ASTROSAT

Forestry Management and Protection System
(FMAP)

Forest

Legality

Initiative

Forest Legality Week

Early Warning Remote Sensing System and Illegal Logging, Part II:

Application of Remote Sensing in Law Enforcement and with Local Communities

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SPACE TECH

Has a role in forestry management

Why Space?

- Enables the monitoring of large forest areas consistently and repeatedly, reducing costs
- A range of satellites can provide a level of detail to suit budgets

Why FMAP?

- Value-added information is integrated into users' existing systems
- Space doesn't mean complicated - **our tech makes it easy for you to benefit from space**

FMAP integrates data

to support the protection and management of forests.

- Fully automated digital service providing automated accurate, consistent, repeated forest monitoring data at scale
- System integrates other data (e.g. management, law) and presents it one dedicated platform
- Cost effective and efficient management tool.

FMAP

FMAP is being piloted in
GUATEMALA

FMAP

Delivered by a team of international partners

Collaboration with key government departments

1. Forestry

2. Security

3. Justice

FMAP

FMAP
3 objectives

1.
Prevention of land crime

2.
Support to national forestry schemes
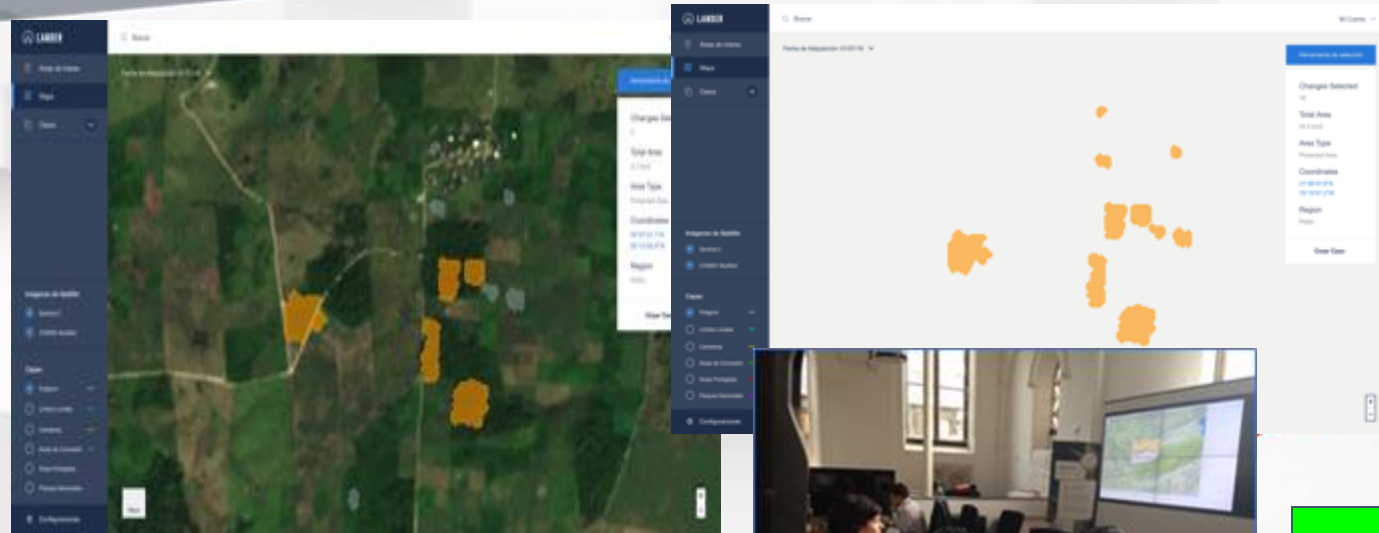
3.
Traceability of forestry products

FMAP supports existing processes

FMAP

1. **Technical staff review alerts**
Select time period, location, size ,
automatic prioritisation

