



WORLD
RESOURCES
INSTITUTE

Making Early Warning data accessible and useful

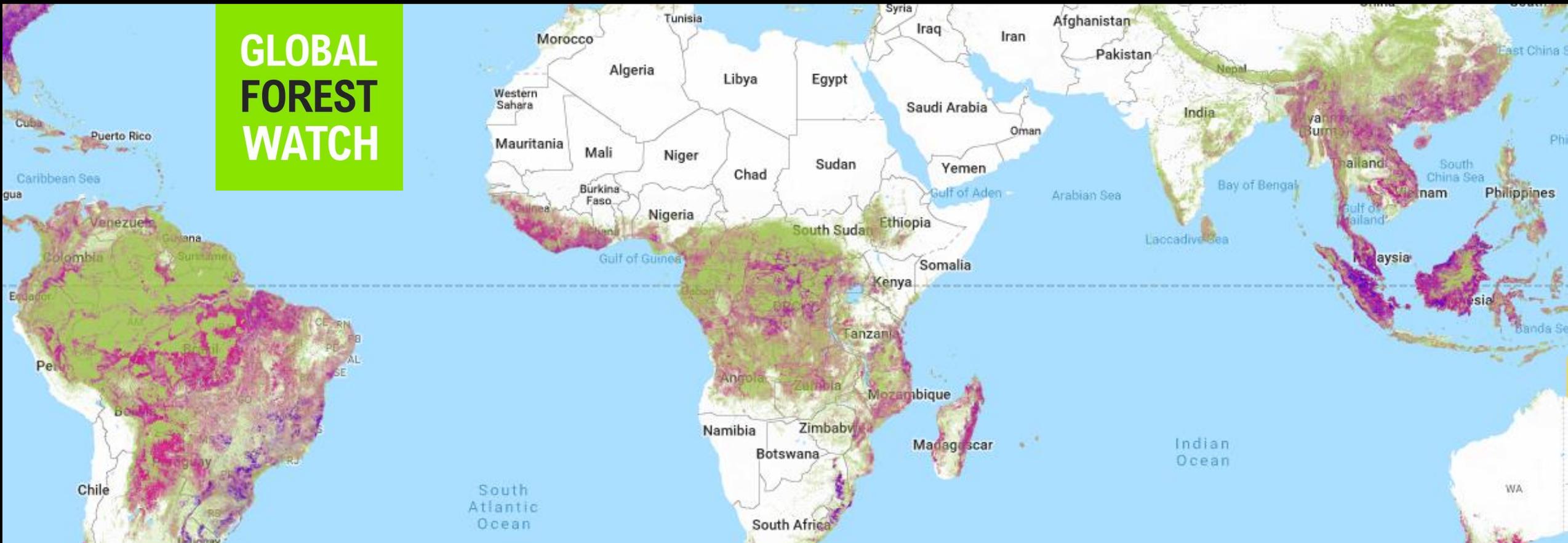
Mikaela Weisse and Ruth Nogueron

October 25, 2018

Forest Legality Week

Global Forest Watch

An online platform that provides data and tools for monitoring forests.



GFW Map

The screenshot displays the Global Forest Watch (GFW) web interface. At the top, the navigation menu includes 'GLOBAL FOREST WATCH', 'MAP', 'DASHBOARD', 'BLOG', and 'ABOUT'. On the right, there are options for 'ENGLISH', 'MY GFW', and 'MORE ...'. Below this, a secondary menu features 'FOREST CHANGE', 'LAND COVER', 'LAND USE', 'CONSERVATION', 'PEOPLE', 'STORIES', and 'COUNTRY DATA'. The main map area shows a satellite view of a forest with pink lines indicating GLAD (Global Land Alert Detection) alerts. A yellow circle highlights a date range slider at the bottom of the map, which is set from '1 MAY 2018' to '11 OCT 2018'. A play button is visible on the slider, and a date marker is positioned at '5 Oct 2018'. On the left side of the map, there are controls for 'Recent Imagery', zoom in (+) and zoom out (-) buttons, a share icon, a visibility icon, a refresh icon, and a search icon. The footer contains logos for Google, Google Earth Engine, and CARTO, along with a 'Show footer' link. Copyright information for 2018 is provided, including 'Imagery ©2018 DigitalGlobe, Landsat / Copernicus, U.S. Geological Survey', a scale bar for 1 km, and links for 'Terms of Use' and 'Report a map error'.

View how alerts have changed over time

GFW Map

GLOBAL FOREST WATCH

MAP DASHBOARD BLOG ABOUT

ENGLISH MY GFW MORE ...

FOREST CHANGE LAND COVER LAND USE CONSERVATION PEOPLE STORIES COUNTRY DATA

Recent Imagery

GLAD alerts

GLAD alerts from 1 MAY 2018 to 11 OCT 2018

5 Oct 2018

Imagery ©2018 DigitalGlobe, Landsat / Copernicus, U.S. Geological Survey 1 km

Confirm alerts with recent Sentinel-2 images

GFW Map

GLOBAL FOREST WATCH

MAP DASHBOARD BLOG ABOUT

ENGLISH MY GFW

FOREST CHANGE LAND COVER LAND USE CONSERVATION PEOPLE STORIES **PERU DATA**

TYPE: MADERABLE
TITLE HOLDER: RAUL GOMEZ VALERA (LOTE A)
PROVINCE: UCAYALI
DEPARTMENT: LORETO
CONTRACT: 16-CON/C-I-AD-001-08
SUPERVISION: SUPERVISADO POR EL OSINFOR
AREA HA: 34917

ANALYZE **SUBSCRIBE**

Recent Imagery

GLAD alerts from 1 MAY 2018 to 11 OCT 2018 | 5 Oct 2018

Google Earth Engine CARTO

Show footer

Imagery ©2018 DigitalGlobe, Landsat / Copernicus, U.S. Geological Survey 1 km Terms of Use Report a map error

Compare alerts with other spatial information

GFW Map

The screenshot displays the Global Forest Watch (GFW) web application interface. At the top, the navigation bar includes the GFW logo, menu items (MAP, DASHBOARD, BLOG, ABOUT), language selection (ENGLISH), user profile (MY GFW), and a MORE menu. Below this, a secondary navigation bar highlights 'COUNTRY DATA' among other categories like FOREST CHANGE, LAND COVER, LAND USE, CONSERVATION, PEOPLE, and STORIES.

