebaye, Professor and Research Director, UCAD, Dakar (afternoon session)

Speakers:

- Mrs Tafeeda Jarbawi, COMEST Member
- Mr. Innocent Butare, African scientist, Senior Specialist Programme, IDRC
- Young African Researchers

Press conference

18:00-18:30

Thursday, 7th of December, 2006

Opening Ceremony chaired by the President of Senegal, and keynote address

10.00 – 12.00, Room B12

Press Conference

12.00-12:30

Session reserved for Ministerial meeting: discussions on the integration of the ethics of science and technology into African public policies

14.00 – 18.30, Room B01

Issues for discussion

Science and technology play a major role in bringing about social and economic change. The complexity of decision-making in the modern world therefore means that links between science and government are more important than ever. Good governance is part of the decision-making process which manages change with the aim of promoting the well-being of populations and maintaining peace in every country. Science, technology and good governance are all elements of the process of devising and implementing a mechanism to allow the interaction of these three in an effective, responsible and transparent way, which increases the importance of advice on science ethics and public participation in policy and decision-making. Policy makers must consider the needs of society and reinforce the social acceptability of science, based on ethical principles such as justice, solidarity and sharing of benefits. Relevant social and ethical implications of scientific and technological advances must be taken into consideration in public policy, while also addressing the priorities of the African region. Discussions will take place on the subject of a Dakar Declaration of Ministers on the Ethics of Science and Technology that will be adopted at the end of the session.

Chair:

- Mrs. Yaye Kene Gassama Dia, Minister of Scientific Research of Senegal

Participants:

- Ministers of West Africa
- Representative of the Executive Secretary of ECOWAS

- Mr. Pierre Sané, Assistant Director-General for Social and Human Sciences of UNESCO
- Mrs. Pilar Armanet, President of COMEST and Ambassador of Chile to France and to UNESCO

**Session 1 on the Ethics of Science, the responsibility of scientists and codes of conduct: regional consultation for Africa
14.00 – 18.00, Room B12**

Issues for discussion

Considering ethics in relation to science is necessary in order to identify the fundamental values of science and scientific research when there exists a risk of conflicting interests. Further actions are also essential to underline the social responsibility of scientists. The development of codes of conduct for scientists is one way of establishing the fundamental values of science. UNESCO is currently investigating ethical issues raised by scientific and technological progress and scientists' responsibilities to society by way of three main activities: (1) exploring the field of science ethics in a wider context, as well as other subjects relevant to future international action; (2) undertaking consultations with scientists, philosophers, policy makers and UNESCO National Commissions and Permanent Delegations in all regions. Consultation meetings have already been organised in Asia (Korea, India, Japan and Thailand), in Europe (Switzerland) and in Latin America (Brazil); (3) reviewing UNESCO's earlier work in this area, with particular emphasis on the following: the Recommendation on the Status of Scientific Researchers, adopted at the 18th session of the UNESCO General Conference in November 1974; the ethical aspects of the Declaration on Science and Use of Scientific Knowledge, adopted at the World Conference on Science, jointly organised by UNESCO and the International Council for Science, at the University of Budapest in June 1999.

Chairs:

- Mrs Margaret Mafe, Secretary of the National Ethics Committee of Nigeria, COMEST member
- Mrs Marta Kollarova, COMEST member

Speakers:

- Mr. El Hadji Issa Sall, Chairman, University of Sahel, Dakar, Senegal
- Mr. Charles Becker, CNRS/CEA Researcher, Cheikh Anta Diop University, Dakar, Sénégal
- Mr. Sang Song-Yong, COMEST member

**Press conference
18.30-19.00**

**Cultural evening offered by the Government of Senegal
20.00-22.00**

Friday, 8th of December, 2006

**Session 2 on the Teaching of ethics of science and technology, consultation on the UNESCO draft core curriculum in these fields, and promotion of diversity in teaching
9.00 – 12.00, Room B12**

Issues for discussion

The general objective of UNESCO's ethics teaching activities is to reinforce and increase the capacities of member states in the domain of ethics of science, technology and bioethics. For the period 2006-07, priority has been given to Africa, Arab States countries and Asia. The Ethics Education Programme was established on the recommendation of COMEST in its report The Teaching of Ethics, published in December 2003. Since then, the following activities have been carried out: identifying experts on ethics training, sampling teaching programmes, setting up documentation

centres, providing teacher training and creating an Advisory Expert Committee for ethics teaching. In the process of promoting ethics teaching it was deemed necessary to establish standards and criteria for ethics teaching programmes. The Advisory Expert Committee for ethics training, formed to assist UNESCO in carrying out the ethics training programme, is currently undertaking activities with the aim of establishing core elements of ethics teaching curriculum, developing standards and criteria for evaluating existing and newly developed training programmes, and providing a system of quality assurance and possibly certification of programmes that have been positively assessed.

