# 04-2013. Indigenous Knowledge of Dayaks Bakumpai in Barito Kuala District

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### Indigenous Knowledge of Dayaks Bakumpai in Barito Kuala District on the Management of Plant Diversity Growing at Streams and Swamps

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Research aimed at describing profile of indigenous knowldge owned by the Dayaks Bakumpai in Batola district on managing the diversity of herbs growing at the river flow and swamp. Data on herb used by the tribe were grouped based on the etnobotanic study, covering study botany, etnofarmacology, etnoantrophology, etnolinguistik and etnoekologi. We also observed how the Dayaks Bakumpai in Batola district preserve the diversity of plant in around them, and how their efforts in bequeathing or teaching the traditional knowledge of an old breed generation to his young daam in managing diversity of herbs around them. The study was carried out at three vellages, namely Simpang Arja, Pengulu and Ulu Benteng. The results showed that 52 plant species living along the river and 67 species that live in the marsh. Based on the interview we found that (1) the profile of indigenous knowldge dayaks bakumpai district batola in making use of the diversity of plant in surrounding shown through etno-linguistic, etno-economy, etno-anthropology, etno-farmacology and etno-ecology against 44 tufted herbs of 67 of herbs found, (2) Dayaks Bakumpai in Batola district, to preserve the diversity of plant surrounding them, have done without planting, but by making use of herbs without a certain rule, making use of herbs by a certain rule, making use of herbs let plant grown in nature, and destroy plants that exist or cultivated, and (3) efforts for the inheriting the indigenous knowldge to its young generation have been done by women and quite alarming that many young ages of Dayaks Bakumpai do not know the name of herbs around them.

#### Keywords: Profile, Indigenous Dayak Bakumpai, Knowledge, Plant Management

#### INTRODUCTION

The management of biodiversity in Indonesia has increased during the past 35 years, not just as the fulfillment of basic needs that are not confined to food, apparel and housing, but also on other needs as the science of medication, recreation and so on. A lot of efforts have also done to harness and preserve biodiversity, ranging from an inventory of the utilization, cultivation, and its preservation, though the effeort involve an interdisciplinary approaches (Anonymous, 1993).

Indonesia is a nation that possesses the diversity in many ways. One of them is the culture of considering indigenous people as national wealth. Indigenous people traditionally continue to hold on to the values of local believed to be the truth and magic life and into the handle of his members which are passed on

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Journal of Wetlands Environmental Management Vol 1, No 1 (2013) 25 - 32 http://dx.doi.org/10.20527/jwem.01.01.01 from generation to generation. Those values are interconnected in a system.

With regard to the environment, the value of sublime can be made by a study on indigenous people local wisdom (indigenous knowledge) in doing the management of the environment. A value important owned by indigenous people is an activities related to exploration and exploitation of nature. Local wisdom in managing nature is believed as one of the potent way the in managing nature. For example, the intelligence of indigenous people in beliving the forest as a magic place has kept environment everlastingly. The environment for indigenous peoples is a symbol of the sustainability of the trimmings (Aliadi, 1996).

Protection against environmental done by people around them reside generally carried out through a set of cultural values, knowledge, the rules, trust, taboo, sanctions, ceremony and a number of behavior cultural arif in the management of forests. In a protective manner as it is known with the term traditional wisdom or discernment local (indigenous knowledge). Knowledge of a community which is like it originates among others via mythically (Rifai, 1998).

Etnobotany is one indigenous knowledge in the concept of understanding the local people for the management of natural resources in the form of a plant which is done in "beradat pusaka" that is inherited by ancestors (Cotton, 1997). According to Martin (1998) etnobotani referring to the study of the interaction between human beings with plants. This study is a form of descriptive documentary plants as traditional knowledge possessed the local munity, which includes assessments of etno-linguistic, etno-economy, etno-anthropology, etno-farmacology and etno-ecology.