The main map area shows a satellite view with a green polygon outlining a selected area of interest. A white crosshair is centered on the map. To the left, a 'FOREST CHANGE' sidebar offers options for GLAD alerts, Places to Watch, and filtering preferences. To the right, a data panel (circled in yellow) displays a line graph icon, 'DRAW OR UPLOAD SHAPE', 'COUNTRY OR REGION', and 'OTHER DATA LAYERS'. It reports a 'TOTAL SELECTED AREA' of 2,064 ha and 'GLAD TREE COVER LOSS ALERTS' of 549. Below these figures are buttons for 'ADVANCED ANALYSIS', 'SUBSCRIBE', 'DOWNLOAD DATA', 'SHARE', and 'DISCARD ANALYSIS'.

At the bottom of the map, a timeline slider shows 'GLAD alerts from 1 MAY 2018 to 11 OCT 2018', with a play button and a date selector set to '5 Oct 2018'. The footer contains logos for Google, Google Earth Engine, and CARTO, along with a 'Show footer' link, copyright information, a 1 km scale bar, and links for 'Terms of Use' and 'Report a map error'.

Analyze alerts within an area of interest

GFW Map

The screenshot displays the Global Forest Watch (GFW) map interface. At the top, the navigation bar includes 'GLOBAL FOREST WATCH', 'MAP', 'DASHBOARD', 'BLOG', 'ABOUT', 'ENGLISH', 'MY GFW', and 'MORE...'. Below this, a secondary navigation bar features 'FOREST CHANGE', 'LAND COVER', 'LAND USE', 'CONSERVATION', 'PEOPLE', 'STORIES', and 'COUNTRY DATA'. The main map area shows a satellite view with a pink polygon highlighting a 'New logging road'. A modal window titled 'Name your subscription' is open, containing a 'NAME *' field with the text 'New logging road', a 'RECEIVE ALERT EMAILS IN...' dropdown menu set to 'ENGLISH', and 'BACK' and 'SAVE' buttons. To the left of the map, a 'FOREST CHANGE' sidebar lists 'GLAD alerts' (with sub-options for 'Recent alerts', 'Places to Watch', 'Show only confirmed alerts', and 'Geographic coverage') and 'Recent Imagery'. To the right, a 'COUNTRY OR REGION' sidebar shows 'TOTAL SELECTED AREA: 2,064 ha' and 'GLAD TREE COVER LOSS ALERTS: 549', with a 'SUBSCRIBE' button circled in yellow. At the bottom of the map, a timeline for 'GLAD alerts' is visible, ranging from '1 MAY 2018' to '11 OCT 2018', with a play button and a date '5 Oct 2018'. The footer includes 'Google', 'Google Earth Engine', 'CARTO', 'Show footer', and 'Imagery ©2018 DigitalGlobe, Landsat / Copernicus, U.S. Geological Survey'.

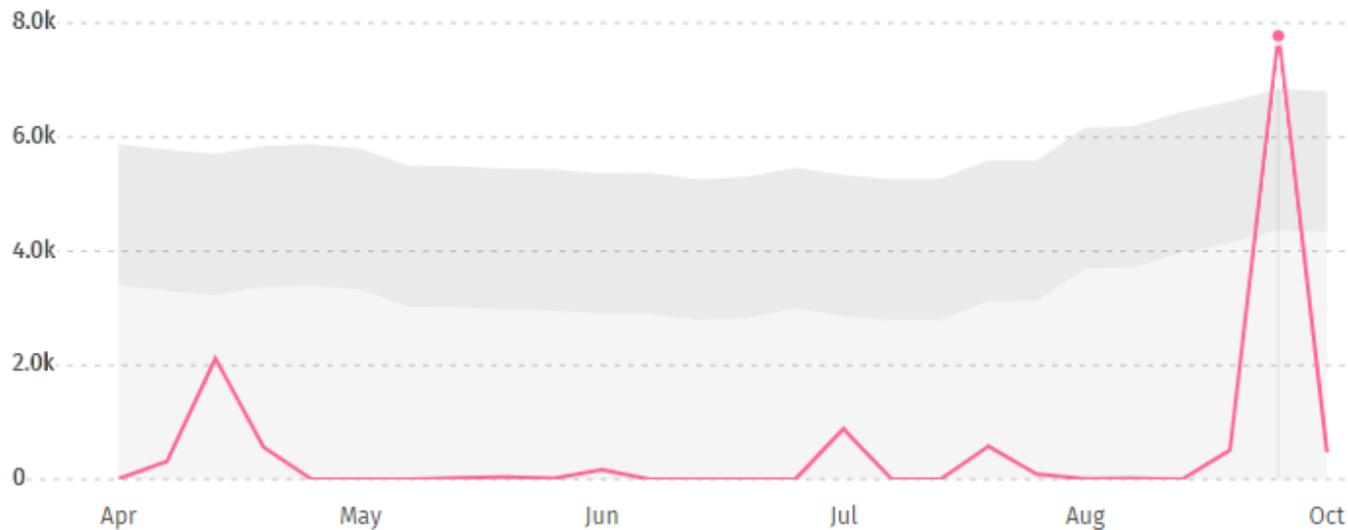
Subscribe to email notifications for new alerts

