Plants used in the traditional ceremony in *kanagarian tiku*

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**Abstract.** The use of plants in traditional tribal ceremonies is a culture. Kanagarian Tiku are inhabited by 3 tribes, namely Minangkabau, Java and Nias. In carrying out the Traditional Ceremony in Kanagarian Tiku each tribe still uses traditional plants. The traditional ceremonies examined are traditional ceremonies of marriage, birth, death and the first milestone. The purpose of this research is to find out the type of plant, the part used and its function in traditional ceremonies of each tribe. Data collection with survey methods, interviews and plant collections. Respondents interviewed were ninik mamak, tribal chiefs, bundo kanduang and people who used to look for plants for traditional ceremonies. The results showed that 44 plant species were used in traditional ceremonies and belonged to 27 families. Parts of plants used by roots, stems, leaves, flowers, fruits and seeds. The most widely used part of the plant leaves 36.4% and the least seeds are only 1%. At the Minangkabau and Javanese tribal wedding ceremonies using 7 species, the Nias tribe is 5 species. In traditional birth ceremonies and the first milestone only performed by Minangkabau tribes using 20 species and 13 species. In the traditional ceremony the death of the Minangkabau tribe uses 10 species, Java 9 species and Nias 6 species. Plants that have the highest utilization rates are found in *Piper betle*, *Areca chatecu*, *Uncaria gambir*, and *Nicotiana tabacum* with UV 0.33.

1. **Introduction**

Indonesia is a country that is rich in natural resources and has a diversity of religions, cultures, regional languages and has approximately 300 tribes. Every tribe has cultural and social norms different [1]. Human life in this world cannot be separated from other creatures. The interaction of fellow living beings is seen between humans and plants, for example how humans use plants in their daily lives. A scientist named Harshberger in 1895 introduced an ethnobotany term that relates to the use of various types of plants traditionally by primitive societies [2].

Along with the advancement of science and technology, ethnobotany developed into a branch of science with an interdisciplinary scope that studies human relations with plant natural resources and their environment [2]. Ethnobotany comes from the Greek language Ethnos (nation) and Botany (plant). Ethnobotany can be used as a tool to document the knowledge of ordinary people who have used various services to support their lives. Life support for food, medicine, building materials, traditional ceremonies, culture, coloring materials and others. All community groups according to the characteristics of their traditional territories have dependence on various plants, at least for food sources [3].
Ethnobotany is a field of study that studies the reciprocal relationship as a whole between the local community and its natural environment, including a system of knowledge about plant natural resources [4]. The traditional cultural environment of the people of West Sumatra is rich wisdom. Not much has been revealed how this wisdom grew and was maintained in people's lives. Therefore, it is necessary to carry out customary excavation efforts customs and culture to strengthen the community base (Community base) in maintaining their culture. But in line with developments time and modern culture, this ancestral wealth is increasingly abandoned and forgotten. Traditional culture which is alleged to have a lot of wisdom the environment has experienced tremendous erosion, so most of it the present generation has no idea and no longer cares about inheritance the ancestor [5].

The use of plants in traditional ceremonies is very important on ethnicity who use it. The results of the study of [6] on a traditional ceremony at the Sontang Cubadak Padang kanagarian Gelugur Pasaman found 30 species from 19 families that were used in traditional ceremonies. The results of the study of [7] found 28 plant species in 14 families in the traditional marriage ceremony of the Batak people in Padang Sidempuan. The results of research [8] found 25 plant species in 14 families in the traditional batagak of the prince in West Sumatra. The results of [9] got 7 plant species used by Minangkabau people in Kanagarian Tiku in traditional Kudo-Kudo batagak ceremonies.

Kanagarian Tiku, Tanjung Mutiara Subdistrict, Agam Regency, consists of 5 jorong inhabited by 3 tribes namely Minangkabau, Java and Nias with Islamic and Christian religions. The habit of the Tiku community in utilizing species upac fig plants in the indigenous or as the drug is still used today. The traditional ceremonies that are still used by the Tiku people are wedding ceremonies, births, first milestone, kudo-kudo batagak and death ceremonies. The purpose of this research is to find out the type of plants used, how many plants are used and how to use plants at ceremonies of marriage, birth, the first milestone and death. Are there differences in the use of plants from the 3 tribes at a traditional ceremony in Kanagarian Tiku, Tanjung Mutiara Subdistrict, Agam Regency.

