Secretariat of the
Convention on Biological Diversity

CBD

22 May 2007
International Day for Biological Diversity

Biodiversity and Climate Change

Statement

by

Ahmed Djoghlaf, Executive Secretary of the Convention on Biological Diversity

at the

BIO International Convention

Boston, United States of America
8 May, 2007

Please check against delivery

United Nations Environment Programme
413 Saint-Jacques Street, Suite 800
Montreal, QC H2Y 1N9, Canada
Tel.: +1 514 288 2220
Fax : +1 514 288 6588
www.biodiv.org
secretariat@biodiv.org

Distinguished delegates,
Ladies and gentlemen,

Here in Boston at the Massachusetts Institute of Technology, paint that can kill influenza viruses and wipe out 99% of bacteria is being tested and could be used very soon in the hospitals. The same institute, in collaboration with the University of Hong Kong, has developed a nano liquid that can stop in fifteen seconds a cerebral hemorrhage and spinal injury. Researchers in Hong Kong have developed micro-wind turbines that generate electricity at wind speeds as low as 2 metres per second. Inspired by the structure of the lotus leaf, renowned for its ability to stay clean in a polluted environment, scientists at the Nees-Institut for Plant Biodiversity at the University of Bonn have created a "self-cleaning" paint. "Structure R" or R-MnO_2 is being tested at the University of Tokyo and may in the near future produce artificial photosynthesis providing almost the same carbon dioxide absorptive capacity as natural forests.

In Milan, tests have been conducted conducted on paint to be used in buildings to soak up to 60% of some of the most noxious gases for vehicle exhausts. "Ecopaint" will be on the European market very soon. In Milan, also cement that can reduce up to 50% of pollution has been tested. The industrial scale production and marketing of TX active has already started. Last week in Vancouver, at the 2007 Conference on Hydrogen and Fuel Cells, experts predicted that hydrogen-fuel cars can be in dealer showrooms by 2015. In the forests of Borneo, WWF is using videotaping to identify new species. In Toronto next month, an international consortium will be launched involving more than 250 researchers from 21 countries with the goal of initiating an unprecedented worldwide species identification process using DNA "bar-coding" to catalogue 500,000 species within five years. This week, a private company will deliver to the government of India an early warning system with a drilling capacity of 3,500 metres which will provide early warning of future tsunamis and thereby help to save tens of thousands of human lives and billions of dollars in damage. The cost would be $50,000.

These are some of the examples of the fantastic power of science, innovation and technology at the service of human well-being, living in harmony with Nature. Technological innovation prompted the industrial revolution as well as the revolution of the information technology. Today, scientific and technological innovations are required to promote the adaptation revolution to sustainable development in the era of a climate change.

Global benefits, new ideas, bold ventures, the theme of this year's BIO International Convention, therefore perfectly reflects the challenges that biotechnology and the biodiversity agenda are facing. Bold ventures, new ideas are indeed required to achieve global benefits to address the unprecedented loss of biodiversity at the same time raping the benefit in a sustainable manner that nature provides. For this reason, I am delighted today to be given the opportunity to address this important meeting to share with you ideas that may not be new but which could open the prospect for bold ventures between the biotechnology industry and the Convention on life on Earth to achieve global biodiversity benefits.

Last week, Working Group III of the Intergovernmental Panel on Climate Change issued its report, which provided new evidence of the impact of climate change and

confirmed that the concentration of carbon dioxide in the Earth's atmosphere is of a level not seen for some 650,000 years. Last year, the most authoritative statement on the health of the Earth's ecosystems, the Millennium Ecosystem Assessment, prepared by 1,395 scientists from 95 countries, also demonstrated the pressure on natural systems has reached such a level that the ability of the planet to continue providing the goods and services that we, and future generations, need for our well-being is seriously and perhaps irreversibly jeopardized. In the view of some experts, we are experiencing the greatest wave of extinctions since the disappearance of the dinosaurs. Extinction rates are now between 100 and 1,000 times the "natural" rate. Land-use change has been the major driving force behind the unprecedented loss of biodiversity, and now climate change is adding to these threats and will increase extinction rates further still.

Rapid population growth has led to a change from traditional to intensive agricultural systems. Over the past 12,000 years, about 7,000 plant species have been tried for cultivated food production. Today, only about 15 plant species and eight animal species supply 90 per cent of our food energy. Of the nearly 8,000 varieties of apple that grew here in the United States of America at the turn of the century more than 95 per cent are no longer widely grown. In Mexico, only 20 per cent of the corn types recorded in 1930 can now be found in production. Only 10 per cent of the 10,000 wheat varieties grown in China in 1949 remain in use. The FAO has estimated that, since 1900, about three-quarters of the genetic diversity of domestic agricultural crops has already been lost.

Wild relatives of food crops are considered an insurance policy for the future, so that they can be used to breed new varieties that can cope with the challenging conditions. One of these emerging challenging conditions is the unprecedented loss of pollinators. American honeybees, which pollinate more than 90 per cent of commercial crops in the United States, have declined by 30 per cent in the last 20 years. This poses a challenge to agricultural interests such as those of California s almond farmers who need about 1.4 million colonies of honeybees to pollinate 550,000 acres of their trees. United States farmers had to import honeybees last year for the first time since 1922.