Discussions should, among other things, help Africa to enrich elements of its curricula in the area of ethics of science and technology. They should also help to evaluate these programmes and develop a system of quality control and possible certification in these areas.

In terms of content, the discussions will aim to show that, while the teaching of the ethics of science and technology is a universal need, priorities are not necessarily the same for all continents. Which ethical issues across the different scientific disciplines should be prioritised in Africa? (For example: the North testing new medication and vaccines in the South, patents being granted to discoveries based on traditional knowledge, North-South relations, protection of the environment and management of toxic waste, the fight against poverty and protection of vulnerable groups, etc.) How can we ensure that ethics teaching effectively takes into consideration the preoccupations of African societies?

Given the paucity of teaching in the area of ethics of science and technology and the challenges that the continent unfortunately still faces, it is necessary to explore how higher education and research institutions in the South can cooperate with each other and their Northern counterparts so that the teaching of the ethics of science and technology can be given the place it deserves in higher education. To ensure the sustainability of this initiative and to increase its impact on society, it is necessary to look at ways of introducing this teaching at other levels, i.e. primary and secondary. New information technologies should help to maximise opportunities and resources in terms of educational practices and learning.

Chairs:

- Mrs Aminata Cissé Diaw, Professor, Philosophy Department, Cheikh Anta Diop University, Dakar, Sénégal
- Mr. Sang Song-Yong, COMEST member

Speakers:

- M. Ruben Apressyan, COMEST member
- M. Clifford Tagoe, Professor, Vice-chancellor of Lagon University, Accra, Ghana
- M. Christophe Kwami Dikenou, Professor, Philosophy Department, Lomé University, Togo

Session 3 on Environmental Ethics, consultation on UNESCO's draft document concerning policy advice on Environmental Ethics, and the question of toxic waste in Africa 14.00 – 18.00, Room B12

Issues for discussion

Environmental Ethics

COMEST's assessment has revealed that environmental ethics are not only a philosophical problem; rather, they may be defined as an issue of common interest which requires urgent action and international cooperation in order to resolve some very practical problems. UNESCO and COMEST have devised a three-phase strategy involving 1) specialists in environmental ethics, 2) the scientific community as a whole, 3) policy makers. The first phase, which took place in 2004, enabled the establishment of a group of experts to tackle the fundamental questions of environmental ethics. This group was given the task of conducting a "state of the art" study on environmental ethics in order to produce a policy document which would identify opportunities for possible international actions. The second stage involves consultations with the scientific community about the relevance of several international actions proposed. Once the views of the scientific community have been considered, the policymakers may be asked to give their opinions on the proposed actions. Following this, the draft

document concerning Policy Advice on Environmental Ethics will be submitted to the UNESCO General Conference for consideration.

The question of toxic waste in Africa

Toxic waste generated by human beings can kill silently and on a mass scale, with harmful effects that can last for generations. The legal, global trade of toxic waste has become a real 'business' in the world economy. The recent catastrophe in the Ivory Coast has shown the vulnerability of African populations who remain unaware of the dangers posed by toxic waste, as well as the limited power of political, economic and social decision makers in this kind of situation.

Such a tragedy weighs on the human conscience and calls us once more to define 'what must be done' and 'what must not be done'. The existence of several international and regional legal instruments aimed to help protect people and ecosystems (the Basel and Bamako Conventions) does not suffice. The crisis has shown the urgent need to renew study on this issue at regional, national and international levels, particularly in countries with weak scientific, technological and organisational capacities. The ethical question of where responsibility lies – whether with individuals, industries, civil society, scientists or policy makers – must be put to countries producing and exporting toxic waste as well as to countries of transit and those receiving toxic wastes.