2. Research Method

This research was conducted in April - May 2016 at Kanagarian Tiku Tanjung Mutiara, Agam Regency. Data collection using survey and observation methods using written questionnaires and oral interviews. Respondents interviewed by Ninik Mamak, tribal chief, Bundo Kanduang and people who used to look for plants for traditional ceremonies from each tribe. The interview material includes the types of plants used, the name of the plant area, the part of the plant used, the way it is used and its function in traditional ceremonies.

Analysis of the data used is qualitative and quantitative. Qualitative data includes the types of plants used, parts of plants used and the function of plants used, while quantitative data includes the use value / benefits of plants used. To determine the use value / value of benefits (use value) a species is used the formula: [10]

\[ U_{vis} = \sum U_{is} / N_{is} \]  

Information:

- \( U_{vis} \): The use value of a species in a traditional ceremony that is still used by the community until now
- \( U_{is} \): The use of a plant species in a series of events in traditional ceremonial processions that are still used by the community until now
- \( N_{is} \): Total series of events in the traditional ceremonial procession that are still used by the community until now

3. Results And Discussion

From the results of the study, it was found that 44 species belonging to 27 families were used in traditional ceremonies in Kanagarian Tiku, Tanjung Mutiara Subdistrict, Agam Regency, as in Table 1.
| No. | Species                             | Local Name | Familia            | Habitus | M | J | N |
|-----|-------------------------------------|------------|--------------------|---------|---|---|---|
| 1.  | *Spondias dulcis* Forst.            | Kadondong  | 1. Anacardiaceae   | Tree    | v |   |   |
| 2.  | *Mangifera indica* L.               | Mangga     | Tree               | v       |   |   |   |
| 3.  | *Canangium odoratum* Lamk. Hook.    | Kananga    | 2. Annonaceae      | Shrub   | v | v | v |
| 4.  | *Ananas comosus* L. Merr            | Naneh      | 3. Bromeliaceae    | Herbs   | v |   |   |
| 5.  | *Blumea balsamifera* L.             | Capo       | 4. Compositae      | Shrub   | v |   |   |
| 6.  | *Enhydra fluctuans* Lour.           | Cikarau    |                    | Herbs   | v |   |   |
| 7.  | *Pluchea indica* L. (Less)          | Beluntas   |                    | Shrub   | v |   |   |
| 8.  | *Ipomoea reptans* Forsk.            | Kangkuang  | 5. Convolvulaceae  | Herbs   | v |   |   |
| 9.  | *Kalanchoe pinnata* Pers.           | Sidingin   | 6. Crassulaceae    | Herbs   | v | v | v |
| 10. | *Mahot utilisimia* (Mull.) Arg      | Ubi kayu   | 7. Euphorbiaceae   | Shrub   | v |   |   |
| 11. | *Saurous androgynus* L.             | Katu       |                    | Shrub   | v |   |   |
| 12. | *Oryza sativa* L.                   | Padi       | 8. Graminae        | Grass   | v |   |   |
| 13. | *Sacciolepsis interrupta* (Wild.) Staph | Kumpai   |                    | Grass   | v |   |   |
| 14. | *Bambusa vulgaris* Schrad.          | Bambu      |                    | Grass   | v | v | v |
| 15. | *Coleus scutellarioides* Benth.     | Piladang   | 9. Labiatae        | Shrub   | v |   |   |
| 16. | *Allium ascalonicum* L. Back        | Bwng merah | 10. Liliaceae      | Herbs   | v |   |   |
| 17. | *Lawsonia inermis* L.               | Daun inai  | 11. Lytharaceae    | Herbs   | v | v | v |
| 18. | *Hibiscus rosa-sinensis* L.         | Bungo rayo | 12. Malvaceae      | Shrub   | v |   |   |
| 19. | *Aglia odorata* Lour.               | Culan      | 12. Meliaceae      | Tree    | v | v | v |
| 20. | *Musa paradisiaca* Linn.           | Pisang     | 14. Musaceae       | Herbs   | v |   | v |
| 21. | *Bougainvillea spectabilis* Wildld  | Bungo karateh | 15. Nytaginaceae  | Shrub   | v |   |   |
| 22. | *Jasminum sambac* Ait.              | Melati     | 16. Oleaceae       | Bush    | v | v | v |
| 23. | *Cocos nucifera* L.                 | Karambia   | 17. Palmae         | Tree    | v |   |   |
| 24. | *Areca catheca* L.                  | Pinang     |                    | Tree    | v | v | v |
| 25. | *Salacca edulis* Reinw.             | Salak      |                    | Shrub   | v |   |   |
| 26. | *Pandanus amaryllifolius* Roxb.     | Pandan msang | 18. Pandanaceae   | Herbs   | v | v | v |
| 27. | *Pandanus tectorius* ex Du Roi.     | Pandan duri |                    | Shrub   | v | v | v |
| 28. | *Piper betle* L.                    | Siriah     | 19. Piperaceae     | Liana   | v | v | v |
| 29. | *Uncaria gambir* Roxb.              | Gambia     | 20. Rubiaceae      | Shrub   | v | v | v |
| 30. | *Psychotria sermentosa* Blume.      | Mudo-mudo  |                    | Liana   | v |   |   |
| 31. | *Ixora chinensis* Lamk.             | Asoka      |                    | Shrub   | v |   |   |
| 32. | *Rosa chinensis* Jacq.              | Mawar      | 21. Rosaceae       | Shrub   | v | v | v |
| 33. | *Citrus aurantium* J. Konig         | Limau kapeh | 22. Rutaceae      | Tree    | v | v | v |
| 34. | *Murraya paniculata* L. Jack        | Kemuning   |                    | Shrub   | v |   |   |
| 35. | *Clausena excavata* (Burnm) F.      | Sicerek    |                    | Shrub   | v |   |   |
| 36. | *Mimusops elengi* L.                | Bago tanjuang | 23. Sapotaceae   | Tree    | v | v | v |
| 37. | *Capsicum annuum* L.                | Cabe       | 24. Solanaceae     | Shrub   | v |   |   |
| 38. | *Nicotina tabacum* L.               | Tembakau   |                    | Shrub   | v | v | v |
| 39. | *Styrax benzoin* Drian.              | Kumanayan  | 25. Styracaceae    | Tree    | v |   |   |
| 40. | *Geussia pentandra* (Robx) Merr.    | Sitapuag   | 26. Verbenaceae    | Tree    | v |   |   |
| 41. | *Peronema canescens* Jack           | Sungkai    |                    | Tree    | v |   |   |
| 42. | *Costus speciosus* Sm.              | Sitawea    | 27. Zingiberaceae  | Herbs   | v |   |   |
| 43. | *Kaempferia galanga* L.             | Cakue      | Herbs              | v       | v | v | v |
| 44. | *Hedycium coronarium* J. Konig      | Kabilu     | Herbs              | v       | v |   | v |

