

Mission GeoNameec #1

Corcovado national park, Costa Rica
October 16th to 19th, 2025

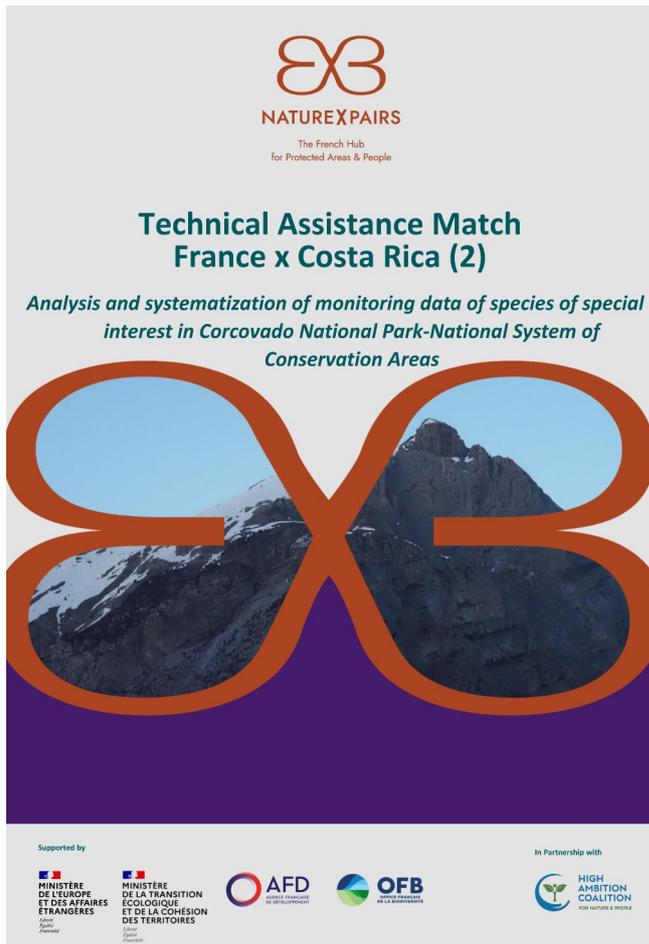
France (OFB-PNE) meets Costa Rica (SINAC)
to work together on information systems, data
management and camera traps.



GeoNameec

 GeoNature meets Pronamec 

Context



The High Ambition Coalition for Nature and People (HAC N&P):

- The HAC N&P is an intergovernmental coalition launched at the Biodiversity COP15 at the initiative of France and Costa Rica, and is now co-chaired by France, Costa Rica, and the United Kingdom.
 - It brings together more than 120 countries committed to achieving the global “30x30” target — protecting 30% of land and sea areas by 2030 — as established in the Kunming-Montreal Global Biodiversity Framework (CBD, 2022).
- The coalition aims to build concrete and operational alliances for implementing this target, notably through experience-sharing and technical support among member countries.

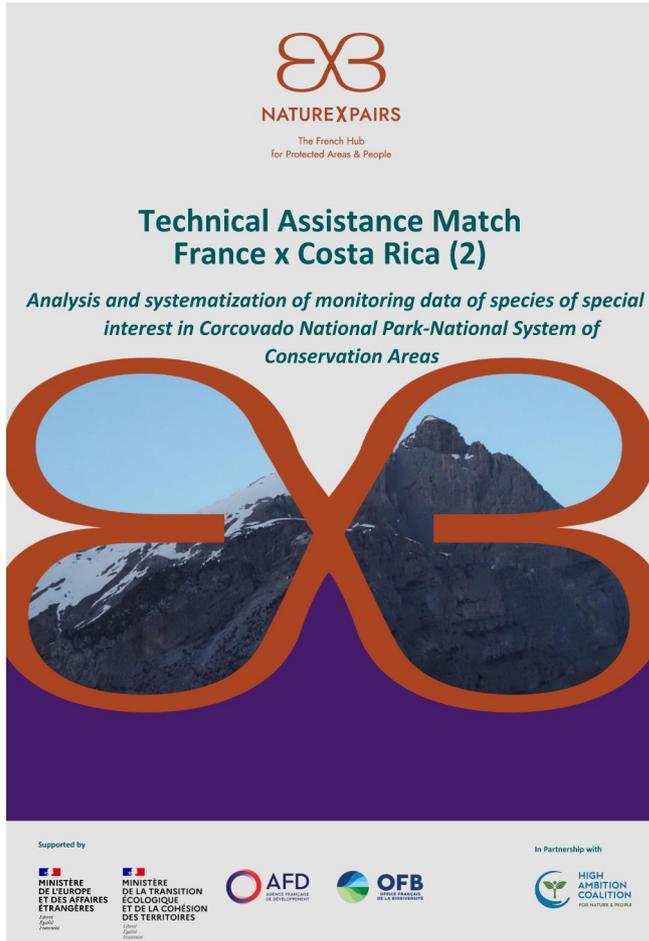
The HAC N&P “Matchmaking” Mechanism:

- The “matchmaking” mechanism was designed to connect a country expressing a need (for technical assistance, expertise, or methodological support) with a country or partner capable of providing a response.
- It is therefore a pragmatic, targeted, and bilateral form of cooperation, facilitated by the HAC N&P Secretariat and national HAC N&P focal points.
- Each “match” project must address a specific request from a partner country and be structured around clear objectives, targeted funding, and practical deliverables.

The Role of France and the French HAC N&P Working Group:

- In France, the “French HAC N&P Working Group” (GT HAC N&P France) is coordinated by NatureXpairs, in collaboration with the French Biodiversity Office (OFB) and the relevant ministries (MTE/MEAE). It brings together all French stakeholders involved with protected areas.
 - Its role is to coordinate the identification of French expertise, facilitate its mobilization, and support cooperation projects (such as this one).
- Within this framework, the French National Parks Federation (here represented by the Écrins National Park), the OFB (here its PACA–Corse Regional Directorate), and other networks may be mobilized.

Context



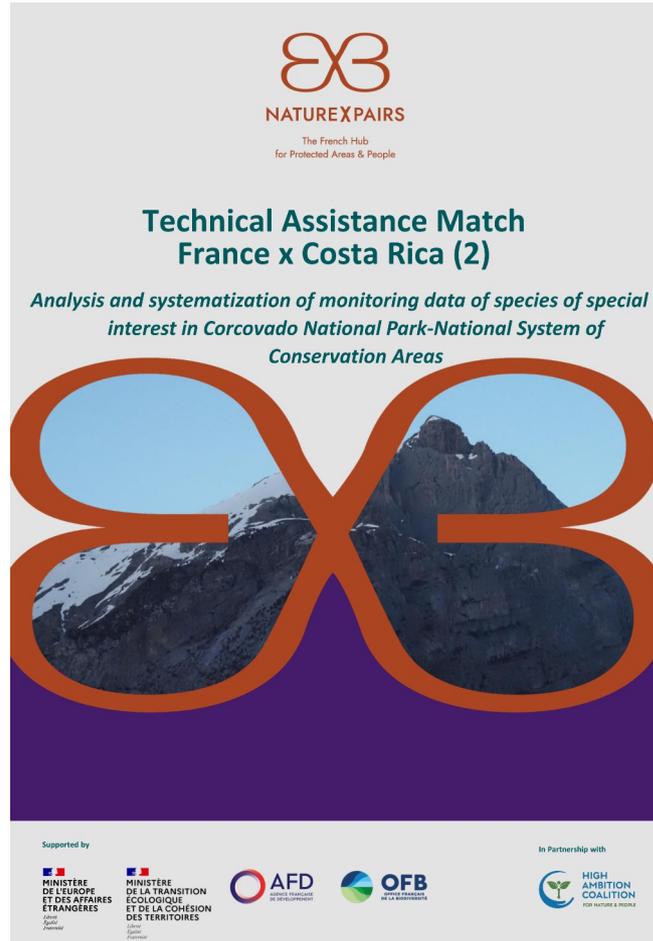
The Costa Rica – France “Match”: PRONAMEC & Corcovado:

- Requesting country: Costa Rica, through SINAC
- Identified needs:
 - Improve the management and analysis of wildlife monitoring data from Corcovado National Park (in particular through camera traps and national monitoring protocols).
 - Support the development of the PRONAMEC national platform to strengthen its integration of data collected from protected areas.
- French response: mobilization of experts from the Écrins National Park and the OFB, drawing on their experience in developing and using the GeoNature platform in France, as well as their expertise in digital biodiversity monitoring tools and protocols (including artificial intelligence applications).

Overall Objective of the Match:

- To contribute, through bilateral technical exchange, to strengthening Costa Rica’s capacity to implement a robust and operational national biodiversity monitoring system.
- To showcase French know-how (particularly regarding GeoNature) and share the lessons learned from its development.

Context



Objective of the Assistance

The technical assistance aims to support Costa Rica's National System of Conservation Areas (SINAC) in addressing key challenges related to:

- 1) Strengthening methodologies for data collection, processing, and analysis related to the monitoring of ecosystems and key species of conservation interest in Corcovado National Park as a pilot site, with an interest on Artificial Intelligence process.
- 2) Providing an expert assessment of potential technological solutions, ensuring their compatibility with Corcovado's operational context, while respecting national protocols and existing monitoring frameworks.
- 3) Sharing France's experience with biodiversity monitoring platforms, including GeoNature, as a case study illustrating the challenges and lessons learned in implementing an open-source system for protected area

Description of Activities

The assistance will be structured as an advisory mission, emphasizing technical exchange and capacity-building. The engagement will involve direct interactions with Corcovado National Park staff, fostering collaborative learning and co-development of adapted solutions. The general lay-out would be as follows:

On-Site Assistance:

- Duration: 3-4 days
- Format: Two French experts will be deployed to Costa Rica to work closely with Corcovado National Park staff and stakeholders.
- Focus Areas:
 - Presentation of methodologies and digital tools used in France for ecosystem and species monitoring, highlighting their functionalities and potential relevance to Corcovado's needs.
 - Case study: GeoNature, an open-source biodiversity monitoring platform used in French protected areas. The discussion will focus on its functionalities, its benefits and challenges, and lessons learned that could inform Costa Rica's approach.
 - Technical discussions on data management, analysis, Artificial Intelligence and integration into broader ecological monitoring frameworks.
 - Assessment of potential solutions, taking into account operational feasibility, existing SINAC protocols, and national conservation strategies.
 - Participatory workshops to co-design recommendations tailored to Corcovado's specific challenges and priorities.

Participants



- Alejandro
- Eugenia
- Mauricio
- Marvin
- Ivan
- Camille
- Ilsia
- Roberto
- Daniela
- Yocelin
- Marylin
- Désirée
- Concha
- Harold
- Luis
- Jason
- Vindas

Participants

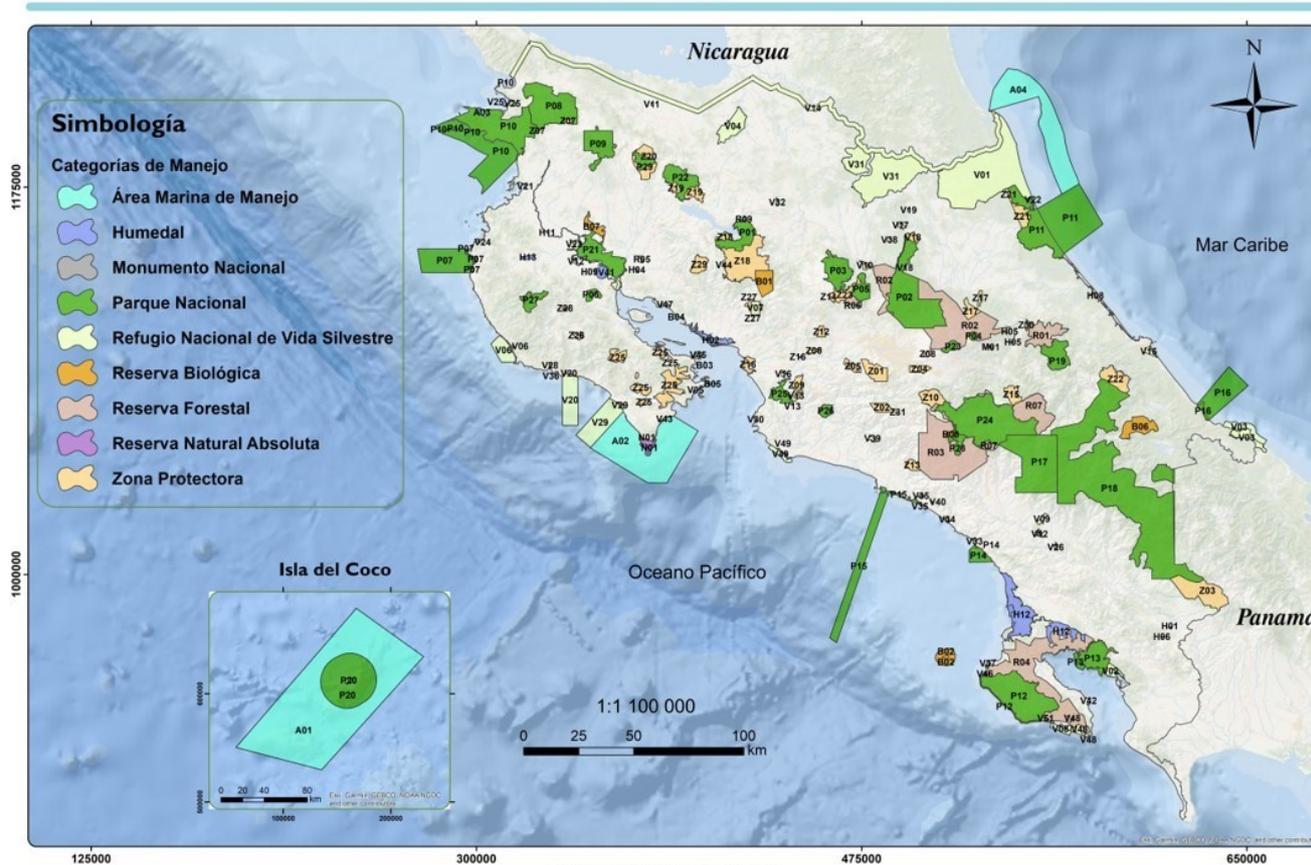
- Eugenia Arguedas Montezuma, Yocelín Ríos Montero (PRONAMEC - Secretaria Ejecutiva - SINAC)
 - Mauricio Arias Zumbado (CUSBSE - Secretaria Ejecutiva - SINAC)
 - Luis Fonseca (Asociación Costa Rica por Siempre)
 - Alejandro Azofeifa, Ilsa Olivares, Jason Céspedes Vindas (Area de Conservación Osa – Parque Nacional Corcovado)
 - Ivan Leiton-Harold Madrigal (Area de Conservación La Amistad Pacífico - Parque Internacional La Amistad - Parque Nacional Chirripó)
 - Marylin Rodriguez Aria (Area de Conservación La Amistad Pacífico - Monitoring brigades)
 - Roberto Fernández (Area de Conservación Guanacaste - Parque Nacional Sta. Rosa)
 - Marvin Aguilar (Area de Conservación Central - Parque Nacional Braulio Carrillo)
 - José Alonso Vindas (Area de Conservación Central - Reserva Jorge Manuel Dengo)
 - Daniela Sánchez Araya (Reserva Biologica Lomas Barbudal)
 - Concha Agero (OFB PACA-Corse – France)
 - Camille Monchicourt (Parc national des Écrins – France)
 - Désirée Segovia (Interpreter - Costa Rica)
- + Aurélie Chane-Yook, Emmanuelle Sarat, Camille Soupín (NatureXpairs – France – Meeting organisation)

Travel



SINAC - Costa Rica protected areas

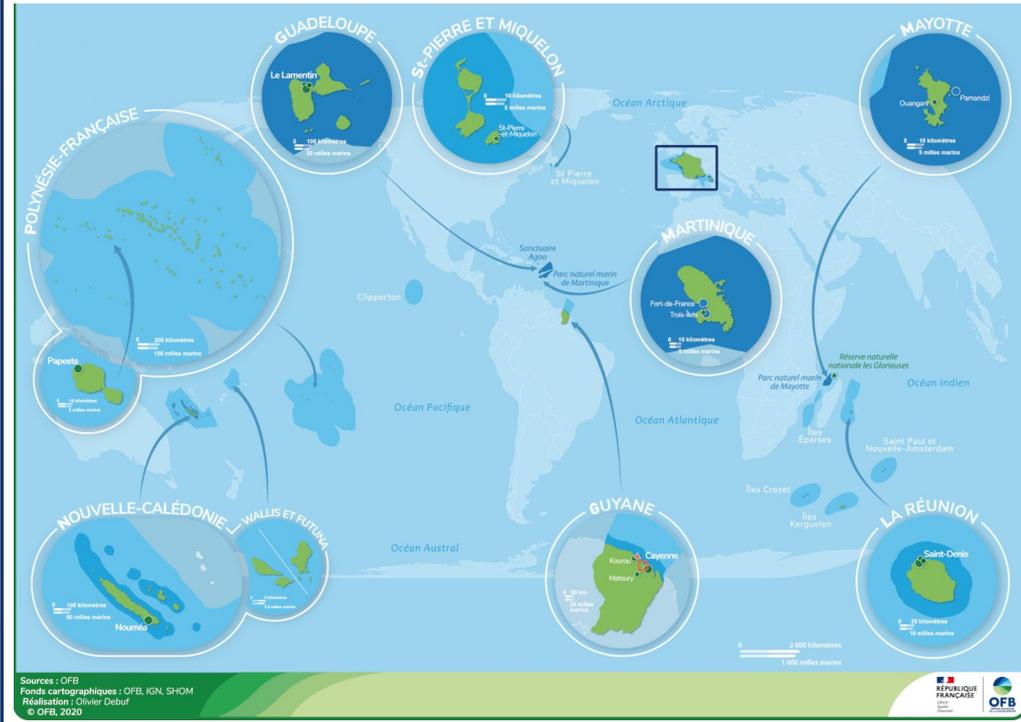
Áreas Silvestres Protegidas de Costa Rica



Ministerio de Ambiente y Energía
Sistema Nacional de Áreas de Conservación
Sistema de Coordenadas: CR05
Versión 2020

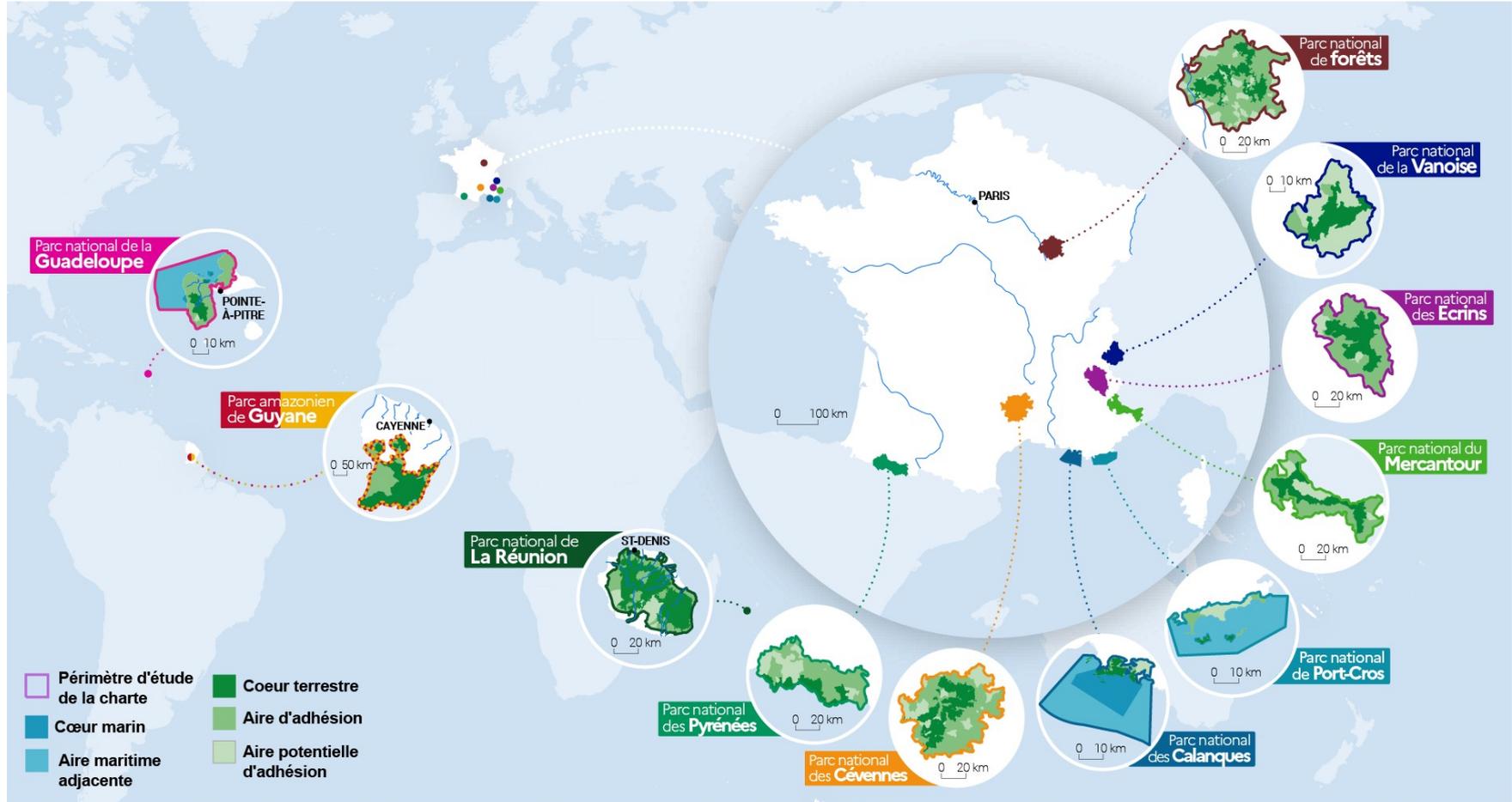
OFB

Implantations de l'Office français de la biodiversité



French national parks

Les parcs nationaux de France



Source : IGN, Les parcs nationaux de France. Traitements : SDES - OFB, 2021

Day 1 - Classroom



Day 1 - Presentations



- Camille MONCHICOURT * camille.monchicourt@erins-pancretioweb.fr
Parque Nacional "des ECRINS"

- Concha AGERO
Oficina francesa de la Biodiversidad
* concha.agero@ofb.gouv.fr

Indicadores
→ decisiones de manejo
→ Adm
→ ACOR
→ MINAE

Indicadores
→ 2006
→ 2012
→ EFM
→ 2016

NU 2006
→ monit & col
→ CR
→ integridad ecológica.

Day 1

Thursday October 16th

- Presentation and roundtable introduction
- Presentation of the Corcovado park and PRONAMEC project (Eugenia)
- OFB general presentation
- National parks and PNE general presentation
- PNE SI general presentation
- GeoNature presentation and demo
- PRONAMEC demonstration

Presentation by SINAC of its monitoring and conservation indicators platform, PRONAMEC.

Presentation by the Ecrins National Park and the French Biodiversity Office (OFB) about their institutions.

Presentation on open data access and the GeoNature tool developed by the French national parks. The Costa Rican rangers representing the national parks showed great interest in the GeoNature platform.

Finally, discussions addressed the issues of poaching and visitor management within the national parks.

Evening (7:00–11:00 p.m.) – Participation in the monitoring of sea turtle nesting.

After a presentation of our institutions (OFB and Ecrins National Park) by Camille and myself, SINAC introduced its monitoring and conservation indicators platform, PRONAMEC, and explained its main objectives.

