

## **IMPLEMENTATION OF THE CBD, THE BONN GUIDELINES AND THE NAGOYA PROTOCOL BY METI AND JBA IN JAPAN**

### **- Highlights -**

Genetic resources are one of the fundamental tools for research in the field of biological sciences as well as for biotechnological applications, which are considered to be a basis for development of key technologies in the twenty first century.

Japan has been actively participating in discussions on “access to genetic resources and benefit-sharing (ABS)” at the meetings of the CBD. Japan also wishes to build a mutually beneficial relations with countries that provide genetic resources, by facilitating access to genetic resources and implementing fair and equitable sharing of benefits arising from the use of genetic resources in an appropriate manner.

The Ministry of Economy, Trade and Industry (METI), as one of the competent national authorities on ABS in Japan, has been implementing the Convention on Biological Diversity (CBD) in cooperation with the Japan Bioindustry Association (JBA) and the National Institute of Technology and Evaluation (NITE). Highlights of JBA’s and NITE’s activities in recent years are given below:

### **1. Japan Bioindustry Association (JBA)**

#### **1-1. Implementation of the CBD and the Bonn Guidelines by organizing public seminars for potential users (companies and researchers)**

METI and JBA have been steadily implementing the CBD and the Bonn Guidelines since its adoption in February 2002. For example, in 2003–04, JBA organized more than 8 public seminars in major cities throughout Japan to provide genetic resources users, e.g. companies and researchers, with up-to-date information on the CBD, particularly on the Bonn Guidelines, in order to enhance their awareness of the CBD.

#### **1-2. Specialized website on ABS**

JBA established specialized website on ABS in August 2003 ([www.mabs.jp](http://www.mabs.jp)). This site contains international information in the Japanese language relating to the CBD matters, country-specific information on the CBD-related measures (domestic laws, regulation measures, etc.), and information on JBA activities for ABS.

#### **1-3. Development of guidelines on ABS for users in Japan ( User measure)**

Through the above-mentioned experiences, METI decided to develop user-specific guidelines for companies and researchers in accordance with the Bonn Guidelines. In the middle of 2004, METI started working on such guidelines in cooperation with JBA. In March 2005, “Guidelines on Access to Genetic Resources for Users in Japan” was completed, and in April 2005, this Guidelines was officially published by METI and JBA in Japan. To promote its dissemination, JBA held 10 public seminars in 6 major cities throughout Japan in 2005, i.e., Tokyo, Sapporo, Osaka, Nagoya, Hiroshima and Fukuoka. Its English translation was completed in February 2006.

Furthermore the Nagoya Protocol was adopted at COP10 in October 2010. Under these circumstances METI and JBA have decided to update the former Guidelines in accordance with the Nagoya Protocol. They published “2012 Update of Guidelines on Access to Genetic Resources for Users (in Japanese)”, based on Nagoya Protocol in March 2012.

#### **1-4. JBA’s Help Desk on ABS**

In April 2005, JBA created Help Desk, i.e., consultation service concerning ABS, providing advice to potential users of genetic resources. Based on the JBA’s 19-year experiences in the CBD-related matters, JBA gives advice on CBD-ABS matters to those

who have questions or problems, free of charge and on a confidential basis. Since 2005, JBA has handled more than 380 cases of such consultation, as of July 2012.

Chronology of the implementation leading to the Guidelines for Users is given below:

