



PERÚ

Ministerio
de Agricultura y Riego

SERFOR
Servicio
Nacional
Forestal y
de Fauna
Silvestre

SATELLITE MONITORING UNIT SERFOR



General Director of Information and forest
management
SERFOR

PERU IN CONTEXT



PERU IN CONTEXT

Natural Forests

- Amazon rainforest (94.7%)
- Dry forests (5%)
- Andean forests (0.3%)

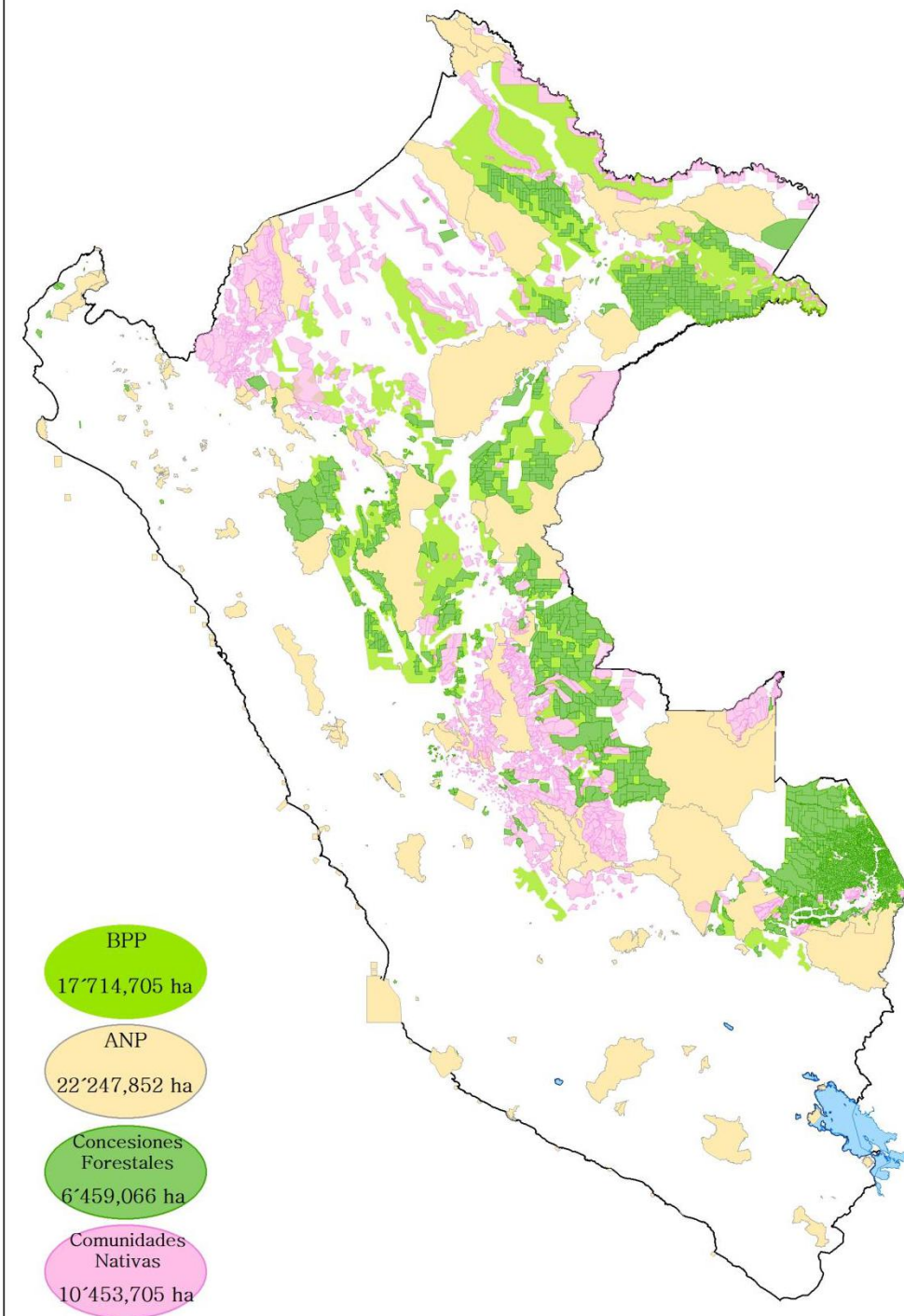


PERU IN CONTEXT

Forest Regulation

CATHEGORIES	SUPERFICIES (ha)
PERMANENT PRODUCTION FORESTS	17,714,704.83
FORESTRY CONCESSIONS	(*) 6,459,066.00
PROTECTED AREAS	22,247,852.05
INDIGENOUS COMMUNITIES	10,453,704.67
TOTAL	56,875,327.55

(*) Operational



SERFOR is the **Technical and Administrative Authority**

(Ley N° 29763)

Mision:

Promotes the sustainable and participatory management of forest resources and wildlife, and the use of their ecosystem services, providing quality services that contribute to the welfare of citizens.



