

MYANMAR EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE (MEITI)

Annex to the 3rd and 4th EITI Forestry Reports

Brief Description of Some Minor Forest Products

April 2020

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INTRODUCTION

This annex includes a brief description about the main minor forest produces in Myanmar together with some pictures provided by the Forest Department.

It forms an integral part of the third and fourth Myanmar EITI forestry Reports for the Fiscal years 2016/17 and 2017/18 respectively.

This annex describes 31 forest products as follows:

N°	Forest product
1	Bamboo Leave
2	Bamboo Products
3	Bamboo Shoot
4	Bark (for tanning)
5	Bat's Guano
6	Bee Wax
7	Bomma-Yaza (<i>Rauvolfia serpentina</i>)
8	Caraway (<i>Cinnamomum impressinervium</i>)
9	Cutch (<i>Acacia catechu</i>)
10	Dani/Thetke (Thatch)
11	Elephant foot yam or white yam or Konjac (dry/fresh)
12	Ginger (<i>Zingiber officinale</i>)
13	Kalamet (Black Sandalwood)
14	Kanyin Resin (Resin of <i>Dipterocarp</i>)
15	Kyu Phyar (Reed mat)
16	Lac
17	Leaf of <i>Dipterocarpus tuberculatus</i>
18	Nathani, Red Sandalwood (<i>Pterocarpus santalinus</i>)
19	Natural Honey
20	Peik-chin, Long Pepper (<i>Piper cubebe</i>)
21	Pepper (<i>Piper longum</i>)
22	Salu (<i>Licuala peltata</i> , Thatching palm)
23	Se-myinkywa (<i>Hydrocotyle rotundifolia</i>)
24	Tabin-shwe-hti (<i>Jatropha podagrica</i>)
25	Taung-htan (<i>Livistona speciose</i>)
26	Taung-tangyi (<i>Premna integrifolia</i>)
27	Thanaka (<i>Limonia acidissima</i>)
28	Thin
29	Thitsi, Lacquer (<i>Melanorrhoea usitata</i>)
30	Turmeric root (<i>Curcuma longa</i>)
31	Turpentine (<i>Pinis insularis</i> and <i>Pinus Khasya</i>)

1. FOREST PRODUCTS

1.1. Bamboo Leaves

Brief description

Bamboos are evergreen perennial flowering plants in the subfamily, Bambusoideae of the grass family Poaceae. In bamboo, as in other grasses, the internodal regions of the stem are usually hollow and the vascular bundles in the cross-section are scattered throughout the stem instead of in a cylindrical arrangement. Bamboo leaves have a rich amalgamation of chemical compounds that make them an excellent source of curative drugs for clinical and physiological treatment in both human and livestock.

Picture



1.2. Bamboo Products

Brief description

Six main products groups of traditional bamboo products, crude bamboo products, bamboo building and bridges, bamboo furniture, bamboo weavings, bamboo handicrafts and food (bamboo shoots). Modern bamboo products are also produced as commercial scale.

Picture



1.3. Bamboo Shoot

Brief description

Bamboo shoots or bamboo sprouts are the edible shoots (new bamboo culms that come out of the ground) of many bamboo species including *Dendrocalamus giganteus* and *Bambusa polymorpha*. They are used as vegetables in numerous Asian dishes and broths.

Picture



1.4. Bark (for tanning)

Brief description

Cassia fistula is a tropical, deciduous or evergreen tree with an erect and slender trunk and small buttresses native to India, Myanmar and Sri Lanka. It is slow growing and reaches up to 9-20 m tall and 3-5 m wide upon maturity. The bark is used as tanning material, often in conjunction with avaram, in South Asia and South East Asia and other places. The flowers with yellow colour appear mainly from April to July.

Pictures



1.5. Bat's Guano

Brief description

Guano is the accumulated excrement of seabirds and bats generally in the caves. As a manure, guano is a highly effective fertilizer due to its exceptionally high content of nitrogen, phosphate and potassium: key nutrients essential for plant growth. Guano is ecologically important due to its role in dispersing nutrients.

Picture



1.6. Bee Wax

Brief description

Beeswax is a natural wax produced by honeybees. The wax is formed into scales by eight wax-producing glands in the abdominal segments of worker bees, which discard it in or at the hive. Chemically, beeswax consists mainly of esters of fatty acids and various long-chain alcohols.

Picture



1.7. Bomma-Yaza (*Rauvolfia serpentina*)

Brief description

Rauvolfia is a genus of evergreen trees and shrubs, commonly known as devil peppers, in the family Apocynaceae. The genus can mainly be found in tropical regions of Africa, Asia, Latin America, and various oceanic islands. *Rauvolfia* is an alkaloid first isolated from *R. serpentina* and was widely used as an antihypertensive drug.

Picture



1.8. Caraway (*Cinnamomum impressinervium*)

Brief description

Cinnamomum impressinervium is a small to medium-sized evergreen tree. The plant is harvested from the wild for local use as a spice and a medicine. The essential oil in its leaves have been shown to be an effective fungicide. The leaves are aromatic, possessing a strong spicy odour - they are used locally as a spice.

