KAYAPO TERRITORIAL SURVEILLANCE 2024



Report on Kayapo Territorial Monitoring and Control

January – December 2024

by Barbara Zimmerman

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EXECUTIVE SUMMARY

We are pleased to report that over **nine million hectares (23 million acres)** of Kayapo forest territory remained **largely intact** during 2024. The Kayapo and their allies achieve these results thanks to ongoing **philanthropic support.**

The report outlines the success and challenges of the Kayapo territorial surveillance program in 2024. The program, part of a broader initiative aimed at empowering the Kayapo people for the protection of their land and rights, focuses on monitoring and safeguarding their territory from immediate threats of illegal logging, gold-mining, and fishing. kayapo.org

The report highlights the extensive coverage of the surveillance program, effectively securing 80-90% of the 2,200 km Kayapo border with the frontier. However, about 250 km of the most remote border region of Kayapo territory in the northwest remains undefended and vulnerable with the advance of roads, land-grabbers, and ranching. This gap results from lack of resources for the Kayapo to monitor and occupy it.

Surveillance relies heavily on guard posts strategically located at vulnerable entry points. Guard posts are a physical deterrent as well as signalling to illegal actors the Kayapo's organized defense of their land rights. The report details the infrastructure and administration of guard posts, emphasizing logistics, communication, and guard team rotation.

Expeditions and border patrols supplement the guard post efforts, marking Kayapo presence and deterring invasion. While the report acknowledges ongoing challenges, such as one unresolved and one new invasion in the northwest, extensive fire during a very dry year, and lack of government enforcement, it also highlights successful interventions, such as deactivation of a gold-mining site, destruction of bridges used by loggers, blocking illegal fishing, and in general, holding the line along some two thousand kms of highly threatened border.

In 2024, federal political support for indigenous people continued such that the Kayapo NGOs were able to function without interference, although government enforcement of indigenous territorial

protected status remained seriously inadequate.

Looking ahead, the report identifies areas for improvement, including the need for additional guard posts in vulnerable areas and the importance of educational programs to empower Kayapo youth and reinforce cultural heritage. Despite challenges, the activities and results reported here demonstrate that the territorial surveillance program has been instrumental in protecting Kayapo territory from extensive exploitation and emphasizes the critical role of continued support for their conservation efforts.

2024 Territorial Surveillance Activities and Results Summary

- **16 guard border posts** operated from five to seven months during 2024
- **5 Overflights** were used to verify, document, and monitor invasions. Overflight photos supplement satellite imagery in official denunciations of illegal activity drafted and submitted to the Attorney General: the first step to obtain federal enforcement
- **GIS analysis Sentinel-2, Planet and Skysat satellite imagery** is used to help detect, monitor, and map invasions by loggers and goldminers and encroachment by ranchers
- **Expeditions**: Post guards perform regular expeditions along sections of border in their area. In addition, there are longer surveillance expeditions of several days where post patrols cannot reach
- **7 Official denunciations**: denunciations of illegal activity are prerequisite for the Attorney General to order helicopter supported enforcement operations by federal authorities. This official documentation relies on satellite imagery, maps, overflight photographs and other information that is provided and drafted by the Kayapo NGOs. Seven formal denunciations of illegal activity were submitted by Kayapo NGOs to the Federal Prosecutor (MPF).
- **1 Successful Government enforcement operation**: there was one operation by the Federal Police that successfully shut down the P14 goldmining site in territory of this project
- **New in 2024: the Survey123 App**: an app was developed for collecting real time data on post activities and patrols to enhance and refine recording and organization of surveillance results
- **New in 2024: Guard Posts as Hubs for Education:** Using a video-based curriculum, the education program was designed to empower youth with knowledge to effectively meet challenges they face in the outside world especially as regards territorial protection and the vital importance of indigenous territorial sovereignty.



2024 SURVEILLANCE PROGRAM HIGHLIGHTS

The results of Kayapo territorial surveillance are remarkable given the area size, intensity of pervasive threat, and lack of government enforcement. Without this investment in surveillance, the entire vast block of Kayapo forest with all its magnificent and irreplaceable biodiversity would be gone today. However, the vast size of Kayapo territory needing protection means that by conservation NGO standards the surveillance program is expensive. **Each guard post costs an average of US$ 12,000/month to operate. Yet given the size of area protected, the conservation return on investment is unparalleled.**

Of trouble spots in Kayapo NGO-allied territory, three continued resolved from previous actions, two were resolved in 2024, and two remain outstanding:

- ***Resolved in 2024:*** logging access at Kranbari on the north-western border of Menkragnoti TI
- ***Resolved in 2024:*** goldmining at the P14 site on near the northeastern border in TI Kayapo
- ***Resolved (in 2023):*** logging access at Koro-roti on the western border
- ***Resolved (in 2023):*** goldmining at Pista Nova and Novo Horizonte locations in the interior of Bau territory
- ***Resolved (in 2023):*** goldmining at Cheiro just inside the northern border near the Iriri river
- ***Unresolved (active):*** goldmining at Pista Velha in TI Kayapo near the northeastern border
- ***Unresolved (active):*** a new goldmining site started in the interior of Bau TI

INTRODUCTION

Here we report on surveillance program activities and results in 2024. Territorial surveillance provides the shield behind which other Kayapo Project programs of conservation and development can function. **All programs work in concert to empower the Kayapo for protection of their land and constitutional rights.**

Other NGO programs vital to Kayapo territorial protection are:

i) sustainable enterprise development (Brazil nut, cumaru nut, ecotourism, handicrafts),
ii) institutional capacity building for administration and management with the three local Kayapo NGOs,
iii) territorial management planning,
i**v) political mobilization and protest** to uphold indigenous rights, and
v) translation of the socio-politico- economic context of the outside world to ensure the Kayapo have the information they need to deal effectively in outside society. (More can be found about the broader Kayapo Project at kayapo.org)

In 2024 the Brazilian political context continued to be supportive of indigenous rights, although in practice government authorities lack resources to adequately enforce protected areas and indigenous territories in Amazonia. Territorial protection, therefore, is largely left up to indigenous people and their partners on their own. Hence the surveillance program described here.



photo: Takakrua Kayapo

2024 KAYAPO TERRITORIAL PROTECTION ACTIVITIES AND RESULTS

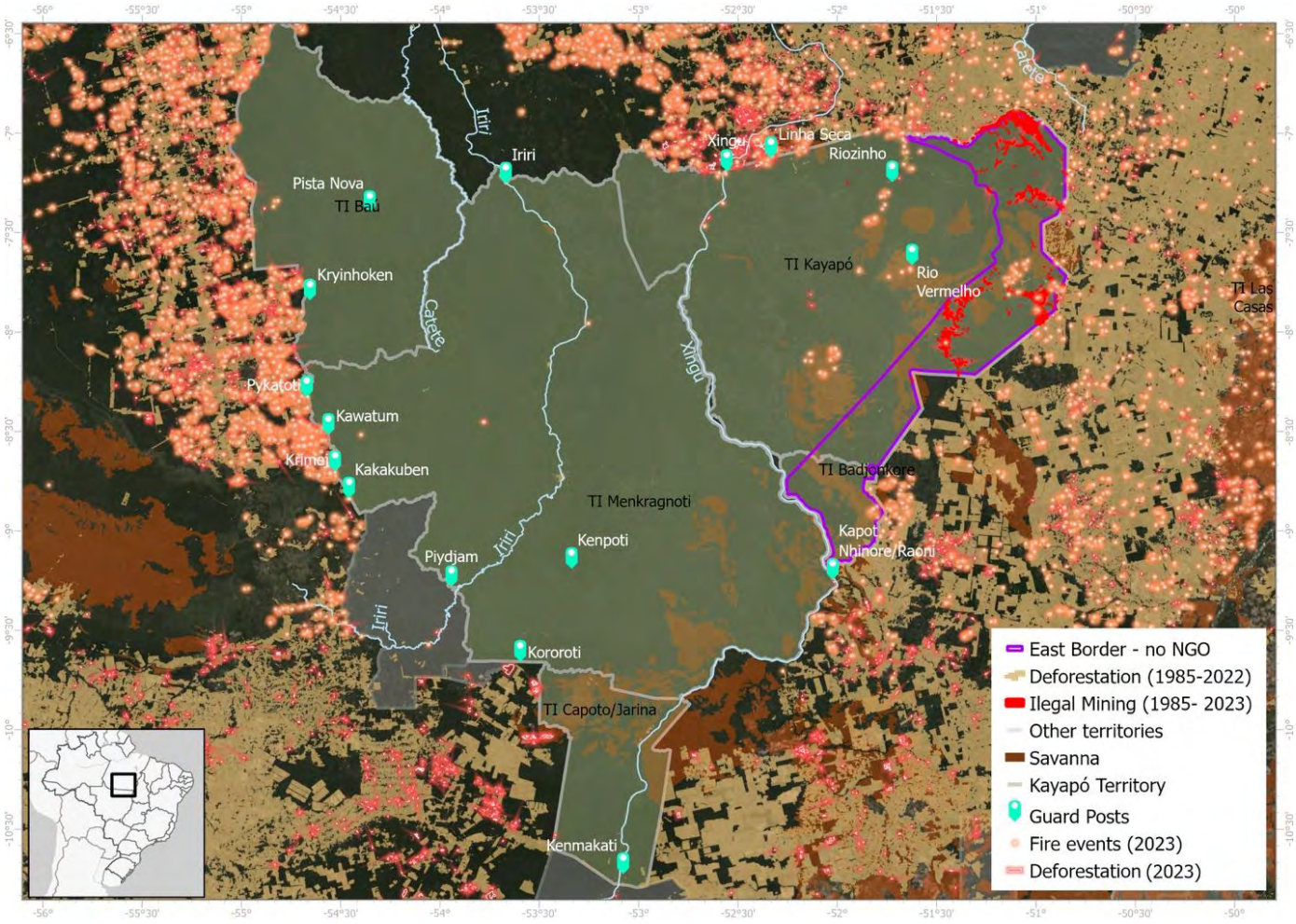
The overall result of Kayapo territorial surveillance in 2023 and in 2024 is presented in Maps **1**, **2**: over nine million hectares (22 million acres) of Kayapo territory and some 2,000 km of border remained largely intact; although due to very dry conditions in the second half of the year, fire was abnormally extensive in 2024 (compare **Map 1** of Kayapo territory in 2023 to **Map 2** in 2024).

Map 3 further highlights the striking impact of philanthropic investment on the protection of Kayapo Territory.

Map 4 demonstrates the rapid march of de-forestation around Kayapo territory between 1997 and 2023.

Map 1.