The discussions also covered open access to SINAC's scientific data, as well as the standardization of data management protocols and tools.

The Costa Rican rangers representing the national parks were particularly interested in the GeoNature tool developed by the French national parks.

Finally, the group discussed poaching challenges and the management of visitor flow within the parks.

In the evening, we had the privilege of taking part in the scientific monitoring of sea turtle nesting, and the next morning we will head into the field to retrieve camera traps and then test AI-based photo analysis tools.

Day 1 - Presentations



Day 1 - Presentations

PRESENTACIÓN
PRONAMEC
EL PIRO
OCTUBRE-2025



Parc national des Écrins

Le Parc national des Écrins

General presentation and missions

A wide-angle photograph of a snowy mountain range at sunset. The sun is low on the horizon, casting a warm orange glow over the snow-covered peaks and valleys. The sky transitions from orange to a deep blue.

Parc national des Écrins

Du cartographe au géomaticien, l'évolution des métiers dans les espaces naturels

L'exemple du Parc national des Écrins

A close-up photograph of a butterfly with black, orange, and white patterned wings perched on a light purple flower. The background is a soft, out-of-focus green.

RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

OFB
OFFICE FRANÇAIS
DE LA BIODIVERSITÉ

LA OFICINA FRANCESA PARA LA BIODIVERSIDAD

Un nuevo establecimiento público,
Una nueva fuerza para la biodiversidad

A landscape photograph showing a river or lake in the foreground, with lush green trees and mountains in the background under a clear sky.

Parc national des Écrins

GeoNature

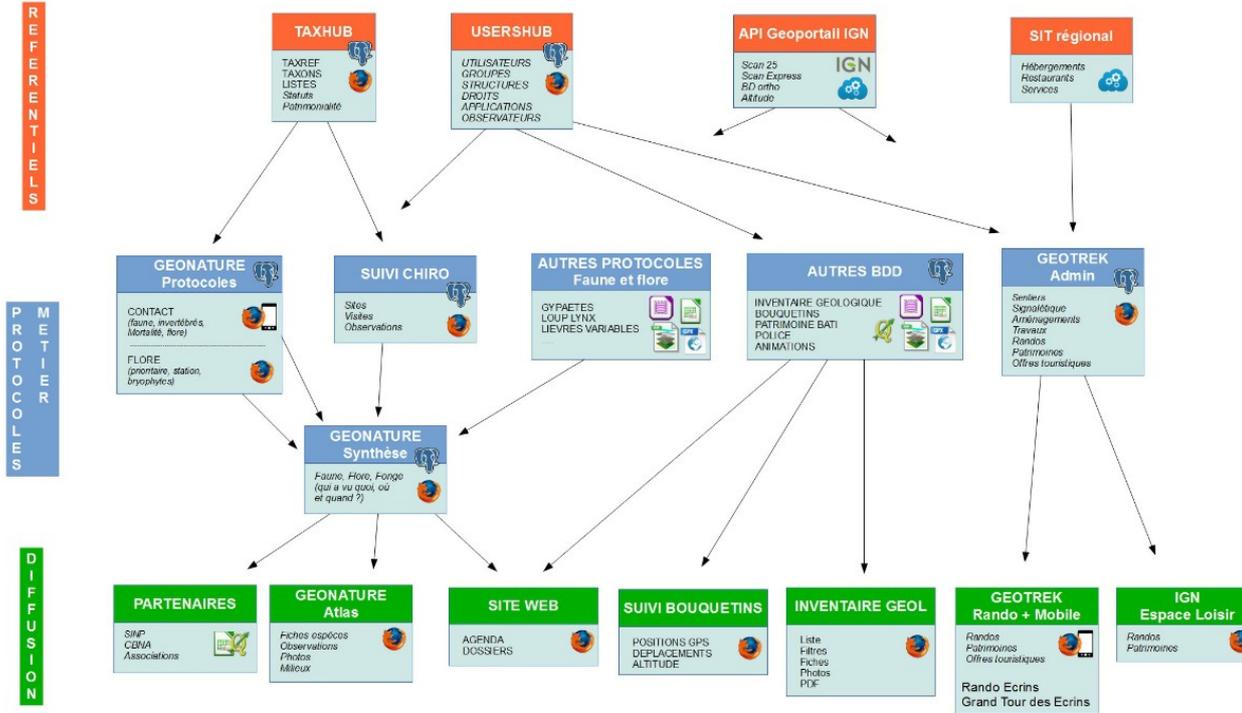
An open source
biodiversity information
system

A close-up photograph of a butterfly with black, orange, and white patterned wings perched on a light purple flower. The background is a soft, out-of-focus green.

- <https://geonature.fr/documents/autres/2025-Costa-Rica/2025-10-SINAC-PRONAMEC.pdf>
- <https://geonature.fr/documents/autres/2025-Costa-Rica/2025-10-OFB-general-presentation-Spanish.pdf>
- <https://geonature.fr/documents/autres/2025-Costa-Rica/PNE-general-presentation.pdf>
- <https://geonature.fr/documents/2017-12-SIGMA.pdf>
- <https://geonature.fr/documents/2024-07-GeoNature-SINAC.pdf>

Day 1 - Presentations

Architecture du SI



Day 1 - Presentations

The screenshot shows the GeoNature DEMO web application. The header includes the GeoNature logo, a navigation menu, the text 'Accueil GEO Nature', 'GeoNature DEMO', and user information 'admin'. The main content area is divided into several sections:

- Welcome:** 'Bienvenue sur le serveur de démonstration de GeoNature 2.16.3' with a small frog icon.
- Events:** 'Événements' section with a list item: 'Septembre 2025 - Le serveur est mis à jour en version 2.16.3'.
- Useful Links:** 'Liens utiles' section with links for 'C'est quoi GeoNature?', 'Installer GeoNature', 'Documentation GeoNature', and 'Code source de Geonature'.
- Map:** 'Les 100 dernières observations' section featuring a map of France with observation points marked by colored circles. A search bar 'Rechercher un lieu' is present above the map.
- Summary Cards:** Four cards at the bottom showing statistics: '577 OBSERVATIONS', '94 TAXONS', '~81 OBSERVATEURS', and '31 JEUX DE DONNÉES'. Below these cards is the text 'Dernière mise à jour dimanche 26 octobre 2025 à 23:15:06 GMT+01:00'.
- Footer:** 'Discussions' and 'Validations' sections, with a button for 'Mes discussions uniquement'.

On the left side, there is a vertical navigation menu with icons for: Accueil, Admin, Blaireautières, Dashboard, Ecrevisses à patte..., Exports, Import, Metadonnées, Monitorings, Occhab, Occtax, and Prairies fleuries.

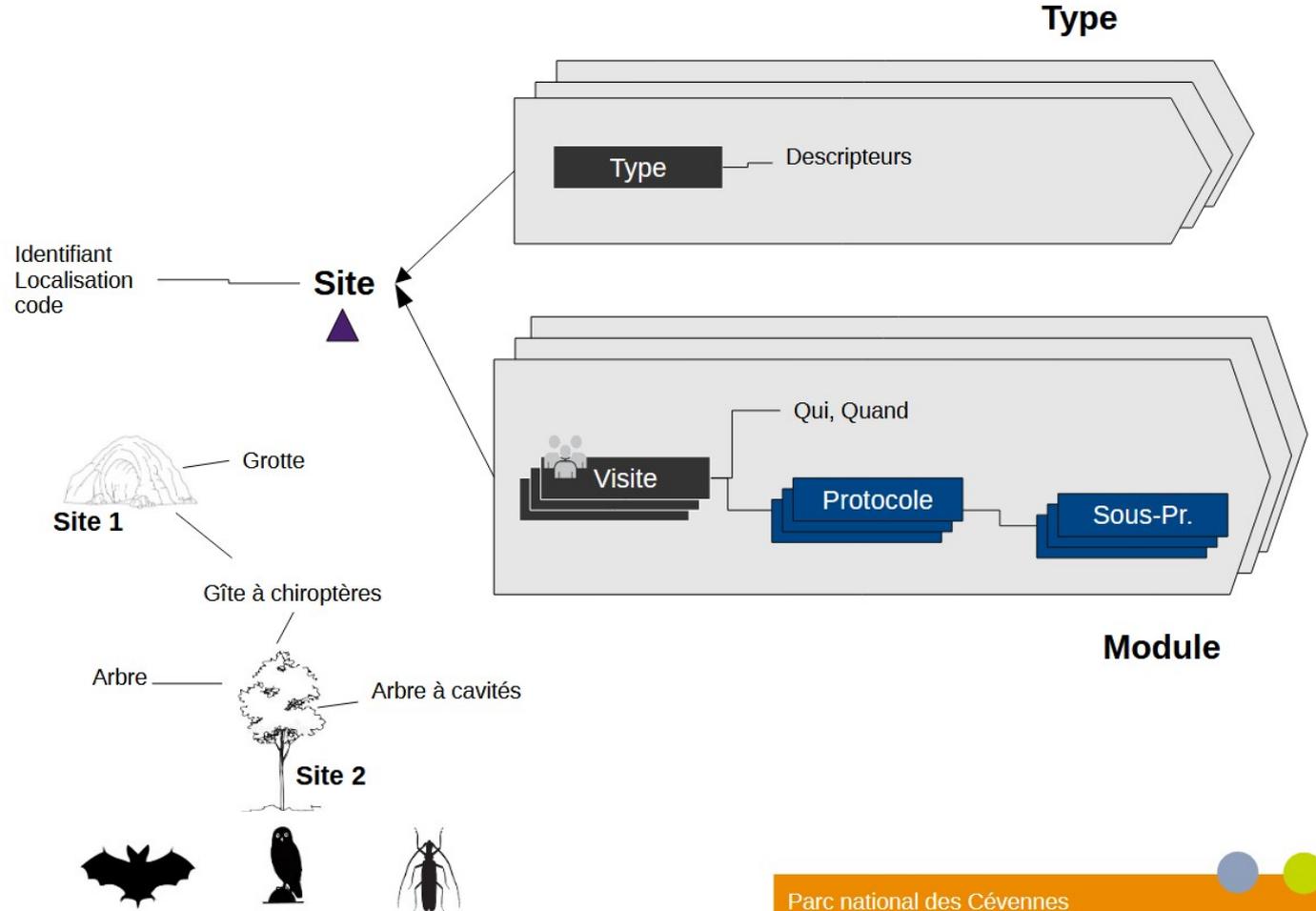
At the bottom left, there is a footer note: 'Réalisé avec GeoNature version 2.16.3' and 'Logiciel open source développé par une communauté de structures'.

The screenshot shows the GeoNature mobile application interface. The top status bar displays the time '15:30' and various system icons. The app title is '2 - Pointage'. The main view is a map of a river area with a red location pin. The map includes labels for 'L'Erdre', 'Ruban Vert', 'Pax 3 Maerna', and 'Ile de Versailles'. A search bar 'Rechercher un lieu' is visible at the top of the map area. At the bottom, there are two orange buttons: 'PRÉCÉDENT' and 'SUIVANT'. The mobile navigation bar at the very bottom shows back, home, and search icons.

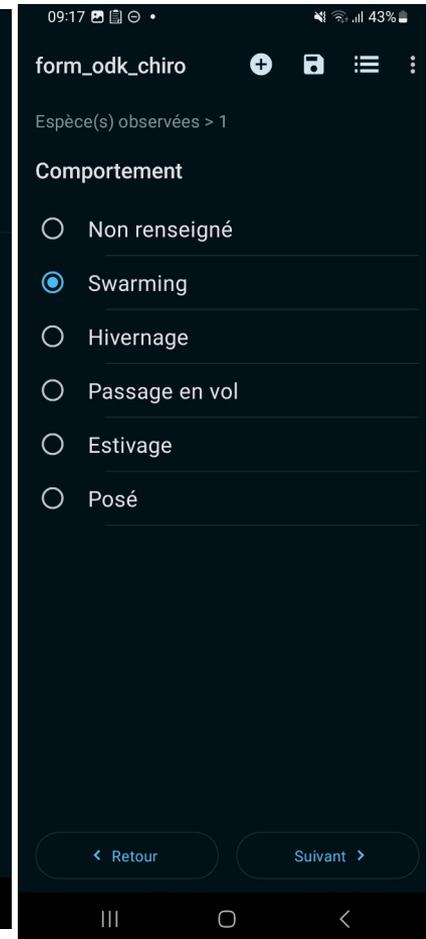
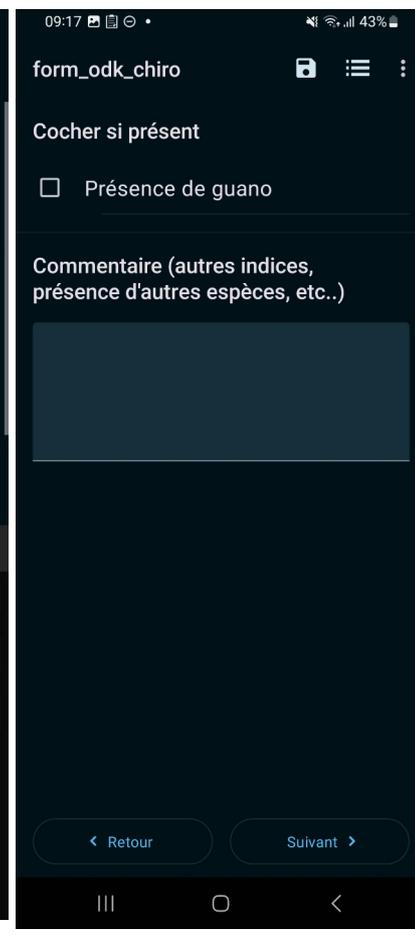
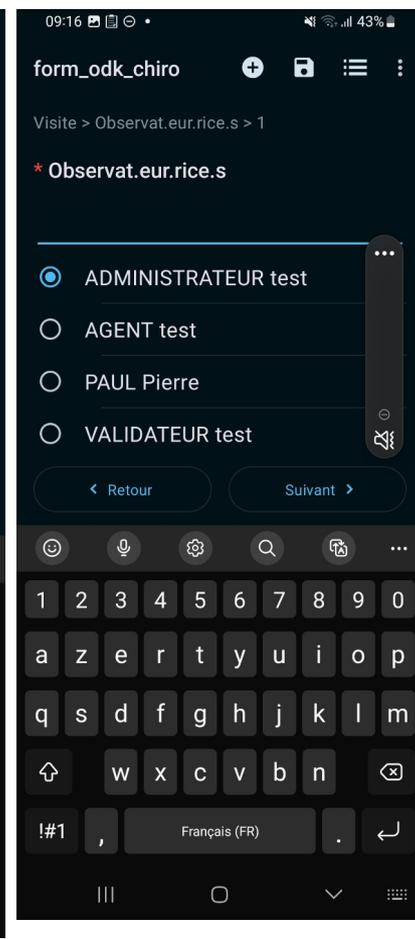
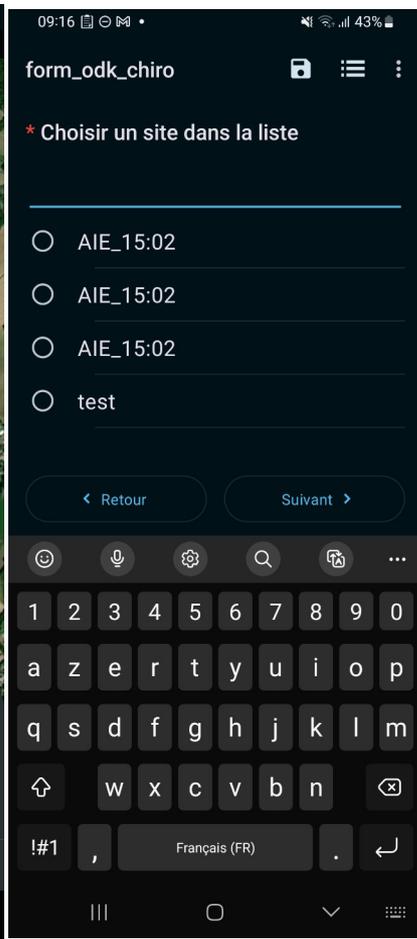
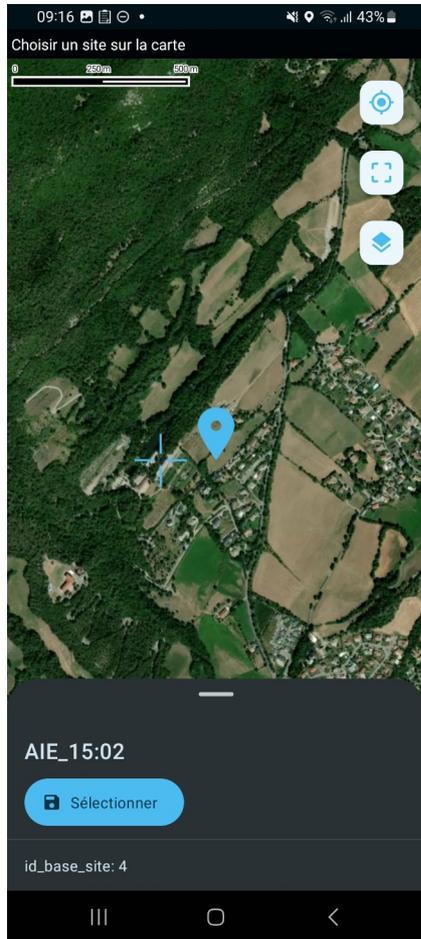
Day 1 - Presentations

GeoNature-monitoring :

- Sites
- Visits
- Observations
- *Individuals*



Day 1 - Presentations

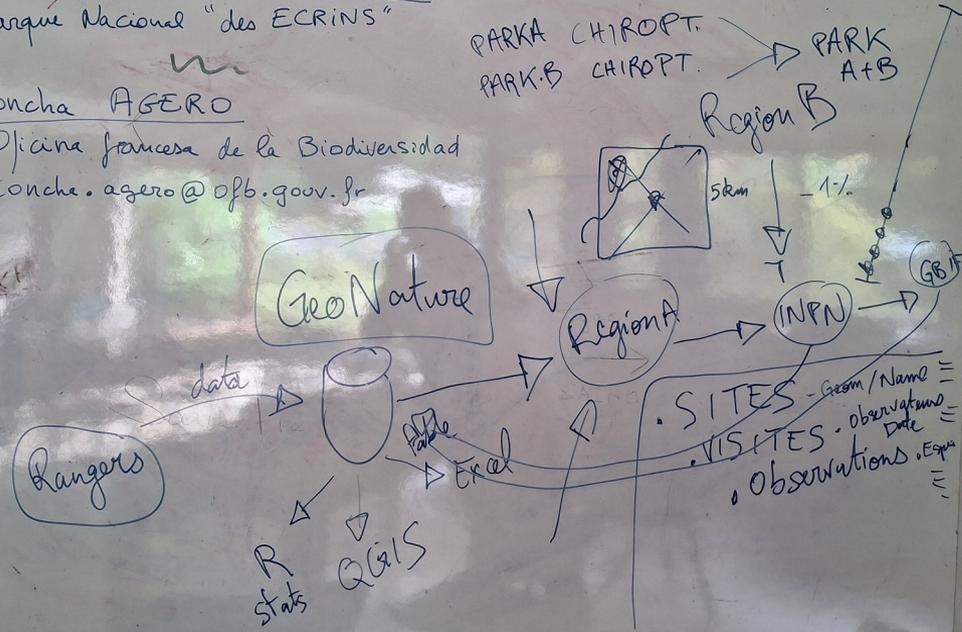


Day 1 - Presentations

- Camille MONCHICOURT
Parque Nacional "des ECRINS"

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Oficina francesa de la Biodiversidad
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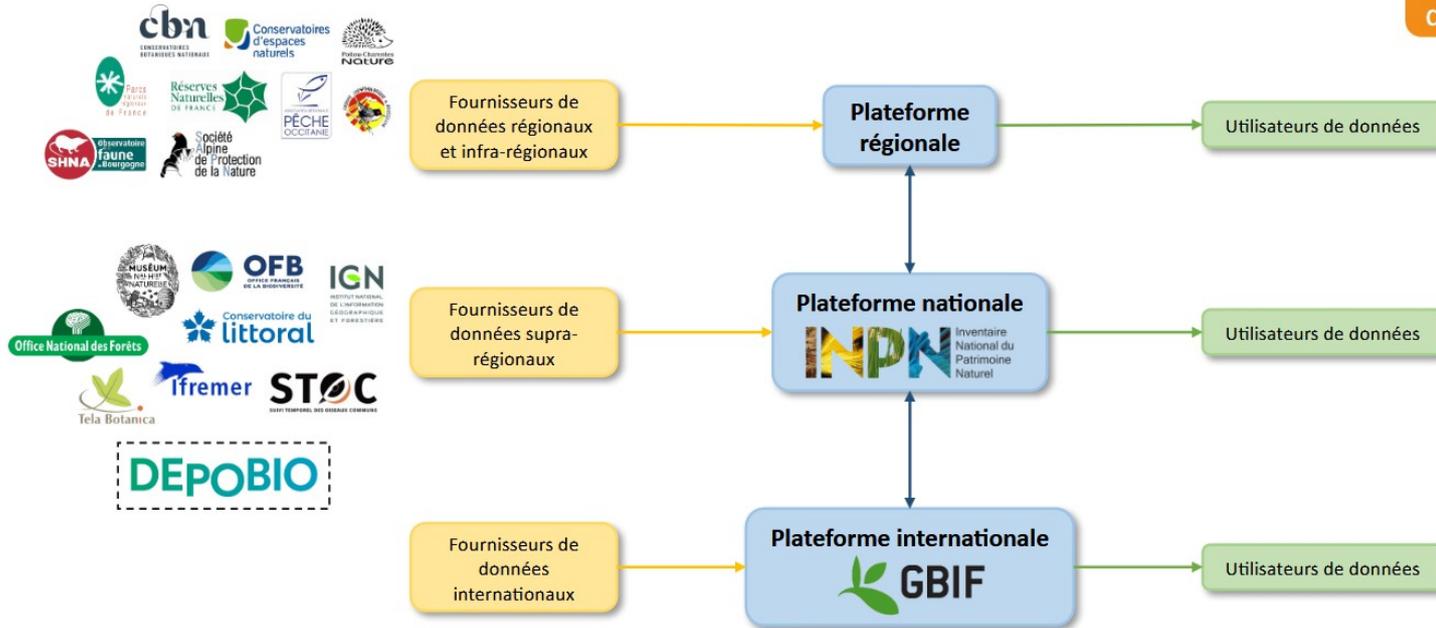
Day 1 - Presentations



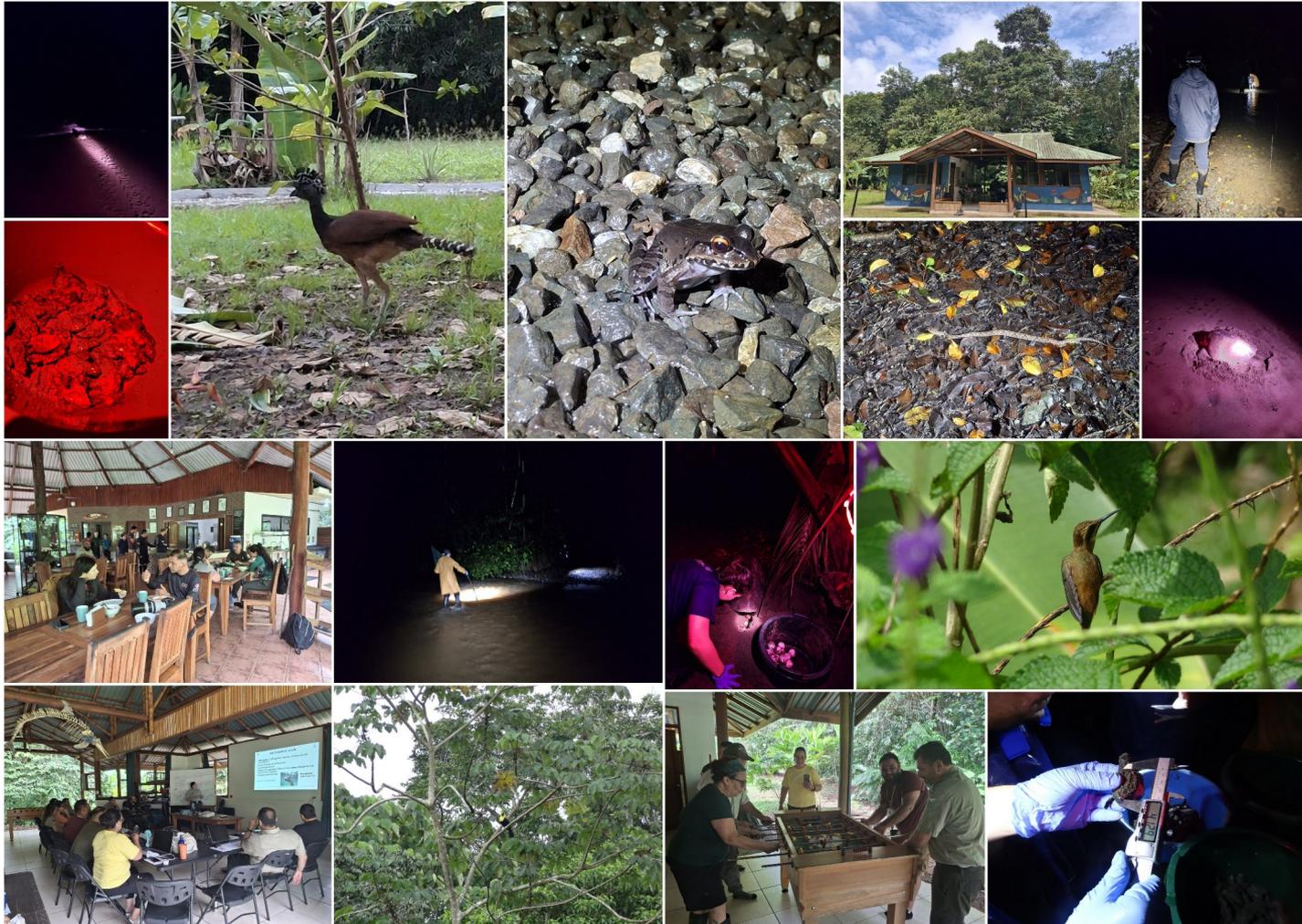
Le SINP, dispositif **décentralisé**

L'architecture du SINP et la circulation des données partagées

Principe de dépôt unique !