Farm animal genetic reources are also an insurance policy for the future. However according to FAO, around 20 per cent of domestic animal breeds are at risk of extinction, with a breed lost each month. Of the more than 7,600 breeds in the FAO global database of farm animal genetic resources, 190 have become extinct in the past 15 years and 1,500 more are deemed at risk of extinction. Some 60 breeds of cattle, goats, pigs, horses and poultry have been lost over the last five years. Livestock contributes to the livelihoods of 1 billion people worldwide, and some 70 per cent of the rural poor depend on it as an important part of their livelihoods.

Biodiversity loss has tremendous implications for our economy, human well-being and security. It jeopardizes global food security, human health, energy security and our supply of fresh water. Biodiversity loss is being compounded by the impacts of climate change. It may cause the extinction of up to 30 per cent of the species recorded today. Climate change will have impact on all ecosystems and will have far reaching implications on food security.

According to FAO, climate change threatens to increase crop losses, increase the number of people facing malnutrition, and may change the development patterns of animal diseases and plant pests. Sixty-five developing countries, most of them in Africa risk losing about 280 million tonnes of potential cereal production, valued at $56 billion, as a result of climate change. This loss would be equivalent to 16 per cent of the agricultural gross domestic product of these countries. Today, 1.1 billion hectares of land in Africa have a growing period of less than 120 days. By 2080 climate change could result in an expansion of this area by 5 to 8 per cent or by up to 90 million hectares.

This situation will occur at a time when the world population is likely increase to over 9 billion by 2050. This increase will take place mainly in developing countries where more than 800 million people are already suffering from hunger and malnutrition. During the second half of the twentieth century, the global food system responded to a twofold increase in the world's population, by more than doubling food production. In 2030, the demand for food is expected to be 55 per cent higher than in 1998. Responding to such an increasing demand is an extraordinary challenge which calls for new ideas and bold ventures for achieving global benefits. Biotechnology has a role to play in meeting the challenges of food security of a more populated and warmer planet.

Climate change will not only affect the health of our ecosystem it will also impact on human health. Rising temperatures in the coming decades would lead to an increased number of deaths, diseases, including malaria and diarrhoea and injuries linked to heat waves, floods, storms, fires and droughts. According to the World Health Organization , death and injury from climate change are set to more than double in the next 25 years and will reach more than 300,000 a years by 2030. Since 1960, WHO has recorded 30 new infectious diseases. The unprecedented loss of biodiversity compounded by climate change affects also the medicinal plants.

About 15,000 species or 21 per cent of all medicinal and aromatic plant species are at risk, according to the report by the Medicinal Plant Specialist Group of the IUCN Species Survival Commission that sets forth the new standard. Almost 70,000 species are involved, many of them in danger of over-exploitation or extinction through over-harvesting and habitat loss. In India, for instance, 319 medicinal plants are listed as threatened by IUCN.

The current usage of plant-derived material in health care is substantial. More than 400,000 tonnes of medicinal and aromatic plants are traded every year, and about 80 per cent of these species are harvested from the wild. WHO estimates that about 80 per cent of the population in developing countries relies mainly on medicine mostly derived from plants for their primary health care. At least 119 chemical compounds, derived from 90 plant species, are important drugs currently in use in one or more countries. Meeting the health challenges of tomorrow is an extraordinary challenge which calls for new ideas, bold ventures for achieving global benefits. Biotechnology has also a major role to play in meeting the health challenges in a warmer planet.

As recognized by Agenda 21 in its chapter 16, biotechnology is of tremendous importance to agriculture and human health. Since its inception, the Convention on Biological Diversity has recognized the importance of biotechnology, as evidenced by its Articles 16 and 19, relating respectively to access to and transfer of technology including

biotechnology, and to handling of biotechnology and distribution of benefits. However the potential of biotechnology must be fully exploited while taking into account the possible impact on human health and the environment. It is for this reason that the Parties have promoted an international protocol on biosafety.

The Cartagena Protocol on Biosafety, was adopted in January 2000 has to date been ratified by 140 Parties. The objective of the Protocol objective is to "contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health and specially focusing on transboundary movements". Therefore, the ultimate objective of the Cartagena Protocol is to ensure that the benefits of biotechnology are fully tapped while protecting human health and the environment. The Protocol provides indeed predictable, workable, transparent and effective regulatory structures necessary for business to operate.

The Cartagena Protocol on Biosafety ensures basic guarantees for all stakeholders. Socio-economic issues arising from the impact of living modified organisms (LMOs) on the conservation and sustainable use of biological diversity are taken into account, especially with regard to the value of biological diversity to indigenous and local communities. It promotes and facilitates public awareness, education and participation concerning the safe transfer, handling and use of LMOs as Parties are obligated to consult the public in their decision-making processes. The Protocol also ensures the protection of confidential information.