**Table 1.** Plants used in traditional ceremonies at Kanagarian Tiku, Tanjung Mutiara Subdistrict, Agam Regency
From table 1, it can be seen that the plant habitus that is widely used is shrubs of 18 species, trees and herbs of 10 species, grasses of 3 species, liana of 2 species and bushes of 1 species. In the ceremonial procession of traditional marriage, birth, the first milestone and death by The Minangkabau tribe uses 43 types of plants, the Javanese use 16 species and 11 Nias tribes.

The use of plants in traditional ceremonies in Kanagarian Tiku for each pro session can be seen in Table 2.

Table 2. The number of plants used by each tribe in the Traditional Ceremony in Kanagarian Tiku, Tanjung Mutiara Subdistrict, Agam Regency

| No | Type of customary procession | Minangkabau | Java | Nias |
|----|-------------------------------|-------------|------|------|
| 1. | Wedding                       | 7           | 7    | 5    |
| 2. | Birth                         | 20          | -    | -    |
| 3. | First milestone               | 13          | -    | -    |
| 4. | Death                         | 10          | 10   | 7    |

In the traditional ceremony of marriage of Minangkabau and Javanese people using the same 7 species namely *M. paradisiaca, P. betle, A. cathecu, U. gambir, N. tabacum, P. tectorius*, and *L. inermis*. The Nias tribe community uses 5 species, 4 species are the same as the Minangkabau and Javanese and one species (*B. Vulgaris*) only the Nias tribe uses it as a stretcher.