2. **Report sent to Regional Directors** of CONAP and DIPRONA

FMAP

3. Operation planned

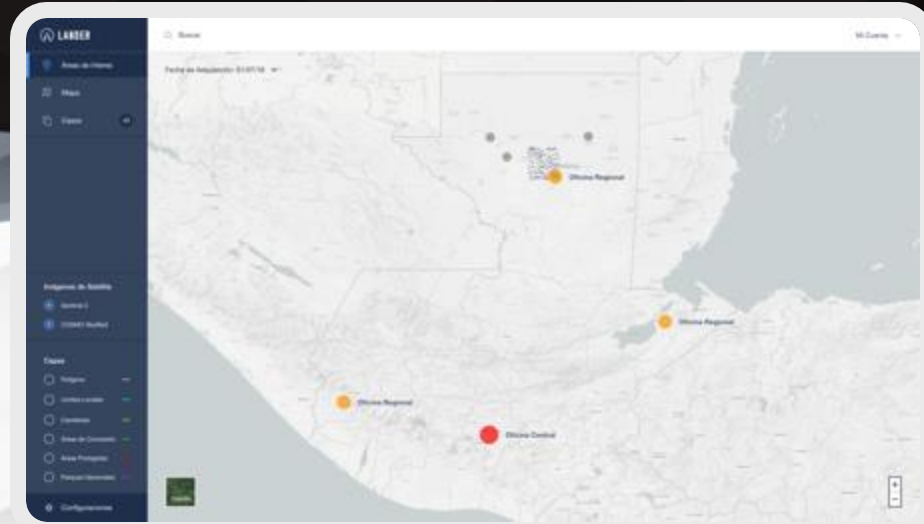**4.** Field Operation and Capture

5. Evidence and prosecution

REPORT

FMAP
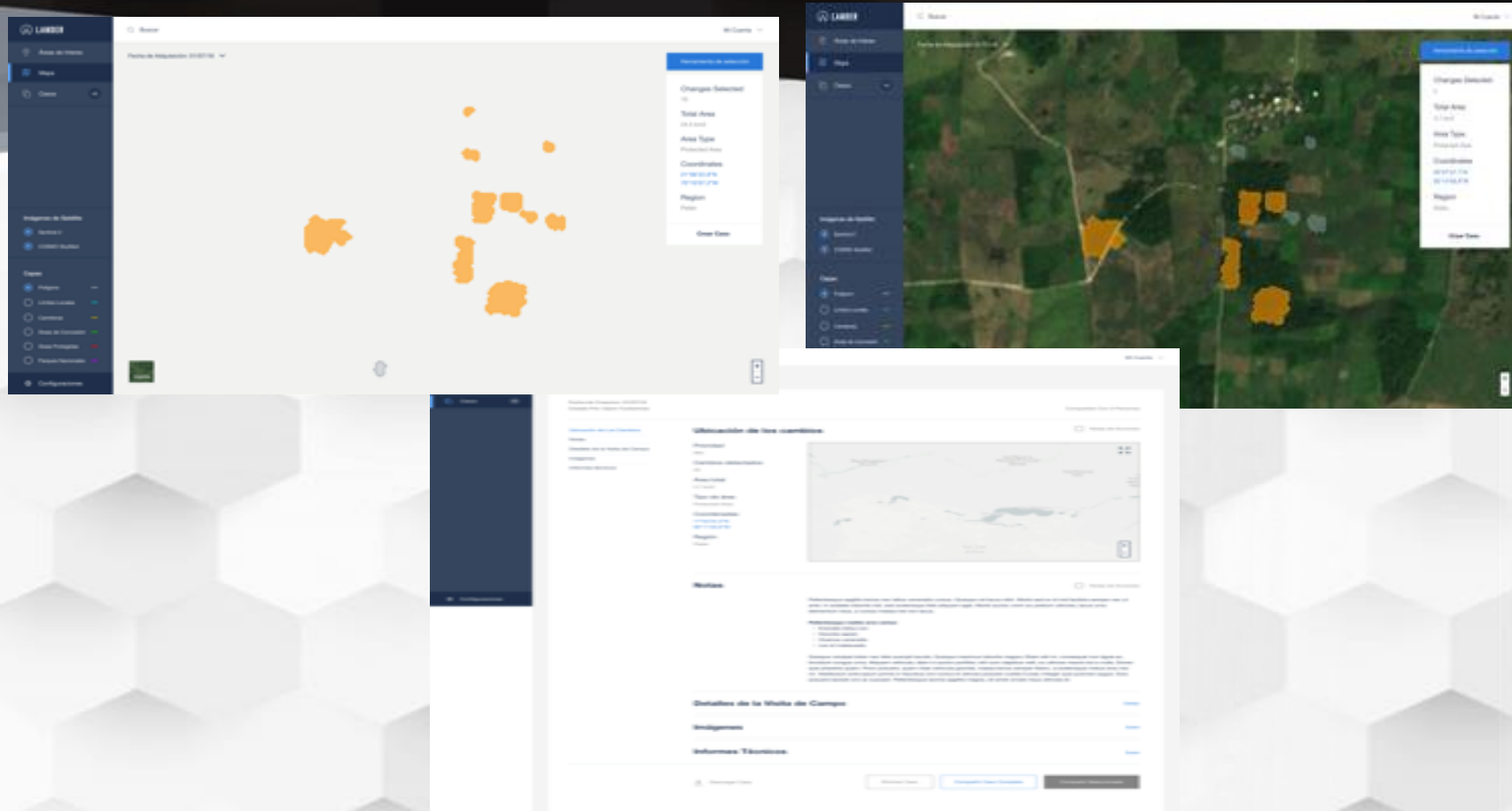
FMAP is user friendly platform

Remote sensing data

Other forestry information

FMAP

Highlights actionable information

FMAP benefits to users

- All relevant information in one place
- Directly related to existing legal structures e.g. concessions
- Customisable dashboard for law enforcement
- Actionable reports
- Targeted patrols reduces costs
- System information can support prosecution

FMAP   **Supports IM**

Difficult to access information from government services such as finance, customs, harbours etc	IM reports are often delayed (2-6 months)	Lack of coordination between ministries responsible for Justice and Forestry (DRC)
• FMAP integrates government databases into 1 platform	• FMAP produces reports for immediate use	• FMAP has lead to better coordination of government departments