**The National Forestry and Wildlife
Information System
(SNIFFS)**

**National Forestry and Wildlife Control
and Surveillance System
(SNCVFFS)**

**Multisectoral Commission to Combat
Illegal Logging – CMLTI
D.S. N°011-2003-AG**

Viceminister of Agrarian Policies
MINAGRI

SNCVFFS National Forestry and Wildlife Control and Surveillance System



- National round table
- Regional round table (04)
- Early warning network

- 10 Active Institutions

- SERFOR
- SUNAT
- DICAPI
- CCFFAA
- FISCALÍA-FEMA
- MIN CULTURA
- OEFA
- OSINFOR
- PNP
- SERNANP SUNAT

- Regional Governments
- Local Governments
- Civil society

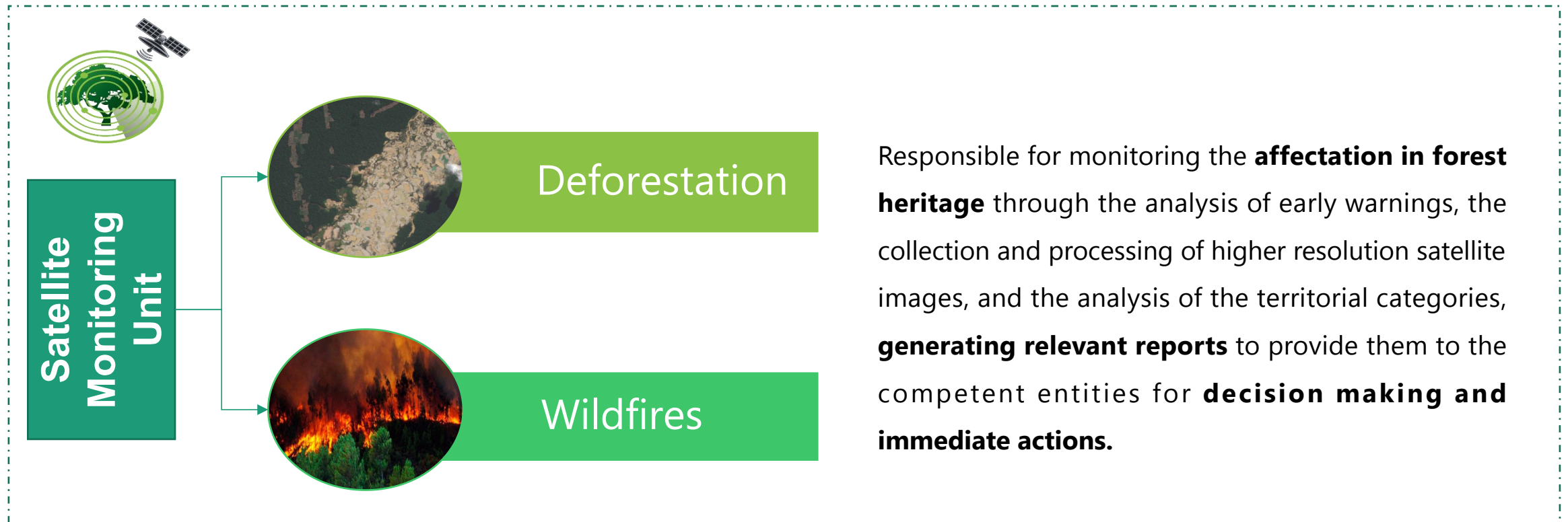




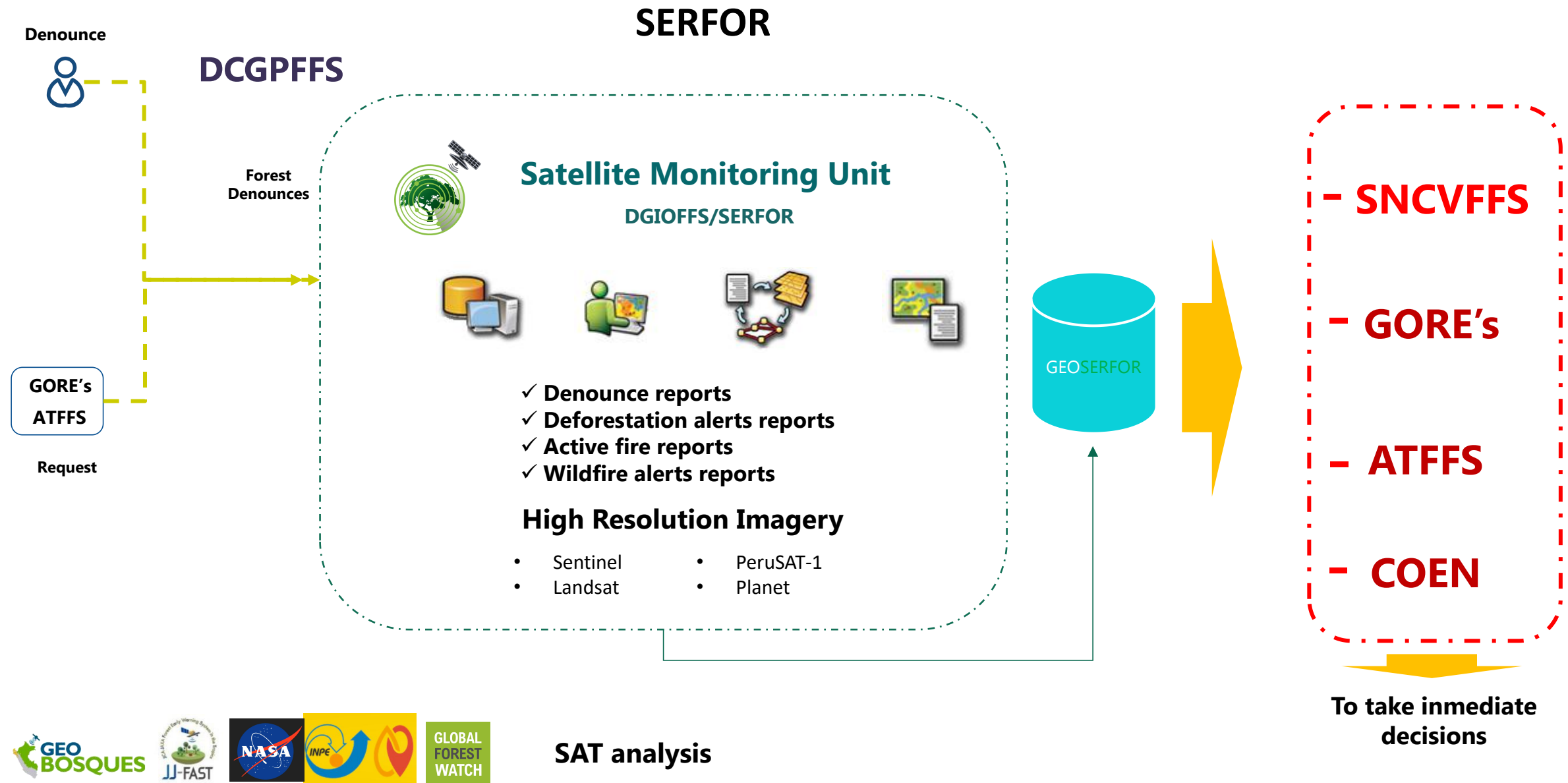
Satellite Monitoring Unit - UMS

Forest Coverage Monitoring System

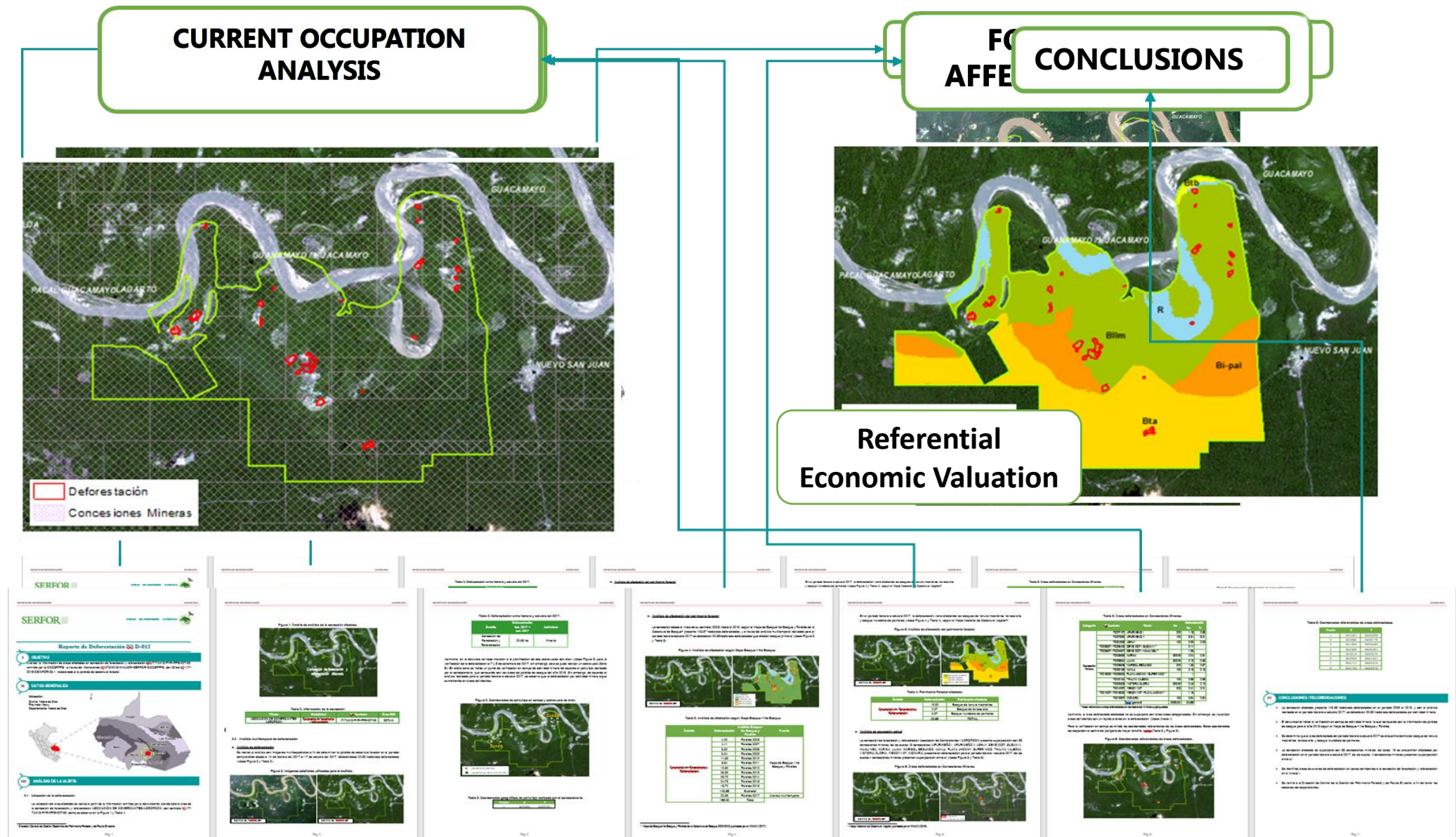
Satellite Monitoring Unit (UMS)



