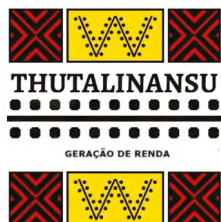


“

We build our calendar, because we are knowledge holders. We want to be recognized by people in our municipality and in the three branches of government. Our calendar must be respected”

Marcos Nambikwara

File



AUTHORSHIP

Thutalinānsu Association of Indigenous Women
of Tirecatinga Indigenous Land

CALENDAR WORKSHOPS' INDIGENOUS PARTICIPANTS:

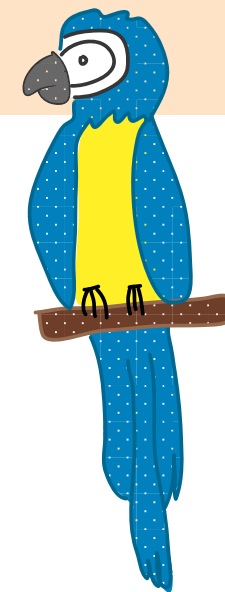
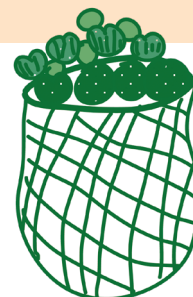
Collaboration: Suyani Terena, Jaderson Pareci, Marcos Nambikwara, Cecília Isabel Nambikwara, Osmar Nambikwara, Eliomar Nambikwara, Melissandra Nambikwara, Creusa Nambikwara, Idilvana Nambikwara, Dainara Nambikwara, Geisiane Kelly, Jamily Cristiana, Agda Nambikwara, Wesley Cristiano Nambikwara, Laiane Gabriele Nambikwara, Ruwam Terena, Geraldo Terena, Ari Nambikwara, Leontina Nambikwara, Saleti Fernanda, Kessia Fernanda, Cleide Terena, Edna Zoloizquemairo, Marcio Ezoquemaece. Kelvin Nambikwara Halotesu, Terezinha Amazokairo, Jennifer Nambikwara, Vania Halokitialisu, Valmir Nambikwara, Talita Nambikwara, Kayume Elaine, Kayula, Jaqueline Nambikwara, Davi Pietro Aikanã Wakalitesu, Ayume Jasmine, Raiza Patricia Nambikwara, Cesar Nambikwara, Vanessa Sawana Nambikwara, Tayuane Nambikwara, Elizabete Nambikwara, João Alantesu, Olivia Laura Wasusu Nambikwara.

Illustrations: Jamily Cristina Pareci, Jayane Cristina Pareci, Jaderson Cristiano Pareci, Geisiane Kelly Sabanes and Olivia Ferraz.

Technical advice and facilitation: Andreia Fanzeres and Liliane Xavier
Indigenous team: Edemar Treuherz, Maitê Tambelini and Ricardo Carvalho

Communication: Suyani Terena and Helena Corezomaé

Layout: Olivia Ferraz **Translation:** Merel van der Mark



SUPPORT



FUNDING



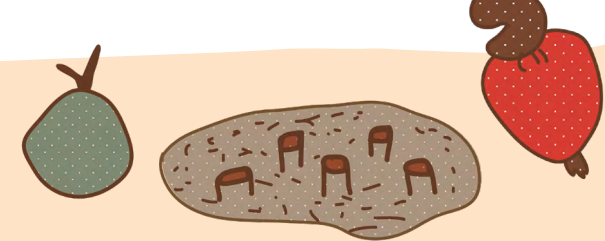
The creation of this calendar mobilized 42 indigenous people from the Terena, Nambikwara, Manoki and Haliti peoples of the Tirecatinga Indigenous Land (Sapezal-MT) as a result of a workshop held in December 2024 and another in February 2025 in the village of Serra Azul.

Sapezal-MT, 2025

ISBN 978-65-86767-17-9



Introduction



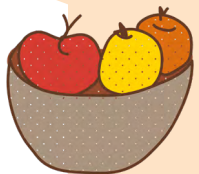
Our presence here is ancestral. We draw our strength from the land. We maintain ourselves as people, we cultivate our culture, we grow our food, we derive our sustenance from it. What we do today is for the existence of tomorrow. We, Indigenous peoples, know that the earth is our mother. Our relationship with her cycles is profound. Our lives are connected to the time of nature. In the past, we Indigenous peoples didn't need to publish anything; there was no need for writing or paper. Our relationship with our ancestors ensured that our knowledge was learned and passed down from generation to generation. The great threats that have been growing around us have brought changes that have affected our lives, and we must pay attention to what is happening and record it. It's a way of not losing ourselves in the face of so many changes. When we understand our ancient calendar and what is happening now, we understand better and can discuss how we will cope. The importance of updating our traditional calendar is to look back in time and understand how it was before and what is changing, what these changes mean for our lives. With the current calendar, we have another tool to fight to improve the lives of the community and defend our rights.