VIEW FULL-SIZE MAP



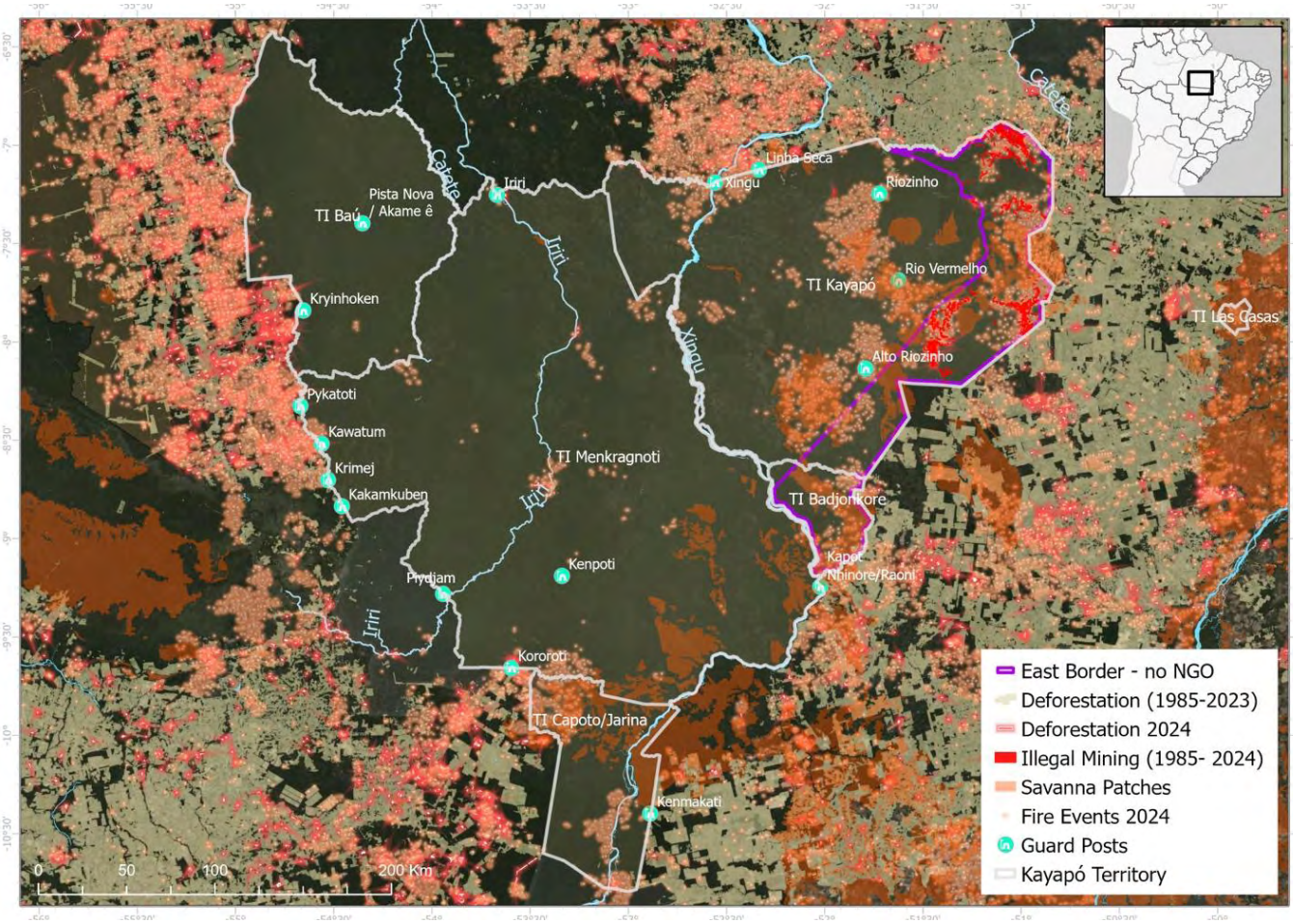
Map 1: *The state of the 10.6 million hectare block of ratified Kayapo Indigenous territory as of December 2023. Kayapo indigenous territories (TI) are outlined in gray with an eastern band of ~ 1.2 million hectares outlined in purple that does not form part of this project so receives no conservation NGO investment and has, therefore, been lost to illegal logging and goldmining. Approximately 9.4 million hectares of Kayapo territory to the west of the interior purple border is protected with conservation and development investment and remains intact. (Fire on the naturally occurring cerrado-savannas are natural)*



photo: Pedro Peloso

Map 2.

VIEW FULL-SIZE MAP



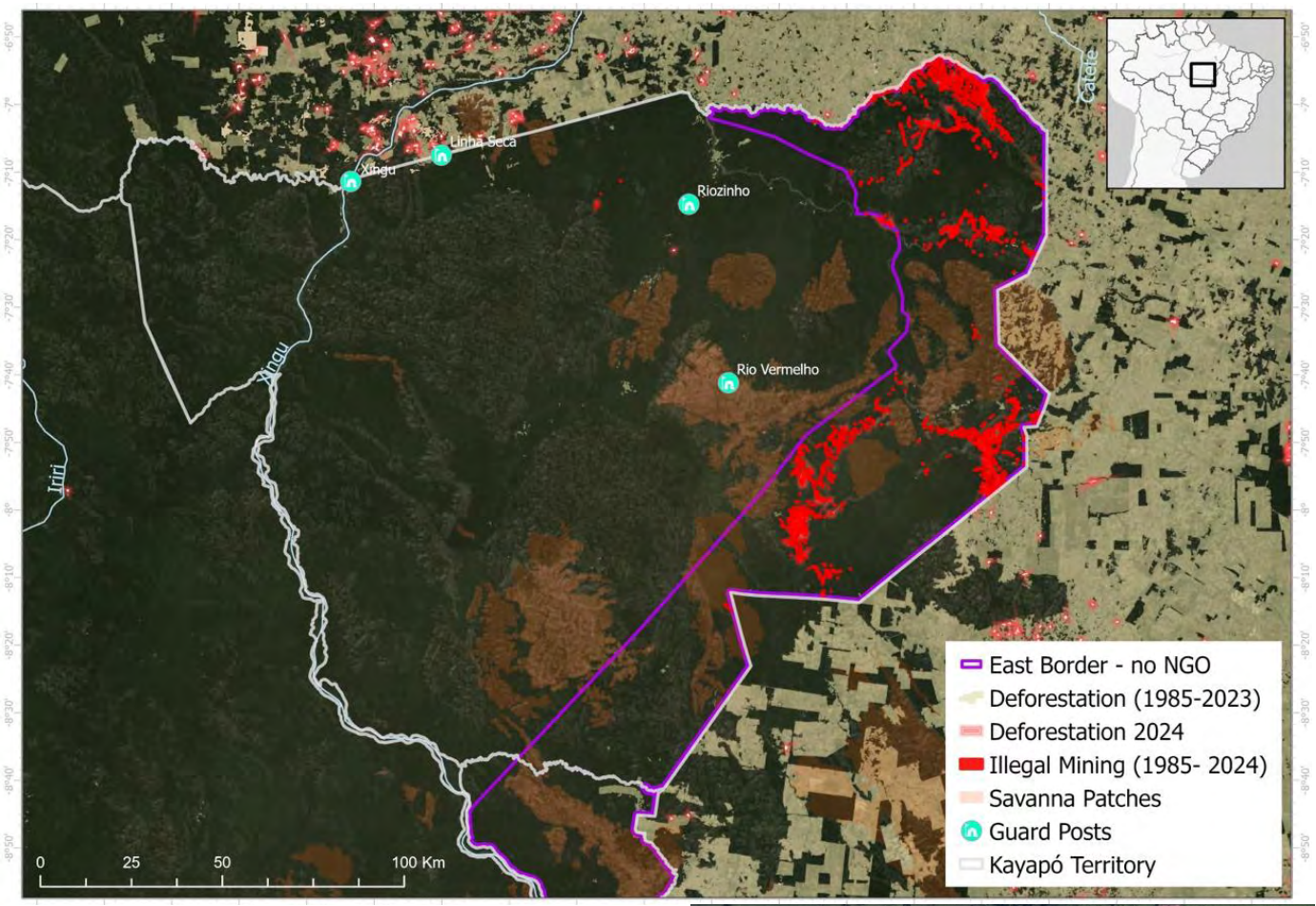
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Team following a trail in the forest affected by fire, Tepdjàti village, Kayapó Indigenous Territory, Pará, Brazil.

Map 3.

VIEW FULL-SIZE MAP



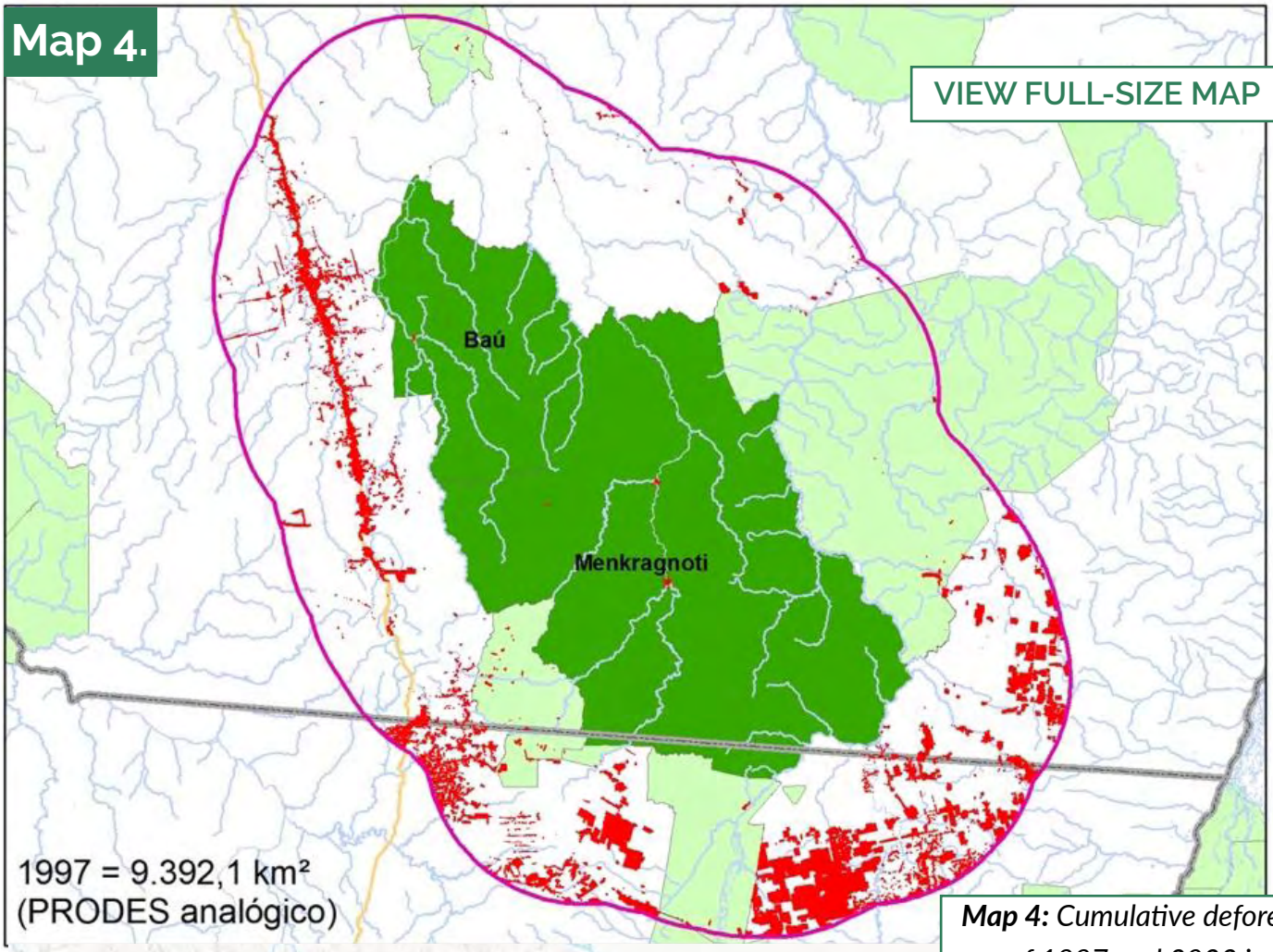
The northeastern sector of Kayapo territory (TI Kayapo) showing the eastern band of territory (delineated in purple) where the Kayapo did not ally with the conservation NGOs and therefore has been heavily invaded by gold-mining (red) and logging. Guard post locations are shown (green dots). The brown in Kayapo territory are patches of savanna (cerrado) on Brazilian shield rock. The tan colour outside Kayapo territory is deforestation for ranching.