Information Flux



Illegal logging/deforestation Denounce Reports



UCAYALI

High Resolution Imagery



Denounce: Palm Oil

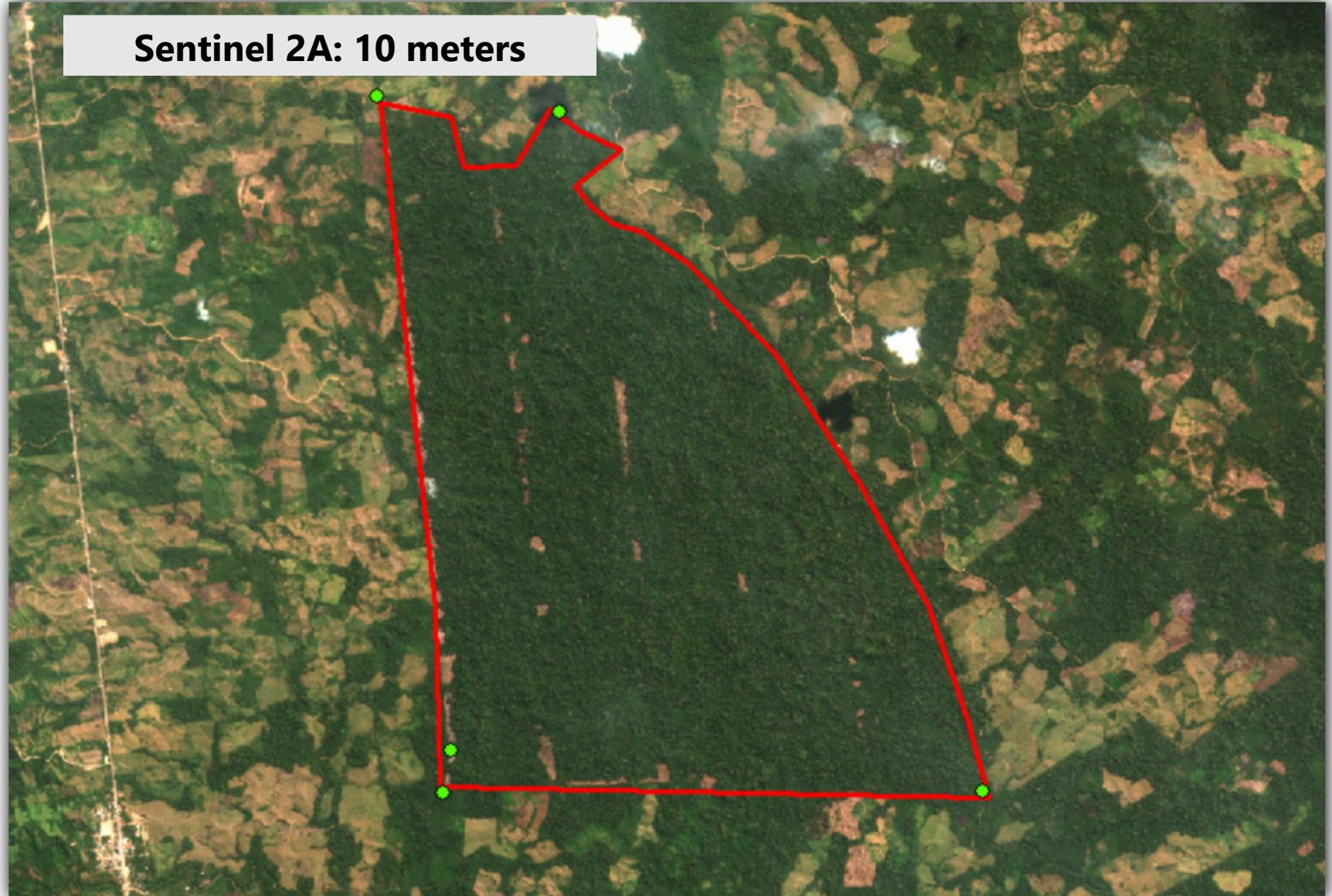
UCAYALI Masisea



Case: Investigation Center UNU Denounce

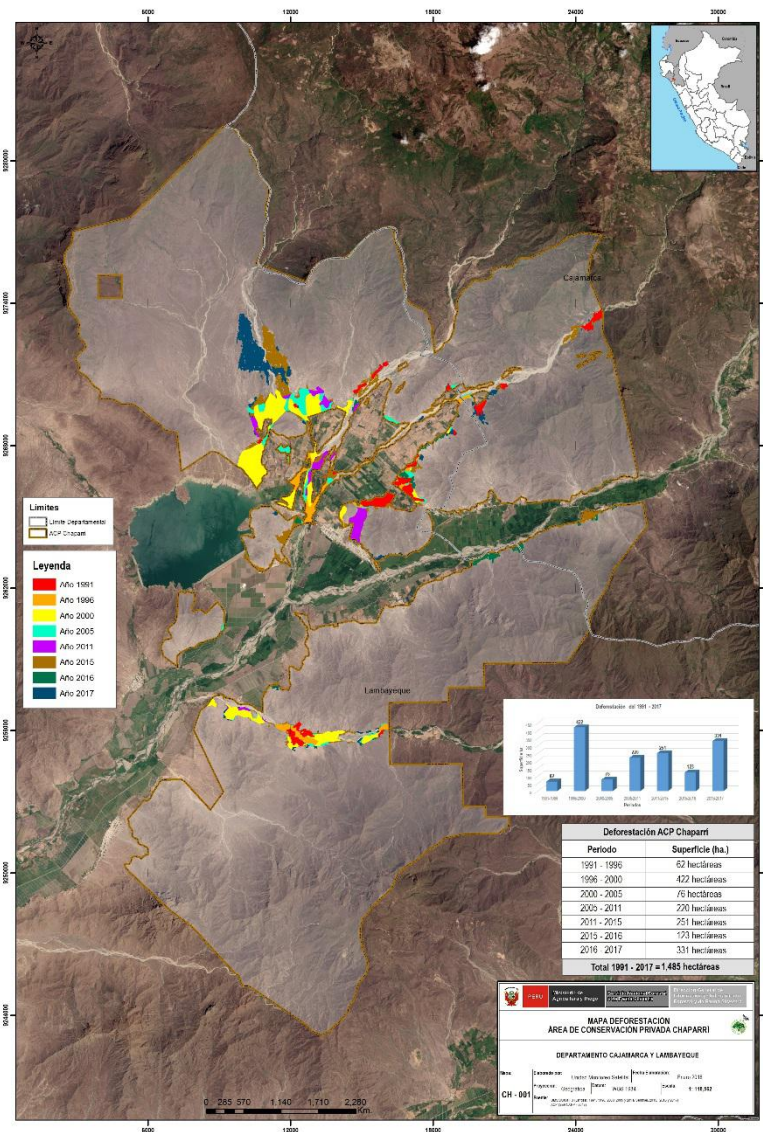
HUÁNUCO

Sentinel 2A: 10 meters



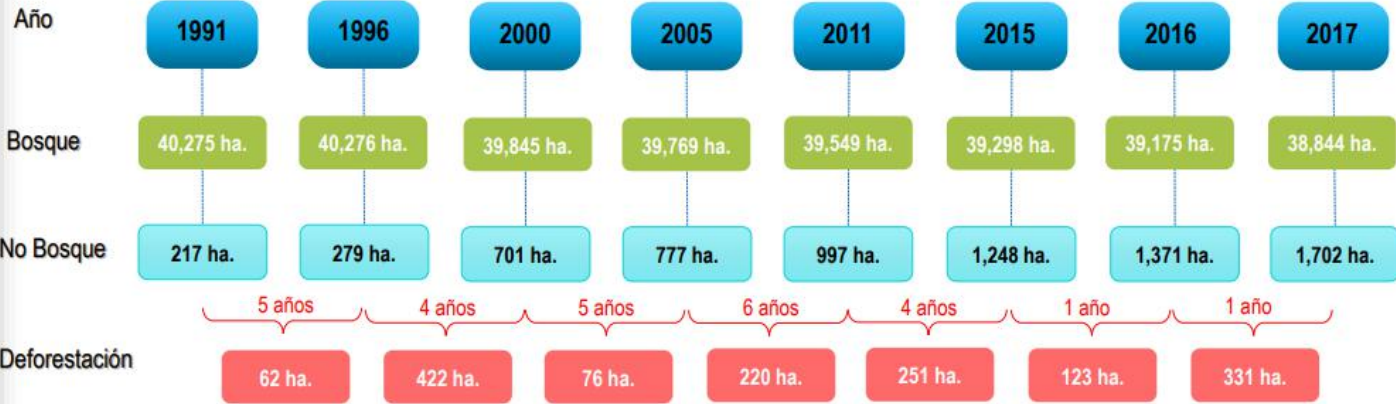
Case: Dry forest Deforestation

Private Conservation Area Chaparrí

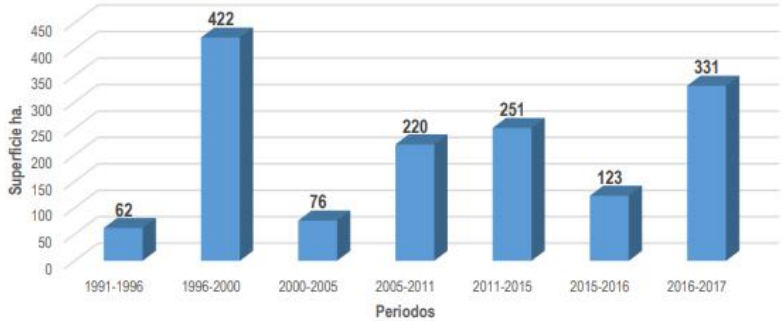


Área de Conservación Privada Chaparrí

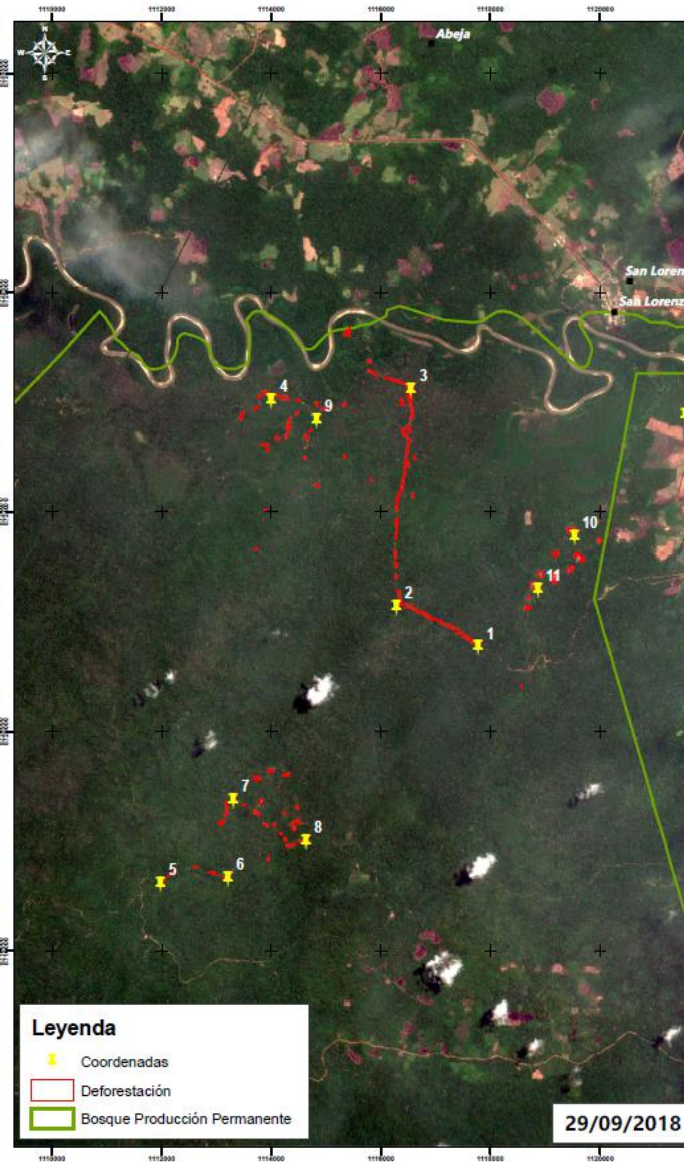
Análisis Multitemporal de la pérdida de cobertura boscosa



Deforestación del 1991 - 2017



Reports for illegal logging operations



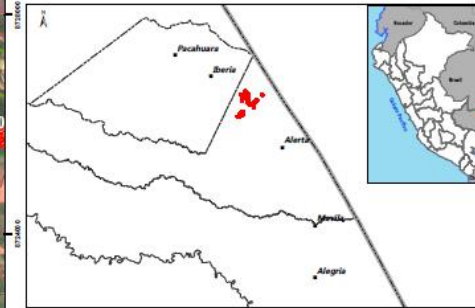
UNIDAD DE MONITOREO SATELITAL DEL SERFOR

REPORTE ALERTA DE DEFORESTACIÓN Y PRESUNTA TALA ILEGAL

Ubicación

Distrito: Tahuamanu
Provincia: Tahuamanu
Departamento: Madre de Dios

UMS-RM- 137
BPPnc



Resumen de la Afectación

- Categoría Territorial: Bosque de producción permanente no concesionado
- Período de detección: Del 04 al 29 de Setiembre
- Superficie deforestada: 52.54 hectáreas
- Tipo de actividad: Agricultura, tala y vías
- Patrimonio forestal afectado: Bosque de terraza baja y colina baja con shiringa
- Obs.: Presunta tala ilegal

Coordenadas

Código	X	Y
0	1121553.92	8725769.76
1	1117776.37	8721528.30
2	1116285.23	8722257.30
3	1116050.33	8726233.67
4	1113986.82	8726034.85
5	1111977.51	8717220.57
6	1113203.55	8717319.98
7	1113302.96	8718744.85
8	1114628.42	8717982.71
9	1114827.23	8725670.35
10	1119532.60	8723548.62
11	1118969.87	8722588.67

Fuente de Información

Catastro Forestal: SERFOR/DGOFPS/DCZF - 2018
Cobertura Vegetal: MINAM/DGVEFPN - 2015