Tirecatinga is a territory of intense resistance and struggle from the diverse peoples who live here. It began with the Mission, when the priests took away our freedom to speak our language, to talk about our lives as they were. So, speaking

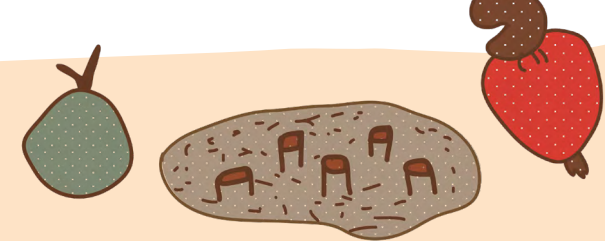
about our ancestry today is about reclaiming and strengthening our identity. We reemerged through our culture and gradually adapted to a new reality. To support us in this work, we invited OPAN, which has always been a great partner of the Thutalinãnsu Association, has contributed to our Management Plan, and is present in strengthening the community to face this moment, together with FUNAI¹, which was also present, participating and contributing to this development."

Cleide Adriana Terena,
president of the Thutalinãnsu Association

¹ Translator's note: FUNAI is the National Indigenous Peoples Foundation



Introduction



Our management plan and the climate

We need documents to communicate with other agencies outside our territory. At the city hall, for example, you need to have a proposal.

Last year, we started a project on our food security. We planted cassava, but it cooked in the soil. The Empaer² technician saw it. In 2015, we completed our Management Plan. That year, we also created an education calendar at our school. January was designated as the time to collect wild cashews. Last year, we followed the calendar. But some things have changed.

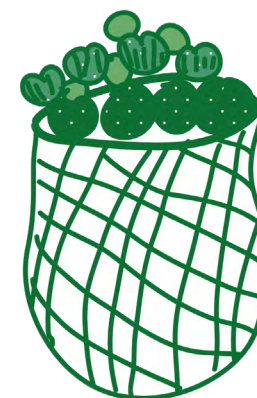
To create this new calendar, I came to speak and to learn. We live by time markers, like the dragonfly. These children don't know. My mother spoke of sounds. She taught me a lot about birdsongs. We agreed to beat the timbó³ in August, but the lake dried up in July. There was no way to follow our traditional calendar. That's when we realized that many things are changing.

² Translator's note: Empaer is the Mato Grosso state agency for Research, Assistance and Rural Extension.

³ Translator's note: timbó is a toxic plant used for fishing

September was the harvest season for bacava, a traditional food. Whether it has changed or not, students need to be in the area to see and learn. Because the birds of the forests are in the fields. And students can watch and learn from the riverbank. This is education with the community. They will gain presence. They will remember this in the future.

Cleide Adriana Terena,
president of the Thutalinãnsu Association



The light ring around the moon is understood by the Nambikwara as a sign that a big fight between peoples is about to happen, and it also happens in the spiritual world.



“

I'm someone who fought and is still fighting. The land is here, demarcated. We have good access to the region. Our reserve is respected by our neighbors. We have no invasions. We're fighting. I would like to hear from the youth, in 10, 20 years, what will their lives be like. We have realized what we had idealized. But today, they are impacting the air, the rivers. What will it be like in 10 years? Who is thinking about that? We have had a good life. And now, what will life be like for the youth?

We created a calendar of what life was like back then. Before, we would set fire in August to plant in September. Today, we make fires in December to plant in January. The weather has changed. Life has changed. The climate is changing. Who changed that? It wasn't us.

I told the farmers: "When you started land grabbing in 1972 (...) You destroyed the environment. And what will happen from now on? Whoever stays here will lack water and food."

Geraldo Terena

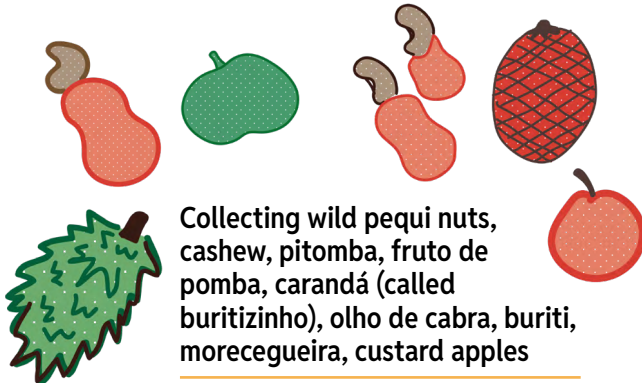
Climate Change CALENDAR

With information from the calendar created at the school in 2015, supplemented by participants in the December 2024 and February 2025 workshops.