GFW Dashboards

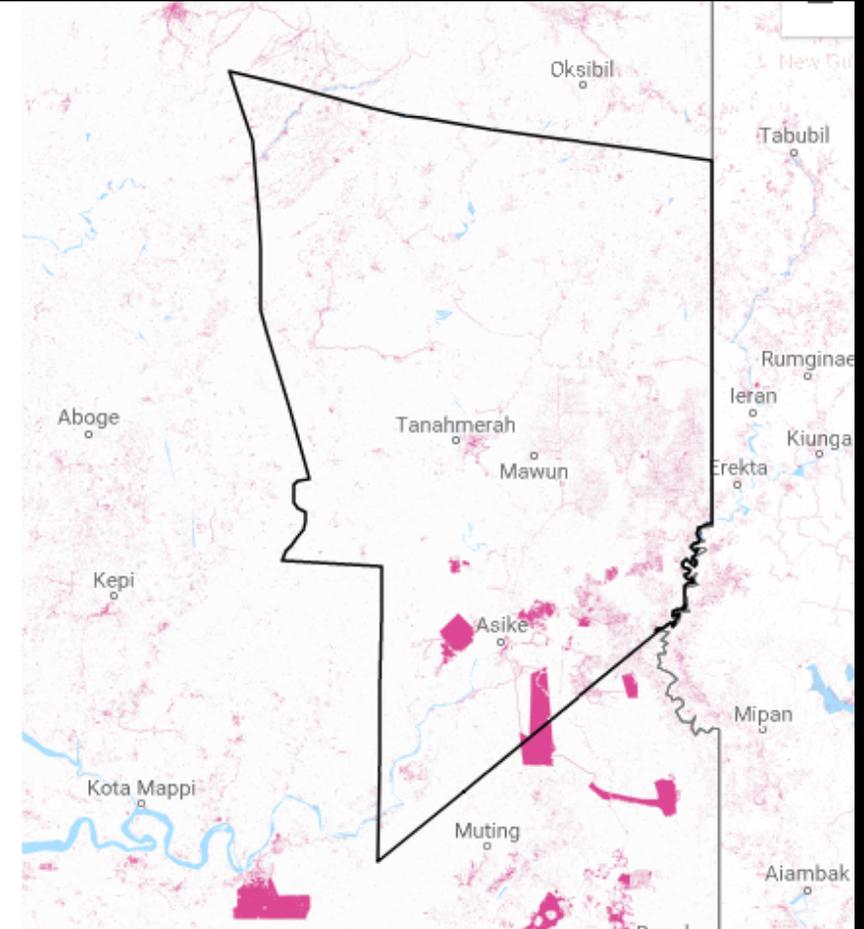
DEFORESTATION ALERTS IN BOVEN DIGOEL

SHOW ON MAP   

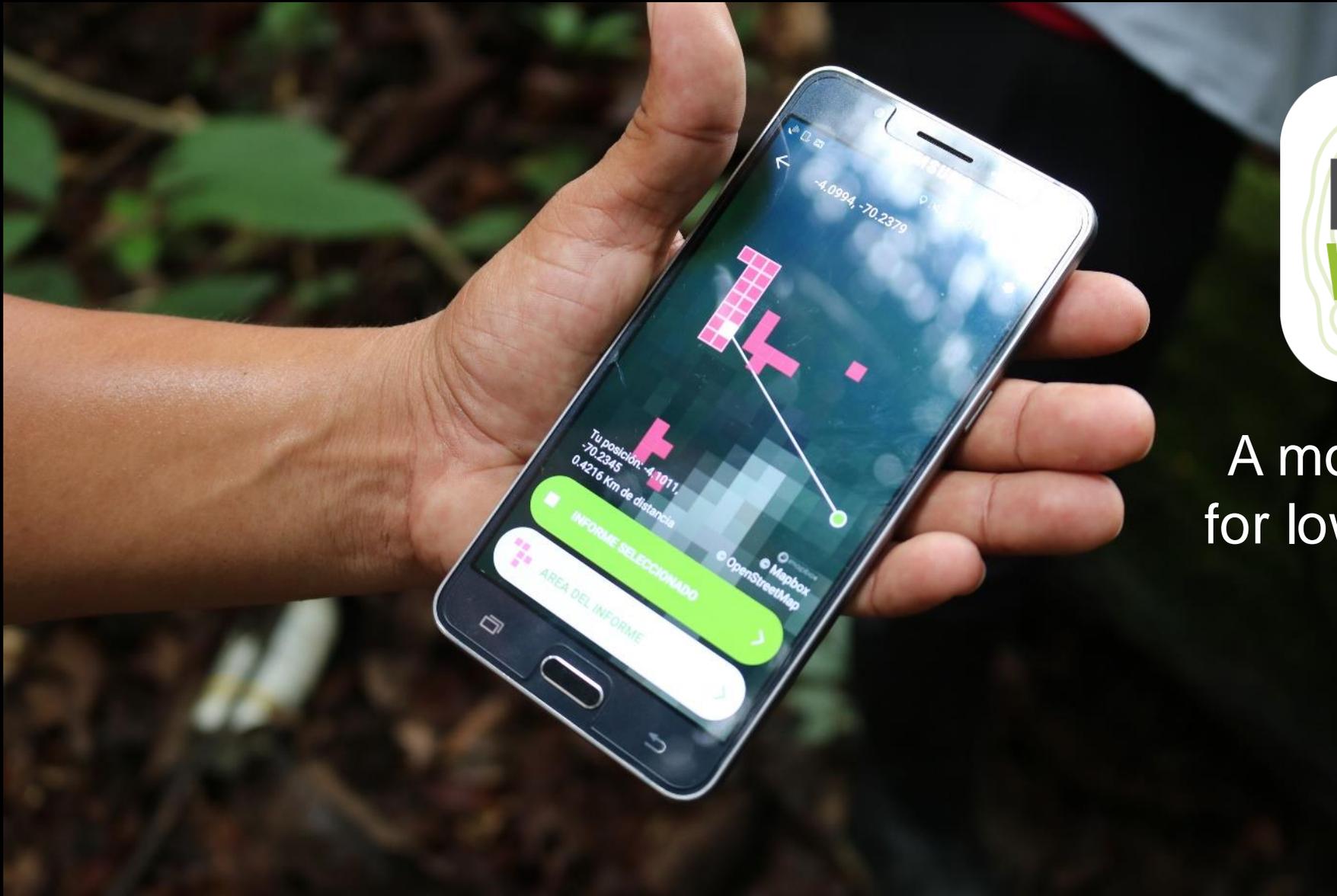
There were **7,776** GLAD alerts reported in the week of the **24th of September 2018**. This was **unusually high** compared to the same week in previous years.