Day 1



Day 2

Friday October 17th

- Excursion to visit Corcovado national park (La Leona sector)
- Mapping challenge (QGIS and open data training and challenging) - GBIF, OSM, SNIT, ...

Learn and train QGIS in 2 hours

Manipulate and discuss the power of open source tools and open data

Each one has to generate and present a map of his choice.

Meeting and exchange with rangers on-site, gaining a better understanding of the scientific monitoring activities conducted in the field, along with their constraints and challenges.

Back at the Osa station (4:00–6:00 p.m.)

“QGIS Mapping Challenge” – creation of maps in QGIS, with participants practicing the use of open data sources such as GBIF, OSM (OpenStreetMap), and SNIT (Costa Rica’s national open data reference platform, similar to France’s IGN).

Day 2

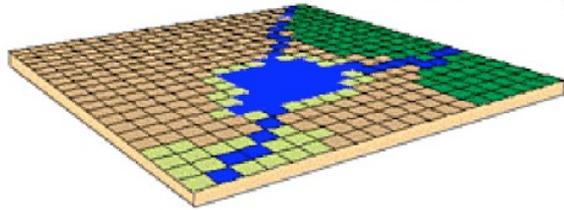


Day 2

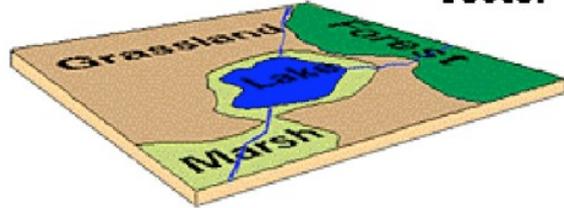


Day 2 - QGIS Mapping challenge

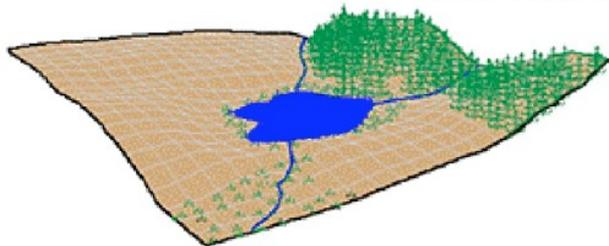
Raster / Image



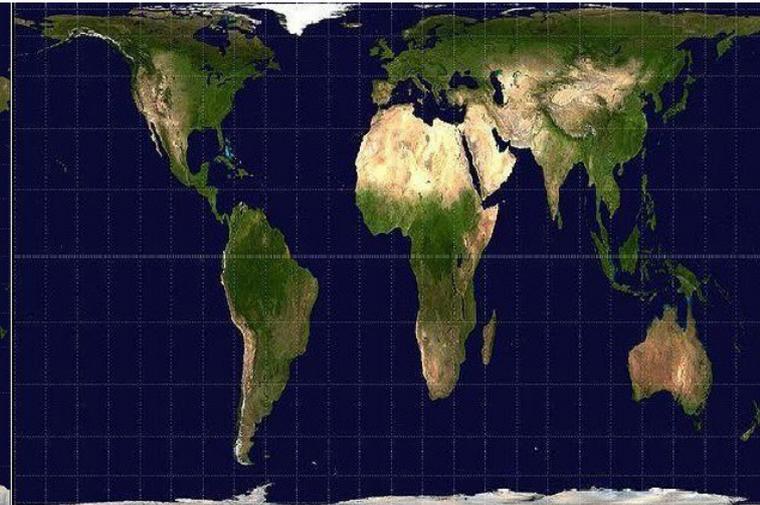
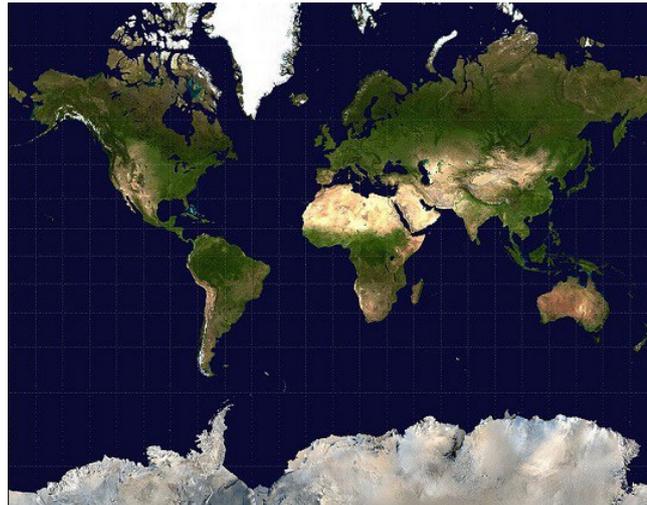
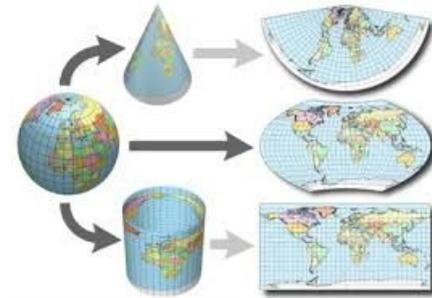
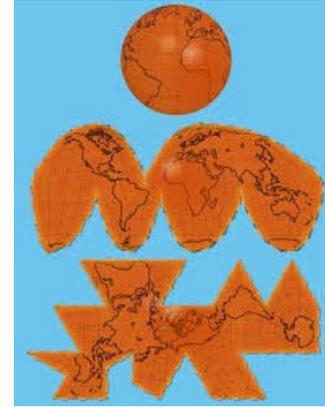
Vector



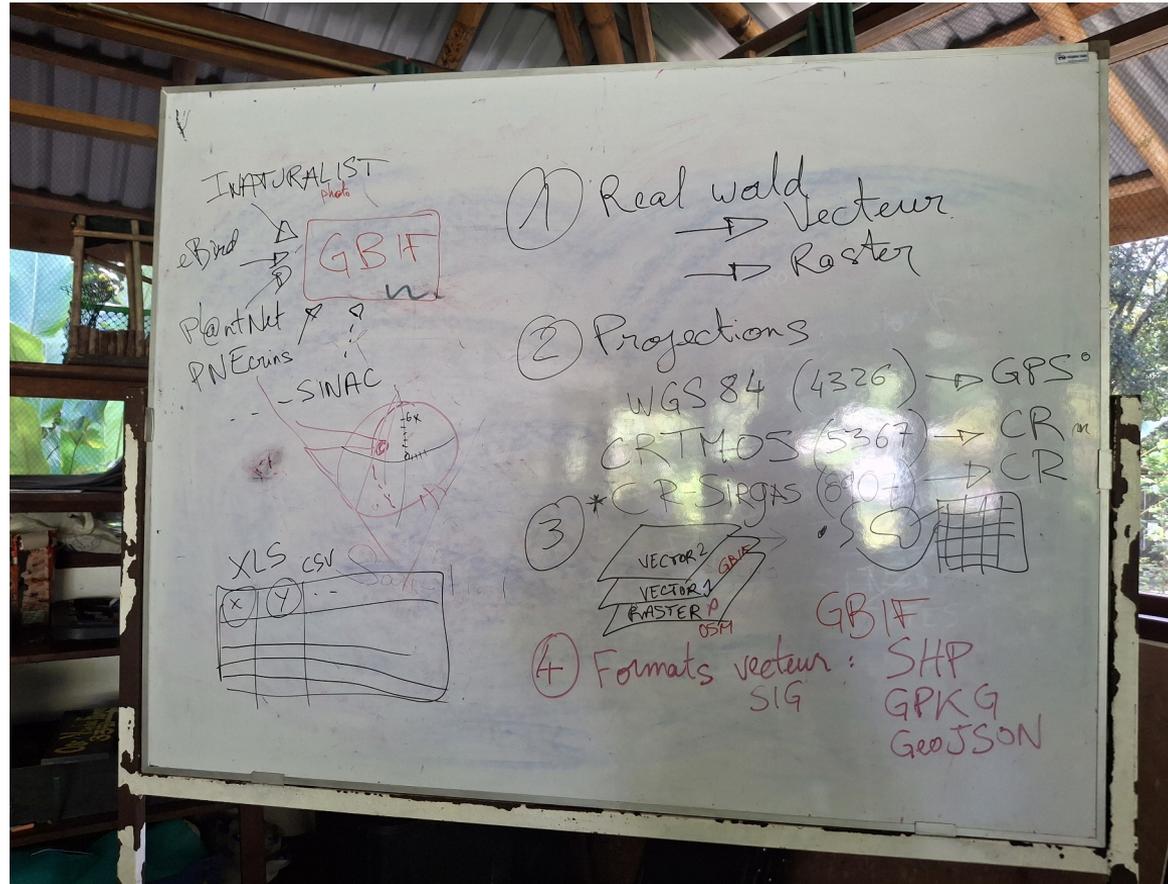
Real World



- 2 concepts :
- Raster / Vector
 - Projections



Day 2 - QGIS Mapping challenge



Day 2 - GBIF in Costa Rica

gbif.org/occurrence/search?country=CR

Get data How-to Tools Community About

SEARCH OCCURRENCES | 37,154,089 RESULTS

TABLE GALLERY MAP TAXONOMY METRICS DOWNLOAD

Scientific name	Country or area	Coordinates	Event date	Occurrence status	Basis of record	Dataset	Kingdom
<i>Pygocheilidon cyanoleuca</i> (Viellot, 1817)	Costa Rica	10.3N, 84.8W	2025 Jan 02	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Amazilia tzacatl</i> (de la Llave, 1833)	Costa Rica	10.0N, 84.1W	2025 Jan 03	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Egretta tricolor</i> (Statius Mullet, 1776)	Costa Rica	9.8N, 84.6W	2025 Jan 01	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Florisuga mellivora</i> (Linnaeus, 1758)	Costa Rica	9.8N, 83.6W	2025 Jan 03	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Playa cayana</i> (Linnaeus, 1766)	Costa Rica	10.3N, 84.8W	2025 Jan 02	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Myiozetetes similis</i> (Spix, 1825)	Costa Rica	10.3N, 84.8W	2025 Jan 02	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Psarocolius montezuma</i> (Lesson, 1830)	Costa Rica	10.0N, 84.1W	2025 Jan 03	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Thamnophilus bridgesi</i> P.L.Sclater, 1856	Costa Rica	9.4N, 84.1W	2025 Jan 02	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Mniotilta varia</i> (Linnaeus, 1766)	Costa Rica	9.8N, 83.6W	2025 Jan 03	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Playa cayana</i> (Linnaeus, 1766)	Costa Rica	9.4N, 83.6W	2025 Jan 02	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Turdus grayi</i> Bonaparte, 1838	Costa Rica	10.0N, 84.1W	2025 Jan 03	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Eurypyga helias</i> (Pallas, 1781)	Costa Rica	9.8N, 83.6W	2025 Jan 04	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Pyrrhula haematotis</i> (P.L.Sclater & Salvin, 1860)	Costa Rica	9.8N, 83.6W	2025 Jan 04	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Amazilia tzacatl</i> (de la Llave, 1833)	Costa Rica	9.8N, 83.6W	2025 Jan 04	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Myiozetetes similis</i> (Spix, 1825)	Costa Rica	9.4N, 83.6W	2025 Jan 03	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Myiodynastes maculatus</i> (Statius Muller, 17...	Costa Rica	9.4N, 84.1W	2025 Jan 04	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Sula brisson</i> , 1760	Costa Rica	10.0N, 84.9W	2025 Jan 01	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Tangara gyrola</i> (Linnaeus, 1758)	Costa Rica	9.4N, 83.6W	2025 Jan 03	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Momotus lessonae</i> R.Lesson, 1842	Costa Rica	10.3N, 84.8W	2025 Jan 02	Present	Human observation	Observation.org_Nature data from around 1...	Animalia
<i>Discosura conversii</i> (Bourcier & Mulsant, 18...	Costa Rica	9.8N, 83.6W	2025 Jan 04	Present	Human observation	Observation.org_Nature data from around 1...	Animalia

37,165,980 occurrences / https://www.gbif.org/occurrence/gallery?country=CR&occurrence_status=present

Day 2 - GBIF in Costa Rica

SEARCH OCCURRENCES | 37,165,980 RESULTS

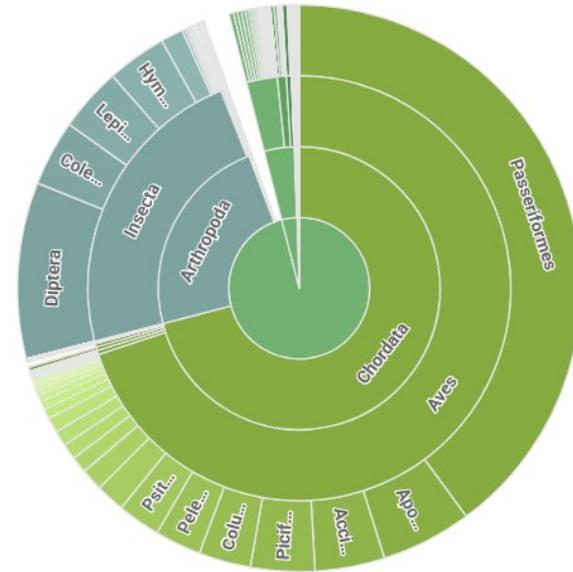
TABLE GALLERY MAP TAXONOMY METRICS [DOWNLOAD](#)

TAXONOMIC DISTRIBUTION OF OCCURRENCES

Explore Major groups

Animalia	35,665,590
Plantae	1,326,410
Fungi	128,115
Chromista	17,873
Bacteria	9,898
Protozoa	6,925
Viruses	664
Archaea	159
incertae sedis	152

TAXONOMIC DISTRIBUTION OF OCCURRENCES

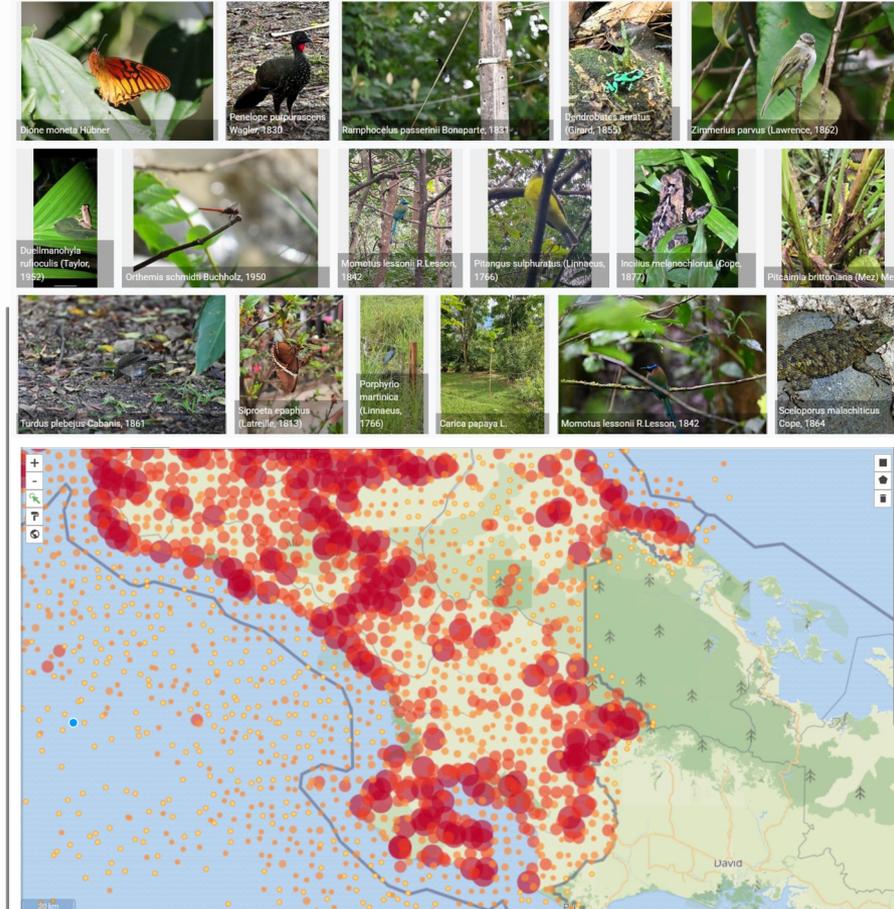


Day 2 - GBIF in Costa Rica

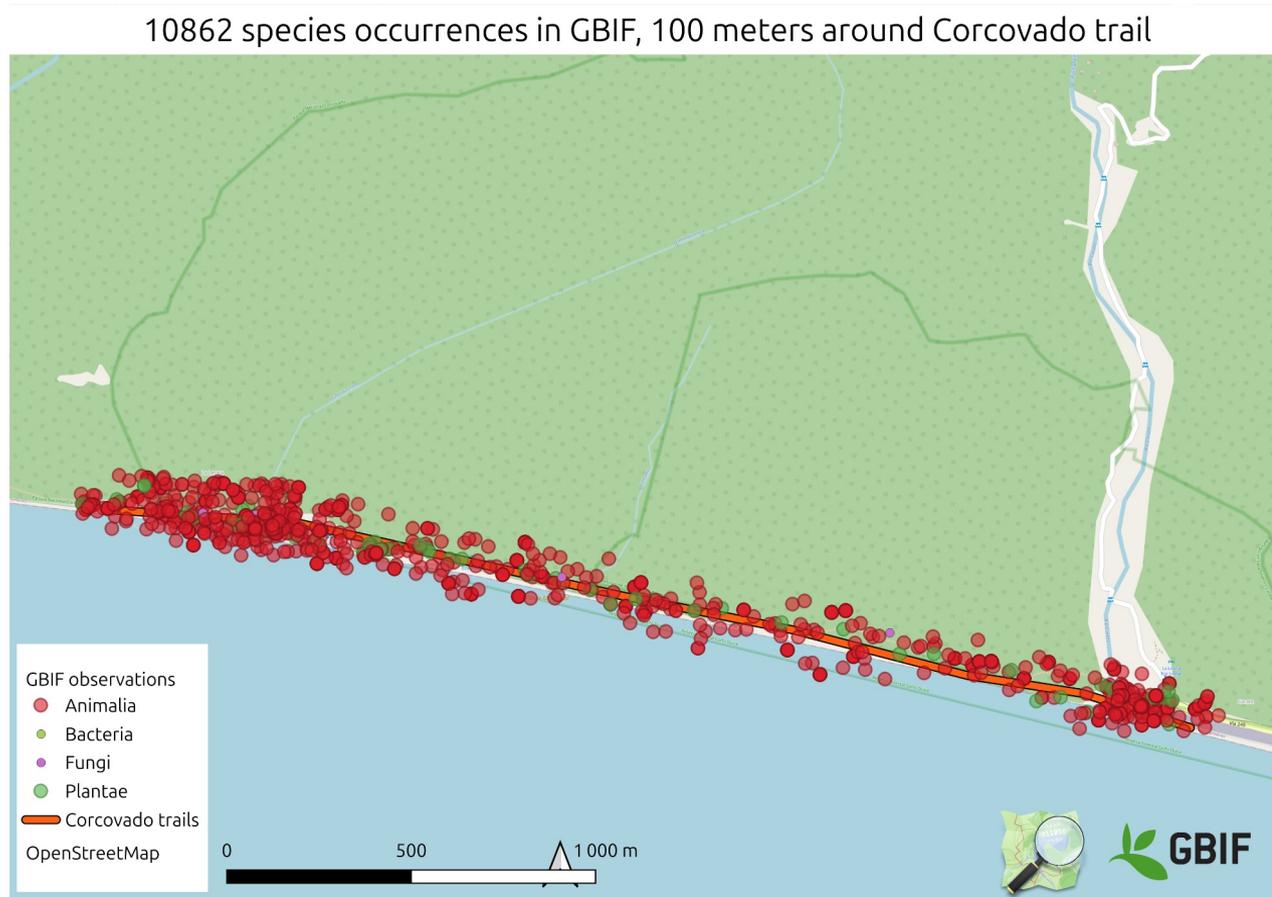
OCCURRENCES PER DATASET

Dataset	Count	
↻ EOD – eBird Observation Dataset	25,414,310	<div style="width: 100%;"></div>
↻ International Barcode of Life project (iBOL)	4,995,237	<div style="width: 80%;"></div>
↻ Insecta of Costa Rica (INBio)	3,276,500	<div style="width: 60%;"></div>
↻ iNaturalist Research-grade Observations	649,163	<div style="width: 30%;"></div>
↻ Plantae of Costa Rica (INBio)	352,692	<div style="width: 20%;"></div>
↻ Tropicos MO Specimen Data	202,222	<div style="width: 15%;"></div>
↻ INSDC Sequences	191,052	<div style="width: 15%;"></div>
↻ herbario	174,944	<div style="width: 15%;"></div>
↻ LACM Entomology Collection	128,311	<div style="width: 10%;"></div>
↻ Observation.org, Nature data from around the World	120,791	<div style="width: 10%;"></div>

NEXT



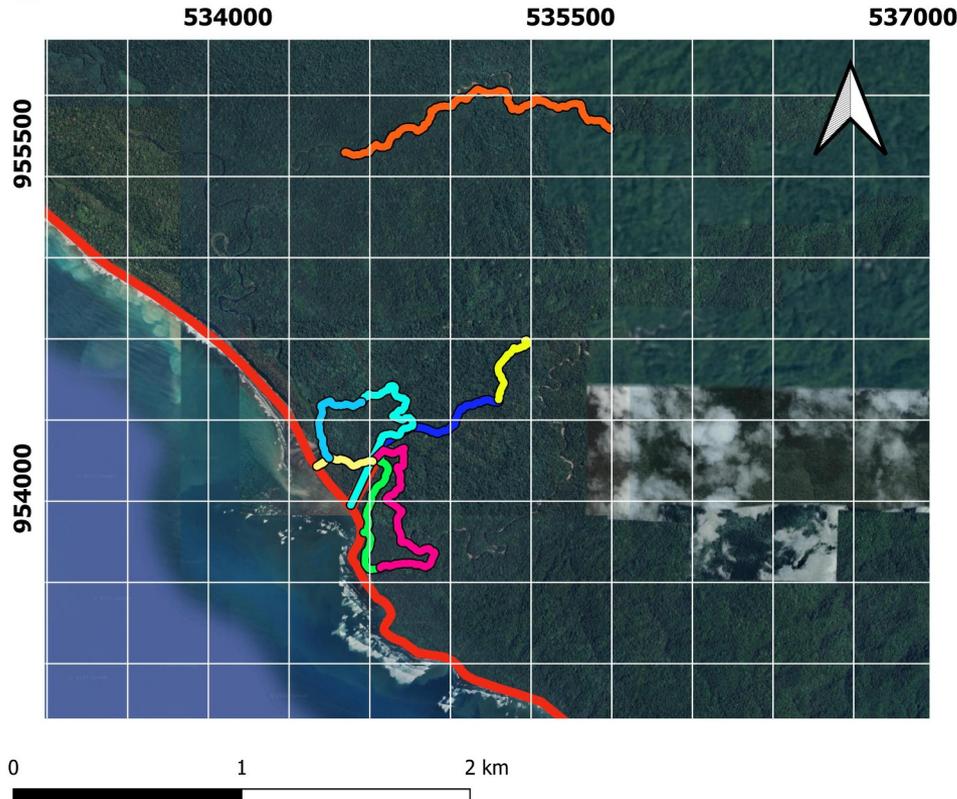
Day 2 - QGIS Mapping challenge



Day 2 - QGIS Mapping challenge



Red de senderos de la Estación Sirena, Parque Nacional Corcovado; Costa Rica.



