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Ecological Sustainability Of Woven Dye Raw Materials In LombokIsland, West Nusa Tenggara

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Abstract:
Background*: Weaving Is A Cultural Product That Represents The Culture Of The Supporting Community. The Preservation Of Raw Materials For Woven Dyes Must Be Considered. The Use Of Coloring Plants By The People Of Lombok Has Now Begun To Be Replaced By Synthetic Dyes. It Is Feared That This Will Eliminate The Wisdom Of The Community In Utilizing Natural Resources And Cause The Extinction Of Several Species Of Coloring Plants In Nature.*
Materials And Methods*: This Research Was Conducted In Villages That Became Weaving Centers On Lombok Island In July 2022 – August 2022 Through Literature Studies, Field Observations, Questionnaires And Interviews. The Data Collected Is In The Form Of Types Of Vegetation Raw Materials For Woven Dyes, Importance Value Index And Frequency Of Raw Material Utilization.*
Results*: Based On The Results Of Interviews (Free Listing), It Was Found That 6 Species From 5 Families Were Most Widely Used By The Local Community As Raw Materials For Woven Dyes, Namely Tarum, Mahogany, Teak, Tamarind, Mango And Pace. The Results Showed That 30% Of The Respondents Used Gardens, Fields And Paddy Fields As Locations To Collect Dye Raw Materials, While 9% Of The Community Used Forests As Locations To Collect Raw Materials. In Practice, The Community Has Made Conservation Efforts That Have Been Carried Out From Generation To Generation. The Visitor's Perception Of The Benefits Of Weaving Ecotourism On Lombok Island Is That On Average, Actual And Potential Visitors Strongly Agree That Through Weaving Ecotourism, The Preservation Of Raw Materials For Weaving Dyes Can Be Preserved.*
Conclusion: *The Results Of The Vegetation Analysis Showed The Availability Of Coloring Plant Species In The 3 Villages.The Community Has Local Wisdom As An Effort To Preserve Coloring Plants.*
Key Word*: Woven Dye Raw Materials, Sustainability*

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I. Introduction

The existence of plants cannot be separated in relation to the fulfillment of human life. Plants have been used to meet the needs of human life for a long time. This utilization has experienced a long history as part of a culture that is supported by biodiversity from various types of existing ecosystems (Rahayu et al. 2006). Various uses of plants have been carried out by the community including the use of plants as natural dyes. Natural dyes are colors that can be produced from various types of plants that produce natural colors which can be obtained from plant parts such as leaves, bark, fruit peels, seeds, roots and flowers which have gone through several processes, namely boiling, burning, crushing, pounding and direct use. (Berlin et al. 2017). Natural dyes are alternative dyes that are non-toxic, renewable, easily degraded and environmentally friendly (Pujilestari 2015). There are at least 150 types of natural dyes in Indonesia which have been identified and used in various industries such as crafts and batik (Husodo 1999). The coloring plant group is used in various ways such as food coloring, traditional equipment/equipment dyes, magical purposes, clothing dyes and cosmetics (Harbelubun et al. 2005).

