G8-UNESCO World Forum
Education, Research and Innovation: New Partnership for Sustainable Development
Trieste, Italy

Report of the session held on Friday 11th May 2007, from 11:45 to 12:45 on : Sustainable Development and Health, chaired by Professor Phyllis Pitt-Miller, Dean of the Faculty of Medical Sciences, University of the West Indies, St. Augustine, Trinidad and Tobago; the keynote speakers were: Dr. Aristides Patrinos, President of Synthetic Genomics, Inc, USA, Dr. Patrap C. Reddy, Founder and Executive Chairman, Apollo Hospitals Group, India and Dr. Giorgio Tamburlini, Scientific Director, Institute of Child Health IRCCS, Burlo Garofolo, Italy.

The main questions discussed concerned the development of integrated approaches to find solutions to the heavy health problems, especially those spread in the most underdeveloped countries located in the sub-Saharan region on the one hand, and on the other hand the ones in other low developed and developed countries to face the challenges of the 21st century. The session has also raised the problems of health linked to the aging of populations in the world, problems aggravated by the degradation of the environment and pollution. How can scientific and biomedical research developed in low income countries, combined with technological innovation and/or technological transfer, help stopping the spread of pandemic diseases in order to, at least, reduce the death rate of the most active part of the population concerned. The other issue raised during the session was about how compatible could be the necessary protection of the principle of intellectual property and health development technologies with the urgent health care needs in the least developed countries taking into consideration the consequences and the impact of what could be developed in terms of innovative research in those countries.

The session also stressed on the need to identify the critical areas of research such as bio-nano-technology, molecular medicine, high-tech-genetics and the novel cancer therapies, and the urgency to develop them which could really help improve the health of the particularly vulnerable population. This challenge could not be faced without paying particular attention to education and high quality training in all domains of science by using the new technologies of communication and dissemination of knowledge, allowing virtual teaching such as telemedicine.

The three keynotes have highlighted the importance of finding solutions to the problems of health for a sustainable development, pointing out the necessity of a good health for a good quality innovative research. Most of undeveloped countries and continents, particularly Africa, live a dramatic situation of infectious diseases (Malaria, tuberculoses, HIV, etc.) as well as malnutrition, toxicity linked to the degradation of the environment and water pollution. All these factors generate very high percentage of child death (11.000.000 per year) and elderly mortality in countries in need of human potential. The disappearance of the future generations particularly in African developing countries, associated to the brain drain, luring away qualified medical personnel, contribute to the blockage of the emergence of sustainable development have added the three speakers.

The measures that could be applied in undeveloped countries, and that have stood the test of times in some emergent states like India, is to politically set up an official agenda of health per state and/or region, with clear objectives and grading of priorities to answer the local,

regional and world demand. The real engagement of states, governments and human potential appears to be the key parameter to solving health problems throughout the world. The necessity of the execution of the agenda set by the most developed countries concerning their financial engagement toward Africa could really help to start these strategies.

The speakers have also globally discussed the necessity to develop the two fundamental ways of research in health domain, clinical and fundamental research. The first concerned the entire innovation of clinical research more oriented on sickness prevention and early detection of illness, deploying in parallel a politic of restructuring the administration by moving away the hospital infrastructures toward rural regions, and assuring training of technical staff on new methods and approaches that concern the management of the sick by using the new technology of communication such as telemedicine. Societies have also to increase the demand of health care through education particularly that of women and children, combined with social policies for a quality care at effective costs. It was largely pointed out that illiterate societies use more traditional medicine than modern clinical approaches in hospitals which strengthen health precariousness and children mortality. The emergence of quality healthcare sectors, private (India as an example) or public institutions could not be possible without including an effective expertise by draining medical talents from all parts of the world and setting up a partnership with the pharmaceutical industry.

The second, based on the fact that understanding that the only one way to reach sustainable development by starting the growth of economic activities is to develop a basic research that could answer to the problems of health taking into account that the most developed countries are concerned by their own research in conjunction with their own health problems. The development of epidemiological studies per countries and regions is necessary to determine health priorities and the domain of research to develop, in order to be able to answer to the real local demand. Fundamental research oriented on bio pharmacy will allow the discovery of new proteins and the use of recombined ADN/ARN not only for therapy objectives, but also to promote the development of pharmaceutical industry in developing countries, and thus be competitive in the market of world medicine. This way, the dissemination of knowledge and transfer of new technologies from developed states toward the poorest countries is a duty. It is necessary to stop the repetitive research which is useless and generates the loss of financial budgets which should be used urgently in training scientific competencies, in the reproduction of simple technologies without losing quality like for the genetic engineering, generic medicine, and the innovative research on medicinal plants.

Finally, the sustainable development could not be a reality if undeveloped countries, particularly African countries, don’t take in account the scientific human potential: the brain drain has to be stopped, and politics and governments have to involve themselves.

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