Leyenda

-  P.N. Corcovado
-  SEN. SIRENA
-  SEN. RIO SIRENA
-  SEN. RIO CLARO
-  SEN. OLLA
-  SEN. NARANJO
-  SEN. ESPAVEL
-  SEN. CORCOVADO PC
-  SEN. CONCHA

Google Satellite

Google Maps

GOLFO DULCE-CRTM05
LLORONA-CRTM05
CARATE-CRTM05
MADRIGAL-CRTM05

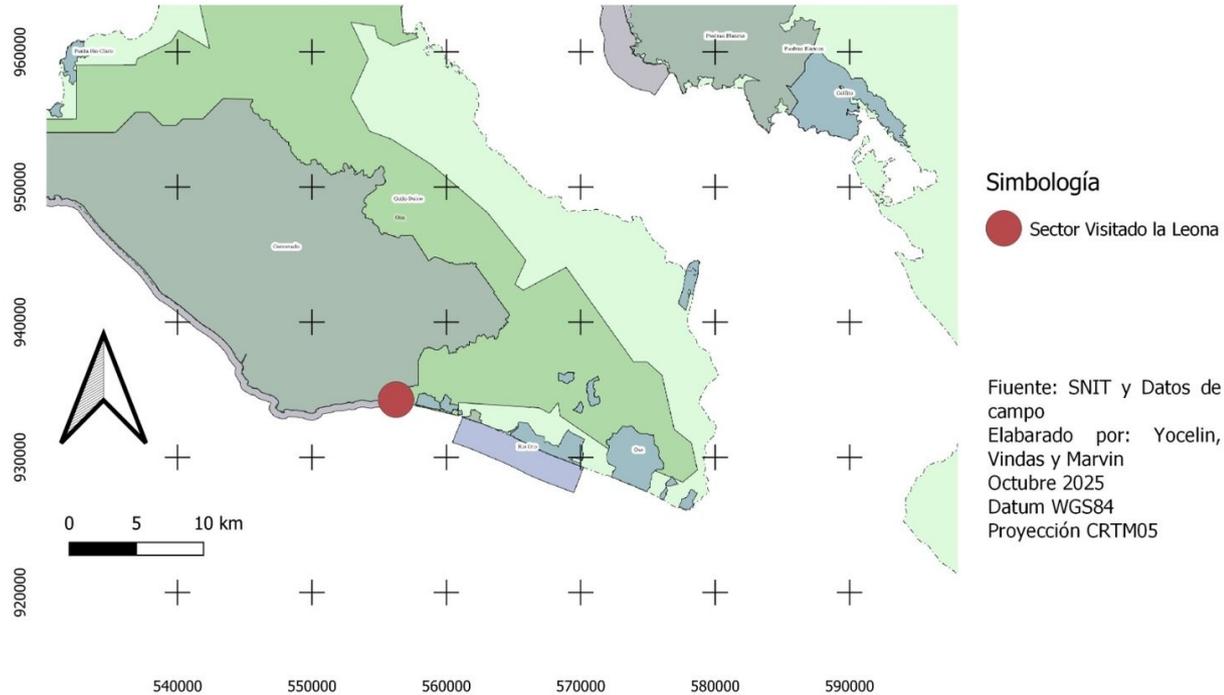
Proyección CRTM05
Datum WGS84

Fuente: Patrimonio Natural del
Estado
Hojas Cartográficas: Atlas 2014

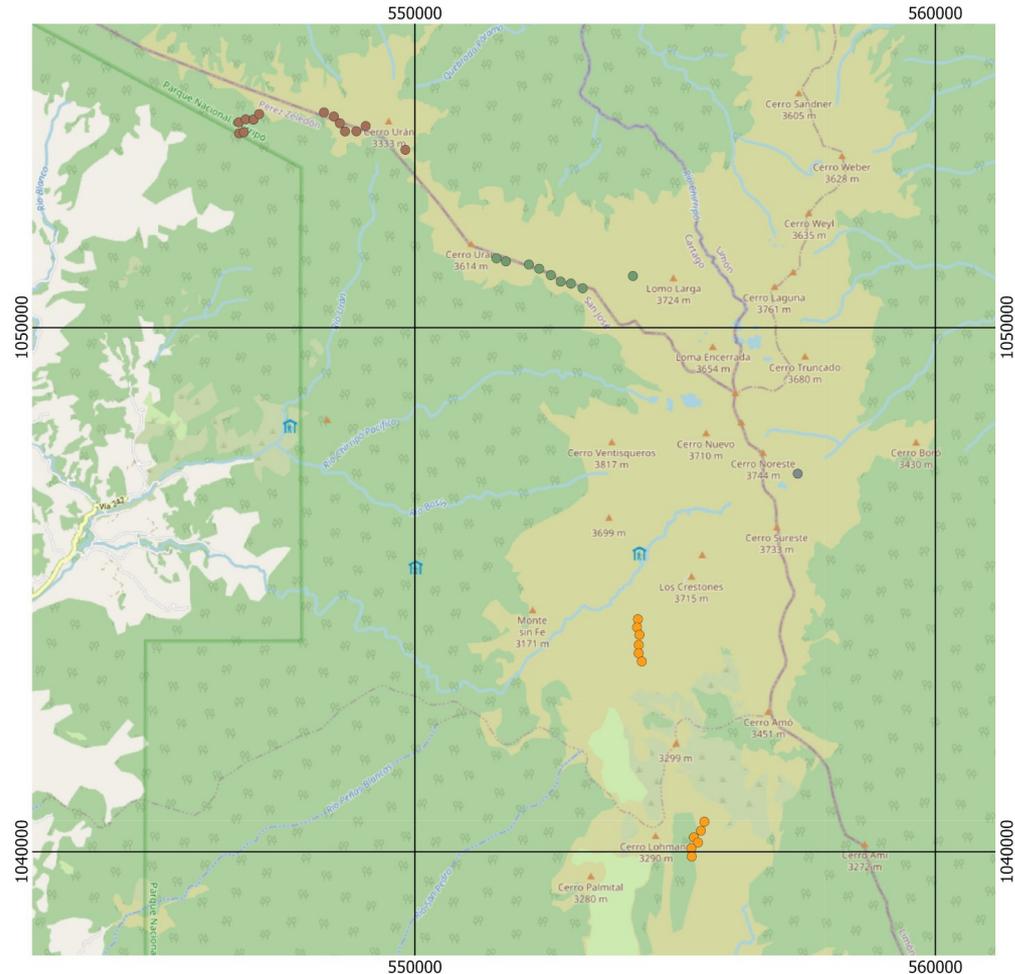
Elaborado por:
Téc. Jeyson Céspedes Vindas
SINAC-ACOSA-RFGD
10 de octubre del 2025

Day 2 - QGIS Mapping challenge

Visita de la mejor delagación Francesa y Tica a Corcovado



Day 2 - QGIS Mapping challenge



MAPA TRANSEPTO MONITOREO DE AVES PN CHIRRIPO

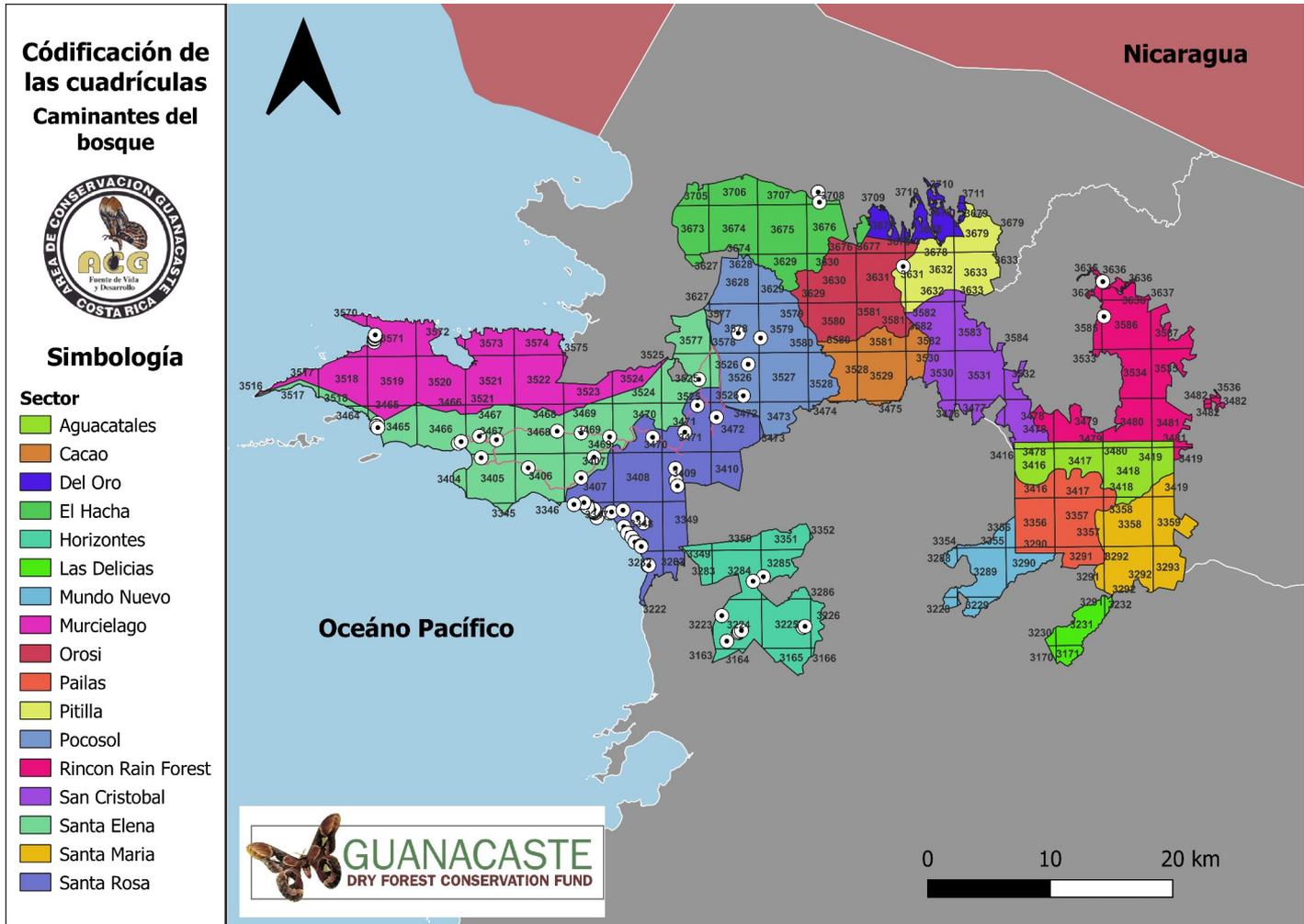
- Uran primer dia
 - Uran segundo dia
 - Camara Ditkevi
 - Sabana de los Leones
- OpenStreetMap

Ubicación: Parque Nacional Chirripó
Equipo Utilizado: Garmin 62s msp
Proyección: CRTM05
Fecha de Levantamiento: Del 26 al 28 de mayo, 2025.

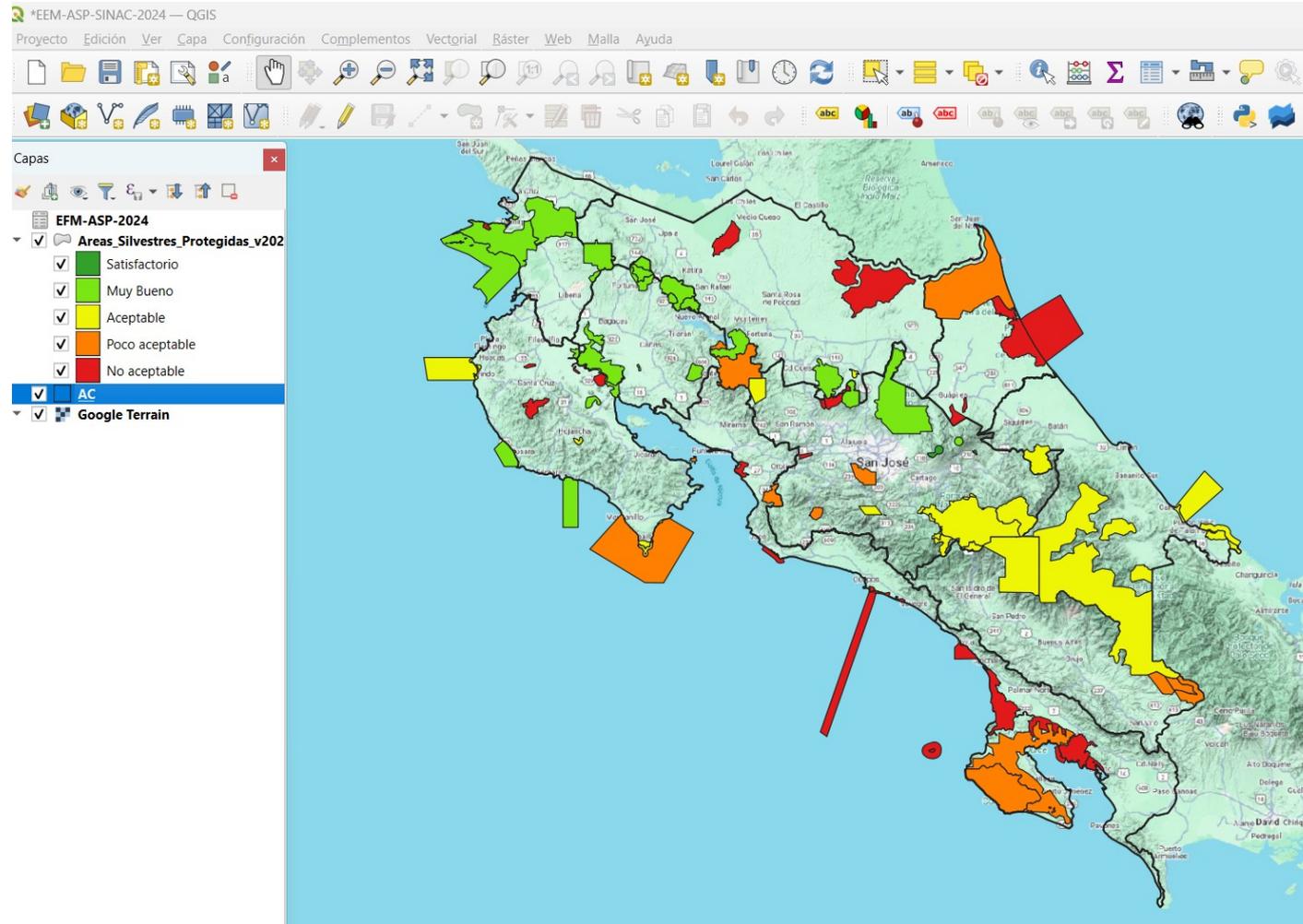
Datos: Ivan Leitón Zúñiga
Diseño: Harold Madrigal Ortega



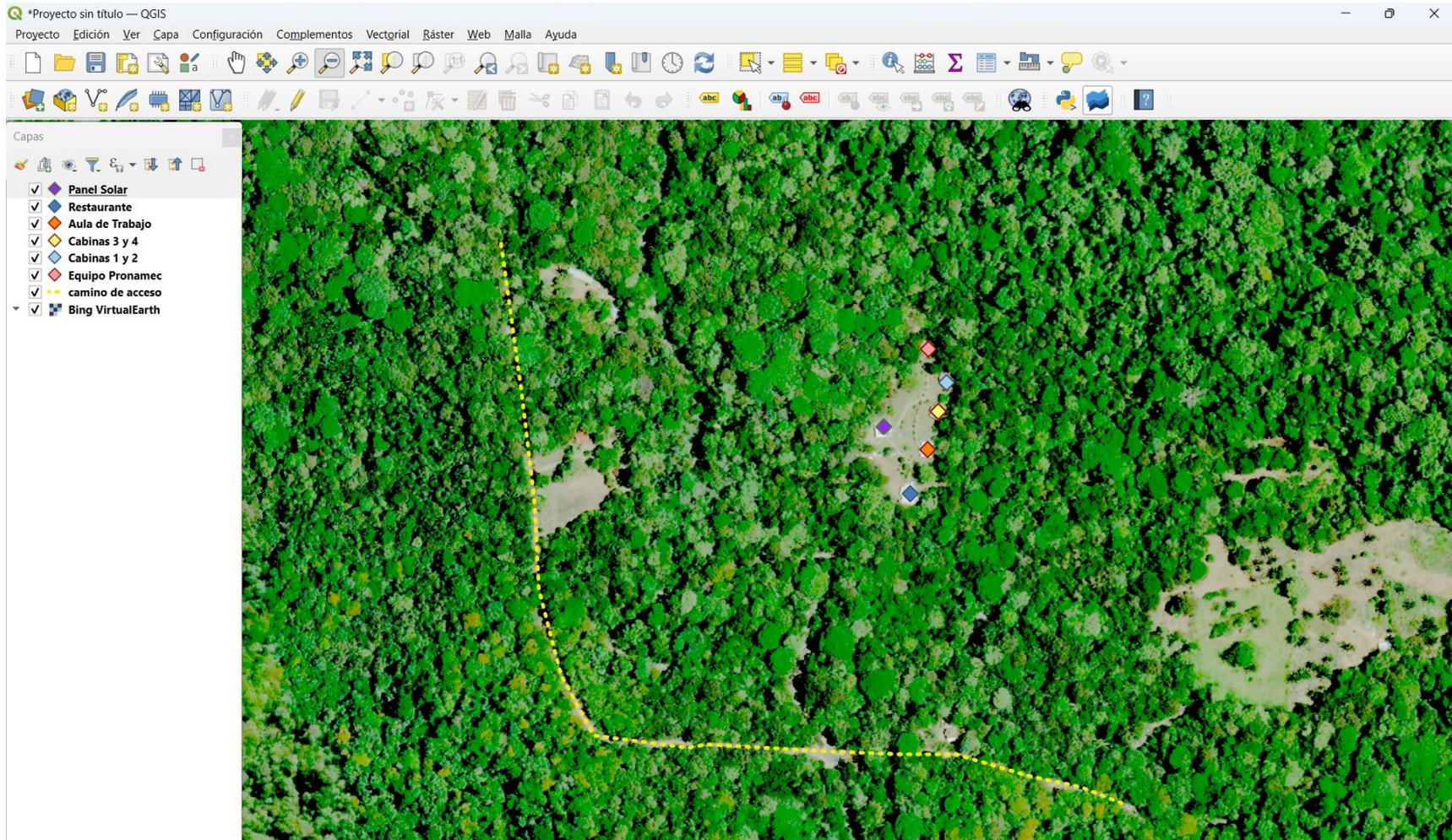
Day 2 - QGIS Mapping challenge



Day 2 - QGIS Mapping challenge



Day 2 - QGIS Mapping challenge



Day 2 - QGIS Mapping challenge



Day 2 - QGIS Mapping challenge



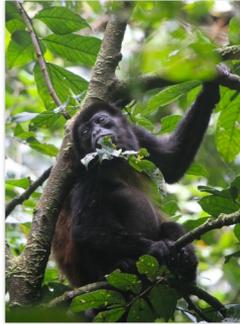
Day 2 - QGIS Mapping challenge



Jorge Alonso Vindas Angul



Jorge Alonso Vindas Angul



Contribution to Wikimedia commons

WIKIMEDIA COMMONS

English Camille.monchicourt

File:Saimiri-oerstedii-OSA-Costa-Rica-2025-10-Jorge-Alonso-Vindas-Angul.jpg

File Discussion Read Edit View history

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[Original file](#) (1,200 × 1,600 pixels, file size: 370 KB, MIME type: image/jpeg); [request rotation](#)

Tools

Actions

Move

General

[What links here](#)

[Related changes](#)

[Permanent link](#)

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[Download QR code](#)

[Concept URI](#)

[Nominate for deletion](#)

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Appearance

Text

Small

Standard

Large

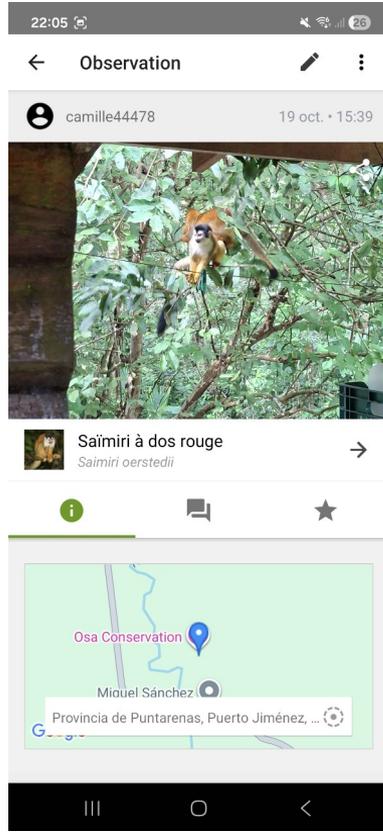
This page always uses small font size

Width

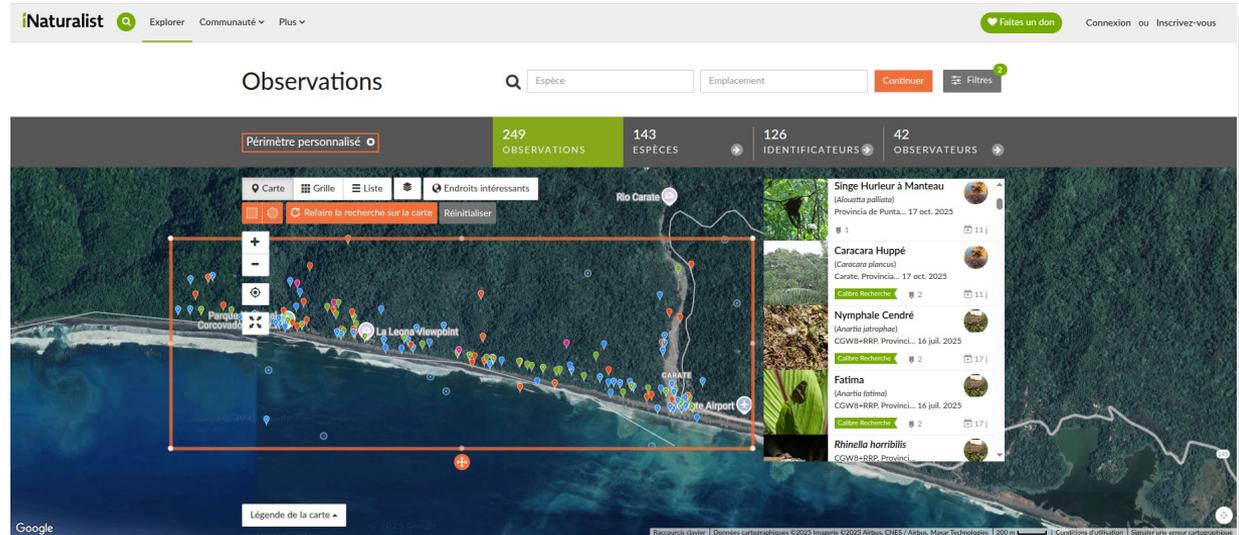
Standard



iNaturalist



« iNaturalist is an online social network of people sharing biodiversity information to help each other learn about nature »
iNaturalist is an international database, open source web and mobile application and community. It is managed by an independent nonprofit organization.