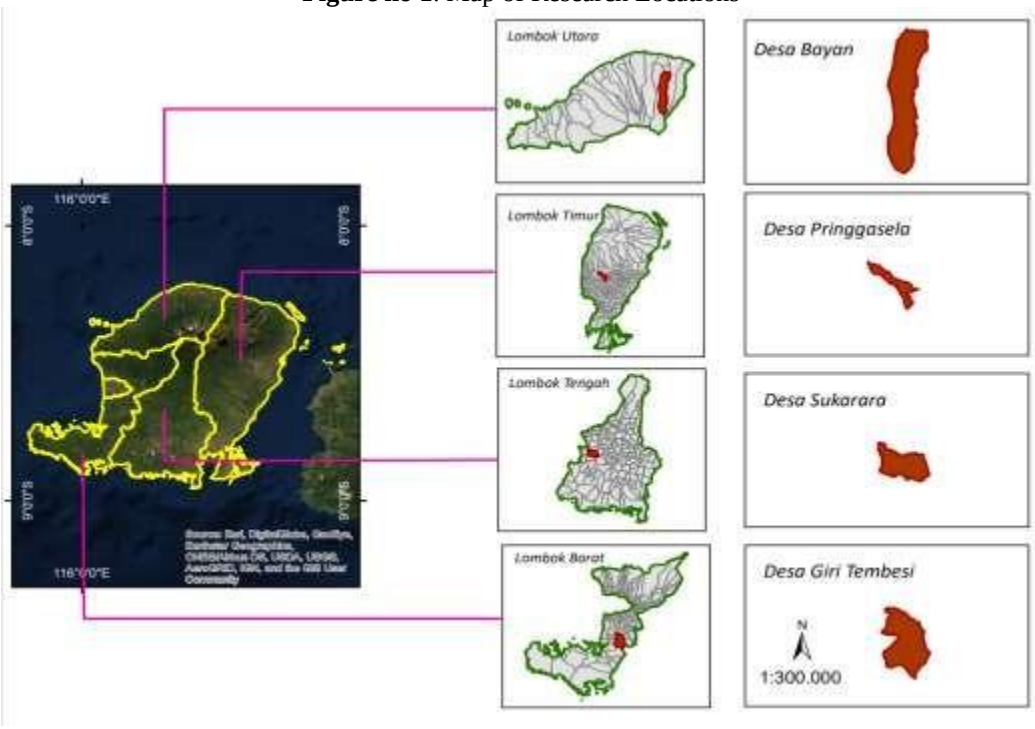
The existence of natural coloring plants cannot be separated from the life of the people of Lombok Island, especially in Pringgasela Village, Bayan Village, Kebun Ayu Village and Sukarara Village. especially in Pringgasela Village, Bayan Village, Kebun Ayu Village and Sukarara Village which are the locations of typical weaving centers in

each district on Lombok Island. Weaving is a cultural product that represents the culture of the supporting community (Sukari, 2013). The use of coloring plants on Lombok Island in particular is very diverse, but the data and identification of various types of plants used as coloring plants on Lombok Island are not too deep. Therefore it is necessary to conduct research related to this matter and encourage various other related studies. For this reason, the purpose of this research is to analyze the sustainability of songket woven raw materials in nature.

II. Material And Methods

This research conducted in May 2022 - July 2022 in four locations, namely in Giri Tembesi Village (West Lombok), Sukarara Village (Central Lombok), Pringgasela Village (East Lombok) and Bayan Village (NorthLombok).

Figure no 1: Map of Research Locations

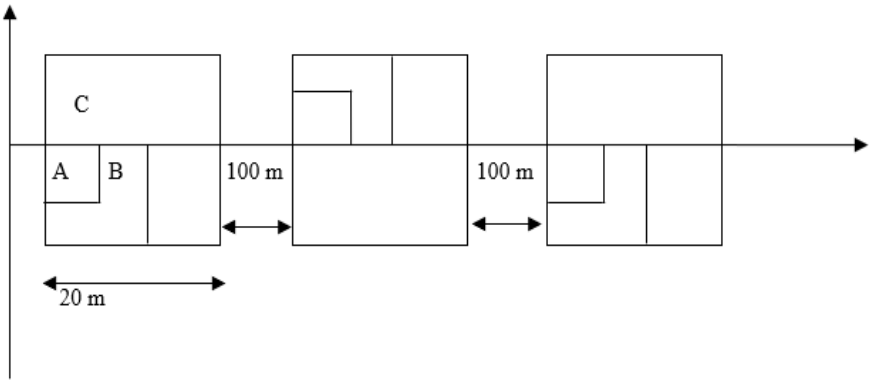


Tools and materials: The tools that will be used in this study are field notebooks, voice recorders (recorders), cameras, phi-band, meters and laptops to process data. The instruments used were questionnaires and interview guides. **Data collection:** The planning stages used refer to Wearing and Neil (2009), namely preliminary/library studies, field surveys/observations, analysis and synthesis. The type of data collected consists of primary data and secondary data. Types of data and methods of data collection during research are contained in table 1 below:

The conservation component is in the form of the availability of plant species which are the raw material for songket woven cloth in the research location, as well as efforts to preserve the plant species which are the raw material for the songket woven cloth.