Bakumpai is a nickname for the dayaks of inhabiting the area of the river Barito. Bakumpai derived from the word barle (in language banjar which means having ) and kumpai which means grass. Society Dayaks Bakumpai in its edges Barito has been mostly big-eyed livelihood as a farmer and searcher freshwater fish (Maulani, 2000 and Syadzali, 2006). The use of herbs by the Dayaks Bakumpai is the parts of plants such as leaves, interest, fruit, stems / twigs, root, and rhizomes used in daily life, either as of foodstuffs, a potion of medicine, industrial materials and since long used in a variety of ritual of customary of culture. Researches Dharmono (2007) and Amir et al (2009) against the utilization of plants by a tribal society dayaks of a hill of Loksado sub-district showed that the knowledges about the utilization of plants currently begin to experience degradation where nearly most of its young generations no longer know

important benefits of herbs in the vicinity; moreover, efforts to preserve it.

Therefore, a research on how can the indigenous knowldge owned by the generation of Dayaks Bakumpai society in Batola district in the management of the diversity of plants in the area of the river flow and swamp. The objective of this research was to describe the profile of the Dayaks Bakumpai in Batola district in making use of the diversity of herbs in the surrounding areas as grouped based on the study etnobotani study botany, which includes; etnofarmakologi, etnoantropologi, etnolinguistik and etnoekologi of any plants that use.

#### MATERIALS AND METHODS

The approach used in this research is qualitative approach. The research covering be three phases: (1) orientation stage, orientation to gain information about what is important to find, (2) exploration that is by finding member check, with check findings according to proper procedures and obtain the final report.

Identification of plants was constructed by recording name of the ground, taking photograph or video and identifying the plants by their indicators.

#### RESULTS

Based on exloration, 52 plant species were found to live along streams and 68 species to live in the swamp. Among these, only 45 plant spesies are known to be benefitial by the Dayaks Bakumpai in Batola District. The 45 tufted herbs based on taxonomy consist of 31 family (Table 1).

Table 1. Tufted herbs that is occupied by Davak bakumpai

No	Family	Species	Name
1	Amaranthaceae	?	Daun Itik
2	Amaranthaceae	Alternanthera philoxeroides Mart. Griseb	Kasisap
3	Anacardiaceae	Mangifera indica	Mangga
4	Annonaceae	Annona muricata L.	Sirsak
5	Apocynaceae	Allamanda cathartica L	Alamanda
6	Arecaceae	Cocos nucifera	Kelapa

Journal of Wetlands Environmental Management Vol 1, No 1 (2013) 25 - 32 http://dx.doi.org/10.20527/jwem.01.01.01

No	Family	Species	Name
7		Metroxylon sagu Rottb.	Rumbia
8	Asteraceae	Pluchea indica L	Beluntas
9	Caesalpinaceae	Cassia alata	Gulinggang
10		Cassia alata	Gulinggang
11	Campanulaceae	Isotoma longiflora Presi.	Dadangkak
12	Caricaceae	Carica papaya L.	Pepaya
13	Convolvulaceae	Ipomoea alba	Balaran
14		Ipomoea aquatica	Kangkung
15	Cyperaceae	Fimbrystilis sp	Purun
16	Euphorbiaceae	Phyllanthus niruri L	Hambin Buah
17	•	Manihot ultilissima	Ubi
18		Sauropus androgynus L Merr.	Katuk
19		Kalanchoe pinnata Lam. Pers.	Rebah rimbangun
20	Fabaceae	Derris trifoliata Lour.	Tutuba
21	Hydrophyllaceae	Hydrolea Spinosa	Jaruju
22	Lamiaceae	Orthosiphon spicatus	Kumis Kucing
23	Leguminoceae	Manikara cauci	Sawo
24	Limnocharitaceae	Limnocharis flava Buch	Genjer
25	Linderniaceae	Lindernia tripolia	Lalambai
26	Loganiaceae	Fagraea crenulata	Kayu Bulan
27	Malvaceae	Urena lobata L.	Sapapulut/Dendelion
28	Melastomataceae	Melastoma candidum	Karamunting
29		Melastoma sp	Karamunting Putih
30	Meliaceae	Sandoricum koetjape Burm.f. merr	Ketapi
31	Musaceae	Musa paradisiacal	Pisang
32	Oxalidaceae	Averrhoa carambola L	Belimbing Manis
33		Averhoa bilimbi	Belimbing wuluh
34	Piperaceae	Piper betle. L	Sirih
35	Poaceae	Imperata cylindrica Beauv	Halalang
36		Cymbopogon nardus	Serei
37	Valerianaceae	Valeriana officinalis L	Rumput belawa
38	Rubiaceae	Richardia brasiliensis Gomez	Kasisap
39	Solanaceae	Solanum torvum Swartz.	Terong pipit
40	Thymelaeaceae	Aquilaria malaccensis	Kayu Gaharu
41	-	Phaleria macrocarpa	Mahkota dewa
42	Zingiberaceae	Kaempferia galanga	Kencur
43	-	Curcuma domestica Vall	Janar
44		Alpinia galanga	Laos
45		Melaleuca cajuputi	Gelam

Another 23 tufted herbs that does not use by the Dayaks Bakumpai society in Batola district consists of 12 family as ahowen in table 2 below.