TRADITIONAL CALENDAR



Heavy rains



Collecting wild pequi nuts, cashew, pitomba, fruto de pomba, carandá (called buritizinho), olho de cabra, buriti, morecegueira, custard apples



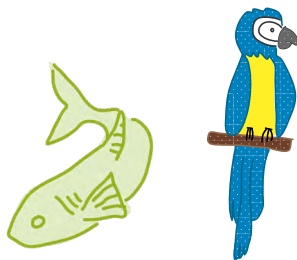
Making crafts (tucum necklace), xiri



Look at the medicine from the bush (sprouting time)



Pacu fruit ripening



Hunting and fishing (pecari, monkey, deer, agouti, birds, parrot, macaw)

Macaw reproduction



Breu fruit used for hunting



Bamboo shoots for sacred flute



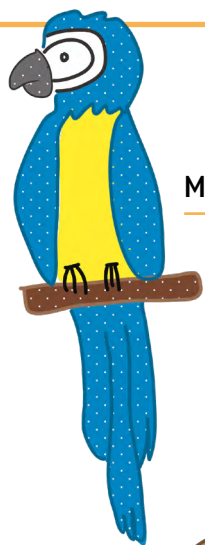
Alligator and fish spawning

CURRENT CALENDAR (2024/2025)

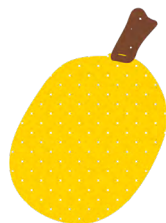
- ▶ The winds are stronger. The rain comes with more lightning, increasing the risk of fires. Now we are working in January to plant. Before, it was in September.
- ▶ Planting soft (fofo) corn.
- ▶ Cashews don't flower or fruit because of the heat. To produce fruit, we have to plant and cultivate it.
- ▶ Spawning is delayed.
- ▶ Fishing is late.
- ▶ The tanajura ant delayed its appearance, and only survives if it manages to get into the ground.
- ▶ Mother tongue classes take place in January.

Climate Change CALENDAR

TRADITIONAL CALENDAR



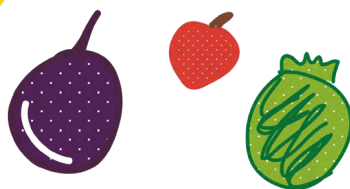
Macaw season



Morecegueira fruit
(tarumarana)

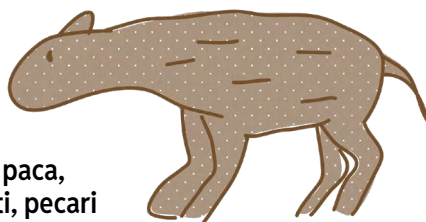


Time of the
paca fruit

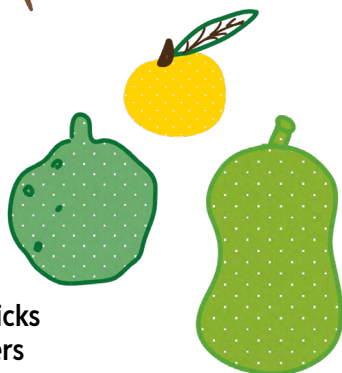


Bujãozinho (torrine),
beetle fruit

Hunting: paca,
fat agouti, pecari

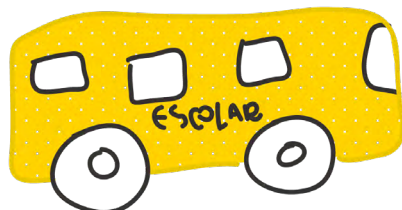


Collecting
of birici,
little guava



Toucan chicks
get feathers

Start of classes



Mutum
cavalo chics



Breu fruit (used for hunting)

CURRENT CALENDAR (2024/2025)

- ▶ There is no more paca fruit and paca pups don't appear either.
- ▶ There are no bujãozinhos, beetle fruits, little guava or birici.
- ▶ We're seeing more anteaters. They have increased in the territory due to deforestation in the surrounding area.
- ▶ There are no more termites in the fields. They come to the territory.
- ▶ Deer and the tocandira ant disappeared.
- ▶ The bees have decreased.

FEBRUARY

Climate Change CALENDAR

TRADITIONAL CALENDAR

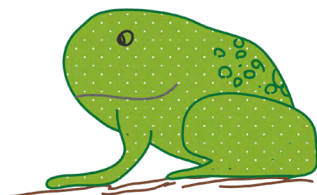
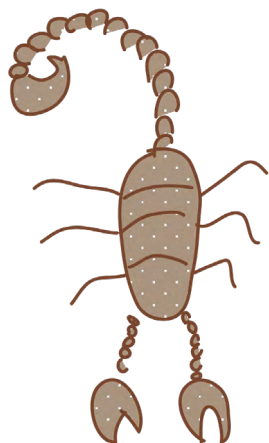
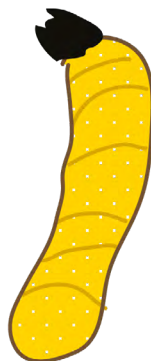
MARCH



Collecting: wild passion fruit, birici, bacava beetle larva, buriti beetle larva



Time of the mosquito, frog, centipedes, snakes, and scorpion – occurrence of bites from dangerous animals



Flowering of bush medicine

Beginning of clearing in a denser forest area



CURRENT CALENDAR (2024/2025)

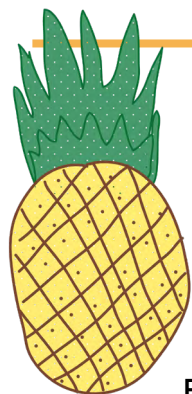
- ▶ The trash beetle larva is gone.
- ▶ Increase in mosquitoes and diseases such as dengue fever.
- ▶ Increase in flies due to the confinement of cattle on surrounding farms.
- ▶ Wild medicines have been delayed or disappeared from the villages' surroundings due to fires and pesticides. Those that do exist are contaminated.