The technique of analyzing vegetation is using the grid line method (Soerianegara and Indrawan 2005). Determination of the placement of the sampling plot is done by purposive sampling method. Parameters recorded or measured were branch-free height, trunk diameter at breast height (130 cm) used to calculate the number of individuals of each species specifically for tree and pole stages, number of stands and tree species.

Figure 2: Vegetation plot



Information :
A: sample stake unit (5m x 5m) B: sample pole unit (10m x 10m)C: sample tree unit (20m x 20m)

Data analysis : Vegetation analysis
The Important Value Index (INP) describes the ecological position of a species in the community, in other words, the INP is used to determine the dominance of a species over other species. INP is used to express the level of dominance of a species or provide an overview of the role of the species in question in the community. According to Indiriyanto (2006), each growth rate is analyzed using the formula:

$$\mathbf{INP = KR + FR + DR}$$

Information :

Density (K) $= \frac{\text{Number of individuals of a species (N)}}{\text{Sample plot area (ha)}}$

Relative Density (KR) $= \frac{\text{Density of a species (N/ha)}}{\text{total density (N/ha)}} x100\%$

Frequency (F) $= \frac{\text{Number of plots found of a species}}{\text{Number of all plots (ha)}}$

Relative Frequency (FR) $= \frac{\text{Frequency of a type}}{\text{Frequency of all types}} x100\%$

Dominance (D) $= \frac{\text{Number of basal areas of a species (m2)}}{\text{Sampling plot area (ha)}}$

Relative Dominance (DR) $= \frac{\text{Dominance of a species (m2/ha)}}{\text{Dominance of all species (m2/ha)}} x100\%$

III. Result and Discusion

Based on the results of interviews (free listing), it was found that 6 species from 5 families were most widely used by the local community as raw materials for woven dyes. The following table shows the types of species that are most widely used by the community.

Table no 2: Plants used by the community as weaving dyes

species	Family	Habitus	Part Used	Resulting Color
Indigofera tinctoria	Fabaceae	Tree	Leaf	Blue
Tectona grandis	Lamiaceae	Tree	Leaf, bark	Red
Swietenia mahagoni	Meliaceae	Tree	Bark	Brown, red
Mangifera indica	Anacardiaceae	Tree	Leaf	Black
Tamarindus indica	Fabaceae	Tree	Seed	Brown
Morinda citrifolia	Rubiaceae	Tree	Leaf, wood	Blue, yellow

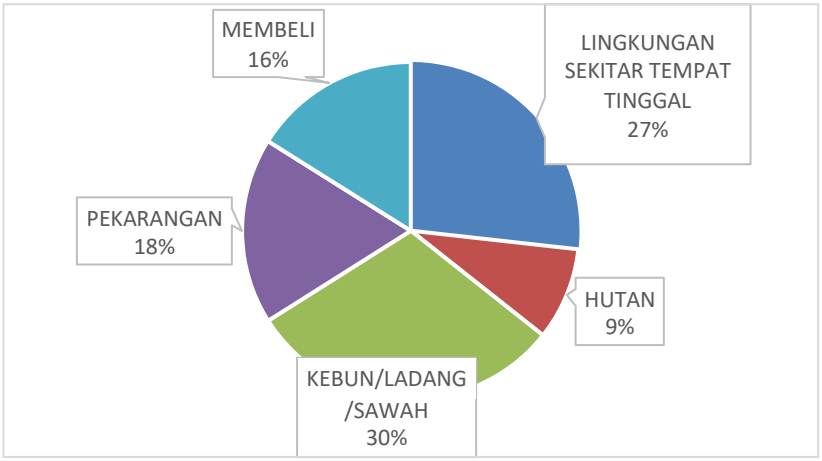
The Fabaceae family is the family with the highest number of species, with 2 species. The Fabaceae family that is used as a dye is *Indigofera tinctoria* and *Tamarindus indica*. Mualiminin (2013) mentions that *Indigofera tinctoria* has been a plant used for textile dyes since the 16th century.

