

3rd JASTIP bioresources and biodiversity lab workshop

The workshop was held at Salak Tower Hotel and Bogor Botanic Gardens, Indonesia on 3rd November. This workshop was jointly held with Humanosphere Asia Research Node Workshop toward Sustainable Utilization of Tropical Bioresources (ARN). This workshop consisted of biological resource session, biodiversity session, and general discussion including Disaster Prevention group (WP4) in JASTIP. JASTIP Participants were 136; they were from Japan, Indonesia, Thailand, and Egypt.

The observation of the Bogor Botanical Garden was conducted with commentary by LIPI researchers. The tour includes collections of orchids, medicinal plants and tropical plants. Particularly, big tree of dipterocarp over 100 years old, and *Amorphophallus titanum* just before flowering gained popularity from many participants.

The usefulness of the properties of living organisms exists widely, including chemical, environmental, remediation and utilization for quality control of products. In the bioresource session, there was an introduction about the task being executed. In the session of bioremediation using tropical microbes, it was reported about the exploration of effective chemical components in tropical fungi and mushrooms. Attempts to wastewater treatment to exclude toxic contaminants by enzymes was reported. In the session of biofuel, chemicals and biomaterials production from tropical bioresources, the effective use of sugarcane trash and exploration of bacterial resources were reported to develop the best use of biological resources in the economy. As a case already being implemented, the quality control of industrial products through business-academia cooperation, a case of bio-based pest management was reported. This presentation pointed out the importance of linking academic fields with practical places and updating knowledge and improving constantly.

When considering contributing to human activities from the viewpoint of biodiversity, it is important to clarify effective characteristics among organism characteristics. From this new viewpoint, all presenters of the biodiversity group participated in JASTIP workshop for the first time. There are many endophytic microbe in the plant. Trial to bio-convert endophytic microbe in *Cinchona ledgeriana* and *Camellia sinensis* chemically was reported. It will contribute to opening the way of the natural energy use by bioconverting. For Myanmar with diverse biological resources, bioprospecting and genetic resources were reported. And it was reported about animals and plants traditionally used for medicinal and edible use in Indonesia. As one method to investigate the diversity of animals, there was a report on the classification of deer based on the difference in body hair and shape.

Finally, a general discussion was held. An active discussion was held on the direction of future research by presenters of WP 3 and researchers of WP 4 which is the theme of disaster prevention against hurricanes and others.

Thus through the introduction and report of ongoing researches in WP3 and discussed with WP4, future direction of bioresources and biodiversity studies in ASEAN was discussed. This reaffirmed the necessary to promote more diverse research and cooperation among different field research as Japan-ASEAN Science and Technology Innovation Platform.