<https://www.inaturalist.org/>

iNaturalist / GBIF

Along with several other data sources, iNaturalist feeds the GBIF database.

« GBIF—the Global Biodiversity Information Facility—is an international network and data infrastructure funded by the world's governments and aimed at providing anyone, anywhere, open access to data about all types of life on Earth. »



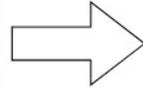
eBird

iNaturalist



...

AGREGATION



GBIF

<https://www.gbif.org>

(publishing)



DATA PROVIDERS



(access)



GBIF.org



(use)



USERS

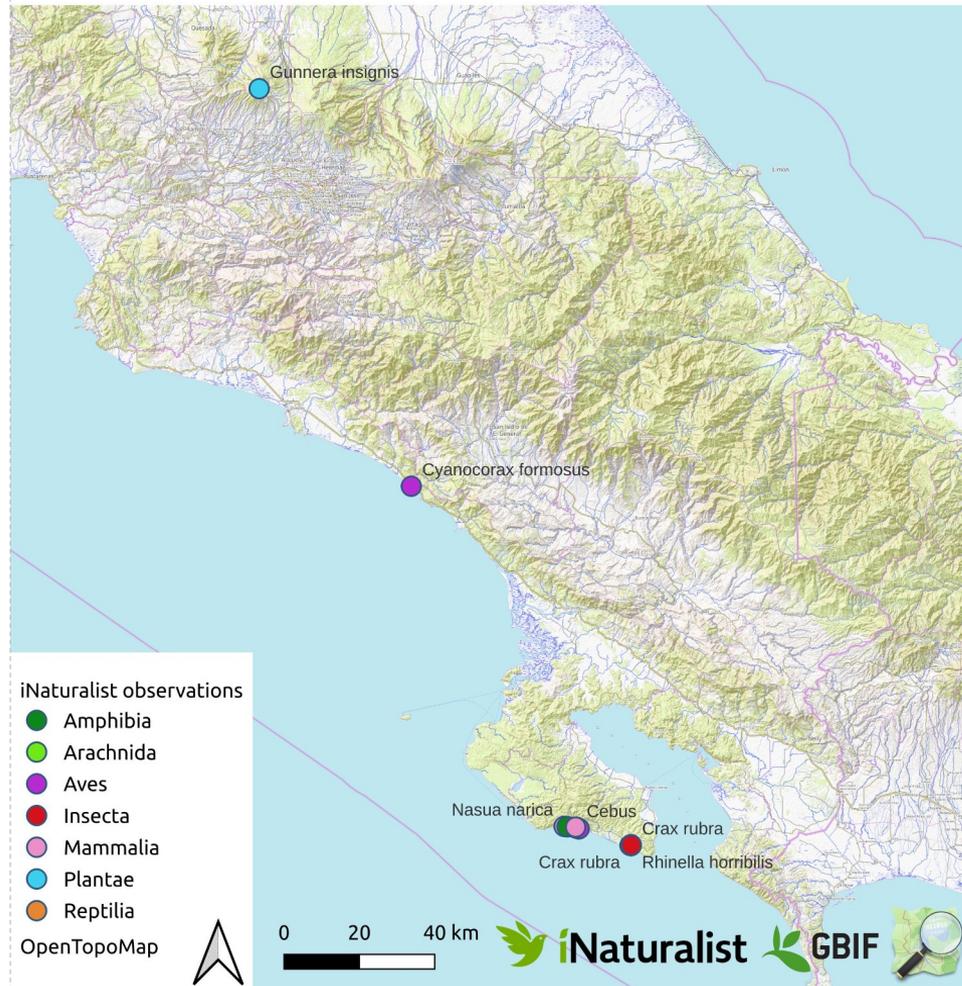
iNaturalist contribution

249 observations from 143 species, by 42 observers in iNaturalist / GBIF since 2025-01-01



iNaturalist contribution

31 species observed during the excursion and published in iNaturalist / GBIF



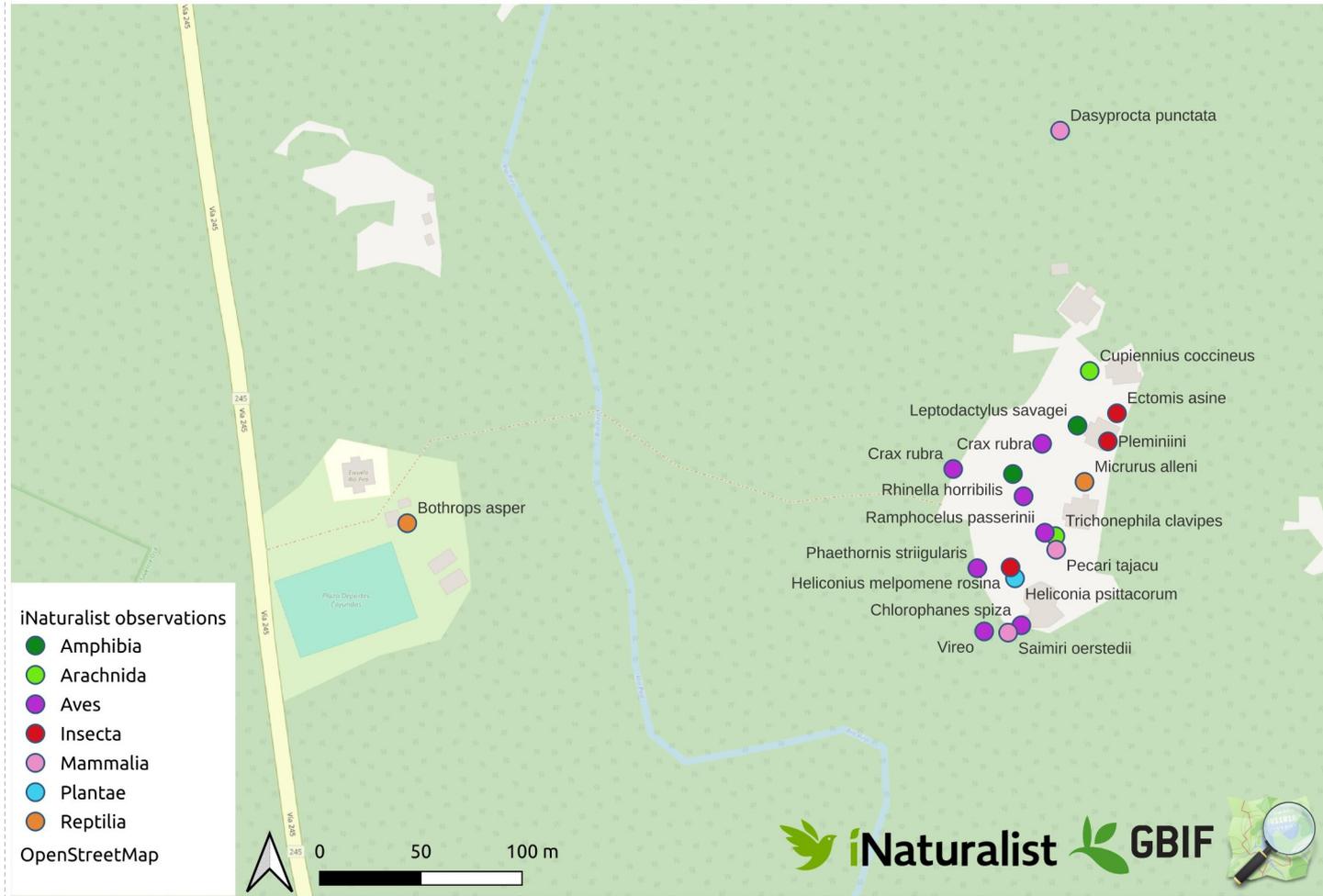
iNaturalist contribution

8 species observed during the excursion and published in iNaturalist / GBIF



iNaturalist contribution

21 species observed at the scientific station during the mission and published in iNaturalist / GBIF



iNaturalist contribution



Day 3 – Camera traps



Day 3 – Camera traps

Saturday October 18th

- QGIS Mapping challenge latest restitutions

Camera traps :

- Wolf and camera traps in PNE
- Automatic analysis of camera traps data in France (DeepFaune + ecoSecrets)
- Concepts and tools for automatic analysis
- Testing tools together on Costa Rica data
- Pronamec ecoMonitorio (Luis)
- Corcovado monitoring of jaguar with camera traps (Alejandro)
- Camera traps masking in France (ONF – OFB)
- OFB jaguar monitoring in French Guyana with genetic
- Late start of Pronamec vision workshop with those leaving the day after Morning
- Launch automatic analysis of 6012 camera trap images of Alejandro

Third day at the scientific station.

It began with presentations of each participant's work as part of the mapping challenge held the previous day, aimed at raising awareness of open-source software and open data.

Discussions then focused on camera traps, as well as the management and analysis of the data they produce — whether for wolf monitoring in France or jaguar monitoring in Costa Rica.

The day concluded late in the evening with small-group discussions to jointly identify desired developments for Costa Rica's biodiversity data platform, as well as to reflect on the ranger profession and the shared challenges faced by protected areas in both countries.

All of this took place, as always, surrounded by the vibrant and generous nature.

Day 3 – Camera traps



Day 3 – Camera traps



Day 3 – Camera traps

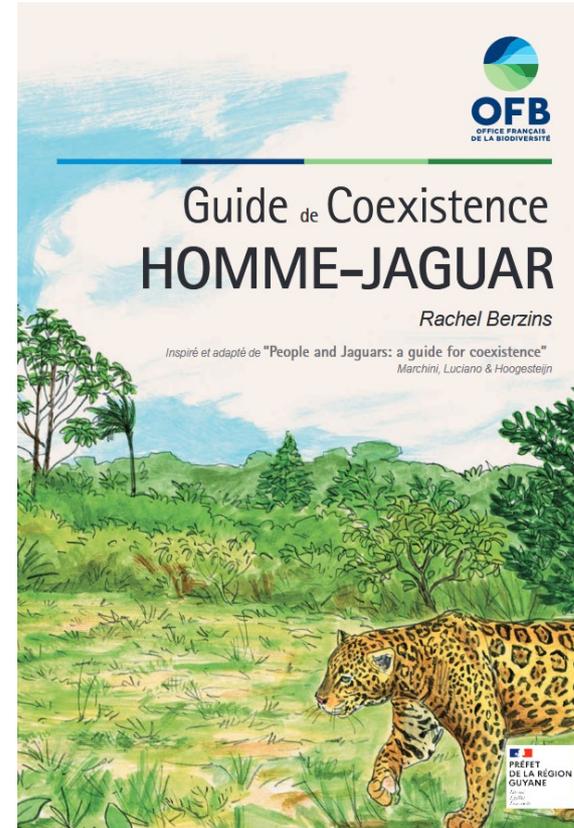


Day 3 – Camera traps

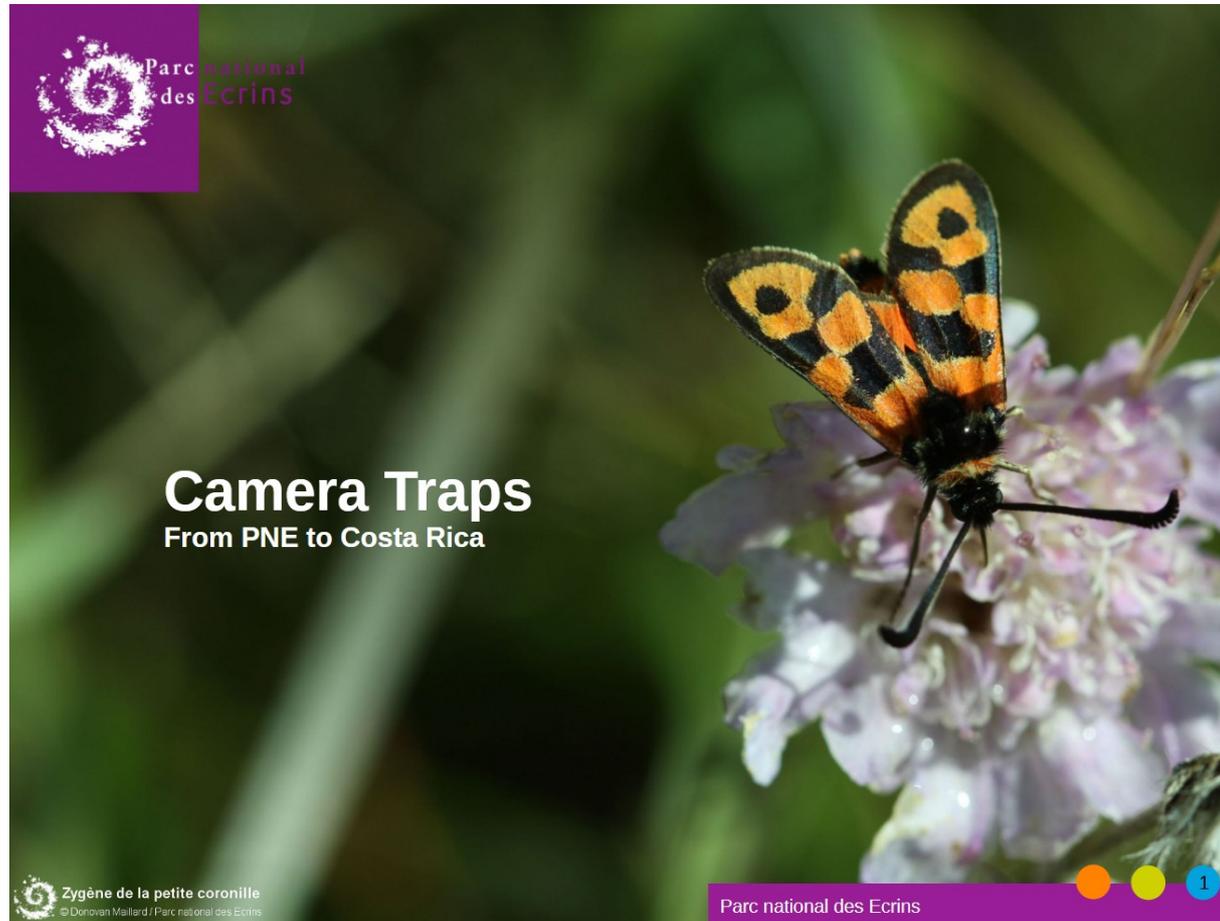


- Conflictos jaguar/hombre en Guyana francesa :
https://guyane.ofb.fr/wp-content/uploads/2021/04/OFB_LivretJaguar_MAJ_032020.pdf

- Monitoreo de los jaguars y pumas en Guyana francesa:
<https://guyane.ofb.fr/decouvrir-les-etudes-de-la-faune-sauvage-et-de-la-chasse/les-etudes-realisees-et-en-cours/le-programme-de-resolution-des-conflits-homme-jaguar/#amlioration-des-connaissancesfinancement-cnes>



Day 3 – Camera traps



Full presentation : <https://geonature.fr/documents/autres/2025-Costa-Rica/2025-10-Camera-Traps-PNE.pdf>

Day 3 – Camera traps

Parc national des Écrins

Découvrir Le Parc national Les patrimoines Parc en actions Le journal du parc Boutique FAQ

Accueil » Le journal du parc » Dossiers

Loup, qui es-tu ? D'où viens-tu ? Où vas-tu ?

Mardi 09 Juillet 2024



Corentin Esmieu

Il fascine, intrigue ou effraie, mais reste encore très mystérieux du fait de sa grande discrétion. Depuis le retour du loup dans le massif des Écrins, les agents du Parc national via le réseau Loup-Lynx collectent patiemment les indices de sa présence. Grâce au projet LIENS mené sur deux ans, toutes les données accumulées ont parlé et ont permis d'esquisser un scénario de la recolonisation des Écrins par le grand canidé.

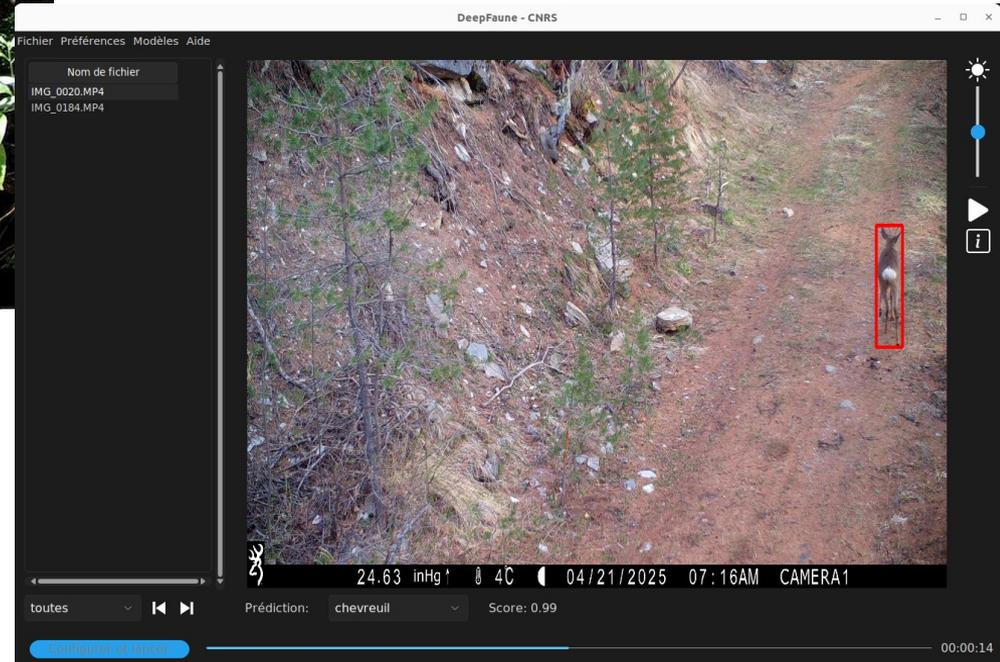
Articles liés

 <p>15/10/2025 Retour en Champsaur, épisode 8</p>	 <p>30/09/2025 Gypaètes barbus : aidez-nous à les...</p>
 <p>30/09/2025 Retour en Champsaur, épisode 7</p>	 <p>09/09/2025 Quand les aigles laissent des plumes</p>

<https://www.ecrins-parcnational.fr/dossier/loup-es-viens-vas>

Spanish translation : <https://geonature.fr/documents/autres/2025-Costa-Rica/Wolves-Genetic-PNE-Spanish.pdf>

Day 3 – Camera traps



Day 3 – Camera traps

(A)

Project / Study

Deployment
29b7d356
from T1 to T1000



Media file
59b38bc6 at T200



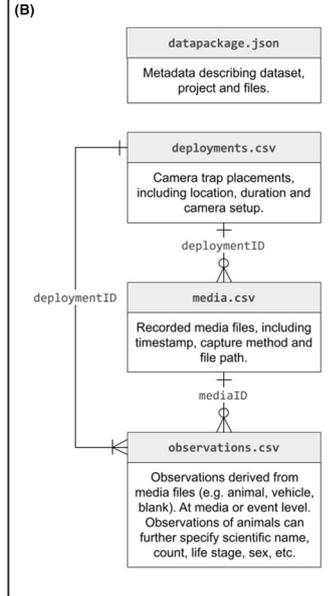
Media file
cc50edaa at T201



Media file
0966e552 at T202



observation ID	observation Level	media ID	event Start	event End	scientificName	count
obs1	media	59b38bc6	T200	T200	Anas platyrhynchos	3
obs2	media	cc50edaa	T201	T201	Anas platyrhynchos	4
obs3	media	0966e552	T202	T202	Anas platyrhynchos	4
obs4	event		T200	T202	Anas platyrhynchos	5



demo.ecosecrets.natural-solutions.eu/project/15

Deployments (2)

NEW DEPLOYMENT

Nom Start date End date Site Dispositif

Name	Start date	End date	Site name	Device name	Import media files	Delete this deployment
Automone combe bidule	22/09/2025	30/09/2025	bidule	Piege photo 1	+	×
iala	09/07/2025	05/08/2025	Peyrelevalde	Piege photo 1	+	×

Study area



Camtrap DP - Data exchange standard for camera trap data

Day 3 – Camera traps

Everything I know about ML and camera traps

[View on GitHub](#)

Overview

This is a list of everything I know about machine learning and camera traps, which is presumably just a subset of what's out there... [email me](#) with updates, or submit pull requests. Help me keep this page up to date! And tell me what I got wrong about your software and your papers!

Maintained by Dan Morris. Disclosure of what I work on: I contribute to several projects on ML for camera traps (particularly, [MegaDetector](#), [SpeciesNet](#), and [Wildlife Insights](#)) and an open repository for conservation data ([Illa.science](#)). And since I've disclosed that, I can say that although I don't filter papers for this list based on whether they use stuff I've worked on, I *do* use this list as a way of tracking how those systems are being used, so in the "papers" sections, you will see tags for a few things I want to track.