2002	The Bonn Guidelines were adopted at COP6 in February. In September, Japanese translation of the Bonn Guidelines was completed by JBA.
2003 - 2004	The Bonn Guidelines were disseminated at a series of public seminars and international symposia organized by JBA in major cities throughout Japan. In parallel with those promotional activities of the Bonn Guidelines, METI and JBA started developing user-specific guidelines in Japan.
2005	“Guidelines on Access to Genetic Resources for Users in Japan”(“Guidelines”) were completed in March, and published on April 1. Six public seminars were organized by JBA in major cities throughout Japan to disseminate the Guidelines.
2006	In February, the English translation of the Guidelines was completed for distribution. Four public seminars were organized by JBA in major cities throughout Japan to disseminate the Guidelines.
2007 - 2009	A series of public seminars were organized by JBA in major cities throughout Japan to disseminate the Guidelines, as follows: 2007: Two seminars 2008: Three seminars 2009: Five seminars
2010	Prior to COP10 in October, five seminars were organized by JBA in major cities throughout Japan to disseminate the Guidelines and to enhance awareness of CBD and COP10. After Nagoya Protocol was adopted at COP10 in October, four public seminars were organized by JBA in major cities throughout Japan to disseminate the Guidelines and to enhance awareness of the Nagoya Protocol.
2011	Ten public seminars were organized in major cities throughout Japan to disseminate the Guidelines and to enhance awareness of the Nagoya Protocol. “2012 Update of Guidelines on Access to Genetic Resources for Users, based on Nagoya Protocol (in Japanese)” was published by JBA and METI in March 2012.

#### **1-5. Bilateral workshops and meetings with Asian and Oceania countries:**

METI has organized bilateral workshops and meetings, in cooperation with JBA, with the competent authorities of Australia, Bhutan, China, India, Indonesia, Korea, Malaysia, Mongolia, Myanmar, Nepal, New Zealand, Singapore, Thailand and Vietnam with a view to sharing information and experiences concerning the respective national policies, laws and regulatory systems regarding the CBD and ABS, and thereby deepening mutual understanding.

#### **1-6. Partnership with Multilateral Initiatives:**

METI has been supporting international symposia and roundtables on the subjects relating to the CBD and ABS, jointly organized by the United Nations University

Institute of Advanced Studies (UNU-IAS) and JBA, JBA's experts have been cooperating with European initiatives such as EC's "MOSAICS" project and "ABS Management Tool" project of Switzerland.

### **1-7. Group Training Courses in Bioindustries for Capacity Building:**

JBA supported "Group Training Courses in Bioindustries" which have been implemented by JICA for capacity building in developing countries. So far, JBA has invited 200 researchers of biotechnology and officials responsible for biotechnology policy-making from 31 developing countries as follows:

Asia	Bangladesh, China, India, Indonesia, Kazakhstan, Laos, Malaysia, Nepal, Pakistan, Philippines, Thailand, Sri Lanka, Turkey, Vietnam
Central and South America	Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Mexico, Nicaragua, Peru, Uruguay
Africa	Egypt, Senegal, Syria, Tunisia
Countries in Econ. Transition	Bulgaria, Estonia, Hungary

## **2. National Institute of Technology and Evaluation (NITE)**

### **2-1. Conservation of Biological Resources:**

We contribute to conservation of species by collecting microorganisms from various environment and depositing them to NBRC culture collection in the Biological Resource Center, NITE. It is called "ex-situ conservation" in contrast to "in-situ conservation" in which organisms are conserved in their habitat. Furthermore, NBRC culture collection obtained certification of ISO9001, and it proves that we have been conducting preservation of microbial resources under quality management of world-class standards.

### **2-2. Sustainable Use of Biological Resources:**

Pursuant to the CBD, the Bonn Guidelines and the Nagoya Protocol, NITE Biological Resource Center considers it important to advance cooperative relationships with other countries to ensure stable and smooth access to microbial genetic resources from a standpoint of microbial taxonomy and its various applications.

NITE signed memorandum of understandings with governmental organizations in six Asian countries, i.e., Brunei, China, Indonesia, Mongolia, Thailand and Vietnam for the conservation and sustainable use of microbial genetic resources in most these countries. In these frameworks, NITE has been conducting joint projects with most these countries to study microorganisms from taxonomical and ecological standpoints. Through these joint projects, conditions are created so as to provide benefits to both sides in each stage of the joint projects.