these estimates do not take tree cover gain into account

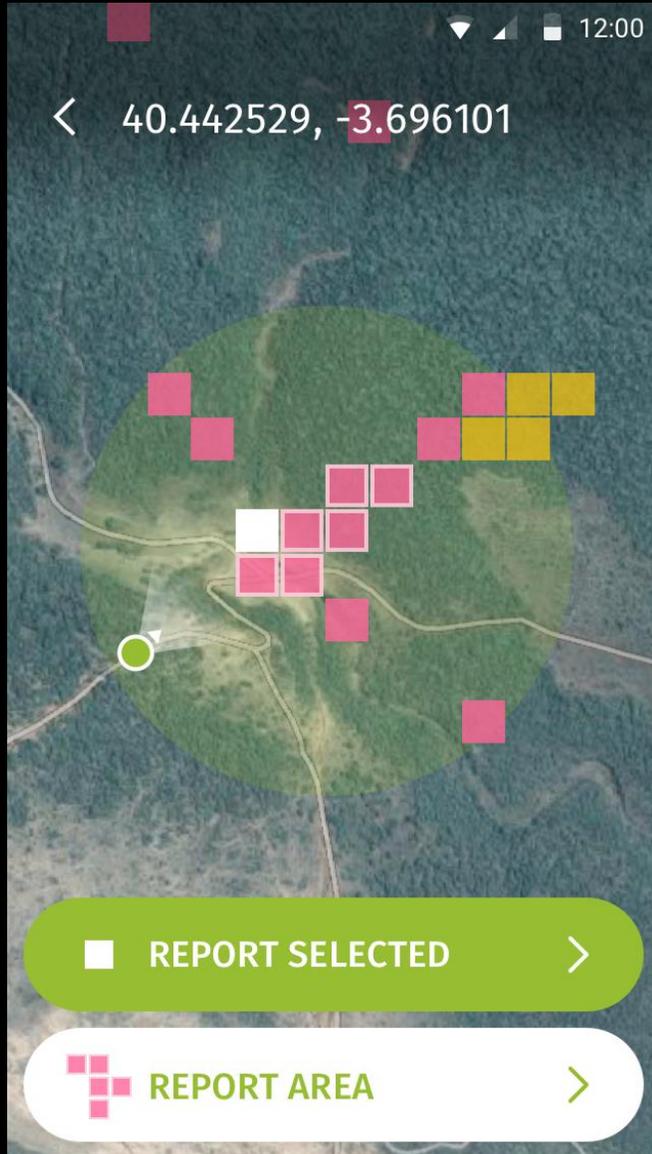


Forest Watcher



A mobile solution
for low connectivity

Forest Watcher



App features

- Monitor an area of interest
- Download GLAD and fire alerts to use offline
- Navigate to areas of recent change
- Collect information via customizable forms

Forest Watcher is...

- Free to use and open source
- Available on Android and iOS
- Available in English, French, Spanish, Portuguese, and Bahasa Indonesian

Forest Watcher

Web app to
customize the
experience and
manage data

The screenshot displays the 'Areas of Interest' page in the Forest Watcher web application. The top navigation bar includes the logo 'FOREST WATCHER', the active menu 'AREAS', and other options: 'TEMPLATES', 'REPORTS', 'SETTINGS', the user email 'WRIFORESTS@GMAIL.COM', a language dropdown 'EN', and a 'LOGOUT' button. The main heading is 'Areas of Interest'. Below it, the section 'Your areas' contains three items: two existing areas and one 'ADD AREA' button. The first area, 'Saree Aceh', is shown as a green polygon on a satellite map with a pencil icon for editing and a 'SHOW REPORTS' link below. The second area, 'Aceh Field Site 2', is also shown as a green polygon on a satellite map with a pencil icon and a 'SHOW REPORTS' link. The third item is a white box with a green border containing a plus sign and the text '+ ADD AREA'.

Places to Watch

GLOBAL
FOREST
WATCH

Places to Watch

Places to Watch is a quarterly initiative that uses Global Forest Watch's weekly GLAD alerts to spot changes in forests around the globe and identify the most consequential cases of recent deforestation. [Sign up here](#) to receive each new Places to Watch update.