In the Minangkabau tribal wedding ceremony, there are 7 plant species in 5 processions, namely maantaan asok, maminang, bainai night, manjapuik marapulai and welcoming at the house of the child daro. There are 4 Javanese tribal wedding processions, namely applying, staging, night and nynri or nyatri. Likewise, the Nias tribal procession consists of 4 series of processions namely famatua (fiancée), famekola (payment of dowry), fameembola (wedding party) and fameetou niowalu.

Minangkabau people use the most plants in traditional birth ceremonies, which are 20 species with 4 processions (young pregnancy, 7 months pregnancy, birth and seeing children). The Javanese and Nias people did not use plants in the traditional birth ceremony procession.

There are 4 procession sequences at the birth ceremony. The first procession was young, the plants used by *S. dulcis, M. indica* and *S. Edulis*, served as cravings for babies in the womb. The second process was 7 months pregnant, the plants used by *A. comosus and C. nucifera* which functioned to increase milk. The third procession of birth, plants used by *S. androgy, M. paradisiaca, M. utilissima* and *I. Reptans*, functioned as vegetables and increased milk. To cleanse dirty blood after giving birth, *C. excavate, M. paniculata, C. scuttellarioides, P. canescens, P. sarmentosa* and *P. indica* were used. The fourth procession saw children, the plants used by *O. sativa, C. nucifera, C. annum* and *A. ascalonicum*, functioned to be good at cooking after adulthood.

At the traditional ceremony the the first milestone was only carried out by the Minangkabau community using 13 plant species. There are 4 species of plants that are used to cool houses, namely *S.interupta, E.fluctans, C.speciosus*, and *K.pinnata*. The parts of plants used are stems and leaves. Flowers from *G.petandra* plants are used to make people like to come home. Flowers from *C.aurantifolia, J.sambac, R.chinensis, B.spectabilis, I.chinensis, H.rosa-sinensi*, and *A.odorata* are used so that the house looks radiant (not dark). Fruit from Citrus Aurantifolia is used for complementary prayers.

The custom of the Minangkabau people in the Tiku kanagarian in building houses in addition to the first milestone ceremony also performed the Batagak Kudo-kudo traditional ceremony. The results of research [9] found 7 species used in kudo-kudo batagakures such as *M. paradisiaca* fruit to cool the house. Plant *C. nucifera* fruit to cool the house and the leaves to make ketupat balerang. Stems and leaves *S. interrupta, E. fluctuans, C. speciosus, K. pinnata* are used to cool the house. Fruit from *C. aurantifolia* used to complement prayer. While Javanese and Nias tribes do not carry out this ceremony in building their homes.
From table 2 can be seen in the traditional ceremony of the death of the Minangkabau tribe and Java using the same 10 types of plants, while the Nias tribe only uses 7 types. The plants used by the Minangkabau tribe for the last bathing procession are J.sambac, C. odoratum, M.elengi, R.chinensis, A.odorata, the same for the 3 tribes and in the Nias tribe plus P. a maryllifolius. Mas ih procession last shower Minangkabau ethnic and Java using P. Amaryllifolius , H.coronarium and K.galanga for paureh while the Nias tribe does not carry out the process of paureh . As a complement to the prayers of the three tribes, the fruit of C.aurantifolia and the Minangkabau was added with S.benzoin

In the use of plants at traditional ceremonies, the various parts of the plants used, ranging from stems, leaves, flowers, fruits, rhizomes / tubers , can be seen in table 3.

Table 3. Percentage of plant parts used in the Nagari Tiku traditional ceremony in Tanjung Mutiara Subdistrict, Agam Regency

| No. | Parts of plants used | Number of species | Percentage (%) |
|-----|----------------------|-------------------|----------------|
| 1.  | Leaf                 | 16                | 36.4           |
| 2.  | Flower               | 9                 | 20.4           |
| 3.  | Fruit                | 9                 | 20.4           |
| 4.  | Roots, stems, adn leaves | 4                   | 9.1           |
| 5.  | Tubers               | 3                 | 6.8            |
| 6.  | Stems                | 2                 | 4.5            |
| 7.  | Seed                 | 1                 | 2.3            |

Table 3 shows part of the plant most widely used in traditional ceremonies at Kanagararian Tiku are the leaves, 36.4% d ith 16 species, flowers and fruits 20.4% with 9 species and the least is the seed of 2.3% only 1 species. There are 4 plant species that are used in full all parts, namely roots, stems and leaves with a percentage of 9.1% .