Documento Elaborado por la UMS

Especialista Encargado: Kelly Salcedo Padilla



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FAP support in illegal logging operations



Illegal logging operations

- ADS 80 Camera
- Video Camera
- Heat Camera

FAP support in research



Forest research

- Lidar
- Hyperspectral

Dron's use for field verifications: Illegal Change Use

MADRE DE DIOS Y UCAYALI



International Forum on Early Warning Systems in Ucayali - SNCVFFS

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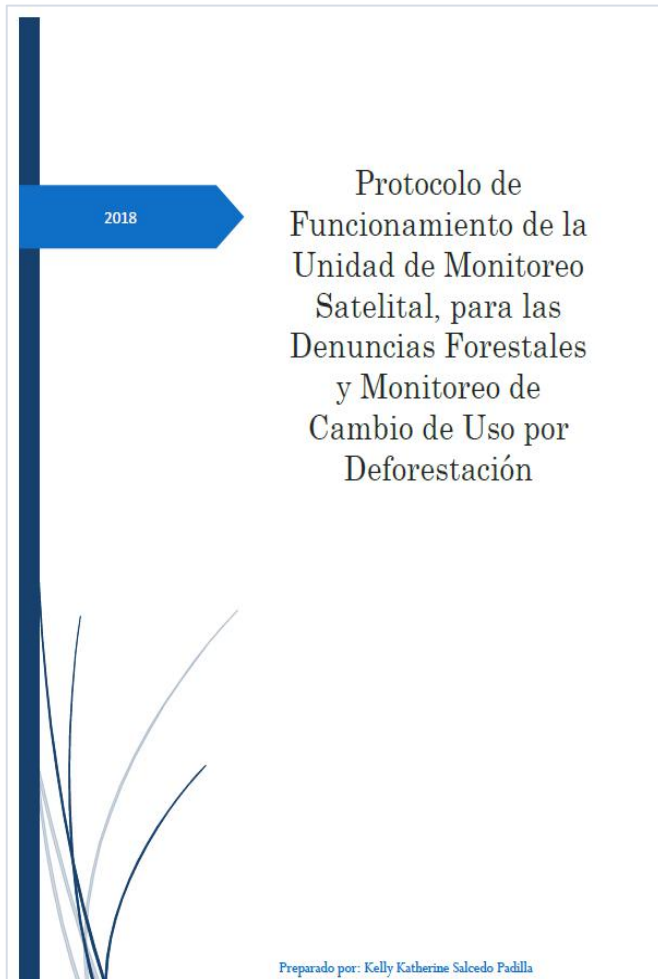


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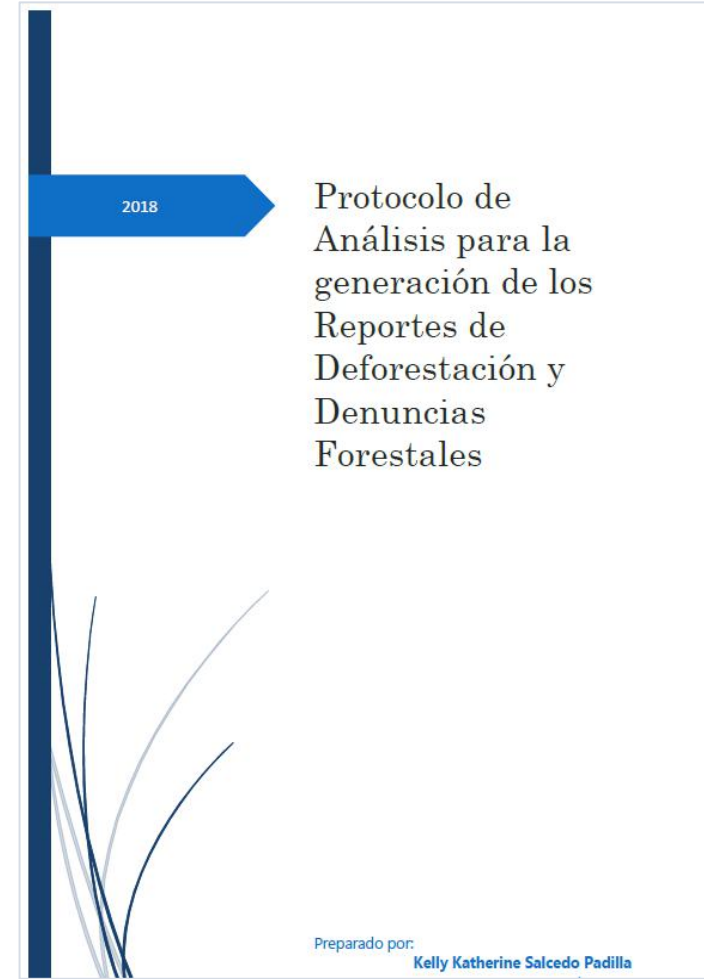
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Elaboration of Protocols



**Operation
Protocol of the
Satellite
Monitoring Unit
(UMS), for forest
denounce and
monitoring of
change use due
to deforestation**