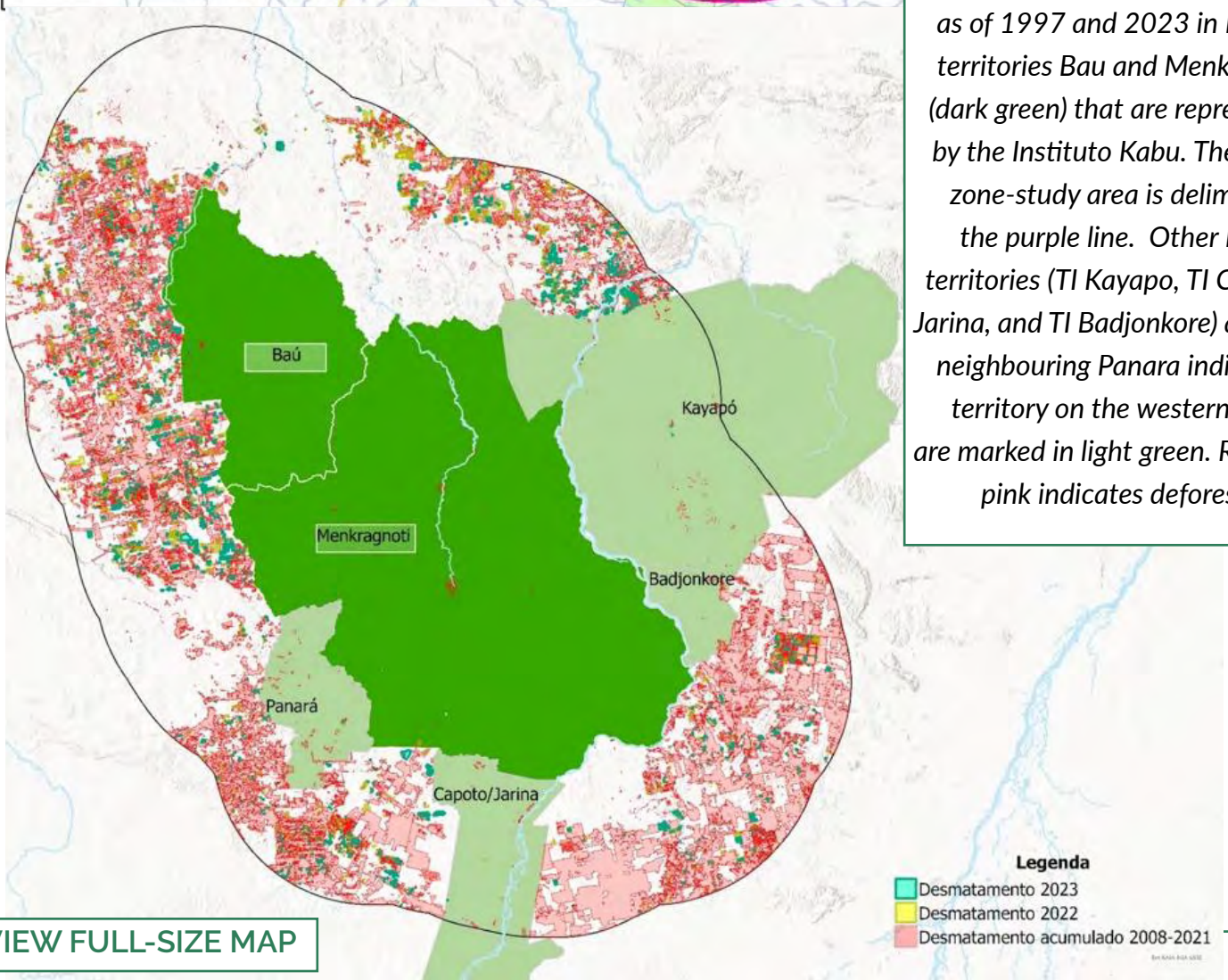


Deforestation caused by goldmining in TI Kayapo

Map 4.

VIEW FULL-SIZE MAP





Map 4: *Cumulative deforestation as of 1997 and 2023 in Kayapo territories Bau and Menkragnoti (dark green) that are represented by the Instituto Kabu. The buffer zone-study area is delimited by the purple line. Other Kayapo territories (TI Kayapo, TI Capoto/ Jarina, and TI Badjonkore) and the neighbouring Panara indigenous territory on the western border are marked in light green. Red and pink indicates deforestation.*

VIEW FULL-SIZE MAP

Cattle grazing inside TI Kayapo



GUARD POSTS

The guard post program supports the Kayapo NGOs to organize and administer monitoring and protection along **most of the 2,200 km (1,375 miles) border** demarcating over **nine million hectares (22 million acres) of their territory.**

Guard posts are located strategically at vulnerable entry points into Kayapo territory. Guard posts signal to outside society that the Kayapo of an area are organized to defend their land rights. The very presence of organized Kayapo along the border has proven effective to deter invasion.

Under the guard post program, inherent Kayapo drive to protect their territory, culture, and livelihood combines with equitably accessed income to produce a strong social antidote to the bribing of individuals by goldminers, loggers, and fishermen.

Guard post teams are comprised of five or six Kayapo drawn from a single community. Teams from different communities rotate every week at most posts. In a few cases guard teams rotate every two weeks or monthly because of daunting transportation logistics. (**Table 1**).



photo: John Meisner

Table 1. 2024 Kayapo Guard Posts

Kayapo NGO responsible, Guard Post Name, (Kayapo Indigenous Territory)	2024 Period of Operation	Coordinates	Participating communities	No. Kayapo guards per team	No. guard teams rotated
Associação Floresta Protegida					
Xingu (TI Kayapo)	4 June – 5 Dec	S 7°10'42.90" W 52°33'24.15"	Kokrajmoro, Madjyre, Pokró, Krinhoe-re, Kamoktidjam, Rikaró, Kruwanhongô, Kawatire, Tepdkati, Tepkatinhôngore, Pykararãnkre, Kamoktjdjam, Kokokrere, Kamure, Kruwakro, Kakore	6	25
Iriri (TI Menkragnoti)	12 June – 5 Dec	S 7°08'51.2" W 53°44'44.0"	Kendjam, Karemá	5	13*
Riozinho (TI Kayapo)	30 June – 28 Nov	S 7°14'46.16" W 51°43'23.44"	Nhgrowarã, Krãnat, Mojkarakô, Mejkare, Pinkejtykre, Ngojamroti, Pytore, Piyredjam, Ydjyre, Ngomejti, Pykatykre, Pykakyti, Kakumre e Kempoti	6	25
Linha Seca (TI Kayapo)	6 June – 5 Dec	S 7° 7'8.90" W 52°18'52.80"	Akrotidjam, Kremajti, Tepdjati	5	26
Rio Vermelho (TI Kayapo)	16 June – 28 Nov	S 7°42'47.4" W 51°38'15.1"	A'Ukre, Ngotajte	5	26
Instituto Kabu					
Pykatoti (TI Menkragnoti)	20 May – 01 Dec	-8° 19' 32,508" -54° 40' 13,704"	Pykatoti, Pyngraitire, Pykany, Jabui, Pytareko	6	28
Kawatum (TI Menkragnoti)	03 June – 30 Nov	-08° 34' 19.2" -054° 32' 35.8"	Kawatum, Mopkrore	6	27
Krimej (TI Menkragnoti)	14 June – 30 Nov	-08° 42' 05.1" -054° 31' 44.1"	Krimej	5	29
Kenpoti (TI Menkragnoti)	30 June – 02 Dec	-09° 11' 22.8" -053° 20' 14.8"	Kubenkokre	6	12*
Krijnhoken (TI Bau)	14 July – 05 Nov	-7° 50' 35,370" -54° 39' 18,452"	Bau, Kamure	5	20
Pista Nova/Angme-e (TI Bau)	21 Jan – 31 Dec	-07° 23' 45.1" -054° 21' 15.02"	Bau	6	6**
Piydjam/Imoti (TI Menkragnoti)	30 June – 02 Dec	-9°7'42,45 -53°41'5,02"	Kubenkokre, Kresan, Sonkwe	2	12**
Kakakubem (TI Menkragnoti)	14 Aug – 29 Nov	8°50`10.386"S, 54°27`31.514"W	Kakakubem	3	9
Instituto Raoni					
Raoni (TI Menkragnoti)	02 May – 30 Nov	9°11'38.03"S 52° 1'44.43"W	Piaraçu, Capotnhinore, Maida, Metuktire	6	6**
Kenmakatyk (TI Capoto/Jarina)	30 May – 1 Nov	10°23'41.98"S, 52°53'37.66"W	Piaraçu, Kretire, Mupa, Totnhore, Bytire, Kaweretxiko, Metuktire, Kromare, Jatobá, More	6	13*
Kororoti-Pijaremej (TI Menkragnoti)	16 May – 26 Nov	9°39'21.67"S, 53°35'46.36"W	Kororoti, Pidjaremey Omejkrankum, Kadjanhoro, Poreby, Kubara, Kadjenhoro	6	28

** Guard team rotation at Iriri, Kenpoti, Kenmakatyk, and Piydjam/Imoti posts is every two weeks due to distance and difficulty to reach these posts*

*** Teams at the Angme-e (Pista Nova) and Raoni guard posts rotate only once per month due to distance and difficult access. Also, at the Raoni post, teams must travel through a dangerous lawless area to reach the post, so leadership decided to minimize risk to personnel by rotating guard teams only once per month.*

Infrastructure and Administration

Guard posts are built with huts for sleeping, cooking, storage, and a bathroom. Each post is equipped with a freezer, water pump, generator, water tower, parabolic antenna and television, and some solar power. Transportation to and from the guard posts relies on boats along rivers and/or 4x4 trucks at posts with road access. All posts are outfitted with starlink internet to greatly facilitate logistics, delivery of a video education program, and safety.