Table 2. Tuffed herbs which has not utilized Davaks Bakumpai.

Table 2. I unted herbs which has not utilized Dayaks Bakumpai			
No	Family	Species	Name
1	Aceraceae	Nelumbium sp	Kumpai
2	Alismataceae	Limnocharis flavaBuch	Kumpai
3	Amaranthaceae	Amaranthus sp	Kumpai
4	Araceae	Pistia stratiotes	Kumpai
5	Convolvulaceae	Hewittia sublobata O.K	Kumpai
6	Cyperaceae	Cyperus iria	Kumpai
7		Cyperus pilosus Vahl	Kumpai
8	Fabaceae	Desmodium capitatumD.C	Papakuan

No	Family	Species	Name
9		Alysicarpus vaginalis	Kumpai
10	Flagellariaceae	Flagellaria indica	Kumpai
11	Myrtaceae	Baeckea frutescens. L	Kumpai
12	Nymphaeaceae	Nymphea tetragona Georgi	Kumpai
13	Poaceae	Leersia hexandra	Kumpai
14		Eleusin indicaGaertn	Kumpai
15		Sacciolepis interupta	Kumpai
16		Panicum sp	Kumpai
17		Hyimenachnea acutigluma	Kumpai
18		Hymennache acutigluma	Kumpai
19		Alternantera amoeraVass	Kumpai
20	Polygonaceae	Polygonum barbatumL	Kumpai
21		Pityrogramma	Papakuan
		calomelanos(L.) Link	
22	Rubiaceae	Hedyotis diffusa Willd	Kumpai
23	Tiliaceae	Triumfetta indica	Kumpai

The fact proves that studies etnofarmakologi is study on the use of herbs in the event of a religious ritual, a belief in and mythically believed by local people (Martin, 1998). Study etnolinguistik is the assessment studies about the origin of the incident the giving of names a plant in respected are's language (Martin, 1998).

Table 3 shows the way Dayaks Bakumpai gave names against herbs. Most of the 44 tufted herbs are given name base on the form of function, color and of the nature of the plant. It is indicated that means the giving of names not delivered from earlier generations both in written or spoken.

Table 3. Means penemaan plants by society dayaks of a hill

No	Name	The way of administering a name
1	Aquilaria malaccensis (Kayu Gaharu)	Akar karas; its roots in which a harsh
2	Allamanda cathartica L (Alamanda)	Akar Kambang Kuning; A yellow flower
3	Ipomoea alba (Balaran)	Balaran ;This plant in length as lalaran / rope drying clothes
4	Averrhoa carambola L (Belimbing Manis)	Belimbing Manis; A fruity taste sweet
5	Averhoa bilimbi (Belimbing wuluh)	Balimbing tunjuk; Size and forefinger shaped like the hand
6	Pluchea indica (L) (Beluntas)	Naming, has been done from generation to generation and unknown reason naming the in a clear manner
7	Daun Itik	Daun itik; The shape of its leaves resembles a mouth ducks and like wings ducks
8	Limnocharis flava Buch (Genjer)	This plant is called by "genjer" because it already has a name given in previous generations from its parents
9	Cassia alata (Gulinggang)	Gulinggang; Interest rate with the shape itself as rolled back so as to clot
10	Phyllanthus niruri L (Hambin Buah)	Hahambin Buah; The fruit of them located along the leaf stalks of as if as carry, ( <i>dihambin</i> ).
11	Imperata cylindrica Beauv (Halalang)	Halalang; Even though sight or vision people because of this plant high and bushy once
12 13	Manihot ultilissima (Ubi) Ipomoea aquatica (Kangkung)	Jawaw atau gumbili kaya; Roots in the form of a corm as of wood Naming, has been done from generation to generation and unknown reason naming the in a clear manner