- ▶ For the Terena People:
The Terena boy ceremony is held.

Climate Change CALENDAR

TRADITIONAL CALENDAR



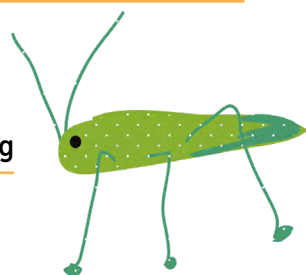
Collecting of pineapple from the Cerrado, jambo fruit

Fishing bait: green tucura (grasshopper) was also used for eating

Nambikwara head football

Teaching about crafts (workshop)

Riverside fishing camp



Preparation of the young-girl ritual



Organizing for offerings

Annatto flowering, a medicine from the bush



Construction of a traditional house, change of the palm leaves



End of the rains and river levels fall

Clearing of the gardens⁴



Paca hunting

Taquara bamboo maturation to collect and to make flutes (men only)

⁴ Translator's note: the word 'garden' is used for 'roçados', which are family farm scale plantation areas.

CURRENT CALENDAR (2024/2025)

- ▶ More tapirs and pecari destroying the pineapple plantation.
- ▶ The green tucura shrank, impacted by the poison.
- ▶ There is no more Nambikwara head football.
- ▶ Production of crafts and collection of craft materials.
- ▶ Exchanges between schools.

APRIL

Climate Change CALENDAR

TRADITIONAL CALENDAR

MAY



Ant-head seed,
japecanga

Soft (fofo) corn
harvest



Beginning of
the dry season



Siputá fruit collection
and marmalade (used as
a garnish, arrowhead, and
remedy against swelling)

Curiango* sings warning
of the beginning of the
dry season

Frog* sings "Piaum"



TRADITIONAL CALENDAR

JUNE



Timbó vine

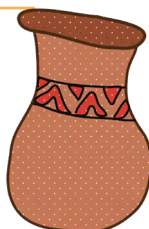
São João's vine flower

N – Tanunira-wawairakixousu

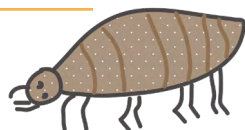
H – Kamaiho Cohaná

T – Ytunevoti

Song of the canary
bird announcing
cold weather



Young-girl's
ritual



Appearance of termites*
gathering sticks to take
to their little house

Harvesting barbatimão (anti-inflammatory
medicine, crafts, necklace)

CURRENT CALENDAR (2024/2025)

- ▶ Urubamba is no longer being found.
- ▶ The singing frog has diminished.
- ▶ The dry season cicada sings.

CURRENT CALENDAR (2024/2025)

- ▶ The cold weather season is shorter.
- ▶ The cold is drier and there is no more frost.
- ▶ Appearance of the red canary and the termite.

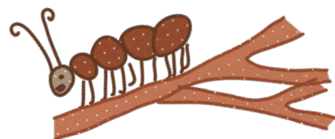
Climate Change CALENDAR

TRADITIONAL CALENDAR



Halalalatasu grass* announces the dry season – dry tassels (when they turn white, for rain)

End of the rainy season, when the river gets drier



The Coró (beetle larva) appears – you can see it by the trail in the sand (the origin of the body paintings of the Nambikwara people)

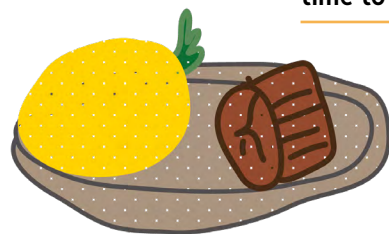
Vacation

Monkey calls* indicate a good time to hunt

Ritual of the final offering of the gardens



Hunting for the jaó (a bird that sings a lot)



Harvesting of crops

Preparing for hunting young animals

Bird reproduction



N - If you imitate its sound, you forget everything

H – Young-girl can not eat jaó

* Time markers

CURRENT CALENDAR (2024/2025)

