UTILIZATION OF MEDICINAL PLANTS INSIDE THE FOREST BY LOCAL PEOPLE: A Case Study of Gunung Walat Educational Forest, Bogor Agricultural University

Ollyn K. Damayanti (Life & Env.Sci., Univ. Tsukuba, Japan), Misa MASUDA (Inst. Agr. & For., Univ. Tsukuba, Japan), Lilik B. Prasetyo, Ervizal A. M. Zuhud (Fac. For., Bogor Agr. Univ., Indonesia)

1. Introduction
Gunung Walat Educational Forest (GWEF) is a 359 hectares of manmade forest belong to Bogor Agricultural University (BAU). In 1999, because of the monetary crisis, some local people encroached approximately 100 Has of the area and in year 2000, the manager of GWEF convert it into agroforestry areas and allows local people to participate in agroforestry program under 10 years of contract.

BAU itself is financially autonomy; therefore GWEF also has to look for the utilization to achieve the self-funding management. This study aims at completing the basic information of GWEB especially on medicinal plant, and exploring medicinal plants used by local people.

2. Method
The field study was held in GWEF, Sukabumi, Indonesia, from May to July 2002. Data analysis was conducted at University of Tsukuba. Methods used are: (1) forest-floor vegetation analysis method, (2) interview with local people (key-person) and stakeholders, and (3) Geographical Information System (GIS) to integrate the information.

3. Results
a. Potential of medicinal plants
There were 85 species of forest-floor vegetation belong to 46 families found in study plots, and 60 species (70.6%) of them belong to medicinal plant. Pinus forest has the most various medicinal plants due to its large size 110.5 Ha.

b. Utilization of medicinal plants
According to the interview with local people, there are 177 species, and 103 utilizations of medicinal plants, namely for 73 diseases and 30 other purposes. Figure 1 shows the condition of respondents' age and their knowledge on medicinal plants and utilization.

![Figure 1. Respondents' age and Knowledge on Medicinal Plants](image)

Figure 1. Respondents’ age and Knowledge on Medicinal Plants (Note: AF = Agroforestry Farmers; Med.Man = Medicineman; MPM = MP Middlemen; Msgr = massager)

There are 17 kinds of part of plants used by respondents. Leaf is the most usable part (45.2%), followed by stem and fruits, and other parts. The growth forms of medicinal plants are classified as herbs (40.68%), trees (25.42%), shrubs (14.12%) and others (climber, liana, bamboos, mushrooms, and ferns).

The last result from interview with local people is that from 177 species of medicinal plants they use, they only take 3 species from GWEF. The 3 species are Tepus (Achasma megalochelios Griff.), Pacing (Costus speciosus (Koen.) J.E. Smith) and Rane (Selaginella plana Hieron).

4. Discussion
GWEF has potential of medicinal plants, but only 60 species. It was caused by small size of sampling areas, about 0.3% of 345.5 hectares (11 stands). This size of sampling area is quite small, so there are possibilities to find many other species of medicinal plants in non-sampling areas.

Actually, there are 24 species of medicinal plants utilized by local people that also found in GWEF, but based on the interview, they utilize only 3 species from GWEF: Achasma megalochelios Griff. for asthma, Costus speciosus (Koen.) J. E. Smith for rheumatism, diabetes, diuretic, etc., and Selaginella plana Hieron for treatment after giving birth. This condition is due to the availability of other species in their surrounding areas and markets. The three species needs specific habitat as in the GWEF. The two first species haven’t been sold in the market due to how they are utilized. They must be utilized in fresh condition and must be used directly after collected, so they cannot be sold in the market. This means there are prospects for local people to utilize other species inside the forest.

Reference