Connect with us: [Twitter](#) [Facebook](#) [Instagram](#) globalforestwatch.org

SEPTEMBER 2018

This edition of Places to Watch examines forest-clearing between May 1, 2018 and July 31, 2018. [Read the full Places to Watch here.](#)

[Sign up here](#) to receive the monthly Places to Watch

PLACES TO WATCH IN CENTRAL AFRICA

Pressure for Resources Strains Virunga Nation

#PlacesToWatch

#PlacesToWatch

Forest Clearing for Oil Palm in
Papua, Indonesia

450 ha

approximate area affected
since May 2018

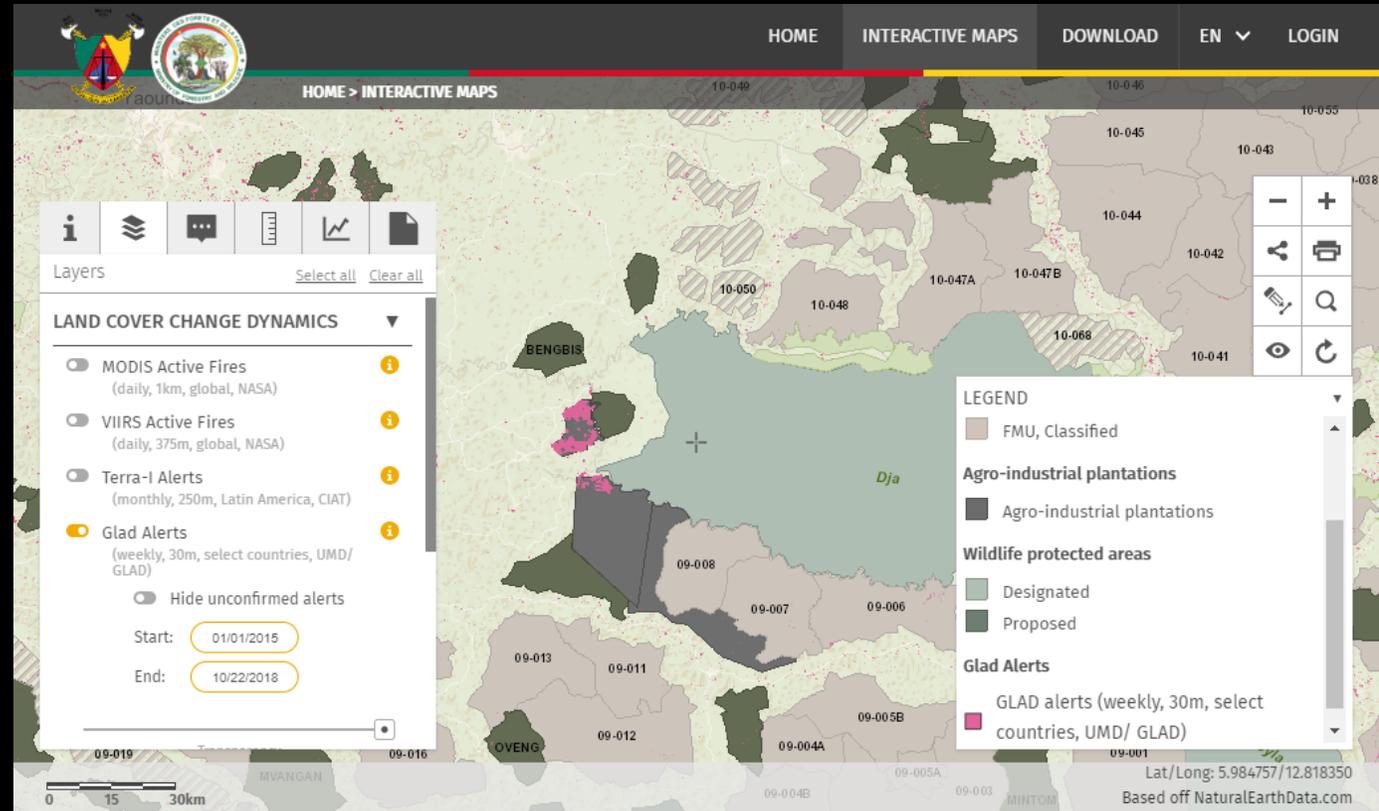
bit.ly/PTWSeptember2018



- Semi-automated method to identify areas of recent alerts that overlap intact forests and protected areas
- Objective: increase media and public attention to recent deforestation

Other ways to access alerts

- Download alerts for an area of interest as a csv
- Access analyses via Global Forest Watch's API
- Build custom web applications that incorporate GLAD alerts through the MapBuilder platform template



Early warning systems use: Peru case study

Uses



Awareness raising



Empowerment



PES & to pay illegal logging fines



Protected areas management



Law enforcement

Awareness raising

HOME · ARCHIVE · SECTORS · SYNTHESIS · INTERACTIVE · COUNTRIES · OTHER · ABOUT MAAP

GLAD weekly alerts

It is worth emphasizing how quickly and precisely the new GLAD weekly alert system picked up the new access road construction in 2016 (see Image 27c). Also, click here to see this view on Global Forest Watch [GFW](#).