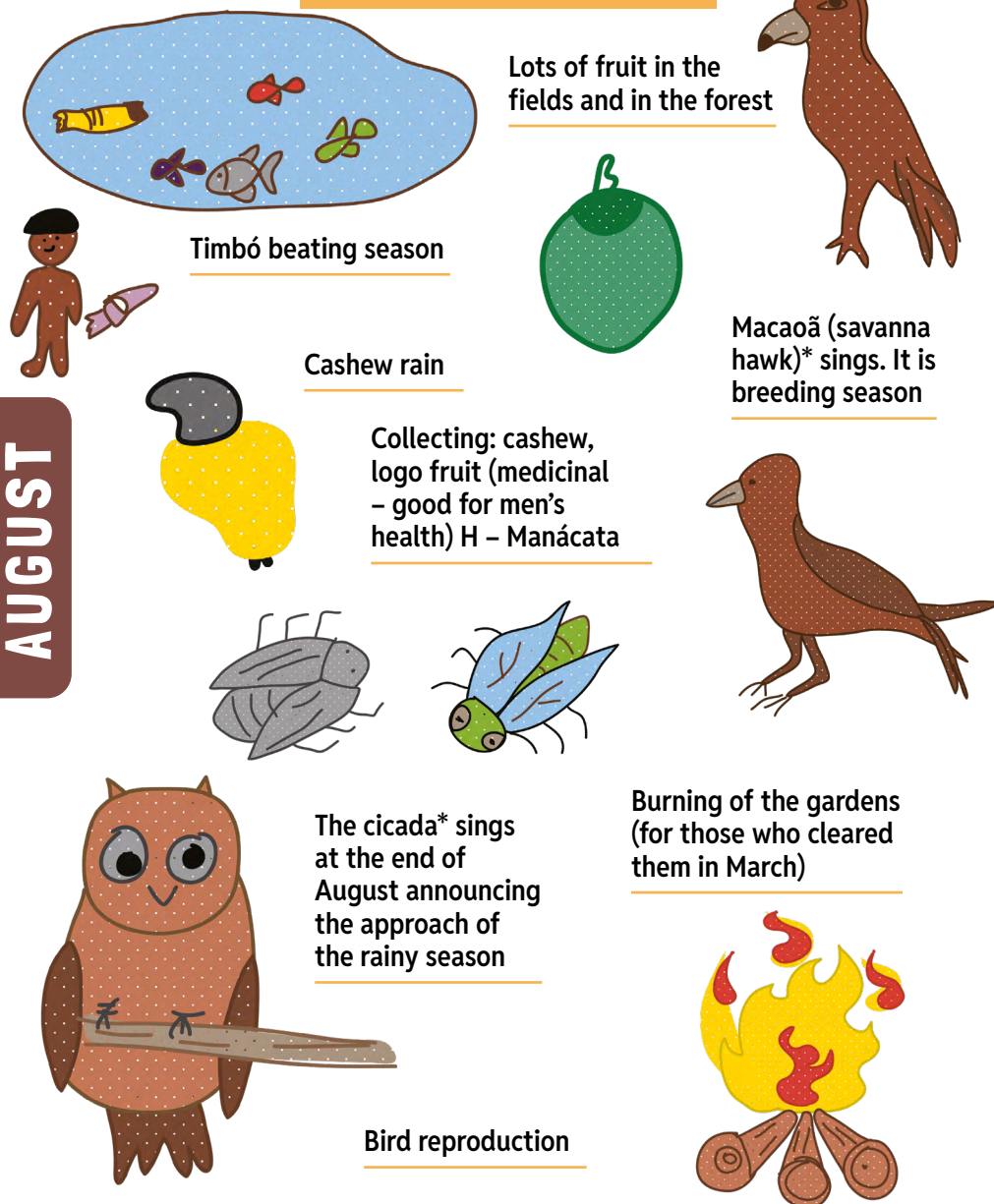
- ▶ The young-girl's ritual is held, which is influenced by the school calendar so as not to interfere with her studies. She is confined for a month during the July vacation.
- ▶ The harvest from the gardens is delayed because we couldn't plant in September last year.
- ▶ Harvesting soft corn planted in January.
- ▶ Collecting barbatimão, which used to take place in June, is now delayed until July.



- ▶ For the Manoki and Terena peoples: Classes are held on their mother tongue and on traditional knowledge.

Climate Change CALENDAR

TRADITIONAL CALENDAR



AUGUST

* Time markers

CURRENT CALENDAR (2024/2025)

- ▶ We couldn't beat timbó because the lagoons dried up in July.
- ▶ There isn't as much fruit in the fields or in the forest anymore.
- ▶ We are missing the dew.
- ▶ There was no cashew rain.
- ▶ We lost this year's harvests because of the fires (e.g. jabuticaba). There was already little in previous years because of the heat.
- ▶ The macaoã sang in August, but the rain didn't come. He sang wrong.



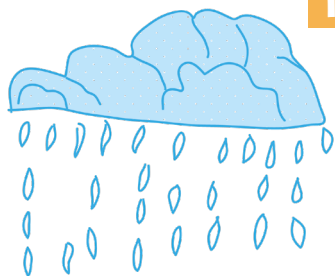
- ▶ For the Nambikwara people:
When the macaoã sings out of season it is sadness, something bad is going to happen.



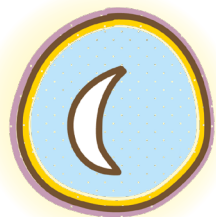
- ▶ For the Haliti people:
If a macaoã sings on a green tree, it's a sign that heavy rain is coming. If it sings on a dry branch, a severe drought is coming.