In addition to the species above, *Tectona grandis* is also used by the community as a raw material for dyes from weaving. The color produced by *Tectona grandis* is red. Sulistiawati (2017) stated that *Tectona grandis* leaves have long been used traditionally by Indonesian people as medicine, textile and food dyes, handicrafts and food wrappers.

Diversity of Pick Up Locations

Based on data in the field, the community admits that they get raw materials for natural dyes from various places. The following data on the diversity of locations for the use of dye raw materials by the community are attachedbelow.

Figure 3 : Diagram of the diversity of locations for woven dye raw materials



The location of the presence of dye plants will affect the intensity of utilization of these dye plants. The closer and easier the location for the collection of dye plants, the greater the potential intensity of the use of these dye plants. The results showed that 30% of the respondents used gardens and rice fields as locations for dye raw materials. This is because in paddy fields and gardens, people plant types of coloring plants as fences from gardens or intercrops in their fields. Meanwhile, another 27% took it from their neighborhood, such as on the side of the road. As many as 18% of other respondents said they took dye raw materials from the yard. This is because the location is easy to reach. According to (Fitriani et al. 2019) the community uses the yard to plant the desired plants so that under certain conditions they can

be obtained easily. Examples of plants that can be obtained from yard are *Tamarindus indica* and *Artocarpus heterophyllus*. Apart from their yards, the forest is also one of the locations where dye plants are collected which are used by the community as raw materials for dyeing woven fabrics.

Figure 4 : Utilization of mahogany skin by the community in the environment around the community's residence

Figure 5 : The jackfruit coloring plant is a fence plant in the community's rice fields

The picture above shows the location of the collection of dye plants that are used by the community as raw material for dyes from weaving. The community grows several types of plants that can be used as raw materials for dyes in rice fields and gardens as intercrops and hedges. Figure (b) shows how the community used mahogany skin by injuring the stem. in practice, the community applies conservation efforts that have been practiced for generations from their ancestors by leaving only one wound (incision) on one stand and will not injure other parts of the stand until the wound on the stem of the stand can back close. As long as there is a wound (incision), the community will not injure the same tree again until the wound (incision) closes again.

Vegetation Analysis

The data from vegetation analysis in the field showed that out of the 4 research locations, only 3 locations had vegetation analysis carried out. This is because in one of the research villages, namely Sukarara Village, they do not have land that is administratively included in their village. Apart from that, the most important thing is that the local community (weaving craftsmen) have abandoned the practice of using natural dyes in their weaving for more than 2 decades. This is because nowadays, the demand for their weaving can be handled with textile dyes so that it no longer costs money to bring in raw materials from nature which requires another process for dyeing threads.

According to loom craftsmen around the village, it is no longer practical to buy finished threads with textile dyes. The following are the results of the analysis of vegetation in Peringgasela Village, Kebun Ayu Village and Bayan Beleq Village attached below.