Leaves are part of the plant that is most widely used in traditional ceremonies because it is always available in nature so that people just take it from the yard of the house, the forest, the fields are often found by plants used for traditional ceremonies. Similar results were also found in the study conducted by [11] that plant species used in the Tengger community's traditional ceremonies also used 50% more leaves. This is because plants have their own spiritual values and meanings in customs that are inherited from generation to generation.

Every plant that people use in their daily lives the day has its own value, where there are plants that are very important and always present at every event and there are also plants that use it only on certain occasions. The frequency of the use of plants by the people of Kanagararian Tiku in traditional ceremonies can be seen by calculating the Use Value of the plants (Table 4).

Table 4. Use Value of plant species used in traditional ceremonies in KanagararianTiku, Tanjung Mutiara District, Agam Regency

| No. | Name of Plant  | Benefit Value (Use Value) |
|-----|----------------|---------------------------|
| 1.  | Areca cathecu  | 0.33                      |
| 2.  | Nicotina tabacum | 0.33                   |
| 3.  | Piper betle    | 0.33                      |
| 4.  | Uncaria gambir | 0.33                      |
| 5.  | Aglaia odorata | 0.25                      |
| 6.  | Canangium odoratum | 0.25                     |
| 7.  | Citrus aurantifolia | 0.25                  |
| 8.  | Jasmimum sambac | 0.25                     |
| 9.  | Musa paradasiaca | 0.25                   |
| 10. | Rosa chinensis | 0.25                      |
| 11. | Mimusops elengi | 0.21                     |
| 12. | Pandanus odorus | 0.21                     |
| 13. | Cocos nucifera | 0.13                      |
In table 4 it can be seen that the calculation of the Use Value of plants is based on the amount of utilization of each plant in a series of traditional ceremonial processions in Kanagarian Tiku which has a value range of benefits of 0.04-0.33. The highest value was found in P. beetle, A. chatecu, U. Gambir, N. tabacum with the Use Value 0.33 which means that the plant is used in 8 processions on 24 series of this traditional ceremony procession. Benefit value 0.25 found 6 species, a value of 0.21 found 2 species, a value of 0.13 one species, a value of 0, 08 found 9 species and the lowest value of 0.04 found 22 species. This means that the lowest value is used only in one procession only. The high value of benefits (Use Value) of a plant has an important meaning in supporting people's lives not only for their daily needs but also in supporting the running of a traditional procession that is still used today.

The importance of a plant in people's lives is not limited to supporting their daily lives, but the cultural values possessed by a society that are applied to a particular type of plant make this as an encouragement for the attitude of every individual community to keep maintaining the natural resources of the plant around them and keep trying to preserve it. Therefore, the high development of technology and the level of public education at this time, it is expected that the cultural values of ancestral heritage that have been handed down for a long time can still be maintained and preserved (Suryadarma, 2008).

Maulidah (2015) states that each plant species contains different meanings. This difference in meaning is based on the trust of the local community in connecting between the meaning of plants and the traditional processions carried out. Interviews carried out on the community revealed that
information about plant species used, parts used, functions, and their numbers spread evenly throughout the community because they were passed on from generation to generation. In accordance with opinion [12] states that the Minangkabau Nagari is complete with its own system of rules (adat) and governmental instruments.

Customary rules in Minangkabau are a rule of life for people who are hereditary and valid, both individually and together. The customs, beliefs, and life histories of these communities provide important values about the environment of plants so that they influence their way of life. The still belief in the mystical / magical value of a plant that is used is something that still accompanies people's lives in performing their traditional rituals. The values contained in each series of implementation paths and symbolic ceremonies are important for the local community (Sundari, 2011).