In this regard, the following questions are raised:

- 1) How can we improve access to information for populations and other social actors, in order to bring about collective action that will prevent or reduce catastrophes resulting from toxic waste? What role should researchers play in this information campaign?
- 2) How can we reinforce the scientific, technological and organisational capacities of African countries in order to protect their health of their populations and their ecosystems?
- 3) How can we put into place a global monitoring authority for countries authorised to export toxic waste, while taking into account the varying technical capacities of different countries?
- 4) How can we promote 'civic behaviour' among countries producing, exporting and importing waste, or, failing that, increase their penal responsibility?

Chairs:

- Mr. Pierre Sané, Assistant Director-General for Social and Human Sciences of UNESCO
- Mrs Nadja Tollemache, COMEST Member

Speakers:

- Mr. Johan Hattingh, COMEST member
- Mrs Yveline Houenou, Agbo, Department of Medical Sciences, Cocody University, Abidjan, Ivory Coast

Saturday, 9th of December, 2006

Session 4 on the relationship between biodiversity, GMOs and biotechnologies: African perspectives.

9.00 – 12.30, Room B12

Issues for discussion:

In recent years, Africa has been placed at the heart of the debate on genetically modified organisms (GMOs) in both developing and developed countries. Genetic modification raises important issues for science and for the public, and debate on its benefits and potential risks to health and the environment, particularly regarding biodiversity, must be encouraged. Africans must also be able to make their own decisions on this matter. There is a real need for capacity building, debate on the ethics of GMOs and effective systems of regulation. Developing countries must improve their capacities in order to independently review and evaluate the use of advanced technologies, such as biotechnology. Promoting the participation of African countries in the international debate on this subject is highly important. This participation is also in accordance with many aspects of UNESCO's mandate and current agenda, particularly with regard to issues such as the sustainability of the U.N.

Millennium Development Goals, the human right to an adequate food supply, and the priority given to the ethics of science and technology by UNESCO member states.

In this regard, it is desirable that African countries promote research on biotechnology and GMOs and develop effective strategies of education, information and communication, with a view to raising awareness about the potential benefits and risks related to their use (e.g. ecological, health, social, economic and ethical implications). In addition to strengthening their capacities in this way, African countries should also set up regulatory and monitoring mechanisms. At the moment authorities of some African countries are unable to confirm or refute rumours concerning the possibility of unauthorized experiments, e.g. those concerning transgenic plants.

The following questions will be examined:

- 1) How can we ensure that the use of GMOs will not affect the biodiversity of agro-ecosystems and increase dependence on foreign agricultural imports?
- 2) How can we improve African capacities for research, regulation, monitoring, sharing of information, the inclusion of various actors in the debate and decision making, in order to prevent adverse effects of the spread of GMOs in a globalized world?
- 3) What attitudes and measures should be taken regarding the distribution of GM foods as aid in Africa?

Chairs:

- Mr. Amadou Tidiane Ba, Director, Institute for Environmental Sciences, and Professor, Cheikh Anta Diop University, Dakar, Sénégal
- Mr. Al Ali, COMEST Member

Speakers:

- Mr. Jeremy T. Ouedraogo, Geneticist, Institute of environmental and agricultural research, Ouagadougou, Burkina Faso
- Mrs Mame Oureye Sy, Doctor, Department of Vegetal Biology, Cheikh Anto Diop University, Dakar, Senegal

Working group of Ministers to finalise Dakar Declaration on Ethics of Science and Technology in Africa

11:00-12:30

Closing Ceremony chaired by the Prime Minister of Senegal

14.3-16.30, Room B12

- Mr. Johan Hattingh, COMEST Rapporteur, presents the COMEST session report
- A representative of the young African scientists presents the report from their forum and their declaration
- Mr. Souleymane Niang, Representative of the Academy of Science and Technology of Senegal
- Mrs. Yaye Kene Gassama Dia, Minister of Scientific Research of Senegal presents the Declaration of Dakar on the Ethics of Science and Technology in Africa
- Mrs. Pilar Armanet announces the new Chairperson of COMEST
- Mr. Pierre Sané, Assistant Director-General for Social and Human Sciences of UNESCO, presents the conclusions of the COMEST session
- Vote of thanks
- Closing speech of the 5th session of COMEST by Mr. Macky Sall, Prime Minister of Senegal

Press conference

17.00-17.30