Peringgasela Village

Table no 3: Vegetation analysis in Pringgasela Village

	Species	LBDS	KR	FR	DR	INP (%)
	Swietenia mahagoni	0,01	14,29	14,29	7,79	36,36
	Terminalia catapa	0,00	3,57	4,76	4,30	12,63
	Arthocarpus heterophyllus	0,02	17,86	14,29	36,68	68,82
	Mangifera indica	0,01	14,29	14,29	16,12	44,69
Se ed	*Syzygium cumini*	0,00	3,57	4,76	4,30	12,63
	Psidium guajava	0,00	7,14	9,52	1,53	18,20
	Baccaurea manihua	0,01	7,14	9,52	8,65	25,32
	Tectona grandis	0,00	14,29	14,29	5,30	33,87
	Erytrinasuburmbrans	0,01	14,29	9,52	14,86	38,67
	Durio zibethinus	0,00	3,57	4,76	0,47	8,81
		0,06	**100**	**100**	**100**	**300,00**
	Swietenia mahagoni	0,10	17,65	14,71	18,12	50,47
	Toona sureni	0,01	1,96	2,94	1,98	6,88
	Terminalia catapa	0,02	3,92	5,88	4,25	14,05
	Arthocarpus heterophyllus	0,10	17,65	14,71	18,82	51,17
	Mangifera indica	0,03	5,88	5,88	4,80	16,57
Po e	*Syzygium cumini*	0,01	1,96	2,94	1,87	6,77
_	*Psidium guajava*	0,02	3,92	5,88	3,00	12,81
	Ceiba petandra	0,03	5,88	5,88	5,98	17,75
	Artocarpus alfilis	0,01	1,96	2,94	1,98	6,88
	Cocos nucifera	0,04	7,84	8,82	7,29	23,96
	Baccaurea manihua	0,04	5,88	5,88	6,64	18,40
	Tectona grandis	0,12	21,57	17,65	22,54	61,76
	Nephelium lapacium	0,01	3,92	5,88	2,72	12,53
		0,53	**100,00**	**100**	**100**	**300,00**
	Erytrinasuburmbrans	0,11	3,45	4,35	2,12	9,92
	Swietenia mahagoni	1,22	27,59	13,04	23,53	64,16
	Toona sureni	0,13	5,17	6,52	2,45	14,14
	Durio zibethinus	0,03	1,72	2,17	0,48	4,38
	Pterospermum javanicum	0,04	1,72	13,04	0,68	15,45
	Terminalia catapa	0,16	3,45	4,35	3,05	10,85
	Ficus benjamina	0,05	3,45	4,35	0,96	8,75
Tr ee	*Arthocarpus heterophyllus*	0,65	10,34	10,87	12,49	33,71
	Mangifera indica	0,07	1,72	2,17	1,29	5,18
	Syzygium cumini	0,13	3,45	4,35	2,46	10,25
	Psidium guajava	0,28	6,90	6,52	5,44	18,86
	Ceiba petandra	0,19	3,45	4,35	3,58	11,38
	Artocarpus alfilis	0,05	1,72	2,17	0,96	4,86
	Cocos nucifera	1,22	10,34	6,52	23,44	40,31
	Baccaurea manihua	0,17	1,72	2,17	3,26	7,15
	Tectona grandis	0,72	13,79	13,04	13,81	40,65
	Total	**5,18**	**100**	**100**	**100**	**300**

Based on vegetation analysis data at the sapling level, several species with the highest INP were *Swietenia mahagoni*, *Arthocarpus heterophyllus*, *Mangifera indica*, *Tectona grandis* and *Erytrinasuburmbrans*. In addition, these types have higher relative frequency values than other types at the pole level. Indriyanto (2006) states that frequency is the level of presence of a species at a location. *Swietenia mahagoni*, *Arthocarpus heterophyllus*, *Mangifera indica* and *Tectona grandis* are used by the community as coloring plants. Based on vegetation analysis data at the pole level, the vegetation type that had the highest INP was *Tectona grandis* with a value of 61.76, followed by *Arthocarpus heterophyllus* with a value of 51.17 and *Swietenia mahagoni* with a value of 50.47. While the type of

vegetation that has the lowest IVI is *Syzygium cumini* with a value of 6.77. The three types with the highest IVI values are the types of vegetation used by the community as raw materials for woven dyes.