Table of Contents

[Camera trap systems using ML](#)
[Systems in active development](#)

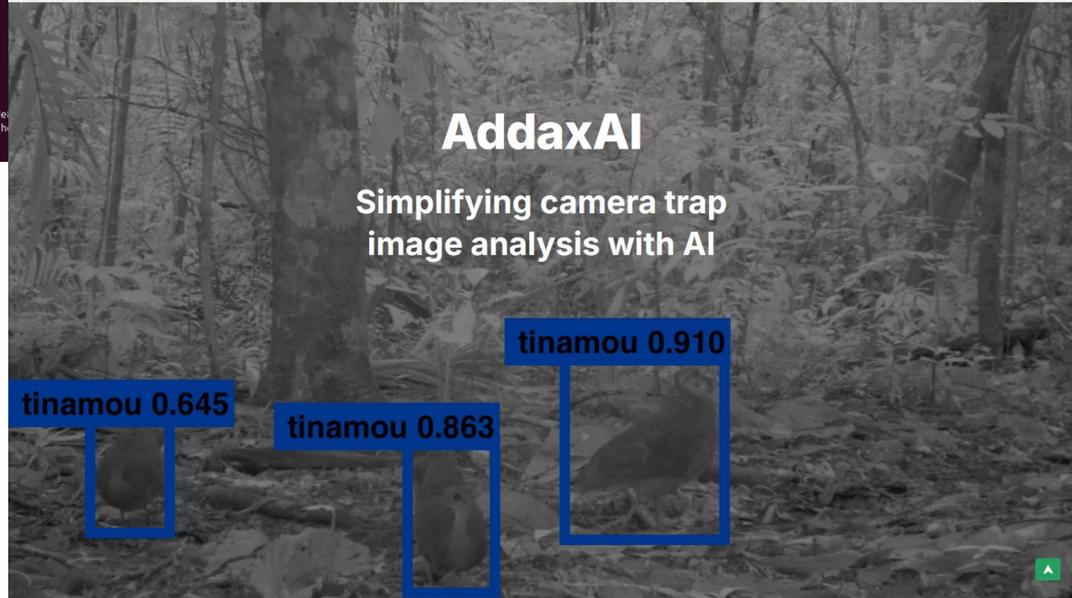
The screenshot shows the WildLabs.Net website interface. At the top, the navigation bar includes 'WILDLABS.NET [The conservation technology network]', 'Search', 'Login', 'Explore', 'Connect', 'Resources', 'About', and 'Join'. The main content area features a post titled 'We are releasing SpeciesNet' dated '3 March 2025'. Below the title is a profile card for Stefan Istrate, a Machine Learning Researcher & Nature Photographer, with links to his GitHub and LinkedIn. The card also lists 'AI for Conservation' and 'Camera Traps' as groups. To the right, a camera trap image shows a giant armadillo in a forest at night, with a green bounding box and AI detection labels: 'animal: 93%' and 'giant armadillo: 99.8%'. The bottom of the image shows metadata: 'Rishmall', 'CTLU10', '73°F 22°C', '04-21-2020', and '03:40:38'.

Day 3 – Camera traps

```
camille@costa-rica: ~/Documents/DEV/speciesnet
Requirement already satisfied: executing>=1.2.0 in ./env/lib/python3.12/site-packages (from stack_data->ipython->yolov5<7.0.12,>=7.0.8->speciesnet) (2.2.1)
Requirement already satisfied: asttokens==2.1.0 in ./env/lib/python3.12/site-packages (from stack_data->ipython->yolov5<7.0.12,>=7.0.8->speciesnet) (3.0.0)
Requirement already satisfied: pure-eval in ./env/lib/python3.12/site-packages (from stack_data->ipython->yolov5<7.0.12,>=7.0.8->speciesnet) (0.2.3)
(venv) camille@costa-rica: ~/Documents/DEV/speciesnet$ python -m speciesnet.scripts.run_model --folders /home/camille/Documents/PP/02-CERRA/ --predictions_json /home/camille/Documents/PP/02-CERRA-speciesnet.json
/home/camille/Documents/DEV/speciesnet/venv/lib/python3.12/site-packages/yolov5/utils/general.py:34: UserWarning: pkg_resources is deprecated as an API. See https://setuptools.pypa.io/en/latest/pkg_resources.html. The pkg_resources package is slated for removal as early as 2025-11-30. Refrain from using this package or pin to Setuptools<81.
  import pkg_resources as pkg
Downloading 6 files: 0% | 0/6 [00:00<?, ?it/s] Downloading from https://www.kaggle.com/api/v1/models/google/speciesnet/pyTorch/v4.0.1a/1/download/info.json...
100% | 399/399 [00:00:00:00, 1.92MB/s]
Downloading from https://www.kaggle.com/api/v1/models/google/speciesnet/pyTorch/v4.0.1a/1/download/geofence_release_2025_02_27_0702.json...
Downloading from https://www.kaggle.com/api/v1/models/google/speciesnet/pyTorch/v4.0.1a/1/download/always_crop_99710272_22x8_v12_epoch_00148.pt...
Downloading from https://www.kaggle.com/api/v1/models/google/speciesnet/pyTorch/v4.0.1a/1/download/taxonomy_release.txt...
0.00/214M [00:00<?, ?B/s]
Downloading from https://www.kaggle.com/api/v1/models/google/speciesnet/pyTorch/v4.0.1a/1/download/always_crop_99710272_22x8_v12_epoch_00148.labels.txt...
0% | 0.00/343k [00:00<?, ?B/s] Downloading from https://www.kaggle.com/api/v1/models/google/speciesnet/pyTorch/v4.0.1a/1/download/README.md...
100% | 119/119 [00:00:00:00, 366kB/s]
100% | 250k/250k [00:00:00:00, 522kB/s]
100% | 343k/343k [00:00:00:00, 678kB/s]
100% | 5.03M/5.03M [00:01:00:00, 4.95MB/s]
100% | 214M/214M [00:10:00:00, 21.2MB/s]
Downloading 6 files: 100% | 6/6 [00:11:00:00, 1.88s/it]
11019 18:10:59.811550 139445927514240 classifier.py:109] Loaded SpeciesNetClassifier in 24.26 seconds on CPU.
11013 18:11:00.585568 139445927514240 detector.py:99] Loaded SpeciesNetDetector in 0.77 seconds on CPU.
11013 18:11:01.038336 139445927514240 ensemble.py:71] Loaded SpeciesNetEnsemble in 0.45 seconds.
Detector preprocess : 100% | 22/22 [01:23<00:00, 3.79s/it]
Detector predict : 100% | 22/22 [01:23<00:00, 3.79s/it]
Classifier preprocess : 100% | 22/22 [01:23<00:00, 3.79s/it]
Classifier predict : 100% | 3/3 [01:23<00:00, 27.00s/it]
Geolocation : 100% | 22/22 [01:23<00:00, 3.79s/it]
11013 18:12:24.437238 139445927514240 utils.py:581] Saving predictions to '/home/camille/Documents/PP/02-CERRA-speciesnet.tmp.ad4f5089-9cf8-4c26-a45a-ba63a239de88.json'
11013 18:12:24.439078 139445927514240 utils.py:583] Moving '/home/camille/Documents/PP/02-CERRA-speciesnet.tmp.ad4f5089-9cf8-4c26-a45a-ba63a239de88.json' to '/home/camille/Documents/PP/02-CERRA-speciesnet.json'.
(venv) camille@costa-rica: ~/Documents/DEV/speciesnet$
```



HOME SERVICES PROJECTS ADDAXAI SOFTWARE ABOUT CONTACT



AddaxAI

Simplifying camera trap image analysis with AI

tinamou 0.645

tinamou 0.863

tinamou 0.910



Day 3 – Camera traps

Peter van Lunteren, Founder of Addax Data Science



How would I describe myself? I'm an optimistic, methodical, results-oriented, tech-savvy ecologist with a passion for developing data-driven solutions that improve the quality of ecological research. In addition to founding Addax, I have worked for several conservation initiatives over the past ten years and currently serve with four: [Smart Parks](#), conserving endangered wildlife through cutting-edge technologies, [Sensing Clues](#), providing nature conservation organisations with data-driven tools, [Inclusion Foundation](#), supporting village communities in Uganda with a basic income, and [CV4Ecology](#), where I teach ecologists to analyse large image, audio, or video datasets using computer vision.

I've also created the open-source AI platform [AddaxAI](#), which enables annotation, training, and deployment of custom models for automated species detection. The goal is for ecologists to be able to focus more of their time on conservation efforts and less time reviewing camera trap images. I am also a reviewer for the [Journal of Open Source Software](#) (JOSS), contributing to the peer review of open-source projects. My hope is that AddaxAI will make a significant contribution to open sourcing, open access, and open science.

See my [LinkedIn](#) and [ResearchGate](#) for more information about me and my [GitHub](#) for information on my software projects.

Day 3 – Camera traps

AddaxAI v6.19 - Simple mode

Al modo avanzado | Addax AI | Patrocine proyecto | Français | Restablecer valores

¿Qué carpeta quieres analizar? no hay carpeta seleccionada

¿Qué modelo de identificación de especies quiere utilizar?

¿Qué especies están presentes en la zona de su proyecto?

- Species 1
- Species 2
- Species 3
- Species 4
- Species 5
- Species 6

Creado por Addax Data Science. ¿Más tecnología de conservación? Visite addaxdatascience.com

AddaxAI v6.19 - Advanced mode

To simple mode | Addax AI | Sponsor project | Español | Reset values

Deploy Help About

Step 1: Select folder

Step 2: Analysis

Model to identify animals:

Identification options

Show model information

Location:

Detection confidence threshold: 0.20

Don't process subdirectories

Use custom image size

Use absolute paths in output file

Disable GPU processing

Process images, if present

Image options

Use checkpoints while running

Checkpoint frequency:

Continue from last checkpoint file

Process videos, if present

Video options

Don't process every frame

Sample frames every N seconds:

Step 3: Annotation (optional)

Manually verify results

Step 4: Post-processing (optional)

Destination folder:

Separate files into subdirectories

Visualise detections and blur people

Visualization options

Draw bounding boxes and confidences

Select line width and font size:

Blur people

Crop detections

Create maps and graphs

Export results and retrieve metadata

Export options

Output file format:

Confidence threshold: 0.3

By Addax Data Science. More conservation technology? Visit addaxdatascience.com

Day 3 – Camera traps



Day 3 – Camera traps

results_detections.csv — LibreOffice Calc

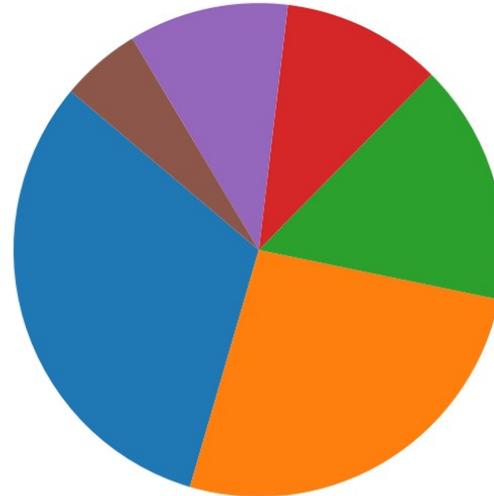
Fichier Édition Affichage Insertion Format Styles Feuille Données Outils Fenêtre Aide

Liberation Sans 10 pt G I S A

A1 absolute_path

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	absolute_path	relative_path	data_type	label	confidence	human_verified	bbox_left	bbox_top	bbox_right	bbox_bottom	file_height	file_width	DateTimeOriginal	DateTime
2	C:/PNE/piege_photo/02-Cerro Bella Vista	07310020.JPG	img	bird	0.7840008810162544	False	882	974	1023	1202	3468	4624	31/07/22 09:39:15	31/07/22 09:39:15
3	C:/PNE/piege_photo/02-Cerro Bella Vista	07310022.JPG	img	bird	0.769195668399334	False	3663	2232	4184	2913	3468	4624	31/07/22 13:54:44	31/07/22 13:54:44
4	C:/PNE/piege_photo/02-Cerro Bella Vista	07310023.JPG	img	bird	0.7049725670367479	False	3801	2172	4553	2899	3468	4624	31/07/22 13:54:45	31/07/22 13:54:45
5	C:/PNE/piege_photo/02-Cerro Bella Vista	07310024.JPG	img	bird	0.6515031736344099	False	3639	2245	4432	2884	3468	4624	31/07/22 13:54:45	31/07/22 13:54:45
6	C:/PNE/piege_photo/02-Cerro Bella Vista	07310025.JPG	img	animal	0.8115458488464355	False	3675	2180	4472	2866	3468	4624	31/07/22 13:54:50	31/07/22 13:54:50
7	C:/PNE/piege_photo/02-Cerro Bella Vista	07310026.JPG	img	bird	0.7408715672791004	False	3423	2123	4175	2769	3468	4624	31/07/22 13:54:51	31/07/22 13:54:51
8	C:/PNE/piege_photo/02-Cerro Bella Vista	07310027.JPG	img	temminck's tragopan										
9	C:/PNE/piege_photo/02-Cerro Bella Vista	07310027.JPG	img	temminck's tragopan										
10	C:/PNE/piege_photo/02-Cerro Bella Vista	07310028.JPG	img	animal										
11	C:/PNE/piege_photo/02-Cerro Bella Vista	07310037.JPG	img	south american coati										
12	C:/PNE/piege_photo/02-Cerro Bella Vista	07310038.JPG	img	south american coati										
13	C:/PNE/piege_photo/02-Cerro Bella Vista	07310039.JPG	img	south american coati										
14	C:/PNE/piege_photo/02-Cerro Bella Vista	07310040.JPG	img	south american coati										
15	C:/PNE/piege_photo/02-Cerro Bella Vista	07310043.JPG	img	nasua species										
16	C:/PNE/piege_photo/02-Cerro Bella Vista	07310044.JPG	img	south american coati										
17	C:/PNE/piege_photo/02-Cerro Bella Vista	07310045.JPG	img	south american coati										
18	C:/PNE/piege_photo/02-Cerro Bella Vista	07310046.JPG	img	nasua species										
19	C:/PNE/piege_photo/02-Cerro Bella Vista	07310047.JPG	img	nasua species										
20	C:/PNE/piege_photo/02-Cerro Bella Vista	07310048.JPG	img	no cv result										
21														

Distribution of detections (n = 19)



- south american coati (n = 6, 31.6%)
- bird (n = 5, 26.3%)
- nasua species (n = 3, 15.8%)
- animal (n = 2, 10.5%)
- temminck's tragopan (n = 2, 10.5%)
- no cv result (n = 1, 5.3%)



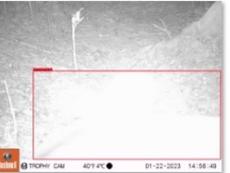
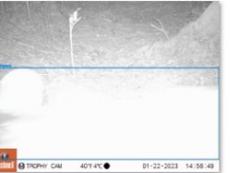
Day 3 – Camera traps

Disque local (C:) > PNE > piege_photo > 04-Gira_N21_junio_2023-KAMUK_11 > addaxai_speciesnet_results

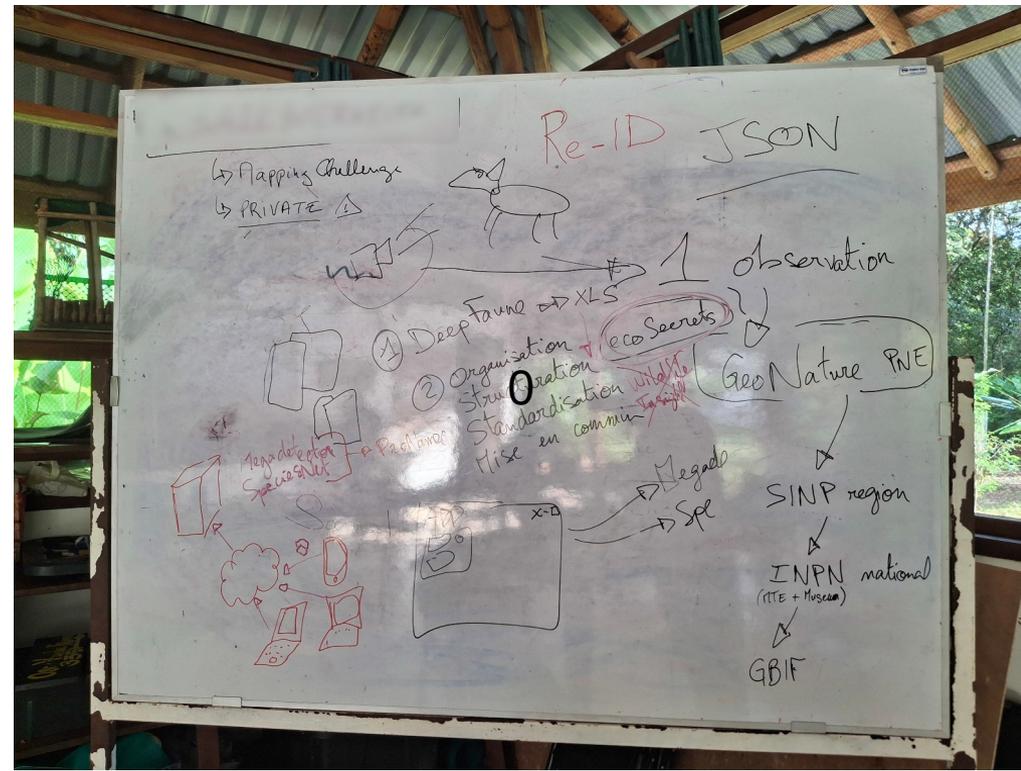
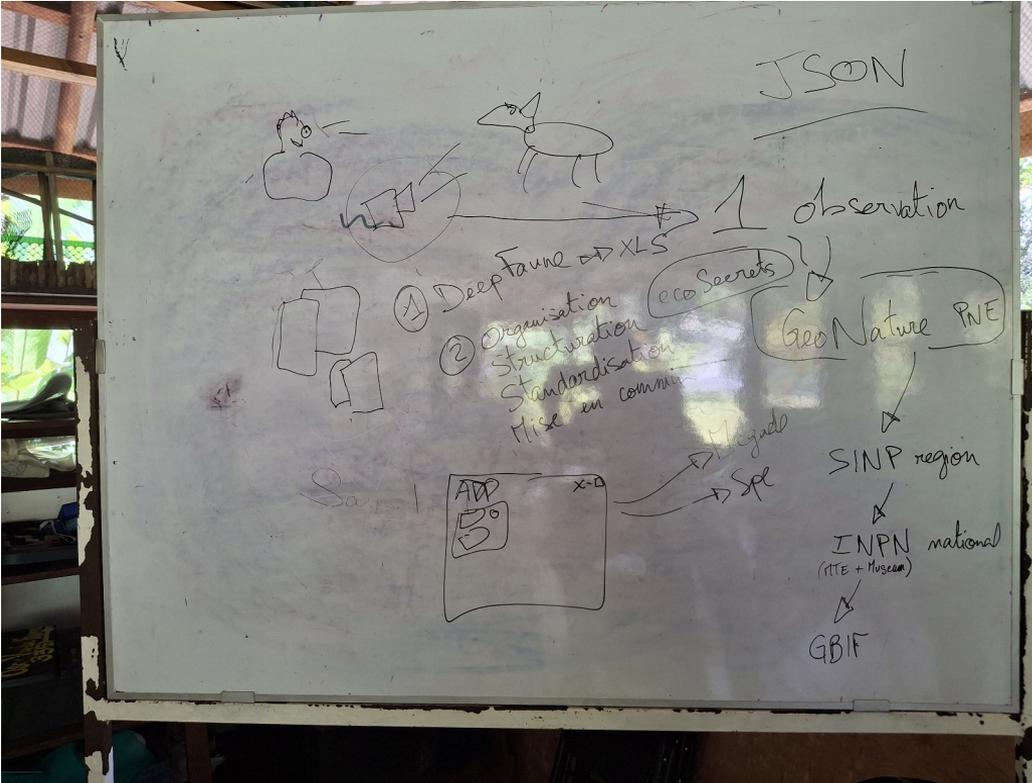
Rechercher dans : addaxai_speciesnet_results

Trier Afficher Choisir comme image d'arrière-plan Faire pivoter à gauche Faire pivoter à droite Détails

graphs

	 01130024	 01170066	 01170067	 01220113	 01220114
 02030157	 02030167	 02030170	 02130294	 02130300	 02170321
 02200378	 02210383	 02210384	 02210385	 02210407	 03010473
 03020383	 03140383	 03140384	 03140385	 03220383	 03220384

Day 3 – Camera traps



Day 3 – Camera traps



Day 3 – Camera traps



Day 3 – Camera traps



YOLOV8 ATTENDANCE

Students: Aurelien Coste, Florian Machenaud
Esteban Thevenon, Longy Riffard
Supervisor: Didier Donsez



Tutors: Pierrick Navizet, Mathieu Garé

DESCRIPTION

Ecrins national park is a French park near Grenoble in which photo traps are set to take pictures of everything that passes in front of them. Those pictures are used to monitor the frequentation of the park quantitatively, in other words how many people pass through a certain path, how many dog, bike, etc...



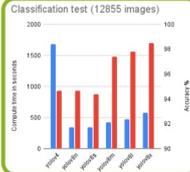
WHAT WE HAD: YOLOV4 (AI MODEL)

To detect people, objects and animals, the park uses the AI model of Ultralytics, YOLOv4. This model is capable of recognizing people, dogs, backpacks, etc... However, qualitatively speaking, it does not do much. From the time when this solution was made, several upgrades were released. That is why our work aims to upgrade the model from v4 to v8 the newest version! (almost see "for the future")

YOLOv4 results



YOLOv8 results



WHAT WE HAVE: YOLOV8 POSE & DETECTION

This version of the model is faster, more accurate, able to estimate the age of people and detect their equipment. Furthermore, it has a second version made to detect the pose of them, allowing us to add some quality assessment to the data, such as the walking direction.

HOW IT WORKS



We use both YOLOv8-detect model and YOLOv8-pose model to analyse pictures. The first one counts every people, animals and equipment that are in the picture. The second predicts the pose of people. Then we made a code to interpret those data to know in which direction they are going (mainly to know if they go left or right on a certain path).



FOR THE FUTURE

During the development of our project, the YOLOv9 version was released which could be an improvement on the YOLOv8 for computing speed.

Qualitatively speaking there is CLIP, a language model able to analyse pictures, that could also be a potential improvement.

Later, this solution could be transformed to use embedded, AI and LoRa devices to gather data more safely and with less cost.

The screenshot shows a web interface for monitoring camera trap data. The browser address bar shows the URL: <http://5.135.42.176/frequentation/#/service/frequentation/procedure/PhotoLauvitelSousDanch>. The page title is "Suivi de la fréquentation".

The main content area is titled "PhotoLauvitelSousDanch" and includes the following information:

- Piège photo mis sur la rive gauche plus bas (sentier GR54)
- Sensor type : insitu-fixed-point
- Time serie : From 2023-07-27T15:00:00+0200 to 2024-09-05T15:00:00+0200

A map shows the location of the camera trap near "la Dançhère".

The "Data" section features a line chart showing the frequency of detections over time, from September 2023 to September 2024. The y-axis represents the number of detections, ranging from 0 to 20. The chart shows a significant increase in detections starting in late 2023, peaking in early 2024, and then fluctuating with a general upward trend through 2024.