No	Name	The way of administering a name
14	Melastoma candidum	Karamunting; Its fruit dipilih-pilih or diunting-unting to get fruit best to
	(Karamunting)	be consumed 4
15	Richardia brasiliensis Gomez	Naming, has been done from generation to generation and unknown
	(Kasisap)	reason naming the in a clear manner
16	Sauropus androgynus (L)	Katuk atau pucuk manis; The leaves of plants having a sweet taste
	Merr.	
	(Katuk)	
17	Cocos nucifera	Kelapa; The shape of its fruit round like the head
	(Kelapa)	4
18	Kaempferia galanga	Naming, has been done from generation to generation and unknown
	(Kencur)	reason naming the in a clear manner
19	Sandoricum koetjape	Ketapi suntul; pada bagian permukaan daun adanya benjolan
	(Burm.f.) merr	, , , , , , , , , , , , , , , , , , , ,
	(Ketapi)	
20	Orthosiphon spicatus	Kumis kucing; bunga tumbuhan tersebut memiliki kumis mirip kumis
	(Kumis Kucing)	pada kucing 4
21	Curcuma domestica Vall	Naming, has been done from generation to generation and unknown
	(Kunyit)	reason naming the in a war manner
22	Alpinia galanga	Naming, has been done from generation to generation and unknown
	(Laos)	reason naming the in a dear manner
23	Phaleria macrocarpa	Naming, has been done from generation to generation and unknown
	(Mahkota dewa)	reason naming the in a drar manner
24	Mangifera indica	Naming, has been done from generation to generation and unknown
	(Mangga)	reason naming the in a clear manner
25	Fimbrystilis sp	Purun atau bonding; This plant, clustered / berbondong- rush of his life
	(Purun)	4
26	Carica papaya L.	Naming, has been done from generation to generation and unknown
	(Pepaya)	reason naming the in a 🚜 ar manner
27	Musa paradisiacal	Naming, has been done from generation to generation and unknown
	(Pisang)	reason naming the in a 🚜 ar manner
28	Urena lobata L.	Naming, has been done from generation to generation and unknown
	(Sapapulut/Dendelion)	reason naming the in a clear manner
29	Metroxylon sagu Rottb.	Rumbia; The leaves of plants this berumbai-rumbai (many leaves
	(Rumbia)	growing terjuntai ) 4
30	Manikara cauci	Naming, has been done from generation to generation and unknown
	(Sawo)	reason naming the in a drar manner
31	Cymbopogon nardus	Naming, has been done from generation to generation and unknown
	(Serei)	reason naming the in a drar manner
32	Piper betle. L	Naming, has been done from generation to generation and unknown
	(Sirih)	reason naming the in a clear manner
33	Annona muricata L.	Sirsak: Comes from the netherlands, namely zuurzak. Said zuur mean
	(Sirsak)	acid, zak mean the bag. So, literally defined as pouch that tastes acid
34	Solanum torvum Swartz.	Terong pipit; The fruit of them small and diperumpamakan as little
	(Terong pipit)	sparrows
35	Derris trifoliata Lour.	Tutuba; Derived from the word a <i>tuba</i> that means poison. It means to
2.	(Tutuba)	meracun tutuba
36	Cassia alata	Gulinggang; Shaped like the flowers shaped like the deposed so as to
	(Gulinggang)	clot
37	Hydrolea Spinosa	Jaruju; This plant having spines that taper
20	(Jaruju)	
38	Alternanthera philoxeroides	Naming, has been done from generation to generation and unknown
	(Mart.) Griseb (Kasisap)	reason naming the in a clear manner

No	Name	The way of administering a name
39	Kalanchoe pinnata (Lam.)	Rebah Rimbangun: If a sick person given the leaves bias wake up again
	Pers.	( up from fall / ill )
	(Rebah rimbangun)	
40	Lindernia tripolia	Lalambai: The stem and its leaves are like hands waved
	(Lalambai)	
41	Dadangkak	Dadangkak: When exposed to eryngo feet will dadangkak (tiptoe)
	(Isotoma longiflora Presi.)	
42	Rumput belawa	Belawa: Bersendawa, Burped, because it can treating diseases of niter
	Valeriana officinalis L	
43	Melastoma sp	Karamunting Putih; White or diunting-unting dipilih-pilih its fruit
	(Karamunting Putih)	4
44	Melaleuca cajuputi	Naming, has been done from generation to generation and unknown
	(Gelam)	reason naming the in a clear manner