Climate Change CALENDAR

TRADITIONAL CALENDAR



Beginning of the first rains accompanied by lots of lightning, thunder, strong winds



Rainbow around the moon and the sun (is a warning of conflicts, political problems)



Maned wolf cry (breeding season)



Singing of the Cicada* that gave rise to Nambikwara painting



Potoo song

Coriango (nightjar)* announcing the rains

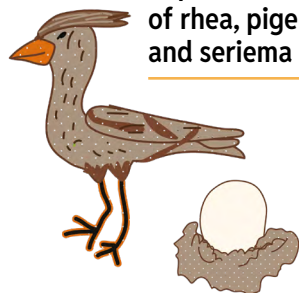
Collecting of jabuticaba and bacava



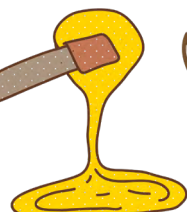
Time to extract honey

Burning of the gardens for those who started clearing in April

Reproduction of rhea, pigeon and seriema



Planting of the gardens



SEPTEMBER

CURRENT CALENDAR (2024/2025)

- ▶ The cassava stems were cooked in the ground. The ground is very hot, drying out the plantation.
- ▶ The rhea no longer appears.
- ▶ The wild cashew was delayed until September.
- ▶ Increase in diseases transmitted by domestic animals in the village.
- ▶ Cleaning the yard to prepare the land for planting food.

Climate Change CALENDAR

OCTOBER

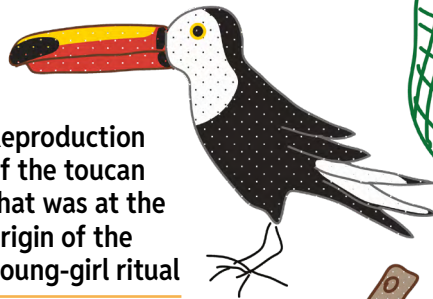
TRADITIONAL CALENDAR

Armadillo and lizard hunting

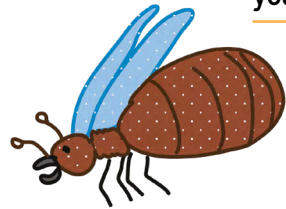
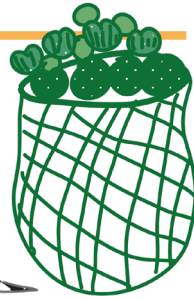


Cerrado marmalade harvest

Reproduction of the toucan that was at the origin of the young-girl ritual



Harvesting pequi and tucum



Many tanajura ants appear

Time of a lot of lightning

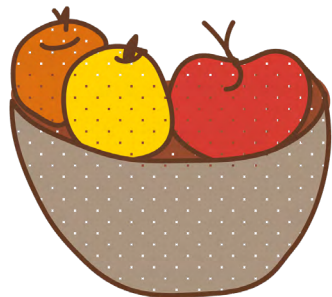


TRADITIONAL CALENDAR

Reproduction of macaws

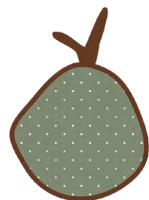


Anaconda season



Pequi fruit collecting time

Fruit falls from the rubber tree



Good fishing weather

CURRENT CALENDAR (2024/2025)

- ▶ Cashew rain fell in October.
- ▶ The harvest of jaboticaba and bacava was delayed until October due to the rains.
- ▶ There are no hunters. It's too hot to hunt.
- ▶ The number of toucans has decreased.

CURRENT CALENDAR (2024/2025)

- ▶ The tanajura flight is beginning in November and December.
- ▶ The pequi and tucum harvest was delayed until November.
- ▶ Time of a lot of lightning.
- ▶ There was a lot of cashew.
- ▶ Beginning of planting food in backyards.

NOVEMBER

Climate Change CALENDAR

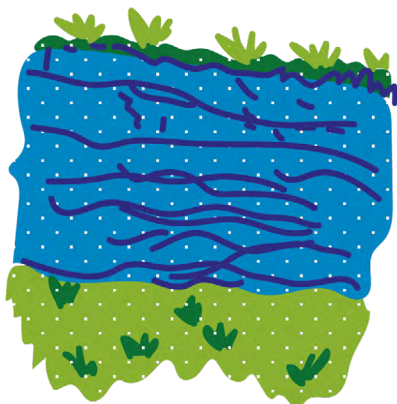
TRADITIONAL CALENDAR

A plant linked to fertility appears (difficult to see) wesakisu “take to make a child”