From the research that has been done, it is known that in this traditional ceremony in Kanagarian Tiku, the use of plants used is divided into 2 criteria. The first is adapted to the needs of the event, while the second is something sacred and must be in the event. This is because there is a provision that has been stipulated in the rules of customs that have existed since the beginning. This regulation is binding and must be obeyed which ultimately becomes an obligation to be fulfilled. One example is the use of several types of plants in an event, when the plant does not exist, it will affect the course of the event.

In the procession per marriage the Minangkabau and Javanese tribes generally use the same plants. For every series of processions carried out by plants that are used have an important meaning in the event for the community. The existence of this plant is used as a symbol that symbolizes the value, strength, tradition, beliefs and kinship of the customs themselves. This can be seen in the use of Carano along with the accessories such as betel (P. Betle), gambir (U, gambier) and nut (A. cathecu). Betel, gambir and pinang are also known as Kapalo Baso (base heads) which are always used in every deliberation to reach the word consensus between the leader and the people.

The existence of betel, gambir and pinang is used as opening remarks, and also during deliberations. While in the procession of the first milestone and batagak kudo kudo plants used according to the needs of the event, for example the use of flowers such as cananga (C.odoratum), paper (B.spectabilis), hibiscus (H.rosa-sinensis) and culan (A. odorata). Customary law in Minangkabau is very important. Because, when people violate the customary law, so much is the effect they feel. Likewise in terms of the use of plants at this traditional ceremony. The existence of a plant is very important at a traditional ceremony, if the plant is not present or incomplete, then the event will not run smoothly. One example in the wedding ceremony is always the use of carano and its accessories such as betel, gambir, and areca nut [12].

The people of Nias also used herbs in traditional events Nias, that Sirih (P. Betle), areca (A. Cathecu), Gambier (U, Gambir), tobacco (N. Tabacum) along with the accessories have meaning complex in traditional ceremonies Nias and in the marriage ceremony symbolizes the word sign of respect and every time the conversation always takes precedence over betel nut. As found (Sundari, 2011) the community in the customary events in West Sumatra, that the carano and its completeness have complex meanings in Minangkabau culture, as a symbol of formality in the interaction of indigenous communication of Minangkabau people and in the inauguration meeting of the headmaster symbolizes the word consensus which was produced through deliberation and endorsed by carano ( Sunda ri, 2011 ).

Carano is a tool that symbolizes customs in Minangkabau. Carano and its completeness, which consists of various plant species that are given values that ultimately have complex meaning values in the culture of the Minangkabau people which will be further illustrated through various customary sayings and claims. In the inauguration session of the inauguration of the headmaster, the carano and its completeness symbolized the power of the word consensus which was produced through deliberation and endorsed by carano ( Sunda ri, 2011 ).

Based on the information above, we can know that plants have important values and cultures. This is because not only is used as a support for the needs of everyday life, but it is also used as an element that is very important for their customs and culture. So that it is used as a guideline in accompanying
all attitudes and actions because of the various values given to the plant. In accordance [13] which states that biodiversity has important social and cultural values. Therefore, usually people use certain plant species that have their own meaning and amount for their events and are very important aspects in it.

4. Conclusion
Based on research on ethnobotany at traditional ceremonies in Kanagarian Tiku, Tanjung Mutiara Subdistrict, Agam Regency, it can be concluded:

- It was found 44 species of plants natural and 27 families used in traditional ceremonies in Kanagarian Tiku, which is dominated by families Compositae, Graminae, Palmae, Rubiaceae, Rutaceae and Zingiberaeae.
- The most widely used parts of plants used for traditional ceremonies are 36.4% leaves, flowers and fruits 20.4% and the least are 2.3% seeds.
- The highest value of plant benefits found in Piper betle plants, Areca cathecu, Uncaria gambir, Nicotina tabacum with a value of 0.33.
- There are differences in the use of plants in traditional ceremonies between the Minangkabau tribe, the Javanese tribe and the Nias tribe. At the Minangkabau and Javanese tribal wedding ceremonies using 7 species, and Nias 5 species. At the birth and ceremony the first milestone was only carried out by the Minangkabau tribe by using 20 species for birth and 13 species for the first milestone. At the death ceremony the Minangkabau and Javanese tribes used 10 of the same species, while the Nias tribe used 7 species.

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