#### DISCUSSION

The dayaks of bakumpai is the dayaks of the most of his life are located along its edges that is a means of transportation in the region. It is causing the dayaks of bakumpai always come into contact with was technology modern attention to environmental impact is that disektarnya in terms of the use of herbs for everyday life. The condition is indicated by at least a plant which is known by people bakumpai Dayak of being utilized (45 varieties of of 68 type of herbs found inthe).

The etno-ecology identification showed that the environmental condition between swamp with its edges is not much different, having light intensity in the range of 4200 - 4500 lux, air temperature in range of 28-31°C, soil moisture 70-72 %, and soil pH in range of 5-6.4. In ecology society dayaks bakumpai harness herbs good in swamp and its edges is to fight pests (aquilaria malaccensis, orthosiphon spicatu), a shade (mangifera indica, manikara cauci, fagraea crenulata) and retaining erosion (sandoricum koetjape, metroxylon sagu rottb, cocos nucifera). Meanwhile another herbs were kept to grow wild around their villages.

The plants by the community Dayaks of Bakumpai are used as herbs drugs covering a wide range of diseases. As the manner, the herbs with consume directly, or boiled, crushed and eaten or spreaded on body. Aquilaria malaccensis used as a cure of the itch. Allamanda cathartica 1 poisoning, as the antidote roots, as a medicine in jaundice

ipomœa alba as a remedy diarrhea, prevent pox diseases. Averrhoa carambola L is as a remedy, lower the high blood diuretic, launched lose weight, reduce fever and overcome inflammation of the fauces. Averhoa bilimbi is as a medicinal compress upon the sick, a drug cough. Pluchea indica is as a fever, overcome the odor of limbs and fetor, whitish, drug overcome pain, the waist and hips cope with rheumatism a drug of intense stomach pain, overcome painful menstruation. overcome indigestion. Limnocharis flava buch efficacious as adder appetite. Cassia alata used as a remedy panu, ringworm, constipating, thrush, a drug cacing keremi in children, Phyllanthus niruri 1 as a remedy lumbago, Imperata cylindrica beauv in use as a remedy lumbago deciduous water art, and a decorrestant Manihot ultilissima to cure diseases rheumatism fever, headache, diarrhea, intestinal worms, eyes blurred, a wound fester and burns. Ipomæa aquatic ambient, used as a medicine a sore tooth, launched the art of, water and in medicine to trouble sleeping.

Melastoma candidum to overcome bleeding wounds, poisoning cassava, the treatment of ulcers and diarrhea as well as treatment bieeding the uterus. Richardia brasiliensis gome intense stomach pain, be used as a medicine a drug allergy, itching / can stop the bleeding, a drug berak blood and drug dizziness the head. Sauropus androgynous (B) merr leaves efficacious multiply milk to fever, a boil, ulcers and impure blood. Cocos

nucifera is as a remedy a high blood disease, heat in, cholera, hair fall, fever caused by insect bites, painful menstruation, allergic because of the weather, sleep problem, the pinworm, prevent hoar and to whiten the teeth. Kaempferia galangal is used as a medicine for relieving tired, pain in a tooth, bruise, chest pain, headache, constipating., treating tetanus, inflammation on the stomach, to vomit, heat in, and poisoning. Sandoricum koetjape (Burm.F.) merr sandoricum koetjape (Burm.F.) merr. Orthosiphon spicatus can cure hard piddle, sweet, diseases of the urinary a kidney stone, lumbago, rheumatism and constipation. Curcuma domestica vall efficacious to colic during menstruation, as jamu to beauty, inflammation of in and busting smell on organ in womanhood (whitish). Alpinia galangal used as an abdominal disease, catch cold, scurvy, phaleria macrocarpa for skin diseases, dysentery and piddle sweet.