At the tree level, the data from the vegetation analysis showed that the vegetation type with the highest IVI was *Swietenia mahagoni* with a value of 64.16, followed by *Tectona grandis* with a value of 40.65, while the species with the lowest IVI was *Durio zibethinus* with a value of 4.38. Trees are the habitus with the highest level of utilization by society. Based on frequency data, the types of *Swietenia mahagoni* and *Tectona grandis* have the highest relative frequency value, namely 13.04, which is still relatively low. Indriyanto (2006) divides the frequency into a classification where the frequency value of 1-20% is included in class A (very low). This is influenced by the unit area of forest in this village which is very small, thus affecting the calculation results from the vegetation analysis.

Kebun Ayu Village

Table no 4 : Vegetation analysis in Kebun Ayu Village

	Species	LBDS	KR	FR	DR	INP (%)
	Gliricidia sepium	0,11	41,07	33,33	43,68	118,09
	L. leucocephala	0,06	23,21	27,27	25,17	75,66
	Indigofera tinctoria	0,01	7,14	6,06	3,89	17,09
Se ed	*Terminalia catapa*	0,01	3,57	6,06	3,93	13,56
	Tectona grandis	0,01	5,36	6,06	3,95	15,37
	Tamarindus indica	0,00	1,79	3,03	2,02	6,84
	Pterospermum diversifolium	0,04	17,86	18,18	17,36	53,39
	Total	**0,244**	**100**	**100**	**100**	**300**
	Gliricidia sepium	0,90	30,30	21,57	32,02	83,89
	L. leucocephala	0,57	21,21	17,65	20,17	59,03
	Indigofera tinctoria	0,16	5,05	5,88	5,66	16,59
	Terminalia catapa	0,52	19,19	19,61	18,43	57,23
	Arthocarpus heterophyllus	0,13	4,04	7,84	4,76	16,65
	Dalbergia latifolia	0,03	1,01	1,96	1,11	4,08
Po e l	*Ziziphus mauritiana*	0,13	5,05	5,88	4,51	15,44
	Tectona grandis	0,09	3,03	3,92	3,36	10,31
	Anacardium occidentale	0,01	1,01	1,96	0,36	3,33
	Pterospermum diversifolium	0,24	9,09	11,76	8,53	29,38
	Ceiba petandra	0,03	1,01	1,96	1,11	4,08
	Total	**2,80**	**100**	**100**	**100**	**300**
	Gliricidia sepium	3,35	23,53	15,63	21,58	60,73
	L. leucocephala	1,40	14,29	14,06	9,04	37,38
	Indigofera tinctoria	1,78	8,40	7,81	11,45	27,67
	Terminalia catapa	0,50	2,52	3,13	3,24	8,89
	Ficus benjamina	0,13	1,68	3,13	0,84	5,65
	Arthocarpus heterophyllus	1,27	6,72	7,81	8,20	22,74
	Dalbergia latifolia	0,32	1,68	3,13	2,05	6,86
Tr ee	*Ziziphus mauritiana*	1,88	10,92	7,81	12,12	30,86
	Tectona grandis	1,20	8,40	12,50	7,70	28,61
	Tamarindus indica	0,54	1,68	3,13	3,46	8,26
	Anacardium occidentale	0,09	0,84	1,56	0,55	2,96
	Pterospermum	2,73	15,13	12,50	17,55	45,18
	diversifolium					
	Delonix regia	0,12	1,68	3,13	0,75	5,56
	Ceiba petandra	0,23	2,52	4,69	1,46	8,67
	Total	**15,53**	**100**	**100**	**100**	**300**

Based on vegetation analysis data at the sapling level, the type of vegetation that had the highest INP was *Gliricidia sepium* with a value of 118.09, while the type with the lowest INP was *Tamarindus indica* with a value of 6.84.