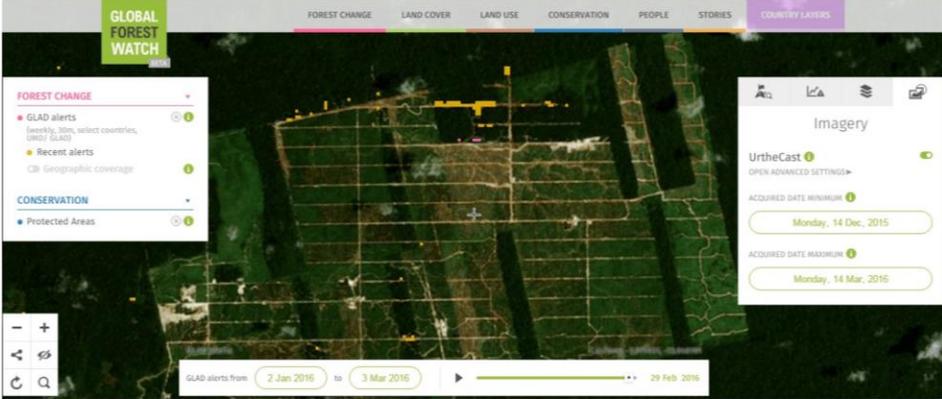


Image 27c. Data: UMD/GLAD, GFW, UrtheCast

Notes

*According to the Supreme Decree (No. 018-2015-MINAGRI) approving the Regulations for Forest Management under the framework of the new 2011 Forestry Act (No. 29763), the official definition of primary forest in Peru is: "Forest with original vegetation characterized by an abundance of mature trees with species of superior or dominant canopy, which has evolved naturally." Using methods of remote sensing, our interpretation of that definition are areas that from the earliest available image (in this case, from 1985)

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climate change wildlife energy pollution

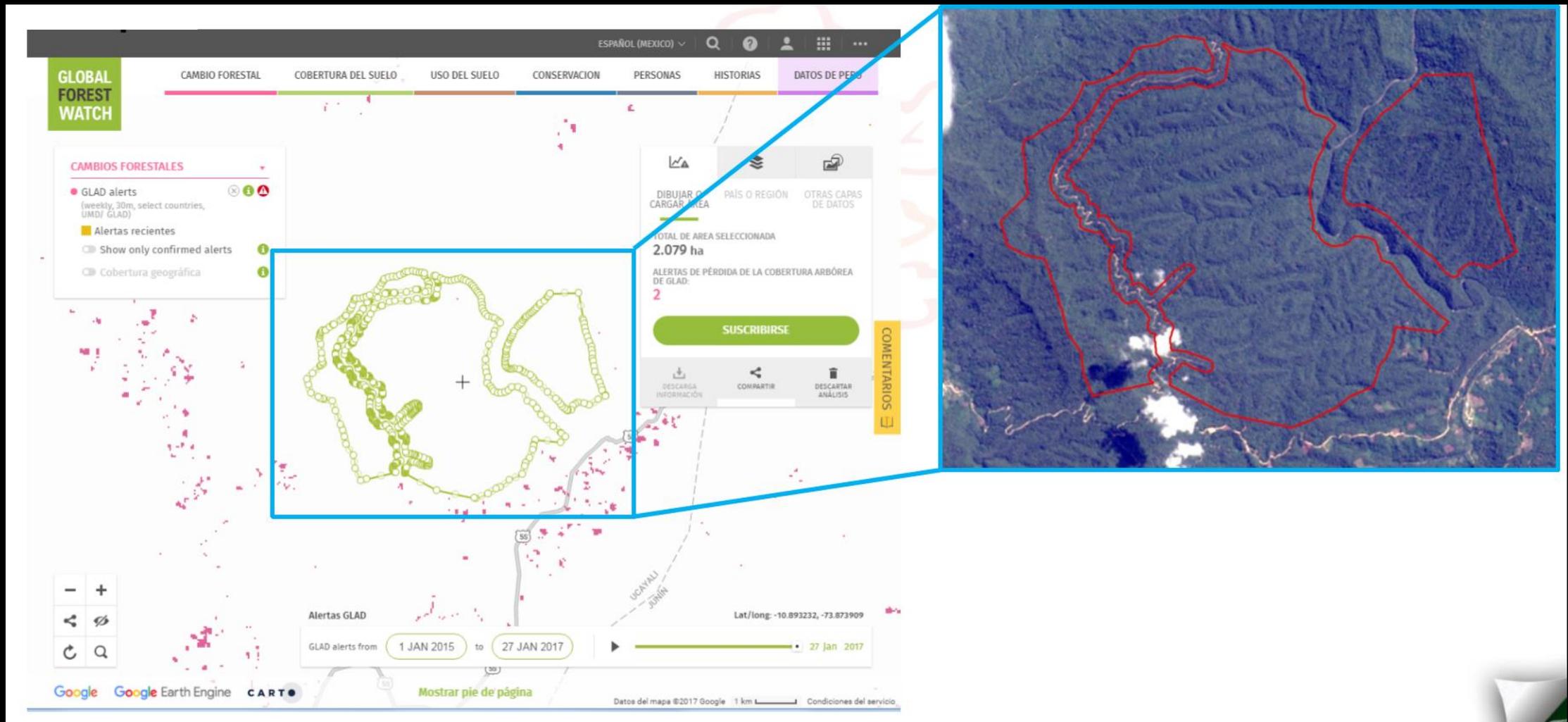
Head of London-listed company linked to illegal clearing of Peru rainforest