Picture



1.9. Cutch (Acacia catechu)

Brief description

Acacia catechu is a deciduous tree growing to moderate-sized deciduous tree native from Asia which is valued to produce tannin ("cutch") extracted from its heartwood. It is hardy to dry zone. A wood extract called catechu is used in traditional medicine for sore throats and diarrhea and uses an ingredient in betel chewing.

Pictures



1.10. Dani / Thetke (Thatch)

Brief description

Nypa fruticans, commonly known as the nipa palm (or simply nipa) or mangrove palm, is a species of palm native to the coastlines and estuarine habitats of the Indian and Pacific Oceans. The long, feathery leaves of the nipa palm are used by local populations as roof material for thatched houses or dwellings. The leaves are also used in many types of basketry and thatching.

Pictures



1.11. Elephant foot yam (EFY) or white yam or Konjac (dry/fresh)

Brief description

EFY is a member of the genus *Amorphophallus*, of which there about 120 species widespread in the tropics and warm temperate areas of Europe. *Amorphophallus muelleri* occurs wild from the Andaman Islands eastwards through Myanmar into northern Thailand and Indonesia. *Amorphophallus konjac* originates from southern and south-eastern China, Vietnam and possibly Laos. It occurs wild and cultivated. Tubers are used to prepare a traditional dish and considered a delicacy.

Pictures



1.12. Ginger (*Zingiber officinale*)

Brief description

Ginger (*Zingiber officinale*) is a flowering plant whose rhizome, ginger root or ginger, is widely used as a spice and a traditional medicine. Ginger is a very popular spice used worldwide; spice up meals, or as a medicine. Ginger can be used for a variety of food or medicine items such as vegetables, candy, soda, pickles, and alcoholic beverages.

Picture



1.13. Kalamet (Black Sandalwood)

Brief description

Sandalwood is a class of woods from trees in the genus *Santalum*. The woods are heavy, yellow, and fine-grained, and, unlike many other aromatic woods, they retain their fragrance for decades. Sandalwood oil is extracted from the woods for use. Sandalwood has a distinctive soft, warm, smooth, creamy, and milky precious-wood scent.

Picture



1.14. Kanyin Resin (Resin of Dipterocarp)

Brief description

Dipterocarpus consists of some 70 species and is distributed from Sri Lanka, India and Myanmar, through Indo-China, southern China and Thailand. Kanyin resin ("wood-oil") obtained from the sapwood of Dipterocarpus. Kanyin resin is still traditionally used for illumination, to caulk boats, to make baskets watertight and to treat timber which is exposed to the weather.

Picture



1.15. Kyu Phyar (Reed mat)

Brief description

Neyraudia reynaudiana, commonly known as Burma reed, silk reed, cane grass, or false reed, is a tall, perennial, large-plumed grass native to subtropical Asia.

Picture



1.16. Lac

Brief description

Lac is the scarlet resinous secretion of several species of lac insects, of which the most cultivated is *Kerria lacca*. Lac is the only commercial resin of animal origin and is a natural polymer. It is a versatile product used in a wide array of applications, and demand for it in many industries provides economic resources. The most common host trees are Rain tree (*Albizia saman*), Pigeon pea (*Cajanus cajan*).

Picture



1.17. Leaf of *Dipterocarpus tuberculatus*

Brief description

Dipterocarpus tuberculatus is a species of tree in the family Dipterocarpaceae found in Bangladesh, Myanmar, Thailand, Cambodia, Laos and Vietnam. The tree is found in clear forests of plains, at altitudes up to 800 to 1000 m. It grows to height of 5 to 25 m. Large mature leaves of young trees are used for thatching roofs and packaging.

Picture



1.18. Nathani, Red Sandalwood (*Pterocarpus santalinus*)

Brief description

Red Sandalwood are the common names red sanders, red sandalwood, is a species of *Pterocarpus* endemic to the southern Eastern Ghats mountain range of South India. This tree is valued for the rich red colour of its wood. *Pterocarpus santalinus* is used in traditional herbal medicine as an antipyretic, anti-inflammatory, anthelmintic, tonic, hemorrhage, dysentery, etc.

Picture



1.19. Natural Honey

Brief description

Honey is a sweet, viscous food substance made by bees and some related insects. Bees produce honey from the sugary secretions of plants (floral nectar) or from secretions of other insects (such as honeydew). Honey is a sweet, syrupy, golden-coloured liquid made by honeybees. Raw honey comes directly from the hive while regular honey undergoes processing before being bottled.

Picture



1.20. Peik-chin, Long Pepper (Piper cubebe)

Brief description

Piper cubeba, tailed pepper is a plant in genus Piper, cultivated for its fruit and essential oil. It is mostly grown in Java and Sumatra. The fruits are gathered before they are ripe, and carefully dried. Commercial cubeb consists of the dried berries, similar in appearance to black pepper. The use of cubeb was in treating gonorrhoea, menstrual pain, tuberculosis, sleeping problems, respiratory tract infections, chronic gut-related pain and arthritic conditions.