Below the chart, there is a section for "Observed properties" with a list of categories and their counts:

- outflaw (null)
- female (null)
- dog (null)
- cattle (null)
- camping (null)
- sporty (null)
- cross (null)
- hiking (null)
- bicycle (null)
- down (null)
- right (null)
- person (null)
- vehicle (null)
- male (null)
- horse (null)
- animal (null)
- padeî (null)
- mountain_sport (null)
- tourist (null)
- Observer (null)
- vertical (null)
- up (null)
- left (null)

At the bottom, there are controls for "Observed properties" (set to "person"), "Plot type" (set to "lines"), "Start date" (1/1/2022), and "End date" (9/5/2024). Buttons for "Plot", "Export", and a settings gear are also visible.

Day 3 – Camera traps



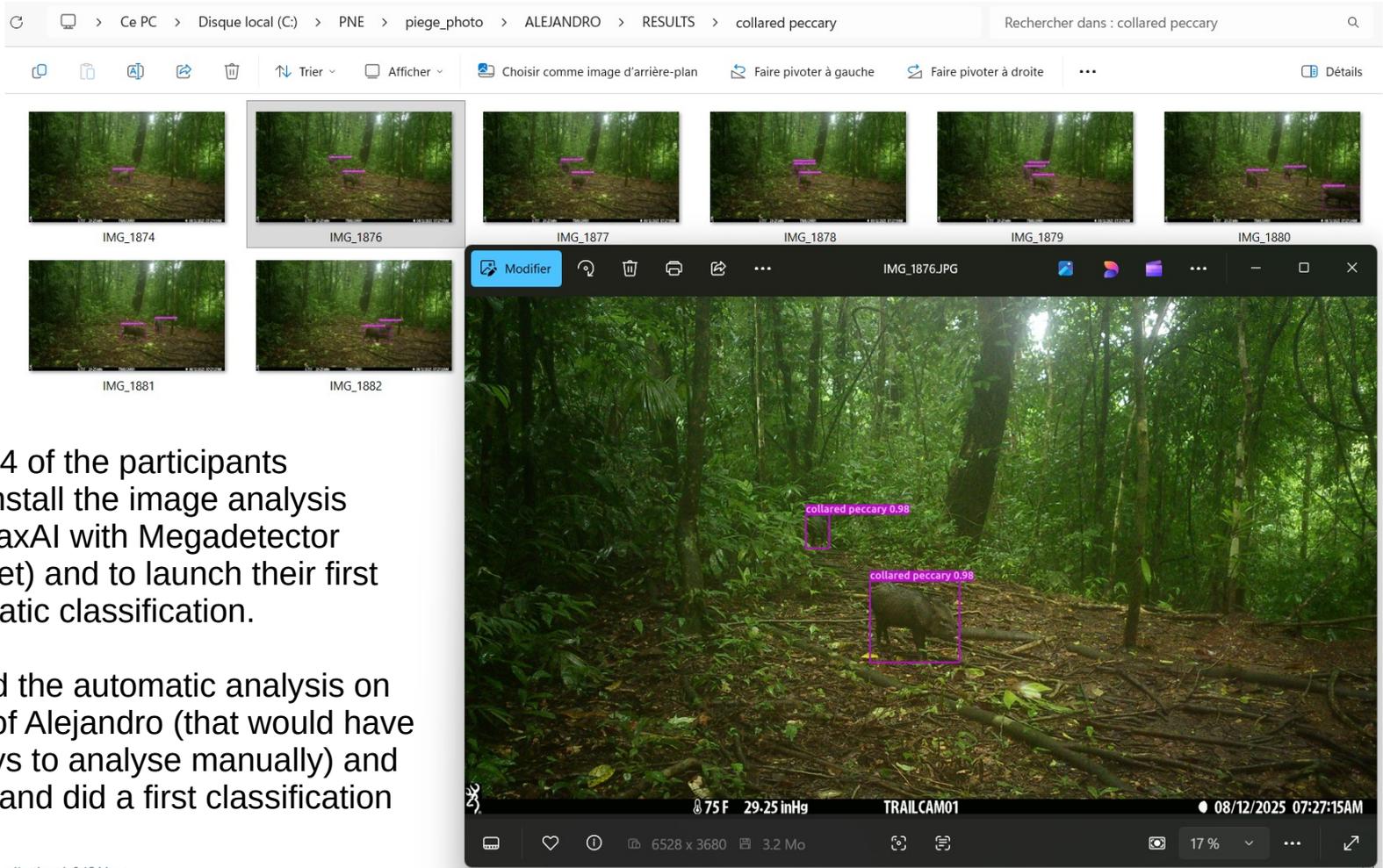
Day 3 – Camera traps

Ce PC > Disque local (C:) > PNE > piege_photo > ALEJANDRO > RESULTS > Rechercher dans : RESULTS

Trier Afficher Détails

					
00-graphs	animal	bird	canine family	carnivorous mammal	cat family
					
cervidae family	cetartiodactyla order	collared peccary	cracidae family	crax species	dasyprocta species
					
dasyproctidae family	domestic dog	empty	great tinamou	human	jaguar

Day 3 – Camera traps



After this day, 4 of the participants were able to install the image analysis software (AddaxAI with Megadetector and SpeciesNet) and to launch their first images automatic classification.

We also tested the automatic analysis on 6012 images of Alejandro (that would have took him 4 days to analyse manually) and it worked well and did a first classification in 4 hours)

Day 3 – PRONAMEC vision



Day 4 – PRONAMEC vision

Sunday October 19th

- Review of AddaxAI analysis of Alejandro 6012 camera traps images
- PRONAMEC vision workshop (actual and future)
- EarthRanger to QGIS
- XnView metadata management, GPS coordinates and table export
- AddaxAI step 3 (manual validation or correction) : seems to have problems
- ONB, Geotrek

Note done, for later :

- Re-IDentification
- Training models
- Attendance camera traps
- PRONAMEC schemas

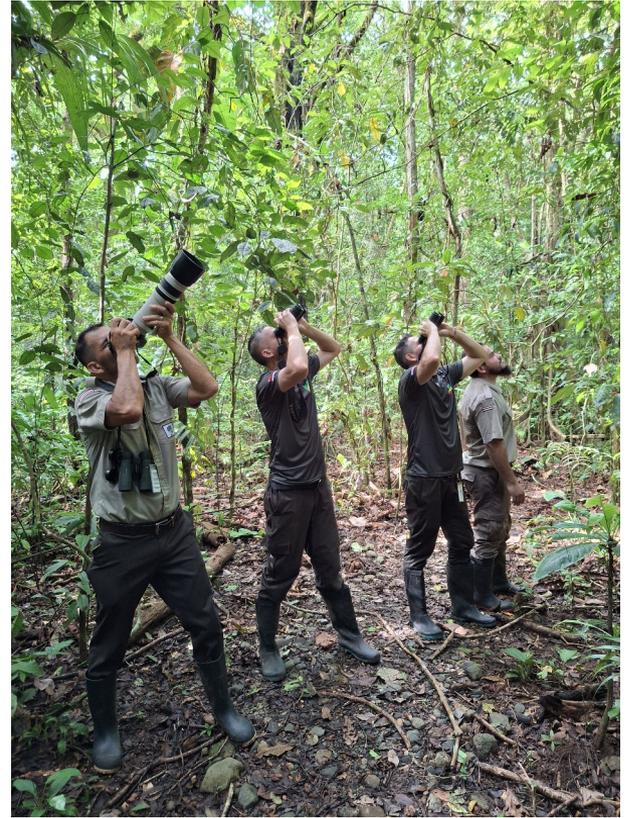
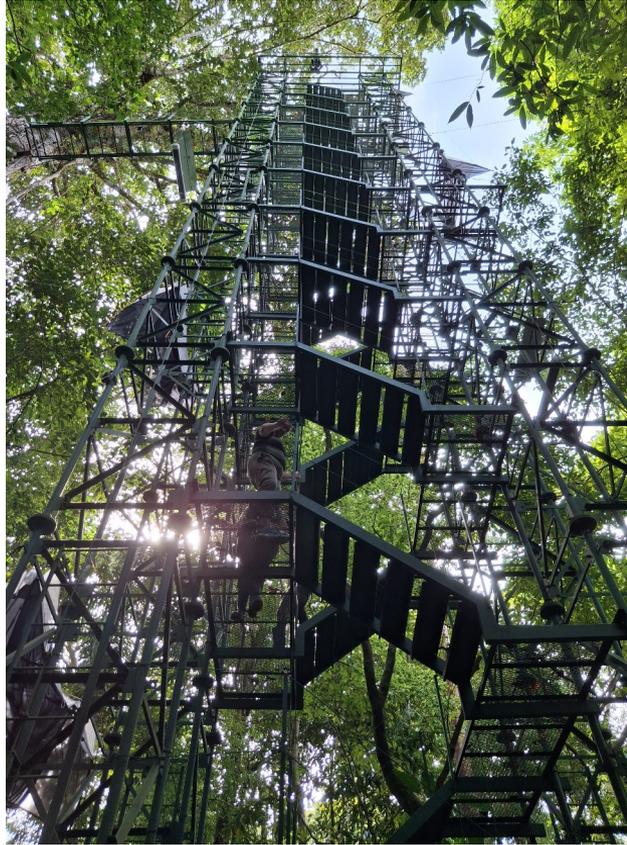
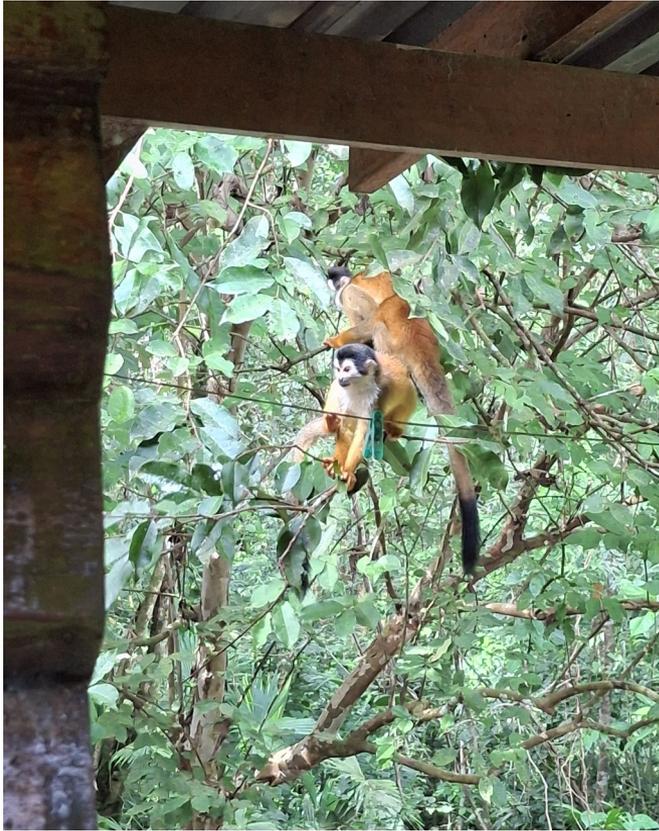
The day began with a roundtable discussion among participants about the Costa Rican platform PRONAMEC, focusing on what currently works well and is useful for them, as well as potential improvements for the future.

This was followed by hands-on support in using various tools (EarthRanger, QGIS, XnView, AddaxAI), along with some short “flash” presentations, introducing additional opportunities and developments.

PRONAMEC :

- What is good in actual platform/project ?*
- What would be good for the future of the platform/project ?*

Day 4 – PRONAMEC vision



Universal rangers



Day 4 – PRONAMEC vision



Day 4 – PRONAMEC vision

The rangers'
trail

Pierre Salomez
Retired



Day 4 – PRONAMEC vision

The rangers' trail

48000 observations of Pierre Salomez in PNE GeoNature

The screenshot displays the GeoNature web application interface for the Parc National des Écrins. The interface is divided into several sections:

- Header:** Includes the 'Synthese' menu, the application logo, the title 'GeoNature - Parc National des Écrins', and the user profile 'camille.monchicourt'.
- Filters (Left Panel):**
 - Où ?** (Where?): Includes filters for 'Communes', 'Secteurs', 'Natura 2000', 'Aires de protection de biotope', 'Réserves naturelles nationales', and 'Réserves intégrales de parc national'.
 - Qui ?** (Who?): Includes filters for 'Observateurs' (with 'salomez' selected) and 'Organisme'.
 - Comment ?** (Comment?): Includes a filter for 'Cadre d'acquisition'.
 - Jeux de données:** Includes a 'Rechercher' button.
- Map (Center):** Shows a topographic map of the Parc National des Écrins region. Numerous observation points are plotted as colored circles (blue and orange) with numerical values. The map includes a search bar, a scale bar (10 km / 5 mi), and a 'Rechercher un lieu' search box.
- Table (Right Panel):** A table listing 20 observations. The columns are: Taxon, Date obs, JDD, and Observateur. The observations are all from 22-05-2016, recorded by 'Biodiv Embrun 201' and 'Pierre Salomez'. The table shows a list of species names such as 'Véronique à feuilles de...', 'Ortie dioïque, Grande', 'Cerfeuil de villard, Ché', etc.
- Footer (Right Panel):** Includes a pagination bar showing '0 selected / 48 367 total' and buttons for 'Importer' and 'Télécharger'.

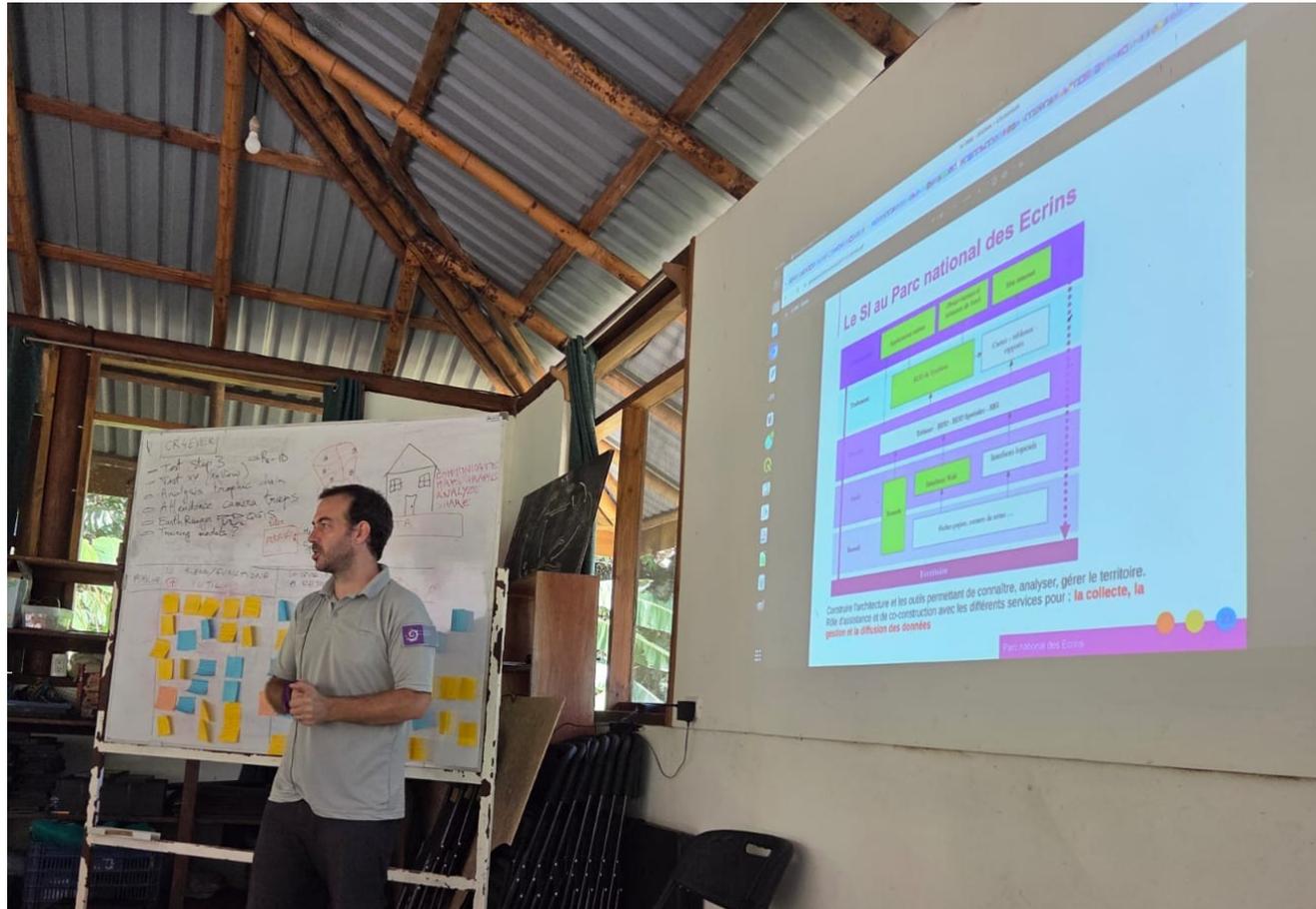
Day 4 – PRONAMEC vision



Day 4 – PRONAMEC vision



Day 4 – PRONAMEC vision

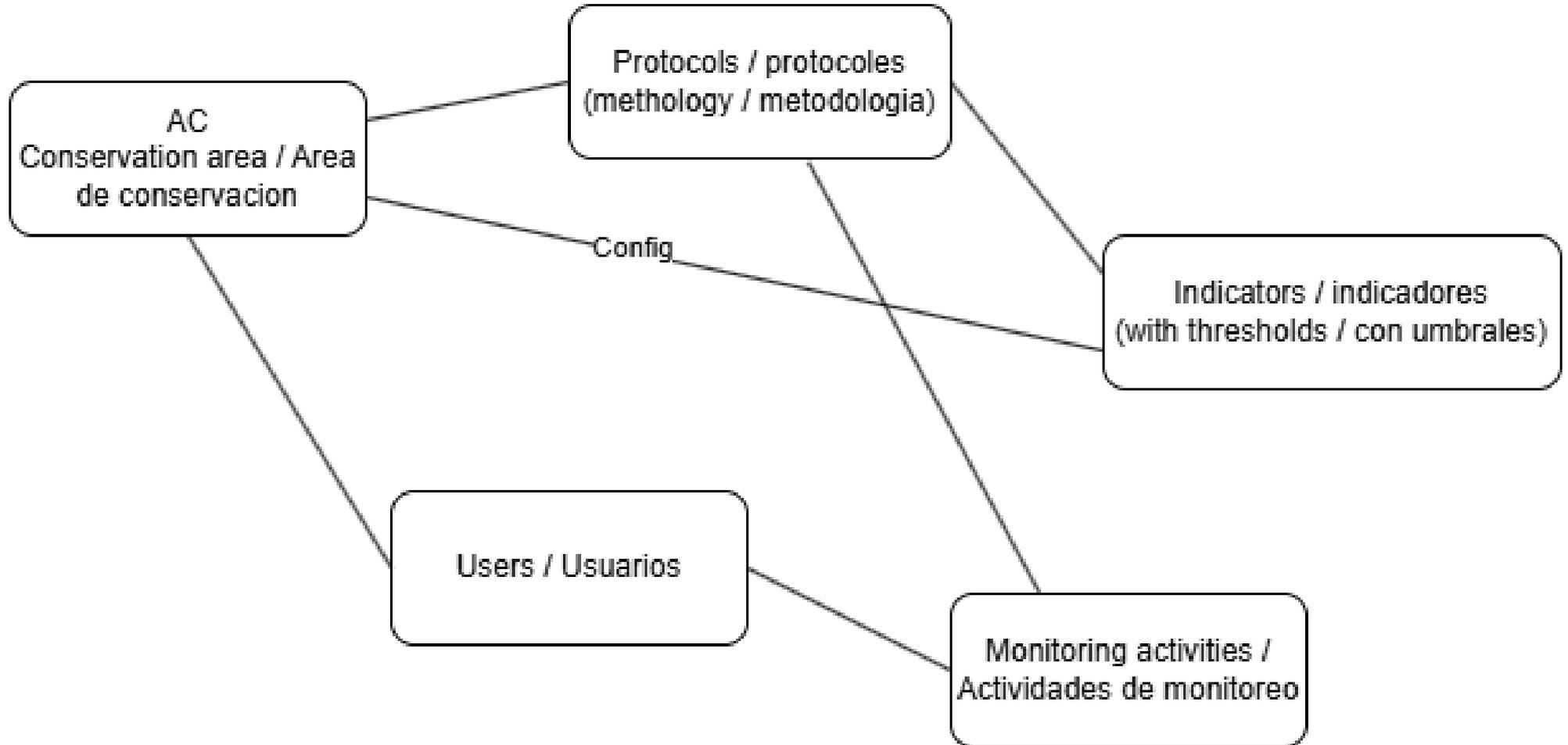


Day 4 – PRONAMEC vision

PRONAMEC - What is working well

- The PRONAMEC project has enabled the standardization of monitoring protocols and associated data, promoting national harmonization and improving the quality of scientific information.
- Staff training within protected areas has provided a solid foundation of comparable baseline data for long-term monitoring.
- The platform supports decision-making within SINAC, centralizing national biodiversity data for better use and sharing.
- PRONAMEC contributes to the planning and management of protected areas.
- It can also help expand monitoring efforts in conservation areas where few currently exist.
- The project has boosted scientific motivation and strengthened international collaboration.
- It provides new opportunities for analysis, data sharing, discovery, and partnerships.

Day 4 – PRONAMEC vision



Day 4 – PRONAMEC vision

PRONAMEC - Improvement propositions

- Additional human and financial resources are needed for both monitoring and technical development.
- The standardization of analyses and reports should complement the already standardized data collection.
- The platform and its data should be opened to external users, with clear distinctions in data types and access levels depending on the audience.
- Improve data dissemination and visibility for visitors and the general public, using simple maps and summary graphics.
- Facilitate access for scientists and students, and create partnerships allowing them to contribute data and analyses.
- Open the platform internationally to share research programs with other countries.
- Establish a data validation process (for both sensitive and non-sensitive data).
- Develop a dashboard with clear, graphical indicators showing the ecological health of each protected area, supporting better decision-making.
- Ensure interoperability between PRONAMEC and other tools (API, QGIS, Lizmap, Superset, etc.).
- The AddaxAI tool is perceived as a major technological advance, highly useful for saving time and improving efficiency.
- Integrate automated image analysis models such as Megadetector and SpeciesNet into PRONAMEC.
- Incorporate international data standards (Darwin Core, Camtrap DP).
- Make better use of the potential of existing open-source tools.
- Transition PRONAMEC to open-source, to showcase Costa Rica's innovation, allow use by other countries, and benefit from external contributions.
- Improve internal communication (forums, coordination between GIS and Conservation departments) and strengthen the shared vision of the project within SINAC.
- Clarify individual roles and communication channels within the conservation areas.
- Expand training for staff, scientists, and students on monitoring protocols.

Day 4 – PRONAMEC vision

PRONAMEC - Reactions and proposals

- Create an exchange space (forums, chat, or contact email).
- Conduct a consultation of external audiences to assess their needs and expectations regarding a platform like PRONAMEC.
- Evaluate the financial and time cost of PRONAMEC to anticipate future resource needs and equipment renewal.
- Gather field staff feedback before finalizing the platform to incorporate lessons learned.
- Establish a Technical Committee (CT) for the conservation areas, responsible for monitoring, reporting, and training.
- Organize biannual meetings with rangers for technology updates and experience sharing.
- Develop a dedicated French support mechanism for Costa Rica (e.g., a technical assistance team).
- Encourage SINAC leadership to give greater recognition and priority to scientific monitoring activities.