Post operation counts on two non-Kayapo administrators responsible for controlling supplies of food and fuel and coordinating logistics with their regional Kayapo NGO. Following traditional Kayapo values of egalitarianism, Kayapo guard teams rotate weekly to maximize work opportunity and, therefore, benefits sharing. This system necessitates permanent post administrators to coordinate day-to-day logistics, supplies, equipment maintenance, and team rotation.

Period of Post Operation

The period of post operation is defined by available funding. On average, each post costs US$ 12,000/month to operate with expenses of Kayapo guard salaries, post administrator salaries, fuel, food, and equipment. The Kayapo NGO's must also obtain federal authorization for the team of non-Kayapo administrators to enter indigenous territory which can take time given government bureaucracy.

Posts must operate a minimum of six months to affect a decent measure of territorial control -although eight to ten months would improve security. Given the limit imposed by available funding, post operation is prioritized to span the June to November dry season when forest roads are passable and invasion threat highest.

The Pista Nova/Angme-e guard post operated over the entire year to prevent re-entry by goldminers after they were expelled from a site near this post in Bau territory in 2021 and 2022. The goldminers will return without the constant presence of this post and its guards.



Xingu guard post team from Kruwanhongo village

Guard Post Duties

Guard post teams of five or six Kayapo plus two non-indigenous administrators are responsible for

- maintaining the camp, collecting firewood for cooking, fishing for food, and building and maintaining structures
- checking authorization of any person entering the (Kayapo) indigenous territory. Non-Kayapo persons must have official authorization from the federal Indian Agency (FUNAI) to be allowed entry
- patrolling sections of border in their area
- opening and closing the posts







Logistics

Several guard posts are exceptionally challenging to supply and rotate guard teams:

- the Iriri post requires transport of supplies over 600 km of bad dirt road (impassable during the rainy season) followed by a 10-hour boat ride. Teams from the village of Kendjam must travel 50km by river to reach the post.
- the Raoni post requires transport over 500 km of bad road followed by a three-hour boat trip plus travel through a dangerous lawless frontier area
- the Rio Vermelho post requires a three-day boat trip to transport the bulk supplies for six months. Guard rotation at the Rio Vermelho post requires a two-day 40 km hike through forest and across a savanna-cerrado.
- the Pista Nova/Angme-e post requires one day's boat ride followed by a 35 km hike through forest.
- the Kenpoti post requires a 280 km trip over a very bad road followed by a boat trip of two days up a rapid filled river.
- Supplying the Piydjam post requires a trip of 350 km by road from Novo Progresso -of which about 200km is dirt track through forest to the large interior village of Kubenkokre- followed by a 138 km three-to-four-day boat trip upriver to reach the post. Guard teams rotate via river from Kubenkokre village.

The poor condition of the unmaintained roads in the region results in high vehicle maintenance costs. Boat motors are another source of never-ending maintenance costs especially when rocks begin reappearing in the dry season.



Bringing supplies to Iriri guard post



Heading up the Iriri river to the Pi-ydjam guard post

Notes on Guard Post Operation in 2024

- **The Angme-e guard post** located in central Bau territory lacks water during the dry season. Effort and expense were expended to dig an 18m deep well to reliably supply water at this post

- **The Kenpoti guard post** lost a boat, motor, batteries and solar panels when a boat overturned in a rapid. This equipment had to be repurchased

- **The Piydjam guard post** was re-located at the end of the year and renamed “Imoti”. This post served the large central Kayapo community of Kubenkokre plus two communities of the neighbouring Panara indigenous people who inhabit a 500,000-hectare indigenous territory that is contiguous with the Kayapo territory of Mekragnoti in the west. Unfortunately, the two groups were unable to agree on guard rotation, i.e., how many weeks each worked at the post, which led to the post having to be relocated to out of Panara territory. Now guard teams are drawn exclusively from Kubenkokre which is the largest Kayapo community with a population of over 500 people.

- **Kakakuben**, a community on the western border, revolted two years ago against a corrupt chief involved in logging and ended loggers access to the vast Kayapo territory of Mekragnoti. **The Kakakuben guard post** was then constructed to permanently block loggers. This community split in 2024 such that half the inhabitants moved to a new village (Kubara) served by the **Kororoti guard post**. The split left only 55 people living in Kakakuben village. The high cost of guard post operation does not justify serving only one small community. Therefore, guard rotation at this post was reduced to only three Kayapo guards instead of the usually 5-6. The reduction in guardians was done in fairness to other communities.

- The low level of the **Iriri river** posed even greater transportation challenges than normal. The remoteness of this post means that all materials for post operation must be transported at the beginning of the season normally using a barge for the final leg up the Iriri river. However, this year fuel and supplies had to be transported some 25 kms up the rocky Iriri river by Kayapo in their canoes. In addition, FUNAI (the government Indian agency) partnered with this project to build a house for the Iriri post.

EXPEDITIONS, BORDER PATROL, AND STATE OF KAYAPO INDIGENOUS TERRITORIES



The purpose of expeditions and patrols is to mark Kayapo presence and deter invasion by fishermen, goldminers, and loggers. Expeditions are by foot, vehicle, boat, or some combination. There are two types of expeditions:

i) weekly or bi-weekly patrols by post teams along stretches of river, and
ii) expeditions of several days that survey areas not reached by guard posts.



Team carrying out cleaning at the border of the Kayapó Indigenous Territory.

Table 2. List of guard post-based patrols and other expeditions by the territorial surveillance program in 2024

GUARD POST-BASED PATROL	Kayapo Indigenous Territory	Month	Objective and Results
Krimej	Menkragnoti	all months	Weekly patrols along 120 km sections of the Pitxatxa (Curuaes) river (**Map 7**)
Kenpoti	Menkragnoti	all months	Bi-monthly patrols along sections of 180 km of the Iriri river between the villages of Kubenkokre and Omejkrakum (**Map 7**)
Pi-ydjam	Menkragnoti	all months	Bi-monthly patrol along sections of 202 km of the Iriri river from Kubenkokre village to the border of Panara Indigenous territory (**Map 7**)
Kryjnhoken	Bau	all months	Weekly patrol along 50 km of the Curua and Pitxatxa rivers to limit with TI Menkragnoti (**Map 7**). Illegal fishermen were encountered three times on the Curua river and escorted out of TI Bau.
Pista Nova/Angme-e	Bau	all months	Patrols in a 5 km radius from post and part of the Curua river. A well was opened for drinking water.
Raoni	Capoto/Jarina Kaponhinore	all months	Patrols along the southern stretches of the Xingu River in Kayapo territory diminish and prevent entry by commercial fishermen and hunters (Map 11). There has been a resurgence of fish and game in the area since the post was established.
Kenmakatyk	Capoto/Jarina	all months	Patrols along the Corgão river that flows into the southern reaches of the Xingu River in Kayapo territory. Prevents and deters entry by illegal fishermen and other bad actors
Pijaremej /Kororoti	Menkragnoti	all months	Guards patrol the upper Iriri river to stop entry by illegal fishermen and prevent re-entry by loggers into the vast Kayapo indigenous territory of Menkragnoti The post hosted training for Kayapo fire brigades
Kakakuben	Menkragnoti	all months	Monitoring the Pitxaxa river (**Map 7**)
Iriri	Kayapo	all months	M5 onitors the entire river from Kendjam village to the border in the north ~ 60 km
Riozinho	Kayapo	All months	Monitors ~ 50km of the Riozinho river from the Rio Branco River to the village of Moikarako
Rio Vermelho			Monitors ~ 30km of the Rio Vermelho River and environs

EXPEDITIONS (communities involved)			
Porto Seguro (Xingu river communities)	Kayapo	March	50 km by boat and on foot: no invasions encountered but herbicides used by neighbouring ranchers are blowing into Kayapo territory and negatively impacting Kayapo gardens and border forest as well as polluting the river (**Map 8**)
Linha Seca 1 (Map 9) (Kremaiti, Acrotidjam)	Kayapo	June	Re-cleared (demarcation) of 11 km of border between Kremaiti and Acrotidjam villages; no invasions encountered (**Map 9**)
Linha Seca 2 (Map 10) (Tepdjati)	Kayapo	September	Re-cleared 6 km of border. Encroachment by ranching and entry of cattle into Kayapo territory was observed. Burning fields by ranchers enters Kayapo territory and degrades forest in the border area. Extreme heat, smoke, and lack of water afflicted this expedition (s 10)
OVERFLIGHTS			
Porto Seguro-Xingu northeastern border	Kayapo	February	No invasions observed although rancher's roads are reaching ever closer to the border
Goldmining at P14 and Cheiro	Kayapo	April	The Cheiro garimpo site remains inactive; P14 active
Goldmining at P14 and Cheiro	Kayapo	November	P14 and Cheiro sites inactive
Goldmining at Pista Velha, Pista Nova and a new one in central Bau	Bau	June	Pista Nova remains inactive; Pista Velha and Novo garimpo are active
Novo Horizonte, Novo garimpo, Pista Velha, goldmining sites in TI Bau and other goldmining sites near the border but outside TI Bau	Bau	December	The Pista Velha and Novo garimpo are active