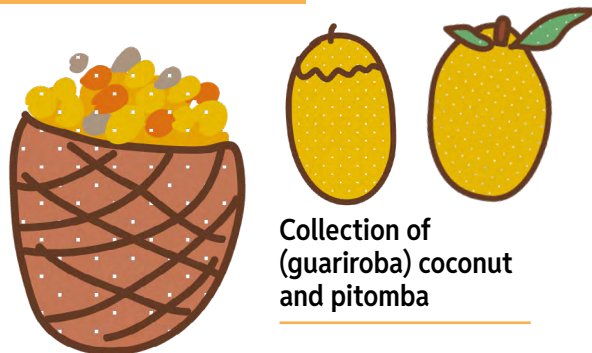
Offering of fruits



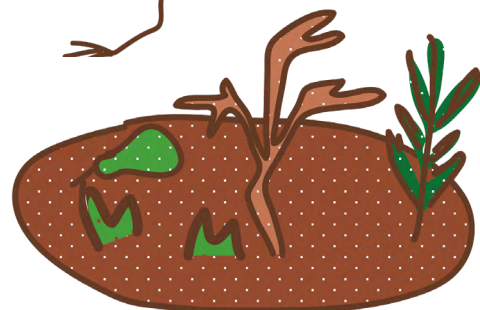
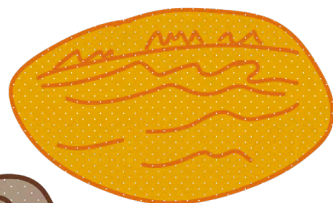
Plants growing (most medicinal)



Full river



Collection of (guariroba) coconut and pitomba



Taking care of the gardens (ants, pigs)

CURRENT CALENDAR (2024/2025)

- ▶ Siputá collecting moved from May to December.
- ▶ Collecting of marmalade from the Cerrado.
- ▶ Toucan reproduces when the bacava is mature (December).
- ▶ The change in the toucan's breeding season affects crafts. Feathers are used to make the young-girl's headdress.
- ▶ The potoo which was supposed to sing in September is still singing (its clock is out of control).
- ▶ Beginning of crop planting in the gardens (which should have started in September).

DECEMBER



“

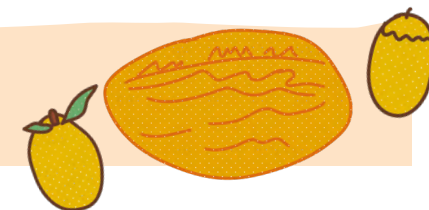
I came to participate to give my opinion on what's happening. We've seen good things happen. We are now seeing things that turn us upside down. The weather. It's a worrying thing for us. To complete the work, we'll take note of what happens..”

Edna Zoloizoquemairo





Proposals for adaptation



PERCEPTIONS ABOUT CLIMATE CHANGE AND ITS IMPACTS



► During the rainy season, storms with strong winds and lightning have occurred, destroying houses, sheds, schools and health centers, hitting people, causing injuries and deaths.

► The decreasing dew and the increasingly dry winds increase the heat.

► The wild cashew and pequi trees flower, but do not bear fruit.

► The pequi, when holding fruit, is attacked by the macaw population that has increased in the territory.

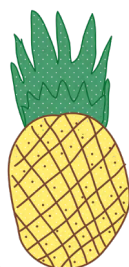


► The intense heat makes it difficult to collect wild medicines far from villages and near the plantations. Natural remedies and nearby water are contaminated by pesticides.

► We no longer have the bamboo we used to make the sacred flute.

► The increase in the pecari population harms the production in the gardens and attacks on domestic animals are frequent.

► The decline in the rhea, the trash larva (coró de lixeira), deer, and species such as wild pineapple, are detrimental to traditional diets and prevent young people from learning about and practicing their culture. Wild pineapple is also used in traditional medicine.



POSSIBLE SOLUTIONS AND ADAPTATIONS

► Build reinforced structures, with deep foundations and reinforced roofs.

► Build safe refuges in the territory to house families in an emergency.

► Plant trees in the backyards: wild cashew, paca fruit, pequi, and others to provide shade, to cool the area, and add more humidity to the air.

► Plant wild cashews in backyards.

► Plant pequi in backyards.

► Carry out hunting expeditions.

► Purchase vehicles and fuel to collect natural remedies and palm leaves.

► Drill artesian wells in the villages of the territory.

► Analyze water from the territory, rivers, wells and groundwater.

► Purchase filters to filter water contaminated by pesticides.

► Conduct analyses on natural remedies found in the heart of the territory to check if they are contaminated.



► Map pesticide-free areas in the territory.

► Collect bamboo in Comodoro – state of Mato Grosso.

► Surround the gardens with resistant canvas.

► Carry out hunting expeditions.

► Conduct dialogue with the Rural Union and large scale farmers in the surrounding area to establish a hunting agreement.

► Fence off areas for rhea breeding.

► Take care of the areas where there are wild pineapples.

► Conduct workshops and training on traditional medicine with young people.

► Provide training, purchase equipment and encourage the production of honey from bees with and without stings in the territory.