The Biosafety Clearing-House facilitates the exchange of scientific, technical, environmental and legal information and experience on LMOs and biosafety and assists Parties to implement the Protocol. This mechanism under the Protocol helps to create awareness about the technology and, at the same time, facilitate exchange of information among businesses and other stakeholders. The Biosafety Clearing-House exists to help Parties and industry to fulfil the requirements under the Protocol.

The Cartagena Protocol on Biosafety should not be seen as constraining biotechnology development but rather as facilitating the adoption of the technology in a manner that ensures safety. The Protocol contains key elements that facilitate trade such as the Advance Informed Agreement procedure, which allows trade issues to be addressed within specific timelines. Within 90 days, Parties must acknowledge receipt of the notification and make decisions within 270 days on the transboundary movement of living modified organisms. A simpler procedure has been adopted for movement of LMOs intended for food, feed or processing. Moreover, by providing a structure that ensures science-based risk assessment of LMOs, prior to intentional introduction into the environment, the Protocol may offer the possibility for more countries to engage in appropriate and informed decision-making, thereby enhancing safe biotechnology trade.

In March 2006, at the eighth Conference of the Parties to the Convention, held in Curitiba, Brazil, the 4,000 participants, including 122 Ministers and other heads of delegation representing the 190 Parties, a new phase of enhanced implementation of the three objectives of the Convention was born. The new enhanced phase of the Convention of life on earth requires the engagement of all stakeholders including the private sector.

Indeed, for the first time in the history of the Convention, a ministerial breakfast with the participation of the CEOs of private companies was organized and a decision on the engagement of private sector was adopted by the 190 Parties. For the first time in the history of the Secretariat, a full-time staff member has been appointed as the focal point for the business community and a newsletter entitled Business 2010 has been launched. Two issues of the newsletter have been prepared and the third one, on climate change and biodiversity, will be released next week on the occasion of the International Day for Biodiversity.

In Curitiba, the Parties agreed to finalize as soon as possible and no later than 2010 an international regime on access and benefit-sharing. The active engagement of the biotechnology industry is crucial for achieving this strategic objective and operationalizing the third objective of the Convention which is key to the future of the biodiversity of our planet and its people.

Biotechnology offers promise that could make a significant contribution to sustainable development and has the potential to mitigate the impacts of climate change. Biotechnology has the potential to enhance food security, improve food quality, deliver major health-care benefits, improve supplies of potable water and deliver cleaner technologies. Just as the technology is indispensable, so is the diversity of life on which it depends. Biodiversity, the very gene pool from which the technology derives its raw material, must be protected. Preserving biodiversity is an asset to biotechnology's future business opportunities. This asset will not be protected without access to and the fair and equitable sharing of benefits arising from the use of genetic resources.

The lack of progress in operationalizing Article 15 of the Convention, the third pillar of the Convention, as well as the serious divergence of views on the suggested international regime on access and benefit-sharing is generating a level of uncertainty that is detrimental to the Convention and to all parties concerned. This uncertainty is compounded by the variety of measures taken by Parties at the national level and the challenges facing their effective implementation. Uncertainty as well as unreasonable risk is the enemy of long-term financial and economic investments. It is a well established fact in the pharmaceutical sector that it takes 10 to 15 years and on average $800 million for a compound to be placed on the market, and only one in every 10,000 compounds screened is marketed.

The benefits derived from the utilization of genetic resources are significant and real for all parties concerned. And the potential in store—as yet unknown—is no doubt much greater. The Convention and its processes should not be allowed to be seen as an additional source of uncertainty. The opportunity to put an end to such uncertainly no later than 2010 should not be missed. The international regime on access and benefit-sharing could form the basis of a new partnership between present and future providers and users of the wealth of Mother Nature. Indeed, the international regime has the potential to put an end to the current uncertainty as well as being a powerful instrument for alleviating poverty, achieving the Millennium Development Goals and promoting peace, security and shared prosperity. All human beings, whether in poor or rich countries, throughout all communities, and industries, large and small, stand to gain from finding common ground on the distribution of the benefits that Nature has so generously provided.

Mr. James Greenwood, President and CEO of Biotechnology Industry Organization (BIO), has called for a policy environment conducive to the promotion of biotechnology. I would like to invite the representatives of the biotech industry here today to join the 190 Parties to the Convention on Biological Diversity when they meet in Bonn in May 2008, as well as in Nagoya in 2010, to engage in a constructive dialogue in promoting biotechnology while protecting the human environment.

Therefore, the relationship between the Convention on life on Earth and the biotechnology industry calls for new ideas, bold ventures to achieve global environmental and responsible business benefits. The future of the planet has to be green. Today, green business is already good business. Green business is tomorrow's business. I invite the biotechnology industry to be partner of the Convention on life on Earth and establish a new era of relations based on new ideas, bold ventures for mutual and global environmental benefits for the benefit of the present and future generations of the biotechnology industry, which will not mature without the attendant benefits for present and future generations of human beings and a healthy environment.

Thank you for your kind attention.