**Analysis Protocol
for the generation
of forest
denouncements
and deforestation
reports**

WILDFIRES REPORTS

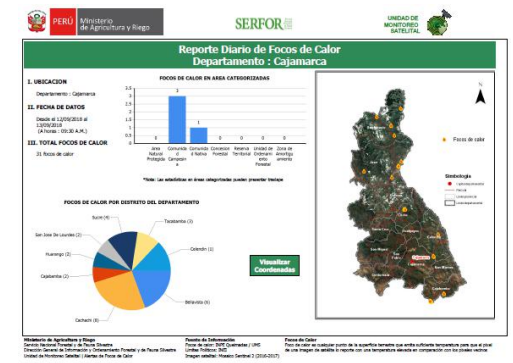
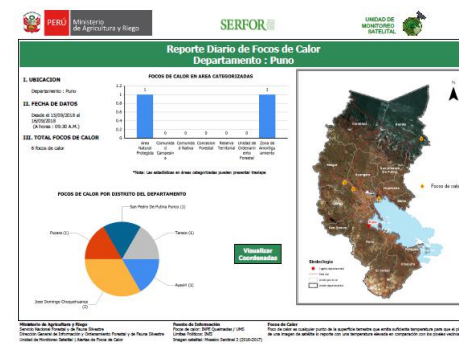
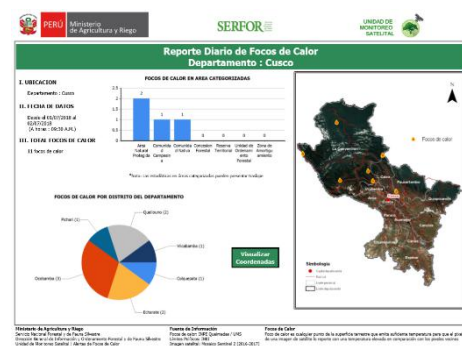
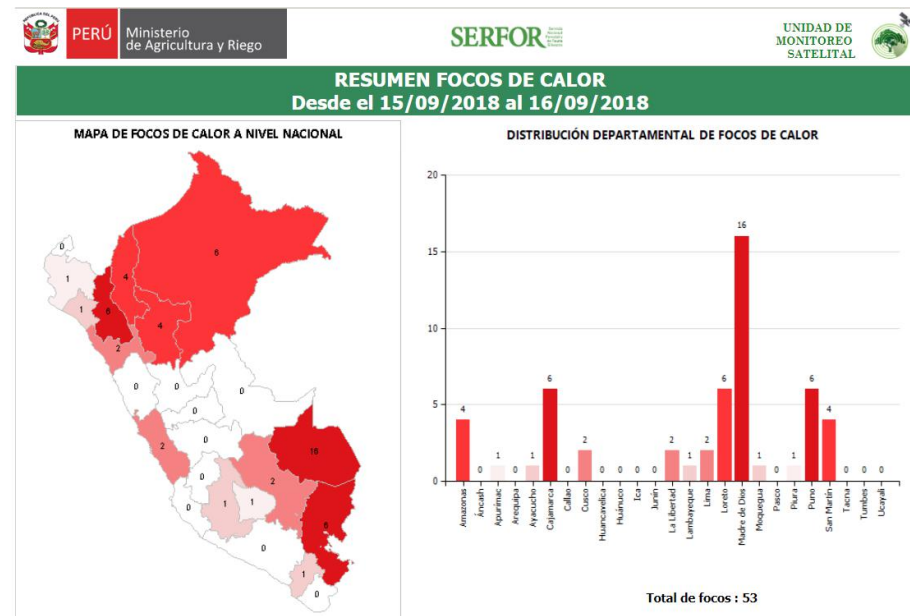
Active Fire Reports

E-mail

Web app
"Heat Points"

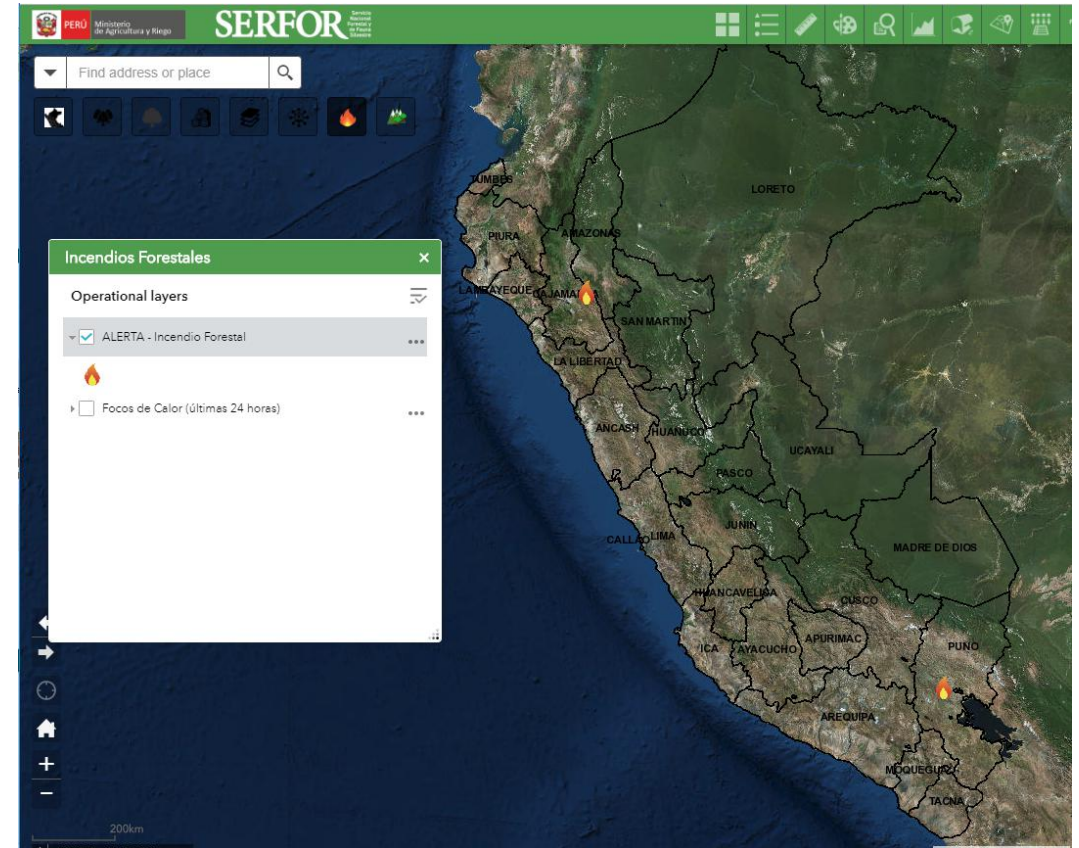
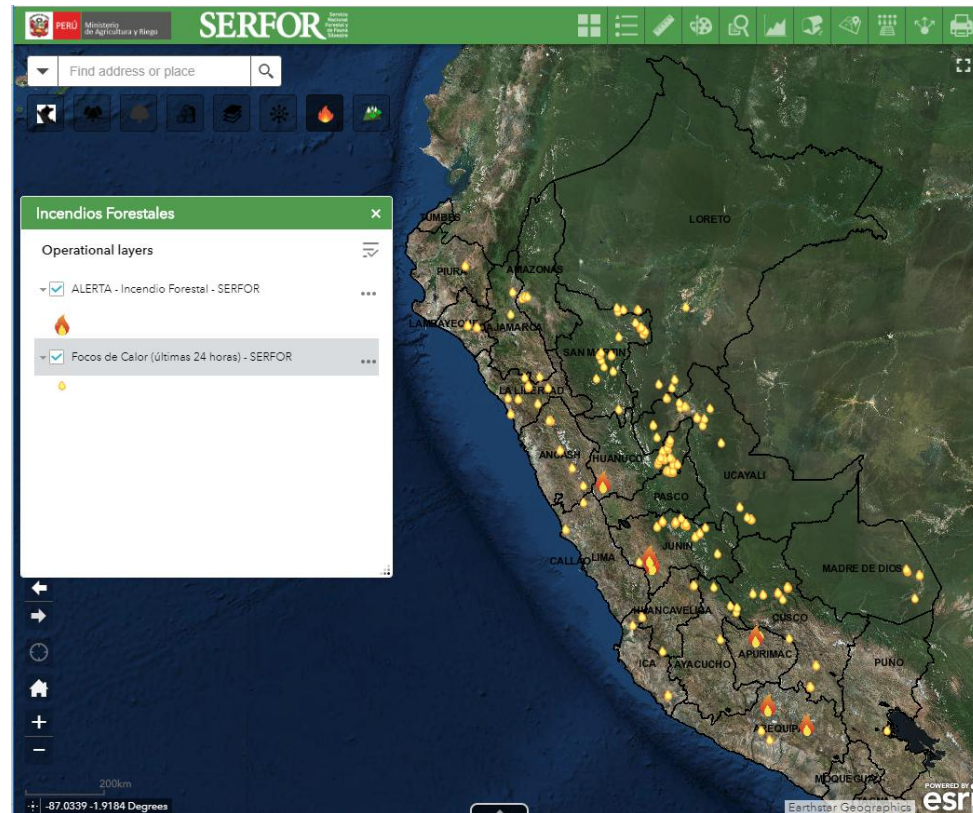
GEOSERFOR

