

Knowledge of local plants offers numerous benefits

Indonesia needs to learn from the traditional agricultural practices of local ethnic groups if the nation wants to preserve its biodiversity and improve its agriculture, a scientist says. Yohanes Purwanto, a scientist from the Indonesian Institute of Sciences (LIPI), said Indonesia had a wide variety of local cultivars that were a resource for improving crop varieties.

But, the government has paid little attention to the importance of safeguarding local cultivars, Yohanes said. In an inaugural speech titled “Ethnobotanical Values for Sustainable Development” given by Yohanes upon his appointment as a research professor at LIPI, he said, “Many local cultivars in Indonesia are in danger of disappearing.”

Yohanes was appointed a research professor along with two other scientists: Tukirin Partomihardjo, who studies ecology and evolution, and Johanis Haba, who studies anthropology. Yohanes was recognized for his consistent work on ethnobotany, his research revealing how plants have been used traditionally and understood among various ethnic groups in Indonesia. He said ethnobotanical research was an important tool to identify local cultivars used by ethnic communities.

Ethnobotanical study had provided scientific proof that traditional and local wisdom had made significant contributions to preserving natural resources, he said.

“It’s important for us to conserve local cultivars,” Yohanes said. The value of biodiversity, which is severely threatened by illegal logging and deforestation, is still little understood by Indonesians, he said. He said instead of preserving local cultivars, the Indonesian government had issued and maintained various policies allowing the unchecked exploitation of forests through concessions.

In the agricultural sector, the implementation of monoculture systems had marginalized traditional farmers, he said.

“These two policies have negatively affected the sustainability of biodiversity and even paralyzed traditional cultures and systems developed with local wisdom.”

Yohanes said his research showed local communities used their traditional knowledge to protect forests and had been able to conserve precious local cultivars through generations. The Dani community from the Baliem Valley in Papua have a sophisticated breeding technique to cultivate sweet potatoes, more sophisticated than other ethnic groups in Indonesia, he said. They have three cultivation techniques for three different ecosystems: swampy land, flat soil and mountainous areas.

Research on the Dani community found rich local cultivars, more than 100 sweet potatoes (*Ipomoea batatas*) cultivars, 15 banana (*Musa spp*) cultivars, eight sugarcane (*Saccharum officinarum*) cultivars and four red fruit (*Pandanus conoideus*) cultivars. “They are all valuable germplasm resources,” Yohanes said. In addition, the Dayak Kenyah community in East Kalimantan has a traditional conservation technique called tanah ulen, while the Krui community in Lampung have a traditional damar agroforestry system. Their knowledge is not only important for conservation, but also for social networks and the economy, Yohanes’ research concluded.

“We should give more authority to local administrations to develop natural resources in line with traditionally inherited local wisdom,” Yohanes said. “Rigorous ethnobotanical research will help people better understand the value of their local cultivars and what is required to confront current challenges.” With ethnobotanical study, people will understand that traditional herbal treatments can help with hypertension, obesity, high cholesterol, diabetes, cancer and even AIDS — which has emerged as a major health threat in Indonesia, Yohanes said.

“Knowledge can improve people’s awareness of the importance of preserving local cultivars,” he added. **(ebf)**