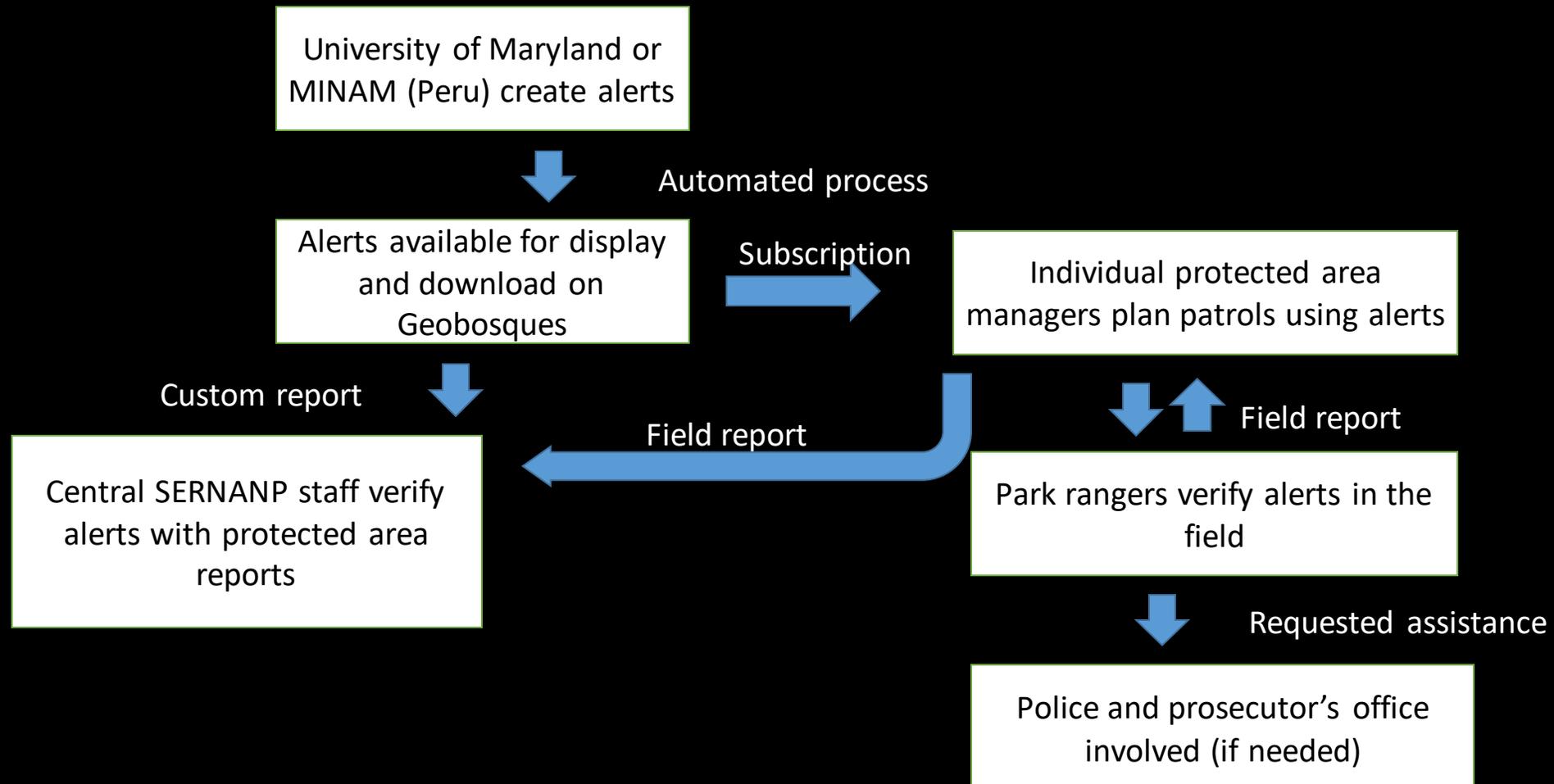
Empowering indigenous peoples



PES & payment of fines for illegal logging



Protected Areas Management



Law enforcement



Lessons

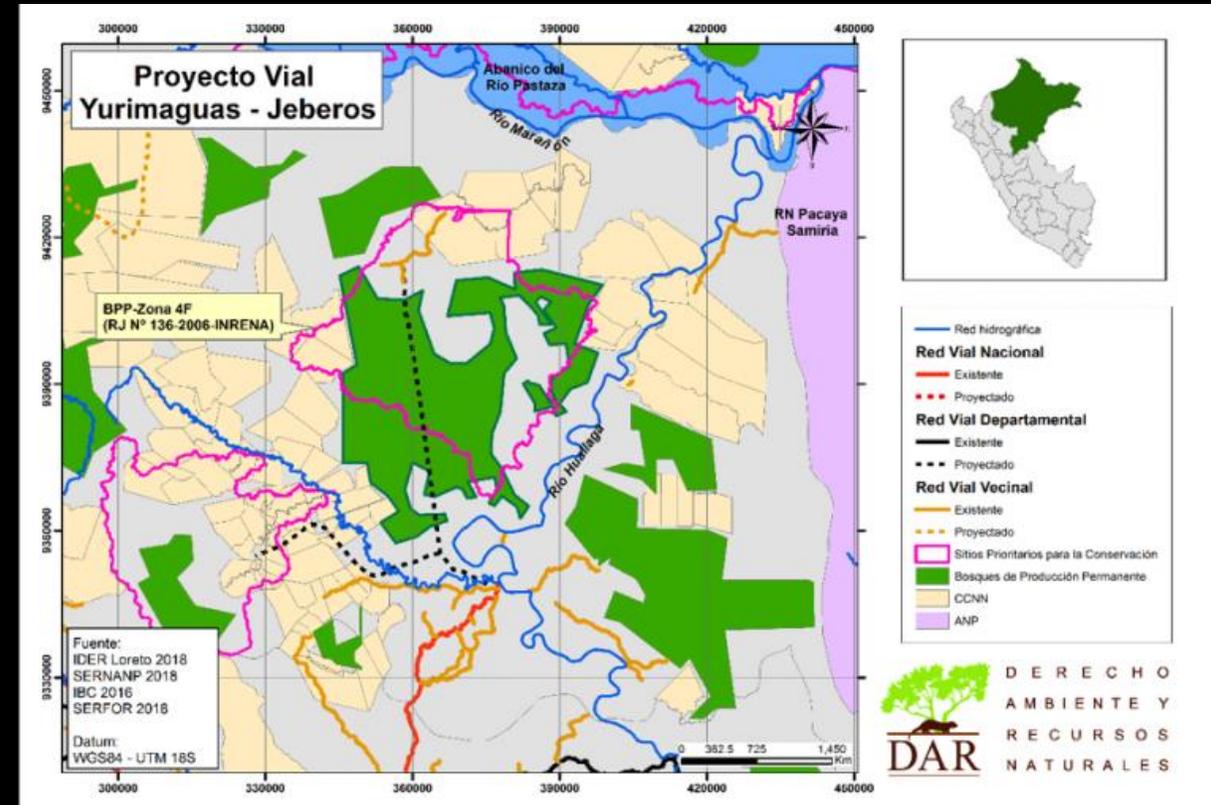
- Satellite monitoring is only the first step

What Happens When an Alert is Triggered?