Frequency data shows the highest value in the type of *Gliricidia sepium* with a value of 33.33%, which value is stillrelatively low in the classification of frequency values based on (Indriyanto, 2006).

At the pole level, vegetation analysis data showed that the vegetation type with the highest INP was *Gliricidia sepium* with a value of 83.89, while the vegetation type with the lowest INP was *Anacardium occidentale* with a value of 3.33. The high INP value of *Gliricidia sepium* was caused by the number of species found more than the other species with a total of 30 findings.

At the tree level, vegetation analysis data showed that the vegetation type with the highest INP was *Gliricidia sepium* with a value of 60.73, while the vegetation type with the lowest IVI was *Anacardium occidentale* with a value of 2.96. The high IVI value of *Gliricidia sepium* was caused by the number of species found more than the other species with a total of 28 findings. Some types that can be used as raw material for dyes are *Indigofera tinctoria*, *Terminalia catapa*, *Arthocarpus heterophyllus* and *Tectona grandis.*

Bayan Village

Table no 5 : Vegetation analysis in Bayan Village

	Species	LBDS	KR	FR	DR	INP (%)
	Erytrinasuburmbrans	0,07	8,33	7,14	9,23	24,70
	Pharaseriantes falcataria	0,03	4,17	3,57	3,65	11,39
	Swietenia mahagoni	0,16	22,92	17,86	22,70	63,47
	Arthocarpus heterophyllus	0,08	10,42	14,29	11,57	36,27
	Artocarpus alfilis	0,03	4,17	3,57	3,65	11,39
Seed	*Terminalia catapa*	0,11	16,67	14,29	15,86	46,82
	Theobroma cacao	0,01	2,08	3,57	2,02	7,67
	Gliricidia sepium	0,15	18,75	14,29	20,93	53,96
	Lannea coromandelica	0,01	2,08	3,57	1,49	7,15
	Aleurites moluccana	0,01	2,08	3,57	1,92	7,58
	Aquilaria malaccensis	0,02	2,08	3,57	2,22	7,87
	Tectona grandis	0,01	2,08	3,57	1,73	7,39
	Ficus gibosa	0,02	4,17	7,14	3,03	14,34
	Total	**0,72**	**100,00**	**100**	**100**	**300**
	Swietenia mahagoni	0,10	17,65	14,71	18,12	50,47
	Toona sureni	0,01	1,96	2,94	1,98	6,88
	Terminalia catapa	0,02	3,92	5,88	4,25	14,05
	Arthocarpus heterophyllus	0,10	17,65	14,71	18,82	51,17
	Mangifera indica	0,03	5,88	5,88	4,80	16,57
	Syzygium cumini	0,01	1,96	2,94	1,87	6,77
Pole	*Psidium guajava*	0,02	3,92	5,88	3,00	12,81
	Ceiba petandra	0,03	5,88	5,88	5,98	17,75
	Artocarpus alfilis	0,01	1,96	2,94	1,98	6,88
	Cocos nucifera	0,04	7,84	8,82	7,29	23,96
	Baccaurea manihua	0,04	5,88	5,88	6,64	18,40
	Tectona grandis	0,12	21,57	17,65	22,54	61,76
	Nephelium lapacium	0,01	3,92	5,88	2,72	12,53
	Total	**0,53**	**100,00**	**100**	**100**	**300**