Mangifera indica a leaf bud is used as a laxative. Fimbrystilis bryops tubers used as repellent bias of a serpent. Carica papaya L. Used by people to launch digestion, launch production breast-fed in nursing mother and treat anæmia. Musa paradisiacal to treat bleeding the womb, wrapped the vagina, thrush the intestines, ambeien; the water pox, swollen, ears and throat dicentry, the tonsils; stomach cancer, jaundice (lever), bieeding the large intestine, diarrhea. Urena lobata 1 as an antidote of a serpent Metroxylon sagu rottb used as a remedy berak blood. Manikara cauci used as a remedy the heart. Cymbopogon nardus be used as a rheumatism menstruation irregular, cough medicine pain, sick to, and diarrhea. Piper betle. L efficacious deprive of odor body, restraining hemorrhage, heals the wound in the skin and disorders of the alimentary canal, eject phlegm; meluruhkan spittle, hemostatic, and stop bleeding. Annona muricata I used as a remedy for ambeien, sick the urine, baby mencret, anyang-anyangen (often keeing but little and ached), lumbago and boils. Solanum torvum Swartz used as a less appetite, swollen, blain, scabies and

Derris trifoliata Lour used of society as a 2sh poison and as an insecticide insects cassia Journal of Wetlands Environmental Management Vol.1, No.1 (2013) 25 – 32 http://dx.doi.org/10.20527/jwem.01.01.01

alata as a panu. Hydrolea spinosa used as a high fever/malaria, boil, a wound skins, mosquito repellent and coughing up blood. Alternanthera philoxeroides (Mart.) Griseb beneficial to treat colic and a cough. Kalanchoe pinnata (Lam.) Used press febrifuge. Lindernia tripolia beneficial to treat itch.Isotoma headache and longiflora presi.Beneficial to treat, cool hot high blood toothache, asthma, bronkhitis, pharyngitis, a wound, the eyedrops, cancer drugs. Valeriana officinalis L beneficial to treat belawa. Melaleuca cajuti used for mengibati febrile diseases, sick kapala, sick coolie.

The herbs are mostly used for purposes of daily living and not merchantable. It was allegedly because the existence of of herbs is not abundant again. In addition to limited communication with the outside world against marketing of plants has caused all plants is only used for daily usages. Only some herbs contribute to economic value which were used for purposes of merchantable as adder income although not too significant with increased their welfare. Plants which have economical values were allamanda cathartica L, averrhoa carambola L, averhoa bilimbi, cassia alata, manihot ultilissima, ipomæa aquatic, sauropus androgynus (B) Merr, cocos nucifera, kaempferia galangal, sandoricum koetjape (Burm.F. Merr), curcuma domestica Vall, of alpinia galangal, mangifera indica. fimbrystilis sp, carica papaya L., musa paradisiacal L, metroxylon sagu Rottb, manikara cauci, annona muricata L.

The review etnoantropology against plants in society of Dayaks Bakumpai showed us that plants are used as a means in a repellent disaster, repellent pest, repellent disease, occult things and ritual of customary. Several species of plants which is used for purposes related to this is aquilaria malaccensis as midges on plants and incense in religious rites. Allamanda cathartica L is hairdos a bride, a repellent. Averrhoa carambola L occasions traditional as repellent. Pluchea indica(B) unbelievable counteracting disease for women. Imperata cylindrica is trusted as beaty medication and lightning. Dried Manihot ultilissima fruit are used as an amulet men to

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mighty. *Melastoma candidum* is trusted as a refined spirit. *Cocos nucifera* is used in ritual bathing by a pregnant mother who has reached 7 months of pregnance. *Phaleria macrocarpa* is trusted as aliens gift. *Musa paradisiacal* used as a means rites wedding to material city as presentation of requirements his marriage good. *Cymbopogon nardus* is used to "tapung-tawar" event to a newborn to bless his birth and sheltered from distress.

#### CONCLUSION

It can be concluded that the Dayaks Bakumpai in Batola district has used the diverse plants surrounding them through etnofarmakologi, etnoekologi, etnoekologi, etnoekonomi and etno-linguitik especially against 44 tufted herbs found. The Dayaks Bakumpai in Batola district has preserved the diversity of plants surrounding them by several models, namely (1) without planting, (2) making use of herbs without a certain rule, (3) making use of herbs by a certain rule, (4) making use of herbs let plant grown in nature, or (5) destroy plants that exist or cultivated.

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## 04-2013. Indigenous Knowledge of Dayaks Bakumpai in Barito Kuala District

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