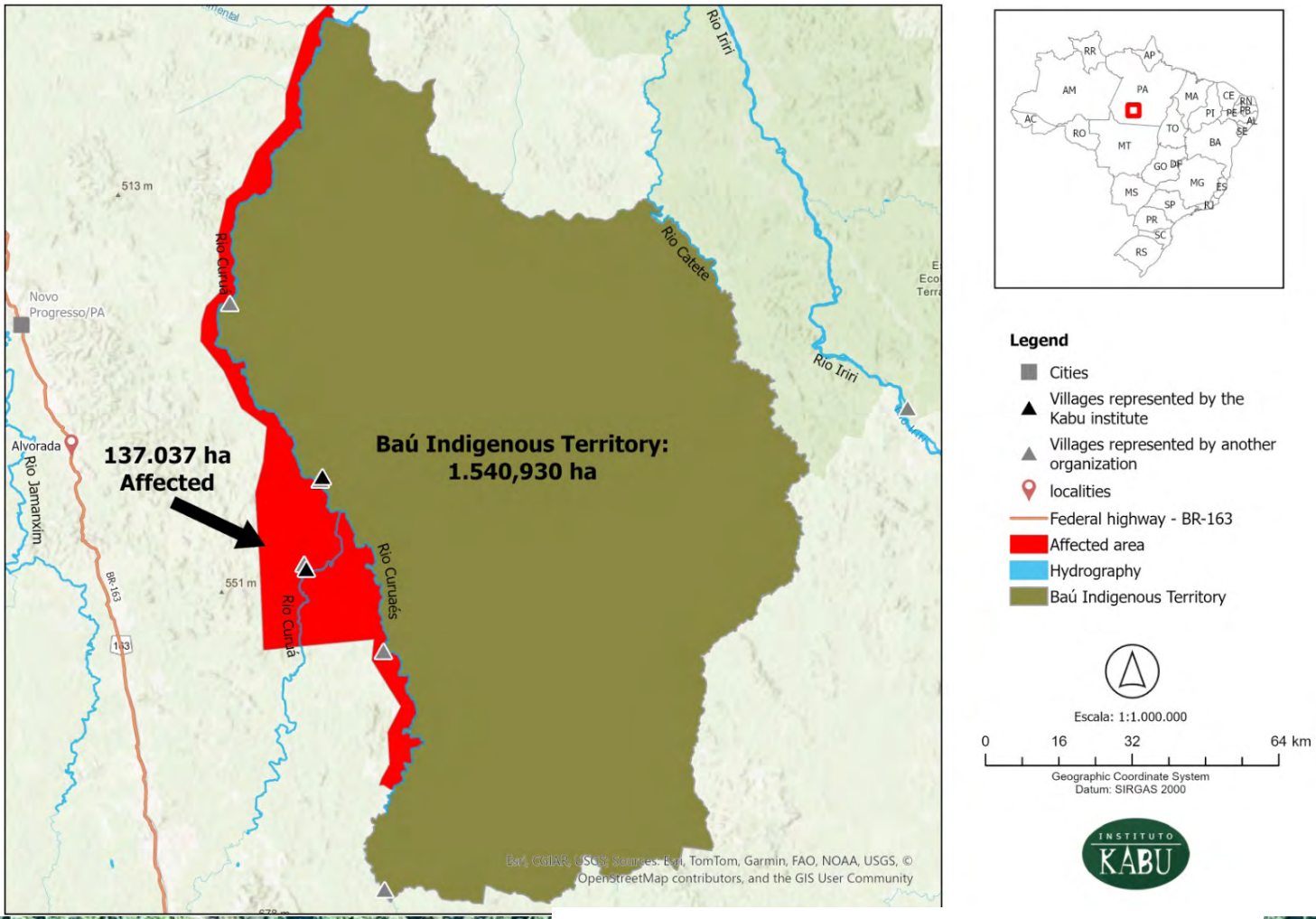
TI Bau

Guards from the Kryinhoken post patrol 144 km of the Pitxatxá (Curués) e Curua rivers in the northwest. This area is politically fraught because five years ago a group of Kayapo from Bau TI that had been allied with the northwestern Instituto Kabu of the conservation alliance were co-opted by goldminers and loggers and left the alliance to pursue illegal activity and easy money. This is when the Kayapo NGO-conservation-alliance lost 137,000 hectares to loggers and goldminers. The lost territory is a slice of TI Bau located west of the Curua and Pitxatxa rivers (Maps **5**,**6**). Although this loss is lamentable, the main prize is the millions of hectares of Kayapo territory lying east of the Curua and Pitxatxa rivers. Guards from the Kryinhoken post and village of Bau are single-handedly holding this line by blocking miners and loggers from crossing these rivers and accessing the interior filet of Kayapo territory.

The Angme-e (Pista Nova) post in central TI Bau marks Kayapo presence where once there was a goldmining site. Post guards patrol a radius of about a 5km from the Angme-e post. Without this post goldmining would be rampant in Bau. Already invasions are happening in central Bau not reached by a post or expeditions. This challenge must be met in 2025.

Map 5.

VIEW FULL-SIZE MAP



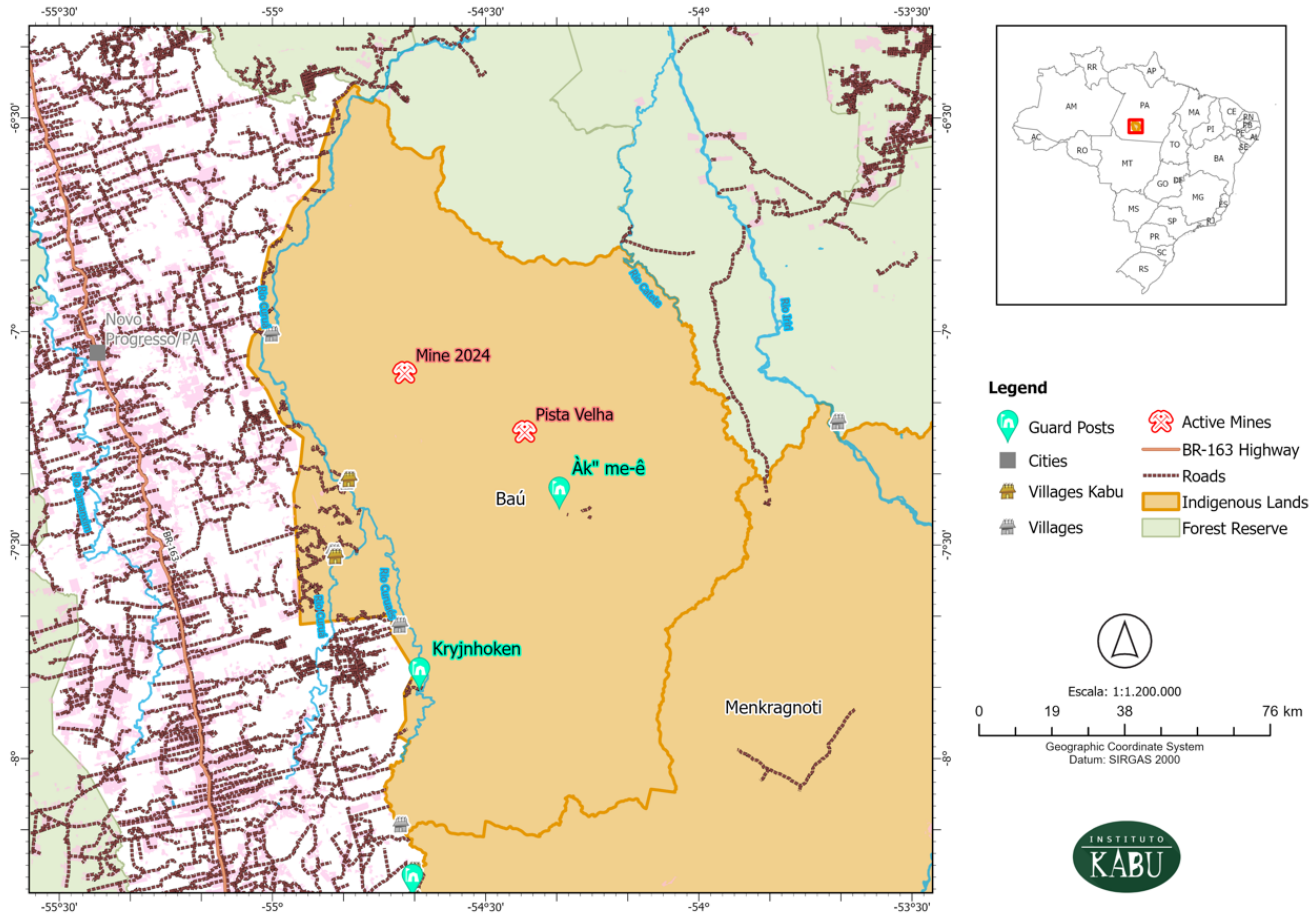
***Map 5.** : The 137,000 hectares of TI Bau (red) west of the Curua and Curuaes (Pitxatxa) rivers that were lost to goldmining and logging beginning in 2020.*



The active Pista Velha goldmine in Bau territory 2024

Map 6.

VIEW FULL-SIZE MAP



Map 6: *Road networks in the 137,000 hectare invaded territory of Bau indigenous territory (TI) west of the Curua river. (this territory no longer forms part of the Kayapo conservation alliance). These roads are used by loggers and goldminers. The two active invasions (goldmines) operating in central TI Bau of this project, Pista Velha and Garimpo Novo, are accessed by one of the illegal roads to the north on the Curua river where supplies are then ferried across. The Angme-e and Kryinhoken guard posts (bases vigilancia) are marked by a green symbol. (The section of road marked in the interior of TI Menkragnoti is a legal road for accessing communities and does not indicate invasion.)*



Trekking to supply and rotate guards at the Angme-e guard post



Guards from the Kryinhoken post inspect illegal logging on the western side of Curua river (not part of this project) across from the post.

TI Menkragnoti

Below we see the map of western guard post locations operated by the Instituto Kabu and their respective patrols that protect the western border of TIs Menkragnoti and Bau (**Map 7**). Overall, eight western guard posts operated by the Instituto Kabu performed 69 patrols that logged a total of 5,498 km (3,436 miles).

The Pykatoti, Kawatum, Krimei, and Kakakuben guard posts patrol 141 km of the Pitxatxa river that is the line demarcating much of TI Menkragnoti in the west.