2,850 reports



WILDFIRES

Early Warnings published at GEOSERFOR (geoplatform)

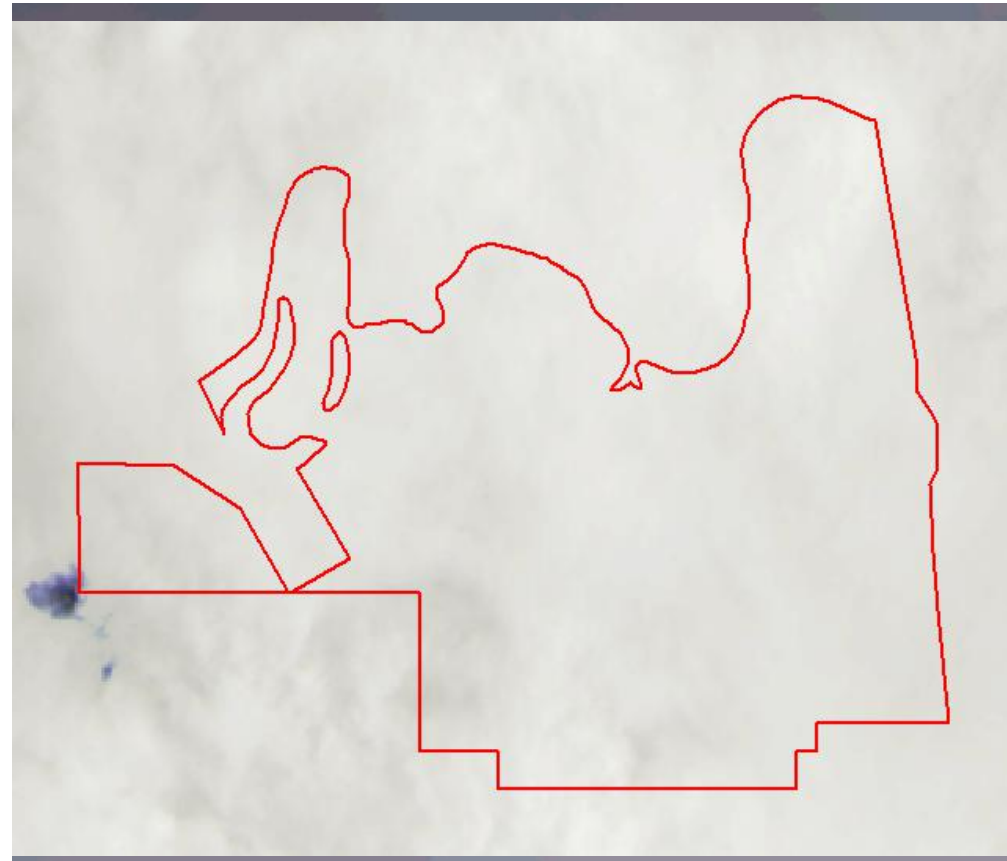


<http://geo.serfor.gob.pe/visor/>

Challenges

- Free cloud imagery acquisition
- **Case:** afforestation and reforestation concession - AGROFOCM.

The illegal activity was developed at January 2018, but we could not identify a free cloud image for the analysis.
- Identify illegal logging with free satellite images.
- Inclusion of new technologies like GGE, JJ-FAST, RADAR for forest monitoring.



Landsat 23 – 02 – 2017

Limitations

- **Budget**
- Different types of forests that not necessarily can be monitor with the same technology.
- Reduce staff dedicated to forest monitoring in national and regional level.
 - National Level:
 - SERFOR: 2
 - Observation Room: 0 (+)
 - Regional Level:
 - 5 Regional Governments: 5 (+)

Favorable scenario for the UMS implementation

- Support of international cooperation



Declaración Conjunta de Intención (DCI)
sobre REDD+ entre Perú,
Noruega y Alemania



- Implementation and articulation between National Forestry and Wildlife Information System (SNIFFS) and National Forestry and Wildlife Control and Surveillance System (SNCVFFS)
- Adequate interinstitutional articulation





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EL PERÚ PRIMERO