Picture



1.21. Pepper (*Piper longum*)

Brief description

Long pepper (*Piper longum*), sometimes called Indian long pepper or pipli, is a flowering vine in the family Piperaceae, cultivated for its fruit, which is usually dried and used as a spice and seasoning. Pepper is can still be found in South East Asia, Myanmar, Indonesian and Malaysian cooking.

Pictures



1.22. Salu (*Licuala peltata*, Thatching palm)

Brief description

Licuala peltata is an evergreen palm tree that is sometimes solitary-stemmed and sometimes suckers to produce several stems from the base. The tree is harvested from the wild for its leaves, which are used locally for thatching, making umbrellas, etc. It occurs in India, Assam, Bangladesh, Nicobar and Andaman Islands, Myanmar, Thailand, Malaysia.

Picture



1.23. Se-myinkywa (*Hydrocotyle rotundifolia*)

Brief description

Hydrocotyle rotundifolia is a small plant native to south-eastern Asia. It is a dicot and was originated in south-eastern Asia. It is used to treat asthma and use the entire plant to help heal bone fractures. The plant extract has also been used to treat edema, fever, throat pain, psoriasis, and the hepatitis B virus.

Picture



1.24. Tabin-shwe-hti (*Jatropha podagrica*)

Brief description

Jatropha podagrica is a succulent plant in the family Euphorbiaceae. It is native to the tropical Americas but is grown as an ornamental plant in many parts of the world due to its unusual appearance. There are many uses of *J. podagrica* in folk medicine, including as an analgesic, tonic, aphrodisiac, purgative, laxative, and to treat infections, intestinal worms, snakebite, gout, and more.

Pictures



1.25. Taung-htan (*Livistona speciosa*)

Brief description

It is a tall palm that can reach 25 m in length and a diameter of 30 cm. It has large fan-shaped leaves. *Livistona speciosa* is native from Southern China to Vietnam, Thailand, Myanmar, Bangladesh, Peninsular Malaysia and Singapore. The tree is harvested from the wild for its leaves, which are used locally for thatch and are woven into hats etc. It is occasionally cultivated in small plantations for this purpose in some South East Asia countries.

Picture



1.26. Taung-tangyi (*Premna integrifolia*)

Brief description

Premna integrifolia Linn. (Verbenaceae) is a scandent, erect shrub or small tree, thorny on the trunk and large branches. It is large shrub or small tree up to 10 m tall, bole up to 30 cm in diameter, much-branched an important woody, medicinal plant and has been used in traditional medicines.

Picture



1.27. Thanaka (*Limonia acidissima*)

Brief description

Thanaka is a traditional powder derived from the bark of certain trees and naturally occurs in the Central regions of Myanmar. It is a distinctive feature of the culture of Myanmar, seen commonly applied to the face and sometimes the arms of women and girls, and is used to a lesser extent also by men and boys. Thanaka cream has been used by Myanmar women for over centuries.

Picture



1.28. Thin

Brief description

Schumannianthus dichotomus is cultivated in riverine areas of South Asia and Southeast Asia. It is widely grown in wetland areas of Myanmar and Bangladesh, providing the raw material for prayer and bed mats and minimizing flood risk and soil erosion.

Pictures



1.29.Thitsi, Lacquer (*Melanorrhoea usitata*)

Brief description

Thitsi tree belongs to the family Anacardiaceae and is grown in Indaing forest and mixed with in (*Dipterocarpus tuberculatus*). Thitsi is widely used as a water-proofing paint for boats, cloth and paper (umbrella), as glue for gilding, as preservative paint for wood, metal ware and leather. A natural vanish, known as Myanmar lacquer or thitsi is obtained by tapping the thitsi tree.

Picture



1.30.Turmeric root (*Curcuma longa*)

Brief description

Turmeric is a flowering plant, *Curcuma longa* of the ginger family, Zingiberaceae, the roots of which are used in cooking. The plant is a perennial, rhizomatous, herbaceous plant native to the Indian subcontinent and Southeast Asia. Turmeric is one of the key ingredients in many Asian dishes, imparting a mustard-like, earthy aroma and pungent, slightly bitter flavour to foods. Turmeric is used widely as a spice in South Asian and Middle Eastern cooking.

Pictures



1.31. Turpentine (*Pinis insularis* and *Pinus Khasya*)

Brief description

Gum naval stores are obtained by tapping of living pine trees. Turpentine is a clear, flammable liquid, with a pungent odour and bitter taste. Turpentine were used in an unprocessed form in the soap, paper, paint and varnish industries in old days. Currently, most rosin is modified and used in a wide range of products including adhesives, printing inks, rubber compounds and surface coatings. *Pinus kesiya* is a tree reaching up to 30-35 m tall with a straight, cylindrical trunk. The bark is thick and dark brown, with deep longitudinal fissures.

Picture



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