For example, the following activities have been particularly emphasized in the joint projects:

- sharing of research results (sharing of information)
- installation of equipments and delivery of supplies
- collaboration in sampling, isolation and taxonomical characterization (human resource development )
- technology transfer by holding on-site workshops
- technology transfer by inviting researchers to NITE facilities in Japan

### 2-3. Project for Development of Internationally Standardized Microbial Resource Center to Promote Life Science Research and Biotechnology:

The collaboration project between NITE and LIPI (Indonesian Institute of Sciences of Indonesia) has been implemented on the joint research project titled “Project for development of internationally standardized microbial resource center to promote life science research and biotechnology” under the SATREPS\*.

This project was assigned as the first of Japan’s Assistance to Developing Countries to Promote the Implementation of the Convention on Biological Diversity (CBD) (“Sleeping Microbial Beauties” Projects).

<[http://www.mofa.go.jp/announce/announce/2010/10/1028\\_01.html](http://www.mofa.go.jp/announce/announce/2010/10/1028_01.html)>

\*SATREPS (Science and Technology Research Partnership for Sustainable Development) is a Japanese government program that promotes international joint research targeting global issues. The program is the collaboration between two Japanese government agencies: the Japan Science and Technology Agency (JST) and the Japan International Cooperation Agency (JICA).

<b>PROJECT INFORMATION</b>	
<b>Project purpose</b>	
	Internationally standardized microbial resource center as a core of Biological Resource Center to promote life science research and biotechnology is established in Indonesia.
<b>Research subject</b>	
	1. Development of functions of microbial resource center in LIPI to be a national reference collection and to serve as a center for research, ex-situ conservation, training and sustainable utilization of microbial resources
	2. Collection of new microbial resources originated from Indonesia, which is beneficial to human welfare, food production, agriculture, and environmental restoration
	3. Isolation and characterization of soil microorganisms that have beneficial effects on agriculture, ecosystem conservation, and environmental restoration
	4. Isolation, identification and selection of animal gut microbiota for probiotics
<b>Expected outcomes</b>	
	1. New microbial resources originated from Indonesia are developed for application in food production, agriculture and environmental restoration.
	2. Valuable Indonesian microbial resources are preserved in Indonesian Microbial Collection for study on taxonomy, physiology, ecology, and bioprospecting.
	3. Indonesian Microbial Collection for facilities and equipments, policy and technical managements, educational and training programs is improved.
	4. Internationally standardized microbial resource center as a core of Biological Resource Center are established.
	5. Database of biodiversity and bioprospects of preserved microbial resources in Indonesia is provided.
	6. Indonesian Microbial Collection as center for training on researches, ex-situ conservation and sustainable utilization of microbial resources.
	7. Collaborative model of microbial utilization researches for improving food and health is established.

### 2.4. Asian Consortium for the Conservation and Sustainable Use of Microbial Resources (ACM)

NITE has been supporting the Asian Consortium for the Conservation and Sustainable Use of Microbial Resources (ACM), which was established in 2004 by representatives of 12 Asian countries: Cambodia, China, Indonesia, Japan, Korea, Laos, Malaysia, Mongolia, Myanmar, Philippines, Thailand and Vietnam at the occasion of the 10th International Congress on Culture Collections (ICCC-10) in Tsukuba, Japan. The objective of the Consortium is to promote collaboration among government or public organizations in Asian countries for the purposes of enhancing conservation and sustainable use of microbial resources in Asia.

<b>Activities of the ACM cover the following:</b>
1. Development of human resources
2. Promotion of research and development on microbial resources and their application in industrial and other uses
3. Collaboration through the network of biological resource centers;
4. Exchange of views and information
5. Enhance public awareness on the Consortium's activities for the conservation & sustainable use of microbial resources;
6. Organize scientific meetings (seminars, workshops, etc)
<b>ACM has established three Task Forces:</b>
1. Biological Information Management (BIM)
2. Human Resource Development (HRD)
3. Management of Material Transfer (MMT)
The ACM members expect the expansion of its activities to reach the international standardized scheme, and to encourage microbiologists to study biological diversity to help solve the global problems on environments and human welfare.

**Those activities have contributed to the promotion of smooth access to genetic resources and benefit-sharing on the basis of mutual understanding and goodwill, consistent with the principles of CBD and the Bonn Guidelines.**