PRONAMEC - Additional Suggestions

- Hold two annual meetings focused on technology updates and monitoring protocols.
- Conduct internal SINAC meetings to track staff time availability within protected areas.
- Improve management of sampling point (PP) locations.
- Create a visual workflow diagram to clarify PRONAMEC's operational steps.

Day 4 – PRONAMEC vision

PRONAMEC - Strategic Vision

- PRONAMEC should become a national reference platform, supporting the sustainable management of natural resources through reliable scientific data.
- It must remain dynamic and adaptable, evolving alongside new technologies and user needs.
- Ultimate goal: to foster informed decision-making, transparency, cooperation, and the promotion of science in service of conservation.

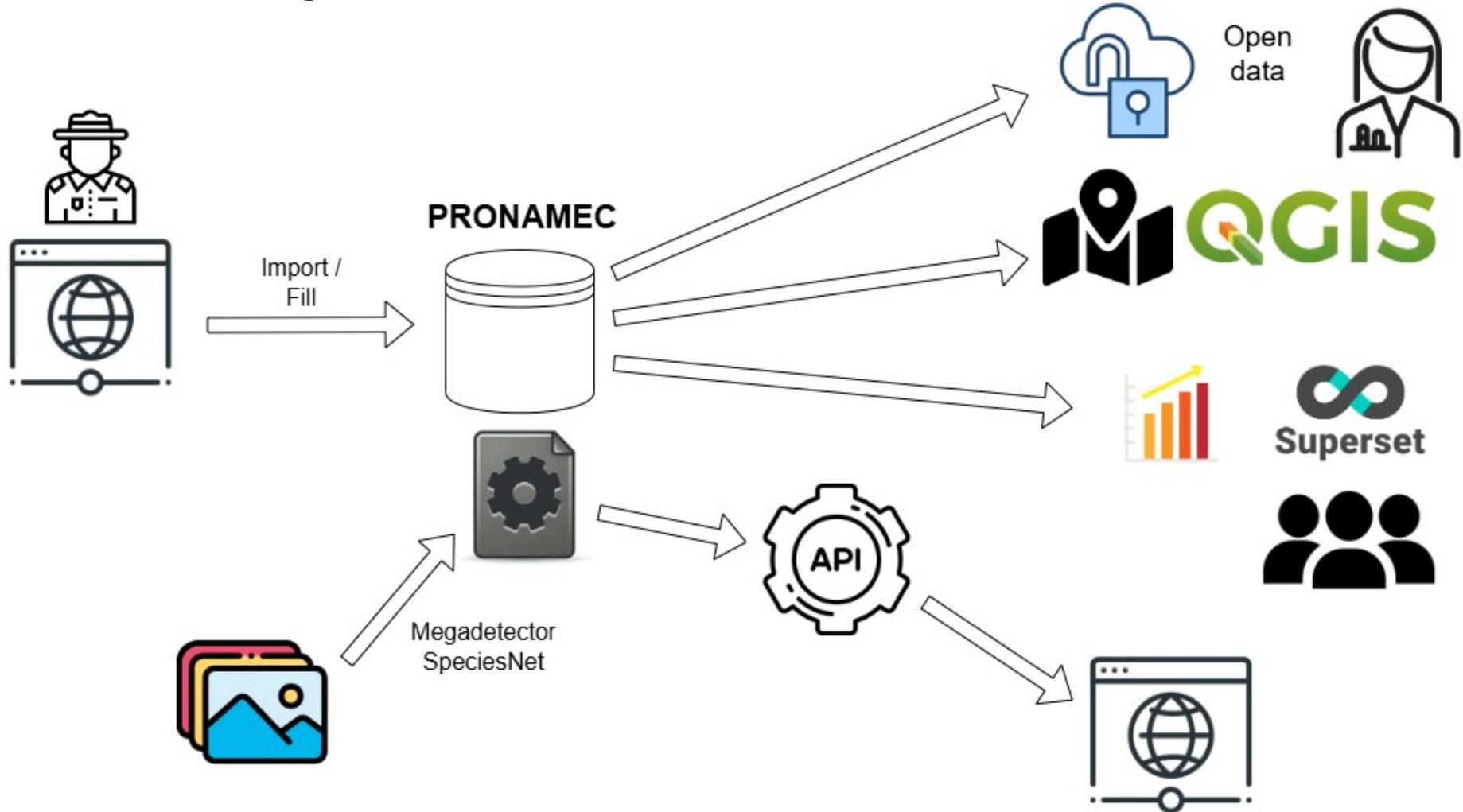
The PRONAMEC project represents a major step forward for Costa Rica's biodiversity management, enabling national standardization of monitoring protocols, better data quality, and more informed decision-making within SINAC. The platform fosters scientific motivation, innovation, and international collaboration.

However, its long-term success depends on strengthening human and financial resources, standardizing analyses and reporting, improving interoperability and open access, and developing user-friendly tools such as dashboards and APIs.

Opening PRONAMEC to researchers, students, and the public -while ensuring data validation and communication- will enhance its impact and visibility.

The strategic vision is for PRONAMEC to evolve as an open-source, nationally recognized, and internationally connected platform supporting sustainable resource management through reliable scientific data and technological innovation.

Day 4 – PRONAMEC vision



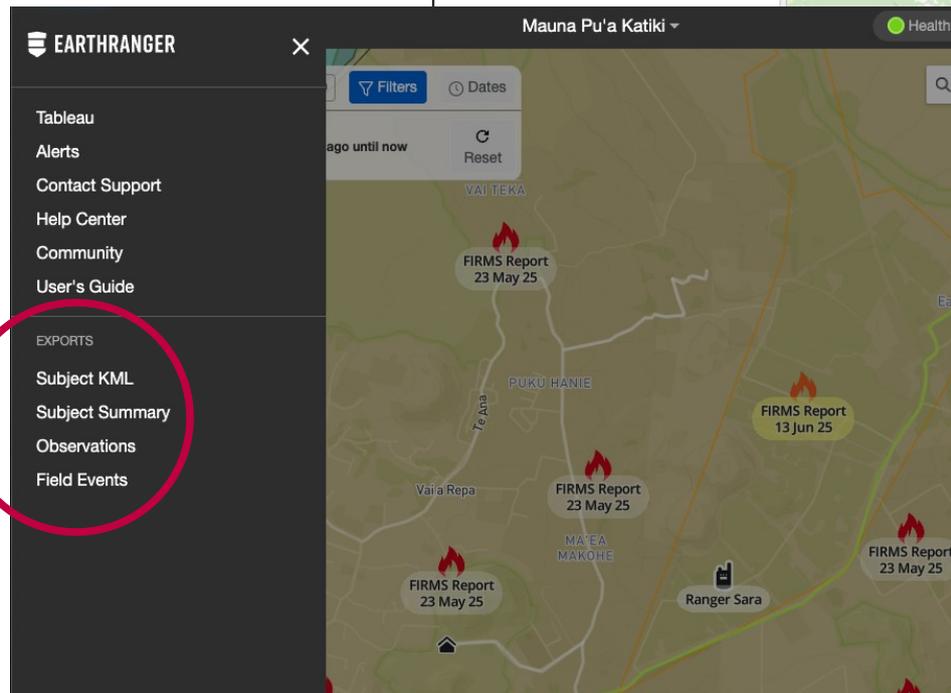
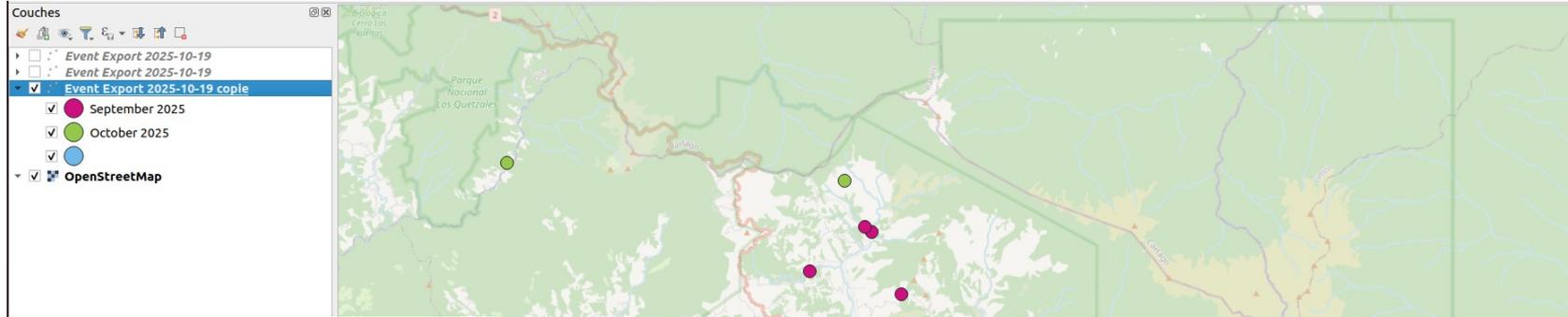
Day 4 – PRONAMEC vision



Day 4 - Thanks Peter (AddaxAI)



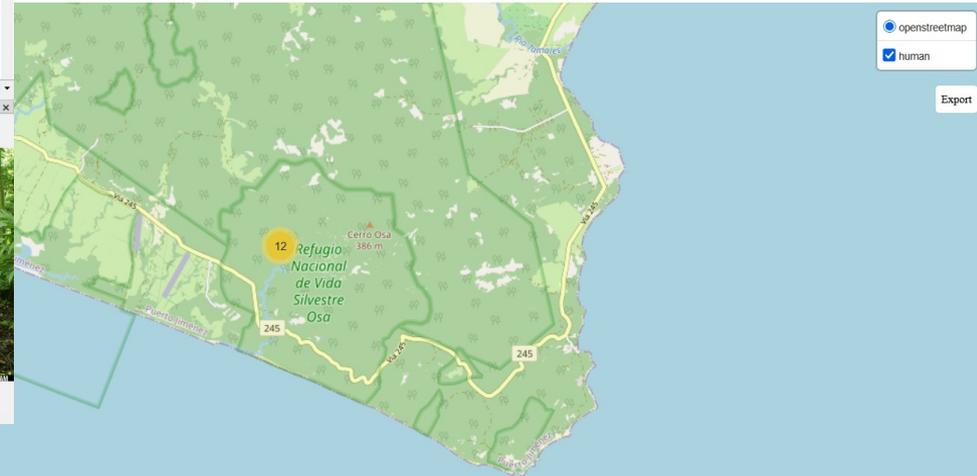
Day 4 – EarthRanger to QGIS



https://support.earthranger.com/en_US/data-export-options
Download CSV file / Load it in QGIS as « Delimited text » / Projection WGS 84 (4326)

Day 4 - XnView and images metadata

The screenshot shows the XnView MP application window. The main area displays a grid of 12 photo thumbnails. A metadata window titled "Edition données GPS" is open, showing fields for Latitude, Longitude, and Altitude, with a "Copier" button. The left sidebar shows a file explorer with folders like "DOCS Installations", "GBIF", "PHOTOS", and "piege_photo". The bottom status bar shows file information: "167 photos / 156 photos sélectionnées (671 77 Mo) | IMG: 0001.JPG | 5376x3024x24 (1.78) | 3.63 Min".



Day 4 - Geotrek



[Inicio](#) [Productos](#) [Usuarios](#) [Sobre](#) [Contacto](#) [en](#) / [es](#) / [fr](#)

Inicio

GEOTREK

GESTIONA Y PROMUEVE TUS RUTAS Y ACTIVIDADES TURÍSTICAS

SABER MÁS

Parc national des Écrins Destination **PARC NATIONAL DES ÉCRINS** Discovery [EN](#) Search

FILTERS 1 Practice > Themes > Localization > Clear all 153 results

153 results practice: By walk Search...

Lancien et le nouv... Villar-d'Arène

Adèle Planchard Refuge

History and architecture Hut

Hard 7h <> 22km ↗ +1473m

La Bâtie des Vigne... Les Vigneaux

Around Les Vigneaux and Grand Parcher

Fauna Flora History and architecture

Easy 4h <> 10,7km ↗ +253m

Refuge de Font Tur... Valjouffrey

Ascent to the Font Turbat

<https://geotrek.fr>

<https://destination.ecrins-parcnational.fr/en>

Day 4 - ONB



Day 4 – BAM

18:04 56% 17

←

GBIF: The Global Biodiversity Information...
10 981 abonnés
1 h •

📅 Announcing the 2025 Ebbe Nielsen Challenge winners at #LivingData2025!

First place: 🏆 **Rukaya Johaadien (#GBIFNorway)** for BDQEmail

Sharing first place: 🏆 **Dax Kellie, Amanda Buyan, Shandiyl Balasubramaniam and Martin Westgate (Atlas of Living Australia)** for galaxias

Second place: 🏆 **Amandine Sahl, Jacques Fize and Camille Monchicourt of Parc national des Écrins and Parc national des Cévennes (France)** for BAM (Biodiversity Around Me) tool

Congratulations to all the winners! 🎉

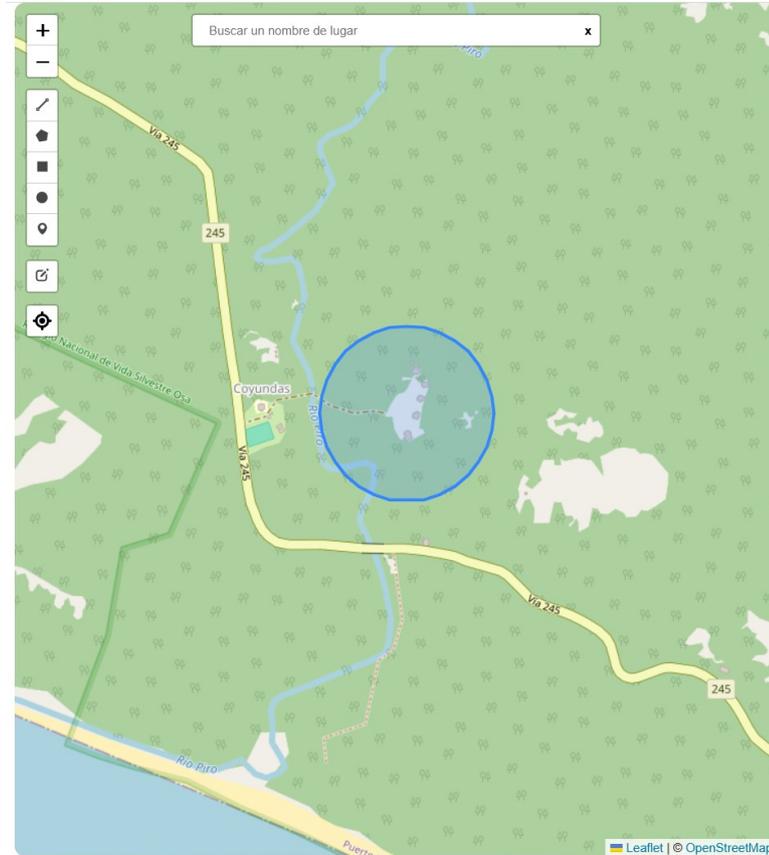
Learn more about the winning projects and the Challenge: <https://lnkd.in/gMqrrHpQ>

Afficher la traduction



5

Ajoutez un commentaire...



Chestnut-backed Antbird

Nombre Científico : Myrmeciza exsul P.L.Sclater, 1859

Número de observaciones : 61

[Más información →](#)

Fecha de última observación : 25/04/2024



Tinamú Grande

Nombre Científico : Tinamus major (J.F.Gmelin, 1789)

Número de observaciones : 57

[Más información →](#)

Fecha de última observación : 31/03/2025



386 especies encontradas en GBIF

https://pnx-si.github.io/BAM-widget/#/?buffer=200&connector=GBIF&nbTaxonPerLine=2&showFilters=false&mapEditable=true&ang=es&mode=detailedList&widgetType=mapList&hybridTaxonList=true&x=-83.3366632461548&y=8.403954350654981&GBIF_ENDPOINT=https://api.gbif.org/v1&LIMIT=300&NB_PAGES=10&soundSource=wikidata&imageSource=wikidata

<https://si.ecrins-parcnational.com/blog/2025-08-BAM-widget-en.html>

Day 4 – BAM

 Observation.org

 Pl@ntNet

eBird

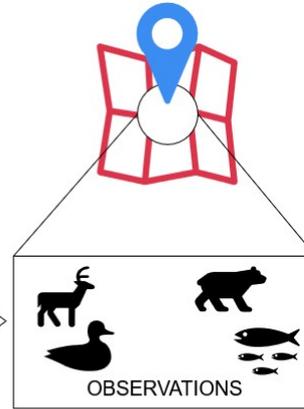
iNaturalist

 Inventaire National du Patrimoine Naturel

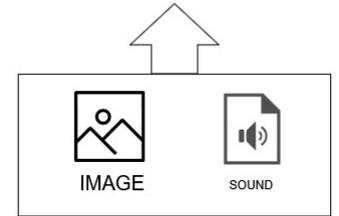
...

AGREGATION

 GBIF



 **BAM**
Biodiversity Around Me



 WIKIDATA

 GBIF

 Inventaire National du Patrimoine Naturel

https://pnx-si.github.io/BAM-widget/#/?buffer=200&connector=GBIF&nbTaxonPerLine=2&showFilters=false&mapEditable=true&lang=es&mode=detailedList&widgetType=mapList&hybridTaxonList=true&x=-83.3366632461548&y=8.403954350654981&GBIF_ENDPOINT=https://api.gbif.org/v1&LIMIT=300&NB_PAGES=10&soundSource=wikidata&imageSource=wikidata

<https://si.ecrins-parcnational.com/blog/2025-08-BAM-widget-en.html>

Day 4 – Individual debrief

The exchange mission between the French and Costa Rican national parks was unanimously praised for the richness of discussions, the quality of workshops, and the strong human connection it fostered. Participants discovered new solutions, particularly in data management and analysis through GeoNature, PRONAMEC and AddaxAI, recognized as powerful tools offering time savings, reliability, and efficiency. Participants also expressed a willingness to open up their tools and share their data with a wider audience.

The collaboration strengthened ties between teams, encouraged experience sharing, and laid the groundwork for continued cooperation to support technological and operational advancements in protected areas.

General Impressions

- Strong overall satisfaction: all participants highlighted the richness of the exchanges, the relevance of the themes discussed, and the quality of the practical exercises.
- Mutual discovery: Costa Rican participants expressed that they discovered “a new world” and new perspectives for their work, particularly in data management and analysis.
- Strengthened human connections: the human and fraternal dimension of the exchanges (workshops and field outings, especially at La Leona) was considered essential for reinforcing cooperation and joint projects.

Technical and Thematic Insights

- PRONAMEC:
 - Seen as a promising and powerful tool for managing and monitoring environmental data.
 - High potential for saving time, improving reliability, and supporting decision-making.
 - Need for ongoing support and follow-up to ensure proper adoption.
 - Recommendation to align Pronamec positively with other existing tools and internal processes.
- Technologies and AI:
 - Gradual but enthusiastic adoption: initially skeptical participants acknowledged the reliability and effectiveness of the tools presented.
 - Highlighted time savings, reduced fatigue, and greater reliability thanks to AI and digital tools (PRONAMEC, AddaxAI, etc.).
 - The AddaxAI tool was particularly appreciated for its power and potential applications.

Day 4 – Individual debrief

Collective Learning and Engagement

- Collaborative learning: the diversity of profiles enriched the exchanges. Sharing experiences (strengths and weaknesses) fosters collective growth and process agility.
- Hands-on learning: practical workshops were considered essential for understanding and retention.
- Knowledge sharing: several participants plan to share what they learned with colleagues from other protected areas.
- Continuing momentum: there is a strong desire to organize future collective sessions to monitor technological progress and strengthen France–Costa Rica cooperation.

Highlighted Quotes

- *“A new world discovered that validates our work on management plans.”*
- *“Pronamec can become a powerful tool.”*
- *“Time-saving and more reliability thanks to AI.”*
- *“AddaxAI is very powerful.”*
- *“These tools really work — and work well.”*
- *“Fraternity, passionate learning, and collective construction.”*

Summary

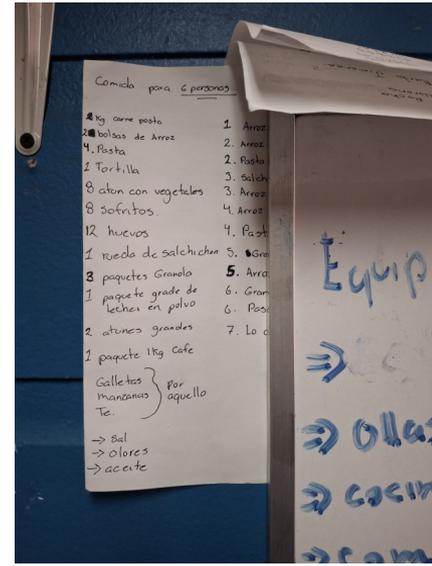
A mission unanimously praised for its human impact, concrete technical contributions, and collaborative dynamic.

The exchanges between France and Costa Rica open new perspectives for cooperation in data management, AI use, and capacity building for field teams.

Day 4



Day 5 – SINAC offices



Giro Norte
Español

Culcas Rites

- 44-1-1-2 camaras
- + Rio Surpico
- + Bahiada Romo

43-2-1-2 camaras

- + Seta
- + Agua Azules

42-1-1-1 camaras

- + Rio Caracal

42-2-1-10 hoyos

8 mst

Day 5 – SINAC offices



7:30 AM – 6:00 PM: Drive back to the capital, San José

- Stop at the Osa Conservation Area station in Puerto Jiménez and meeting with manager Juan José.
- Stop at the Humedales Nacionales de Sierpe protected area ranger station (Sierpe national wetlands) to speak with the park rangers.

Day 6 – Poas volcan & follow-ups



From 8h30 to 16h : Visit of Poás Volcano National Park
Discussion with the park rangers and the local mission leader regarding objectives and next steps.
Meeting with a French volcanologist based in Costa Rica.

Potential follow-ups



Immediate and Anticipated Follow-ups

- Remote cold debrief of the mission: November 3.
- Drafting technical documentation (AddaxAI, EarthRanger/QGIS, etc.).
- Searching for technical solutions for re-identifying jaguars captured by camera traps.
- Technical study of AI-based image analysis training solutions to contribute to building a more efficient model for Costa Rica.

Perspectives for actions and collaborations

- Support SINAC in transitioning their PRONAMEC platform to an open-source license.
- Contribute to the development of the PRONAMEC platform once it becomes open source.
- Support one of the protected areas in concepting a pilot project to digitally showcase the scientific knowledge of their territory.
- Analyze possibilities to align PRONAMEC data structuring with international standards (GBIF sampling-event – <https://www.gbif.org/sampling-event-data> for monitoring & Camtrap DP for camera trap deployments and media – <https://camtrap-dp.tdwg.org/>).
- Establish contact with tourism teams to present Geotrek and “Esprit Parc” tools, helping develop an ecotourism strategy and highlight tourism providers with best practices, as opposed to illegal practices.
- Prepare and fund the next mission in the form of a technical development workshop with experts from Costa Rica and France.
- Participate remotely in the new Costa Rican biannual meetings of the working group on new technologies, established following the mission.
- Assist in designing the opening and expansion of the PRONAMEC platform to other tools (camera trap analysis models, QGIS, etc.) and other audiences (scientists, students and universities, tourists and visitors, etc.).
- Support the use and valorization of PRONAMEC scientific data for other work areas: law enforcement (procedures, investigation techniques, satellite imagery, etc.), citizen mobilization (ABC, etc.), and more.
- Share the management of field agents’ time programming for OFB personnel.

Gracias



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