1 Measures to assist in the capacity-building, capacity development and strengthening of human resources and institutional capacities in developing countries: Group Training Courses in Bioindustries for Capacity Building

Japan International Cooperation Agency (JICA), supported by Japan Bioindustry Association (JBA), has been implementing "Group Training Courses in Bioindustries" for officials and researchers from developing countries for more than twenty years. The training course aims at the development of human resources in bioindustries and the promotion of mutual understanding and friendship between Japan and the developing country. Annually about five to ten trainees are invited to Japan for the two months course. The training course includes lectures and field trips including hands-on experiences in a microbial taxonomy laboratory. A total of 200 officials and researchers have been invited to take the course in Japan from 30 countries as follows:

(Asia) Bangladesh, China, Indonesia, Kazakhstan, Laos, Malaysia, Nepal, Pakistan, Philippines, Thailand, Sri Lanka, Syria, Turkey, Vietnam,

(Central and South America) Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Mexico, Nicaragua, Peru, Uruguay,

(Africa) Egypt, Senegal, Tunisia, and

(Countries in Economic Transition) Bulgaria, Estonia, Hungary.

The recent course has more focused on the CBD-related issues. As an example, the program for 2010 is outlined below.

The topics covered during the training include:

- Conservation and sustainable use of biological resources

Japan's national policy on bioindustry, current status and future prospect of bioindustry, CBD, risk assessment of biotechnology products, access to and benefit-sharing of genetic resources, patents related to biotechnology, and public understanding

- Evaluation of biological resources

Applied microbiology, plant engineering, bio-active substances from biological origin, recombinant DNA technology, bioreactors, and biotechnology-supporting technologies

- Application of biological resources to industries

Fermentation industry, biopharmaceuticals and diagnostics, new applications and potentialities of industrial enzymes, biotechnology for food industries, marine biotechnology, and bioinformatics

Field trips included visits to the following institutions:

- Universities

Hokkaido University, Kitasato University, Kyoto University, Nagahama Institute of Bio-science and Technology, Nagoya University, Nara Institute of Science and Technology, Osaka University, Tsukuba University, and University of Tokyo

- Public research institutes

Japan Biological Information Research Center, National Food Research Institute, National Institute of Advanced Industrial Science and Technology, National Institute of Agrobiological Resources, National Institute of Technology and Evaluation (NITE), and RIKEN Yokohama Institute

- Private companies

Ajinomoto Co., Inc., Amano Enzyme Inc., Astellas Pharma Inc., Kyowa Hakko Bio Co., Ltd., Meiji Seika Kaisha, Ltd., Mizkan Group Corp., Sapporo Breweries, Ltd., Shimadzu Corp., Sumitomo Chemical Co., Ltd., Suntory Research Center, and Yotsuba Milk Products Co., Ltd.

Hand-on experiences on advanced bioindustries included the following topics:

- National Institute of Technology and Evaluation (NITE) in Kazusa

Role of Biological Resource Centers, isolation of Actinomycetes and screening of antibiotics, fungal taxonomy, classification of isolated microorganisms, optical microscopic observation, sample preparation and manipulation of scanning electronic microscope, PCR amplification and detection of 16S rRNA gene, and L-drying preservation of microorganisms

- RIKEN Plant Science Center in Yokohama

Guided tour of RIKEN laboratories, plant transformation by bombardment, preparation of plant genome DNA, GUS staining and fluorescence observation of GFP, and metabolome analysis

2. Measures to raise awareness of the importance of genetic resources and traditional knowledge associated with genetic resources, and related access and benefit-sharing issues

Dissemination of the Bonn Guidelines in Japan

The Ministry of Economy, Trade and Industry (METI) is a competent national authority on ABS in Japan, and has been implementing CBD/ABS. On behalf of METI, JBA has been implementing the Bonn Guidelines in order to help the private sector and the scientific community to continue to build a win-win relationship with other countries in compliance with the CBD principles.

Soon after the adoption of the Bonn Guidelines in February 2002, JBA translated them into Japanese, and disseminated the translated version of the Bonn Guidelines by organizing more than 8 public seminars in major cities across the country during 2003 and 2004. This helped to enhance the

awareness of genetic resources users (e.g. companies and researchers) about the Convention and the Bonn Guidelines.

Development of 'Japan's ABS Guidelines for Users'

As the Bonn Guidelines became better understood in Japan, a number of users expressed their views that descriptions of the Bonn Guidelines were often too general to be helpful for users of genetic resources to cope with their practical needs. They emphasized a need for user-specific and user-friendly guidelines. Taking these requests and experiences into consideration, METI decided to develop user-specific guidelines on the basis of the Bonn Guidelines to be used as Japan's METI-JBA ABS guidelines. In consultation with experts from industry and academia, METI started working on such guidelines in cooperation with JBA in 2004. In April 2005, "the Guidelines on Access to Genetic Resources for Users in Japan" (abbreviated as Japan's ABS Guidelines for Users) were completed and published.

The Japan's ABS Guidelines for Users aim to help both providers and users of genetic resources to build win-win relationships, and to minimize the risk of getting involved in problems, while ensuring business flexibility. To promote their dissemination, JBA held since 2005 a lot of public seminars in major cities across the country. Its English translation was completed in February 2006, and is now included as Japan's national measure for ABS in the ABS measures of the CBD Secretariat's website.

Japan has also been making efforts to build mutually beneficial relations with countries that provide genetic resources, by following carefully the national obligations under provider countries on access to genetic resources and implementing fair and equitable sharing of benefits arising from the use of genetic resources in an appropriate manner.

Other Support Tools for Users of Genetic Resources

On the basis of the Japan's ABS Guidelines for Users, METI and JBA have developed a number of tools to support users of genetic resources.

- *Bilateral workshops and meetings with CBD officials of providing countries:*

In order to promote development of partnership between users of genetic resources and providing countries, JBA and METI invited CBD officials (or experts) from provider countries to Japan for information exchange at public workshops or meetings. They presented information to the audience on their national policy, laws and regulatory systems relevant to ABS implementation. In some cases, experts from JBA traveled to provider countries for information exchange and learn about their national rules and procedures on ABS. So far, JBA and METI have held such bilateral workshops or meetings with the following countries; Australia, Brazil, Bhutan, China, India, Indonesia, Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Singapore, Thailand and Vietnam.

- *JBA's specialized website for ABS-related information on providing countries:*

JBA established a Japanese-language website specialized for disseminating information on ABS-related policy, laws and regulation of different countries, for users of genetic resources in Japan.

- *JBA's 'Help Desk'*:

JBA has been involved in the CBD matters since 1993. Based on these experiences, JBA gives advice on ABS matters to those potential users in Japan who have questions or problems, free of charge and on a confidential basis. Since 2005, JBA has conducted more than 300 cases of such individual consultation.