	Species	LBDS	KR	FR	DR	INP (%)
	Erytrinasuburmbrans	0,41	9,09	9,68	5,88	24,65
	Pharaseriantes falcataria	0,73	4,55	3,23	10,49	18,26
	Swietenia mahagoni	1,64	20,45	12,90	23,59	56,95
	Arthocarpus heterophyllus	0,63	13,64	16,13	9,11	38,88
	Ceiba petandra	0,15	2,27	3,23	2,16	7,66
	Artocarpus alfilis	0,04	2,27	3,23	0,57	6,07
Pohon	*Terminalia catapa*	0,32	6,82	6,45	4,59	17,86
	Ficus benjamina	0,51	4,55	6,45	7,30	18,29
	Theobroma cacao	0,48	4,55	6,45	6,85	17,85
	Mangifera indica	0,05	2,27	3,23	0,71	6,21
	Gliricidia sepium	0,78	11,36	9,68	11,27	32,31
	Lannea coromandelica	0,57	4,55	6,45	8,22	19,21
	Aquilaria malaccensis	0,18	6,82	6,45	2,54	15,81
	Tectona grandis	0,31	4,55	3,23	4,42	12,19
	Ficus gibosa	0,16	2,27	3,23	2,30	7,80
		6,94	**100**	**100**	**100**	**300**

Based on vegetation analysis data at the sapling level, the type of vegetation that had the highest INP was *Erytrinasuburmbrans* with a value of 79.06, then *Swietenia mahagoni* with a value of 60.55, while the type with the lowest INP was *Theobroma cacao* with a value of 15.23. Types that can be used as raw material for dyes for weaving are *Swietenia mahagoni, Arthocarpus heterophyllus, Terminalia catapa* and*Tectona grandis.*

At the pole level, vegetation analysis data showed that the vegetation type with the highest INP was *Swietenia mahagoni* with a value of 63.47, while the vegetation type with the lowest INP *was Lannea coromandelica* with a value of 7.15. The high INP value of *Swietenia mahagoni* was caused by the number of species found more than the other species with a total of 11 findings. *Swietenia mahagoni* in the habitus of trees is used for its skin as a raw material for dyes from weaving.

At the tree level, vegetation analysis data showed that the vegetation type with the highest INP was *Swietenia mahagoni* with a value of 56.95, while the vegetation type with the lowest INP was *Mangifera indica* with a value of 6.21. Several species that can be used as raw material for dyes in tree plots are *Terminalia catapa, Arthocarpus heterophyllus Swietenia mahagoni* and *Tectona grandis.*

Preservation Efforts

Figure 6: Fallen vegetation is cut into pieces to make it easier for the community to use.

Figure 7 : Types of vegetation used as raw material for woven dyes as a combination of agroforestry plants by thecommunity.

Based on the results of interviews targeted at weaving craftsmen and people who have broad insight into the natural coloring of weaving in each research village, it is shown that the community really understands the importance of preserving nature. This can be seen from Figure 4 above, where for the types of vegetation that are commonly used for the raw material needs for woven dyes, if they already have an incision, then the surrounding community will not make a second incision on the same vegetation until the incision wound on the vegetation can recover. In addition, the community also utilizes fallen vegetation in natural selection and also certain types such as *Swietenia mahagoni*, *Arthocarpus heterophyllus,* and *Indigofera tinctoria*. The community plants their own in their yards, as garden fences, and agroforestry.

The people of Pringgasela Village and Bayan Village have cultivated plants. This cultivation is carried out by the community because they already know the value of its benefits from an economic perspective and knowledge about the cultivation of these plants (Rahayu 2006). About 30% of the respondents cultivate plant species that can be used as raw materials for weaving dyes in the community's gardens, fields and rice fields, besides that as many as 18% even cultivate in the yard of the community's house. The types of plants cultivated by the community are *Arthocarpus heterophyllus, Swietenia mahagoni, Indigofera tinctoria* and *Mangifera indica*.

IV. Conclusion

It was found that 6 species from 5 families that were most widely used by the local community as raw materials for weaving dyes were *Indigofera tinctoria, Swietenia mahagoni, Tectona grandis, Tamarindus indica, Mangifera indica* and *Morinda citrifolia.* 30% of the respondents used gardens, fields and rice fields as locations to collect dye raw materials, while 9% of the community used forests as locations to collect raw materials. The results of the vegetation analysis showed the availability of coloring plant species in the 3 villages.

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