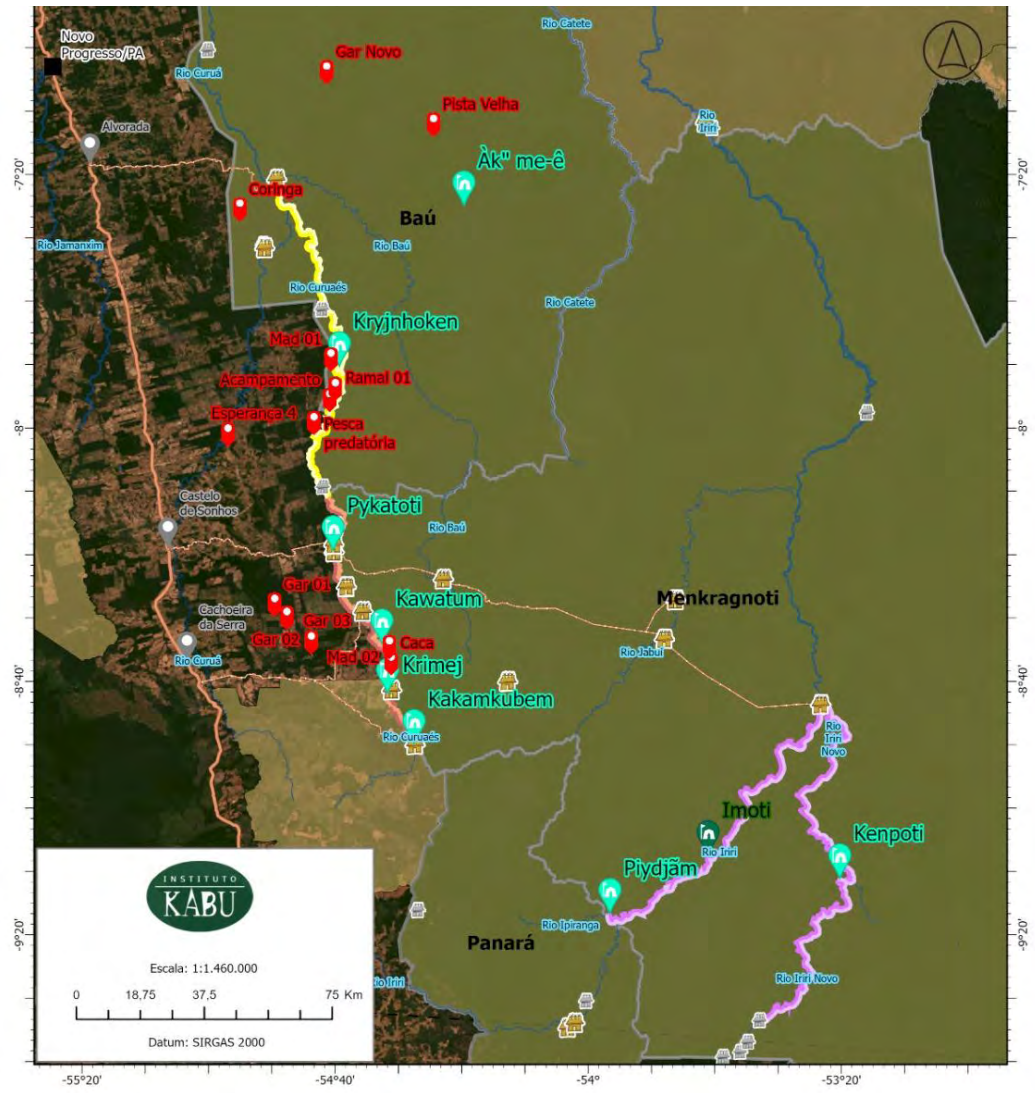
The Piydjam post was responsible for patrolling 100 km of the Iriri and Ipiranga rivers.

The central Kenpoti post monitors 182 km of the Iriri Novo river.

There were no invasions of TI Menkragnoti in 2024. Menkragnoti's lack of savanna and mostly undisturbed canopy forest also meant this territory mostly escaped the fires that afflicted the southern and eastern Kayapo territories of Capoto/Jarina and Kayapo (**Map 2**). The one incident of note was an attempt by loggers to cross the Pitxatxa river at "bucha 03" (**Map 12**). A "bucha" is the temporary log bridge that loggers use to cross smaller rivers and streams in the dry season. Guards from the Krimei post destroyed this bridge. Also, illegal fishing was encountered by patrols and stopped.

Map 7.

VIEW FULL-SIZE MAP



PONTO	TIPO DE DELITO	LATITUDE	LONGITUDE
Caca	Caça	-08° 39' 5.0"	-054° 31' 8.0"
Mad 01	Extração de madeira	-07° 51' 7.66"	-054° 40' 38.55"
Coringa	Garimpo	-07° 27' 29.03"	-054° 55' 1.56"
Pista Velha	Garimpo	-07° 14' 3.5"	-054° 24' 25.79"
Gar Novo	Garimpo	-07° 05' 46.91"	-054° 41' 18.78"
Acampamento	Pesca	-07° 57' 31.86"	-054° 40' 51.44"
Mad 02	Extração de madeira	-08° 36' 31.39"	-054° 31' 25.68"
Esperança 4	Garimpo	-08° 02' 58.85"	-054° 56' 54.68"
Gar 01	Garimpo	-08° 29' 49.96"	-054° 49' 33.75"
Gar 02	Garimpo	-08° 31' 54.92"	-054° 47' 35.63"
Gar 03	Garimpo	-08° 35' 45.57"	-054° 43' 45.69"
Ramal 01	Ramal ilegal	-07° 55' 47.53"	-054° 39' 58.63"
Pesca predatória	Pesca	-08° 01' 10.81"	-054° 43' 21.3"

Map 7: *Western Kayapo villages (brown huts) that are represented by the Instituto Kabu (IK). Guard posts (green pins) operated by the IK and responsible for protection of ~ five million hectares of Kayapo territories Bau and Menkragnoti. The extension of river patrols by IK guard posts is marked by the yellow, brown, and pink track lines. Rivers (Rios) are named in blue text. Red pins indicate locations of illegal goldmining and/or logging ("Delitos") mapped in 2024 which are all outside of Kayapo territory except for the "Pista Velha" and "Garimpo Novo" locations in TI Bau. The town of Novo Progresso (upper left corner) is the base town from where the Instituto Kabu operates.*

TI Kayapo

Expeditions by the Associação Floresta Protegida, the Kayapo NGO representing communities of the northeast, were land based and performed along the Linha Seca dry border (i.e. a border defined on a map and not by a river) (**Table 2**; Maps **8**,**9**,**10**). The Linha Seca region is bordered by ranches that, given the chance, will encroach on Kayapo territory. Loggers can easily gain overland entry here as well if not deterred. Therefore, locating and re-clearing the demarcation line is important.

Guards from the Xingu and Iriri posts do not need to patrol per se as both are the gatekeepers of northern access to their rivers, i.e. no unauthorized persons can get past these posts to start illegal activities inside the protected territory of the Kayapo conservation alliance. Nevertheless, guard team rotation between villages and the post plus some additional travel means that some 60 km of the Iriri river is monitored as far as the northern border. Also, travelling to and from the Riozinho and Rio Vermelho guard posts means that some 50 km of the Riozinho and 40 km of the Rio Vermelho is patrolled regularly.

There were no new invasions in TI Kayapo of this project in 2024. A previous invasion -the P14 goldmining site (**Map 12**) -was shut down in an operation reported on below.

Map 8.

VIEW FULL-SIZE MAP



Map 8: *The Porto Seguro expedition in March*

Map 9.

VIEW FULL-SIZE MAP



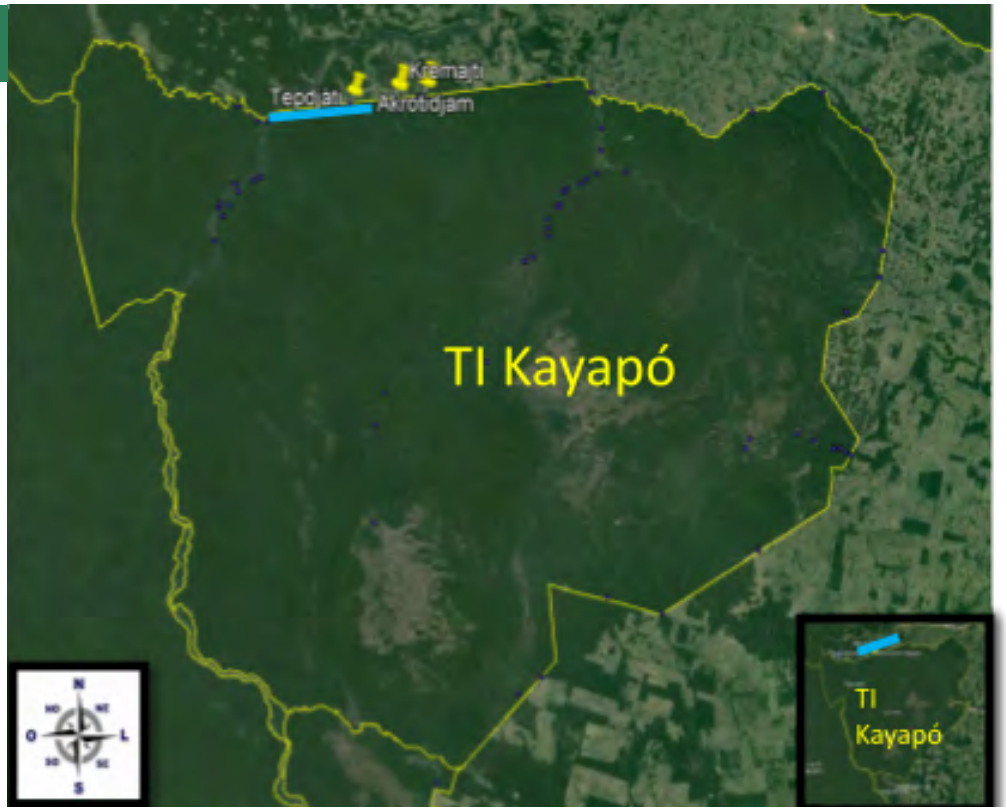
Map 9: *The Kremaiti expedition on the Linha Seca in June*



Cleaning of the boundary of the Kayapó Indigenous Territory, PA, Brazil.

VIEW FULL-SIZE MAP

Map 10.



Map 10: *The Tepdjati expedition along the Linha Seca in September*



Border identification sign near the Bom Jardim River, Tepdjàti Village, TI Kayapó, PA, Brazil.

TI Capoto/Jarina

The southwestern Kayapo NGO Instituto Raoni, based out of Peixoto de Azevedo, PA, operates three guard posts: Pijaramei, Raoni, and Kenmakatyk (the Raoni post is actually located within southern TI Menkragnoti near the border with Capoto/Jarina) (Maps 1,2). Capoto/Jarina, the southernmost Kayapo territory, is a region where canopy forest begins transitioning to savanna (cerrado) such that the forest here is not as dense or as high as to the north. Its more woodland nature combined with a large area of Brazilian shield rock leaves the forest here more susceptible to fire than the higher, denser forest of TIs Menkragnoti and Bau to the north. In 2024, the major problem faced by Capoto/Jarina was fire during an exceptionally dry year (**Map 2**).

As with much of Kayapo territory now, ranches and roads reach the border unleashing relentless invasion pressure. Nevertheless, the three guard posts operated by the Instituto Raoni successfully held the line on invasions in this southernmost territory.

The Pijaramei (formerly Kororoti) post continued to block entry by loggers while the Kenmakatyk and Raoni riverine posts blocked illegal fishing and depletion of fish stocks that otherwise would have occurred.