Proposals for adaptation

PERCEPTIONS ABOUT CLIMATE CHANGE AND ITS IMPACTS



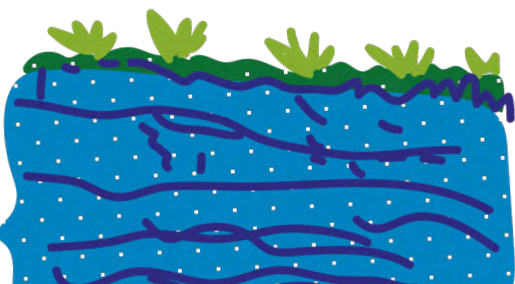
► The disappearance of bees has harmed fruit production.

► The increase in mosquito and fly populations is believed to be due to the surrounding livestock confinement systems. The number of fleas, ticks, and related diseases has also increased.



► The decline in the toucan population affected the production of the young-girl's headdress for the ritual.

► The river no longer fills as it used to and the fish population has decreased (it is believed that the baiting of fish in the surrounding area has also harmed the fish stock).



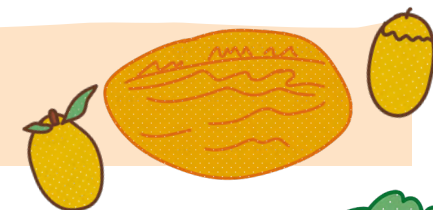
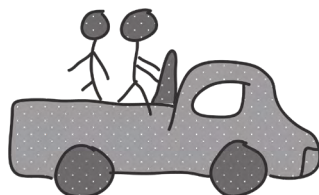
► The occurrence of fires in the territory harms the species of plants and animals used for subsistence and construction of homes, such as the palm leaves used in roofs.

► Strong sun, heat and intense winds cause fire and smoke to spread very quickly, harming health and causing disease.

► The cold season is waning. When the cold weather arrives, it's dry, bringing respiratory illnesses, earache, and more.

► The delay in the flowering of barbatimão, used for making crafts and as natural medicine.

► The disappearance of locusts used for bait and traditional food.



POSSIBLE SOLUTIONS AND ADAPTATIONS



► Coordinate with the municipality about the presence of a team, and the organization of epidemiological surveillance actions to control pests and diseases and carry out vaccination of domestic animals in the territory.

► Use macaw feathers to make headdresses.

► Install fish farming tanks in the territory.



► Study the feasibility and promote the repopulation of surrounding rivers with native species.

► Plant fruit-bearing species around rivers to encourage an increase in the fish population in the surrounding rivers.



► Conduct dialogues with the Rural Union and large scale farmers in the surrounding area to establish a fishing agreement.

► Purchase a vehicle to collect palm leaves in remote locations.

► Change the type of palm leaves used on the roofs from guariroba to buriti.

► Plant buriti seedlings in backyards and around rivers.



► Create the Indigenous Brigade. Train, equip, and remunerate brigade members to work in the territory during the dry and rainy seasons, providing educational activities to prevent and prepare the community.

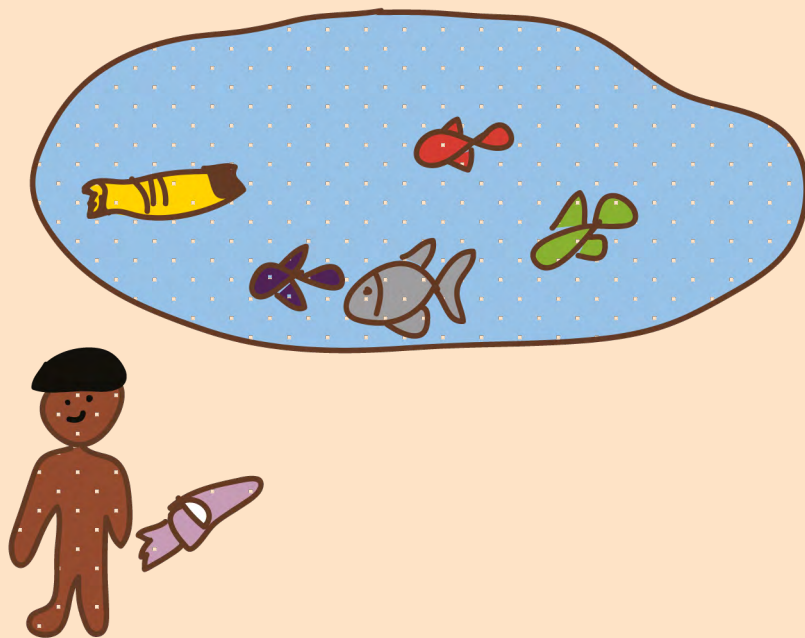
► Carry out fire management.

► Anticipate the burning of the gardens with the support of firefighters and Prevfogo⁵.

► Replant areas affected by fires with fruit and native species.

► We created new villages during the pandemic because there was no medicine nearby. We sought medicine from the forest. We divided ourselves to heal ourselves.





“

Creating the calendar is a form of security for us. We will leave a legacy for those who come after us. I thought it was very important.”

Pedro Nambikwara



Thutalinânsu
Associação de
Indigenous Women
of Tirecatinga
Indigenous Land