FMAP modular design allows existing and future technology sources to be integrated E.g. field apps, forest fire hotspots, illegal wildlife monitoring

Next steps

- No precedent for satellite data used in Guatemalan courts
  - Satellite evidence used elsewhere
  - Supporting evidence captured e.g. photos, notes

- After arrest, DIPRONA have to process within 6 hours
  - Satellite phones for field staff

- Data protection from national systems.
  - GDPR compliant

- Data Sources
  - Land change
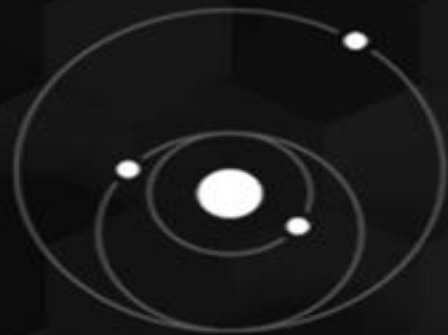 - Forest Fires
  - Other Data sources.

FMAP is an ambitious project

- FMAP is funded until November 2019
- Ambition for:
  - Continuation in Guatemala
  - FMAP-Regional (México, El Salvador, Honduras and Guatemala)
- Estimated costs:
  - Year 1: $460k (for set up)
  - Year 2: operational costs: $400k
- Cost-Effectiveness Analysis highlights:
  - Scale of Impact (Guatemala) = 84 Patrols a year
  - $82/ha saved vs $301/ha for Patrols
  - Other sources of income of INAB/CONAP

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