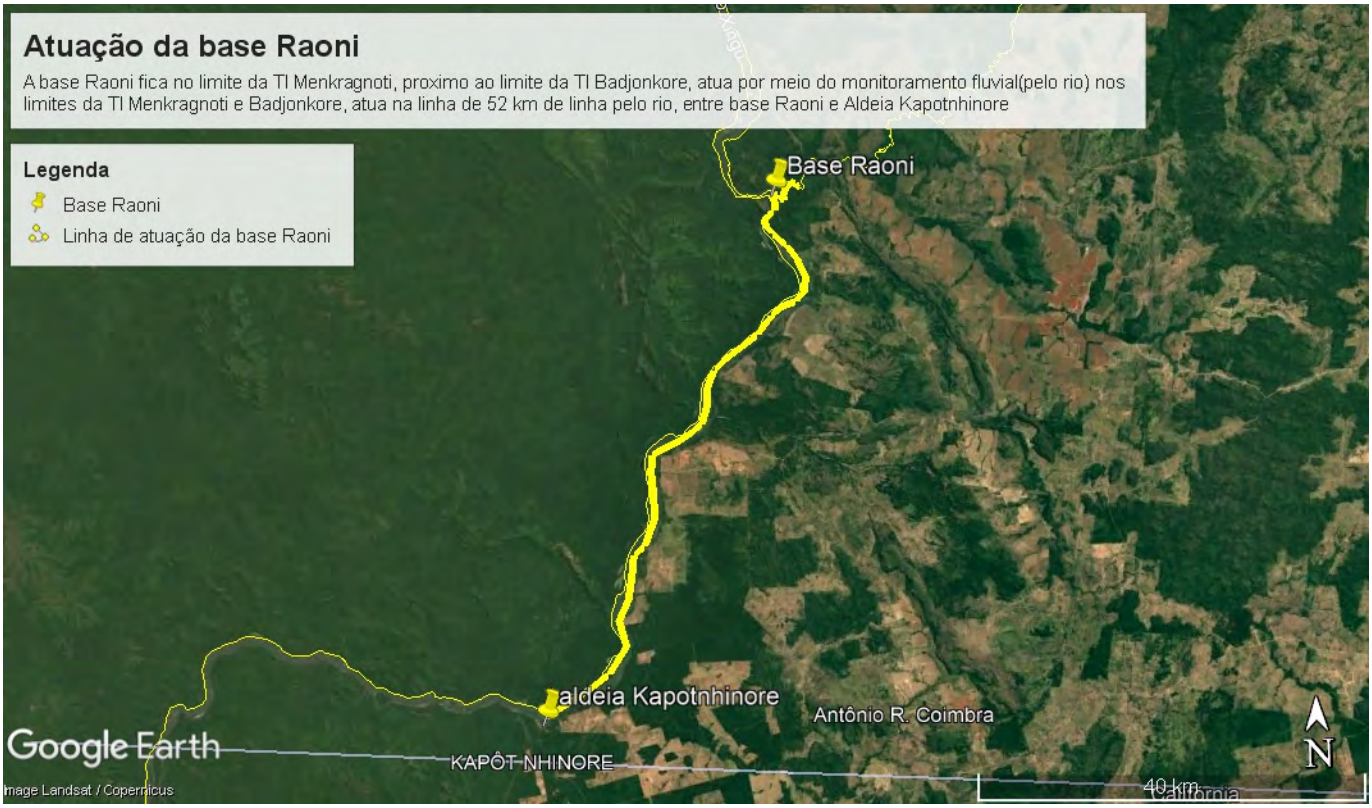
The Raoni post patrols a stretch of the Xingu river exposed to the frontier along its eastern bank (**Map 11**). Fishing camps are located on this eastern bank. Post guards patrol the river to ensure that outside fishermen, who are legally allowed to fish for subsistence using rods, do not use commercial fishing gear such as nets and are not removing quantities of fish in coolers. These patrols are essential to preserve fish stocks of the Xingu river.

This is a video of Raoni post guards orienting non-indigenous fisherman on the Xingu river in 2024:



Map 11.

VIEW FULL-SIZE MAP



Map 11: *The yellow track shows the section of the Xingu river exposed on its eastern bank to the frontier and patrolled by the Raoni guard post (base Raoni)*

GOVERNMENT ENFORCEMENT

Government enforcement operations are not easy to obtain anywhere in Brazilian Amazonia. The enforcement agency of the federal Ministry of Environment, IBAMA, has five helicopters to enforce protection of millions of hectares ratified protected areas and indigenous territories across six million square kilometers (2.3 million square miles) of the Brazilian Amazon. Helicopters are necessary equipment to raid and shut down most invasions. This one indicator demonstrates how under-resourced IBAMA is for the size of their mandate, especially when most logging and goldmining in the Amazon is conducted by big organized crime.

Official denunciations of illegal activity drafted with data collected by the Kayapo NGOs (GPS coordinates, maps, photos) are submitted to the Attorney General's office and the first step for the Kayapo to obtain an operation. The Kayapo NGOs Associação Floresta Protegida representing TI Kayapo and the Instituto Raoni representing TI Capoto/Jarina were invasion

free in 2024 and, therefore, submitted no denunciations. The Instituto Kabu (IK) of TIs Bau and Menkragnoti, however, has two active invasions in their territory (Map 12).

In 2024 the IK submitted seven "oficios/ denuncias" (official denunciations) to the Attorney General, IBAMA, and Federal Police. Copies of these denunciations can be found in the link below. "Ofício no 30/2024v - Rede Xingu+" is the one dealing with the Garimpo Novo (new goldmine) in the NGO-alliance territory of this project. "Ofício no 51/2024 - Rede Xingu+" deals with both active goldmining sites in TI Bau of this project: Pista Velha and Garimpo Novo. The other five denunciations decry illegal activity near the border outside Kayapo territory but that impacts Kayapo territory negatively; and illegal logging and goldmining within the 137,000 ha slice of TI Bau west of the Curua river that was lost by the NGO conservation alliance.

Operation P14. In September, the Federal Police raided the goldmining at P14 in territory of the Kayapo NGO Associação Floresta Protegida (Map 12). Although no helicopters were involved and therefore no heavy equipment was destroyed, this raid stoked enough fear that the goldmine closed. This is a link to an article about the raid in the Brazilian media.

Click here to see the full list of 2024 official denunciations



An illegal goldmine operating outside of Kayapo territory but adjacent their western border is polluting the Pitxatxa river

NEW DATA COLLECTION APP

The northwestern Kayapo NGO, Instituto Kabu, developed an ESRI/ArcGIS based data collection app called "Survey123" for use at guard posts. The objective is to log real-time information on guard post activities that will form a clear picture of surveillance results. Data entered by guard teams includes identities of guards, activities performed, times, GPS locations on patrols and expeditions, illegal activity encountered, and photos.

The app was tested at three guard posts in 2024: Krijnhoken, Pykatoti e Krimej. Some software bugs were encountered and resolved. This app, once perfected and hopefully rolled out to all guard posts in 2025, will track activities and provide greater details on surveillance program results.

GUARD POST EDUCATION PROGRAM

The future of Kayapo lands rests with its youth. Today Kayapo youth are exposed a great deal more to outside society than were their elders who grew up at or before contact and are keepers of traditional Kayapo culture. Traditional culture is what gained the Kayapo their vast territory and what protects it. Therefore, reenforcing traditional culture and helping youth understand outside society, especially its pitfalls, has become foundational to long-term territorial protection and stewardship.

Towards this end of helping youth understand the outside world and their important place in it, the Kayapo Project team curated a curriculum of videos for viewing at the guard posts. Guard posts are the perfect venue to host an education program as the infrastructure is in place and a wide Kayapo audience spends time at the posts. Furthermore, videos are an educational tool suited to a largely illiterate to semi-literate audience. This education program is designed to reinforce the goals of the Kayapo territorial control and sustainable management, focusing on the crucial role of Indigenous territory to sustain their future. Specifically, the objectives of the guard post education program are to i) reinforce the value of Kayapo culture and global importance for large-scale forest protection, and ii) build capacity for Kayapo youth to understand and navigate the complex foreign world that surrounds and threatens their land and culture.

This first year of the guard post education program ran successfully and was embraced by all. We will continue to build on this program because the more the Kayapo hear from the good guys, the stronger their territorial protection.

In this video, Kayapo youth at the Pista Nova/Angme-e guard post in Bau territory discuss a video they have watched. In halting Portuguese, the young man articulates his desire to continue with the struggle of his predecessors to protect their land, a struggle highlighted in the video curriculum.





An overflight in July 2024 by the northeastern Kayapo NGO Protected Forest Association shows the Cheiro goldmine in the north remains inactive as the excavations are growing over with vegetation

2024 TERRITORIAL SURVEILLANCE HIGHLIGHTS

Three previous invasions of NGO Kayapo territory remained inactive after action taken by the Kayapo NGOs and federal authorities in 2021 and 2022:

- logging access at Kororoti in the south-west
- goldmining in the northwest at the Pista Nova and Novo Horizonte sites in the interior of Bau territory (**Map 12**)
- goldmining at the Cheiro site near the northwestern border (**Map 12**).
- P14 goldmining: a team of Federal Police raided this goldmine in September. After the raid, the site has remained inactive.

Click on the image below to view satellite images before and after the raid:



- a logger's bridge ("bucha") spanning the Pitxatxa river was dismantled by guards from Krimei post (**Map 12**)
- illegal commercial fishing was kept out of most Kayapo rivers and fish stocks preserved



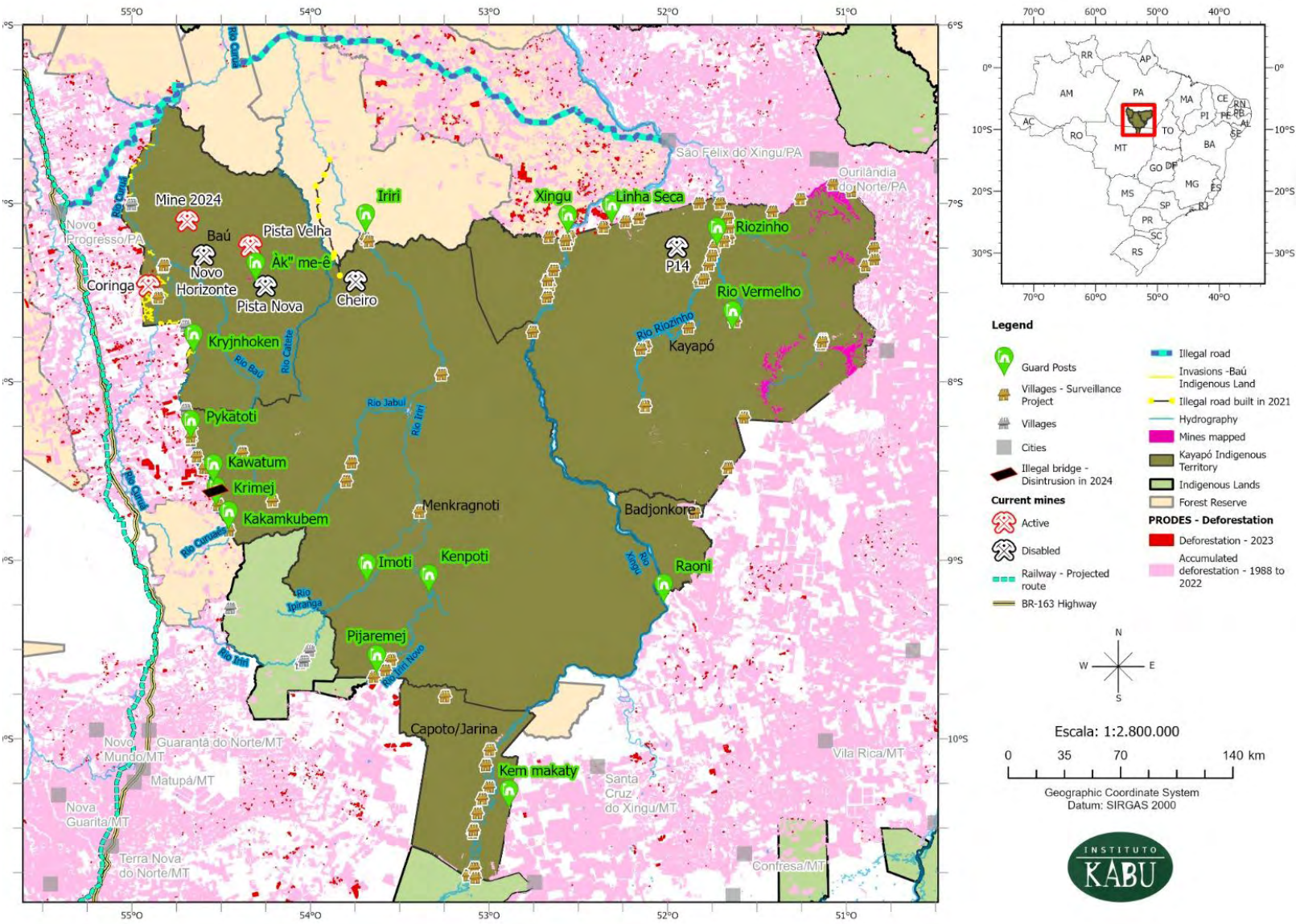
photo: Martin Schoeller



The loggers bridge "Bucha 03" situated north of Krimei village is destroyed by guards from the Krimei post

Map 12.

VIEW FULL-SIZE MAP



Map 12: *Overview of Kayapo territory in 2024: Ratified indigenous territories of the Kayapo (green) showing locations of guard posts (green pins), main villages (brown hut symbols), de-activated/disabled goldmining sites in Kayapo NGO-alliance territory (black crossed miners picks), the P14 and Pista Velha active goldmining sites in Kayapo NGO-alliance territory (red crossed miners picks). The Panara indigenous territory (light green) is contiguous with the Kayapo territory of Menkragnoti in the west and participates in the Piydjam guard post.*

The P14 (goldmining) and Bucha 03 (logging) sites were disabled in 2024. Bucha 03 is marked by a black rectangle. The Cheiro, Pista Nova, and Novo Horizonte goldmining sites remain disabled from previous year's actions. Two invasions of the territory of this project continue active: Pista Nova and Garimpo Novo (marked as Mine 2024 on the map) in TI Bau.



INVASION

The active Garimpo Novo *goldmine in Bau territory 2024*

Invasions threat is widespread and relentless. In 2024, there was one new invasion and one ongoing previous invasion on over nine million hectares of Kayapo territory of this project (Map 12).

Pista Velha

The ongoing Pista Nova goldmining invasion in central TI Bau reflects complicated Kayapo politics mentioned above. The few northwestern Kayapo who left the alliance for illegal activity and the promise of easy money in 2020 and control (or believe they do) the invaded slice of Bau territory west of the Curua and Pitxatxa rivers (Maps 5,6) are paid for access by the Pista Nova goldminers. Although Kayapo from the IK community of Bau on the eastern bank of the Curua river could take over the Pista Nova site and expel the miners, this action could provoke serious and possibly violent infighting between them and the co-opted Kayapo west of the Curua river.

The Pista Nova site has been growing slowly indicating that the miners have not been able to transport heavy excavating equipment across the Curua river. And due to the internal politics, guards from Bau at the Angme-e and Kryinhoken posts do not patrol that far north on the Curua where the Pista Nova goldminers are gaining entry. This delicate situation will need to be resolved in 2025 or risk the disease of goldmining expanding to unmanageable proportions. The Kayapo of Bau east of the Curua are keen to act.

Click on the slider below to see satellite analysis comparing the Pista Nova images from August to those of October showing expansion of digging at this site:



Garimpo Novo

This new goldmining site in TI Bau was confirmed by overflight in June. For now, it is called simply “Garimpo Novo” or “New Goldmine” (**Map 12**). Garimpo Novo is a portent of worse to come if the IK Kayapo do not manage to gain full control over TI Bau east of the Curua river in 2025. Once a foothold on the east side of the river is established, goldminers and loggers will have unimpeded access to Kayapo lands.



Pista Velha 2024

OTHER CHALLENGES

Funding: Financial limitations are the main reason these invasions occurred and remain ongoing. Neither of the two active invasions reported here are unresolvable. Sustainable funding is an ongoing challenge and last year's funding was compromised by a major donor dropping out, as sometimes happens.

The community of Tepdjati near the Linha seca northern border suffering from smoke during the September fire season when ranchers burn their field and clear new ones



Fire: 2024 was an exceptionally dry year facilitating a much greater than normal spread of fire in Kayapo territory (**Map 2**). Fire in Kayapo territory concentrated on savannas and woodlands of rocky outcrops and plateaus as well as the eastern band of invaded, degraded territory (that does not form part of this project, Map 3). Also, there was abnormal spread into parts of riverine forest along the Xingu and Riozinho rivers (**Map 2**) possibly fuelled in part by the grasses that grow naturally in these flooding habitats.

The southern Kayapo territory of Capoto/Jarina suffered badly from fire this year (**Map 2**); fire threatened to burn villages. Capoto/Jarina is more fire prone that Kayapo territory to the north because it is located where Amazon forest transitions to cerrado (savanna) so the forest there is less dense and drier than in the north.

The dry year also led to lower than normal water levels which complicated patrolling along smaller rivers like the Pitxatxá demarcating much of the western border. Guards were unable to patrol the Pitxatxa river as often as usual.

Regional Politics

Many members of government from local police to municipal politicians are involved in illegal activity. For example, the mayor of Sao Felix do Xingu, one of four base towns for the Kayapo project, is a known murderer and land-grabber. The mayor of Novo Progresso where the Instituto Kabu is based is involved in goldmining. Given rampant corruption and lawlessness in the south-eastern Amazon region where the Kayapo NGOs operate, care must be taken to preserve the safety of teams.



photo: Takakrua Kayapo

Internal Kayapo Politics

Internal Kayapo politics presents challenges as well. As with all peoples, there is jockeying to access benefits and fights over power that usually lead to founding of new communities. However, the greatest internal political threat to Kayapo territorial sovereignty is when Kayapo individuals fall prey to the “promises of sugarplums and fairies” pressed on them by loggers and goldminers. Participating in illegal activity leads ultimately and inevitably to loss of territory and culture. Hence it is vitally important to provide sustainable, equitable alternatives to illicit regional activities and to educate and orient youth on the serious nature of dangers lying await the moment they step out of their territory.

In 2020 a group of the northwestern Kayapo succumbed to easy money and left the conservation alliance led in their region by the Instituto Kabu (IK). The 137,000 ha of the Kayapo territory of Bau that subsequently fell to illegal activity is shown on Maps 5 and 7. The Angme-e/Pista Nova and Kryinhoken guard posts of the IK, largely successfully, have kept illegal activity west of the Curua and Pitxatxa rivers out of the interior of Bau territory.

NEXT STEPS

▸ Guard Posts and Expeditions

Additional guard posts and/or expeditions are needed where sections of border lack Kayapo presence, i.e., i) the northwestern-most border of TI Bau, ii) the road that accesses the P14 goldmine in the northeast, iii) the interior of eastern Kayapo territory to the west of the Rio Vermelho for halting the advance of gold-mining and logging from the non-allied band of territory (Maps 1, 2), and iv) the western border of TI Capoto/Jarina

▸ Education Program

We will expand and enhance the guard posts educational curricula program. By investing in the education and empowerment of Kayapo youth, we aim to ensure the continuity of their cultural heritage, strengthen their ability to protect their territories, and create a sustainable future that balances tradition and innovation.

▸ Technology and Monitoring

We will work to perfect and roll out the Survey 123 App across all guard posts to facilitate real time monitoring, data collection, and reporting of monitoring activities.

▸ Government Enforcement

Kayapo NGOs will continue strengthening their relationship with the Attorney General, IBAMA, and the Federal Police.

▸ REDD+ Carbon Project

The Kayapo project seeks financial stability and sustainability. Therefore, the Kayapo and their partners have embarked down the road to develop a carbon project based on protection of standing primary forest and associated ecosystem services, i.e. a REDD+ project. Kayapo forest could generate millions of dollars in carbon credit sales under a properly structured and verified carbon project. With support from the Climate and Land Use Alliance (CLUA) and re:wild, the first step of building this project has been completed: free, prior, informed consent.





photo: Takakrua Kayapo

CONCLUSION

The Kayapo and NGO partners continue to demonstrate the power of their territorial surveillance program to protect a vast tract of forest within a landscape of high threat. Territorial protection highlights in 2024 include:

- shutting down goldmining at the P14 site
- destroying a logging bridge just north of Krimei village in the west
- blocking illegal fishing on the Xingu, Iriri, Iriri-novo, Rio Vermelho, Riozinho, and Pitxatxa (Curuaes) rivers
- development of an app to record guard post activities and expedition results
- implementation of an education and awareness raising program for Kayapo guardians

The survival of the Kayapo's vast block of forest and their own survival depends continued philanthropic investment in territorial protection.

THE KAYAPO AND ALL THE PLANTS AND ANIMALS THEY PROTECT ARE FOREVER GRATEFUL FOR YOUR SUPPORT.


photo: Scott Hecker

MAJOR DONORS TO KAYAPO TERRITORIAL SURVEILLANCE IN 2024

International Conservation Fund of Canada
The Philanthropic Initiative (USA)
The Miller Foundation (USA)
The 1994 Fund (USA)
Environmental Defense Fund (USA)
The Schmidt Family Foundation (USA)
Re:wild (USA)
The A Team Foundation (UK)
Global Conservation (USA)
The Gordon and Betty Moore Foundation (USA)

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