Technical limitations

- Availability
- Accessibility
- Technical capacity
- Contextual data and analysis



Governance limitations

“We have near-real time deforestation alerts, but un-real capacity to respond.”

Luigi R. Vargas
Natural Resources Director
Regional Government of Ucayali, Peru

- Capacity
- Corruption
- Inter-agency coordination

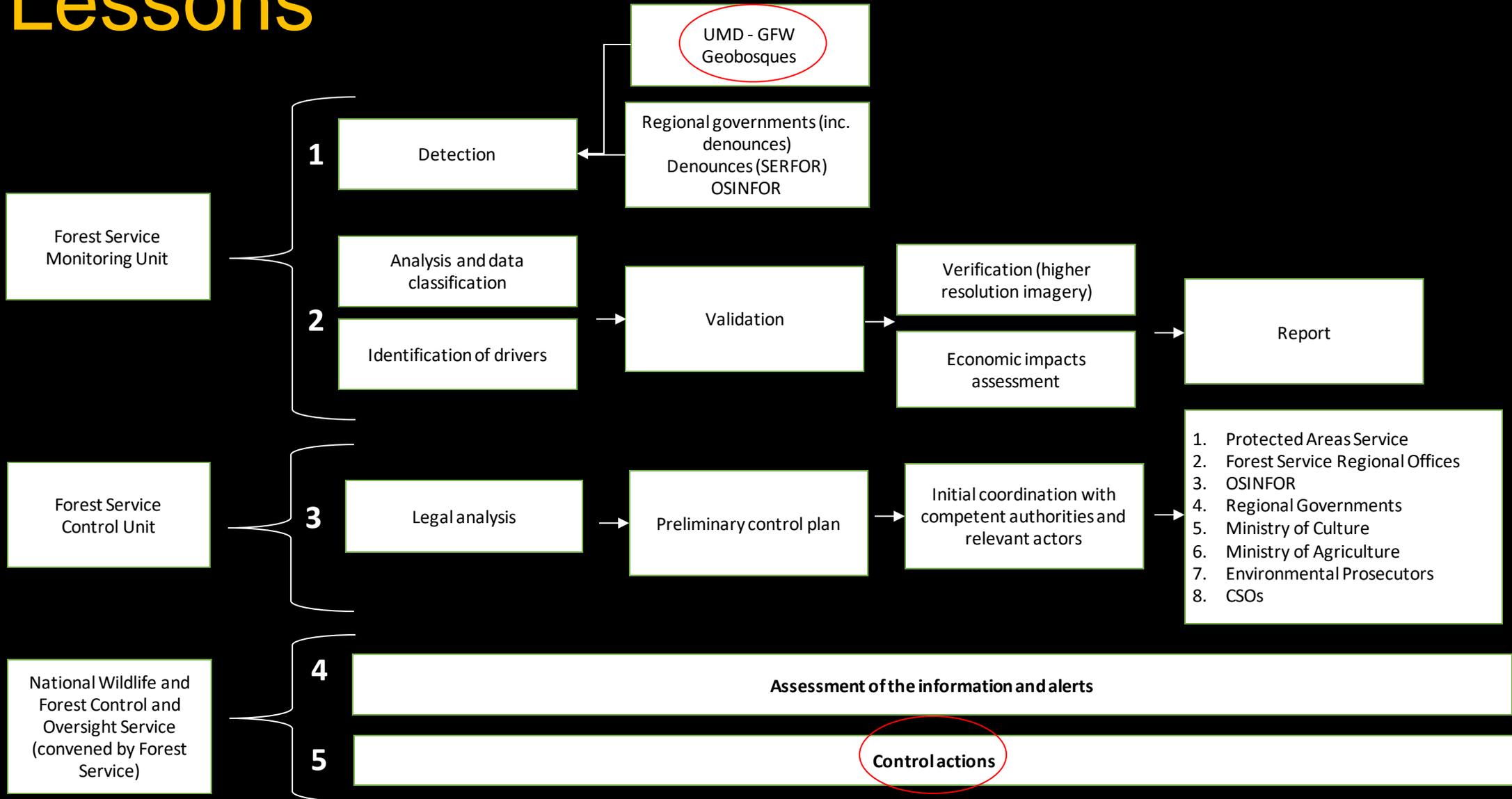
Actores instituciones públicas evidenciadas



SERFOR Servicio Nacional Forestal y de Fauna Silvestre

De acuerdo a la norma	En el avance de implementación	GORES- ARFFS (Distancia/Presencial*)
SERFOR	SERNANP	Ucayali
GORES – ARFFS (9)	OSINFOR	San Martín
MINISTERIO PÚBLICO	MINAM - PNCA	Tumbes
PNP ESPECIALIZADA		La Libertad
FUERZAS ARMADAS		Huánuco
DICAPI		Ayacucho*
SUNAT		Loreto + Amazonas + Madre Dios (Temas conectividad)
OEFA		
GOBIERNOS LOCALES (29)		

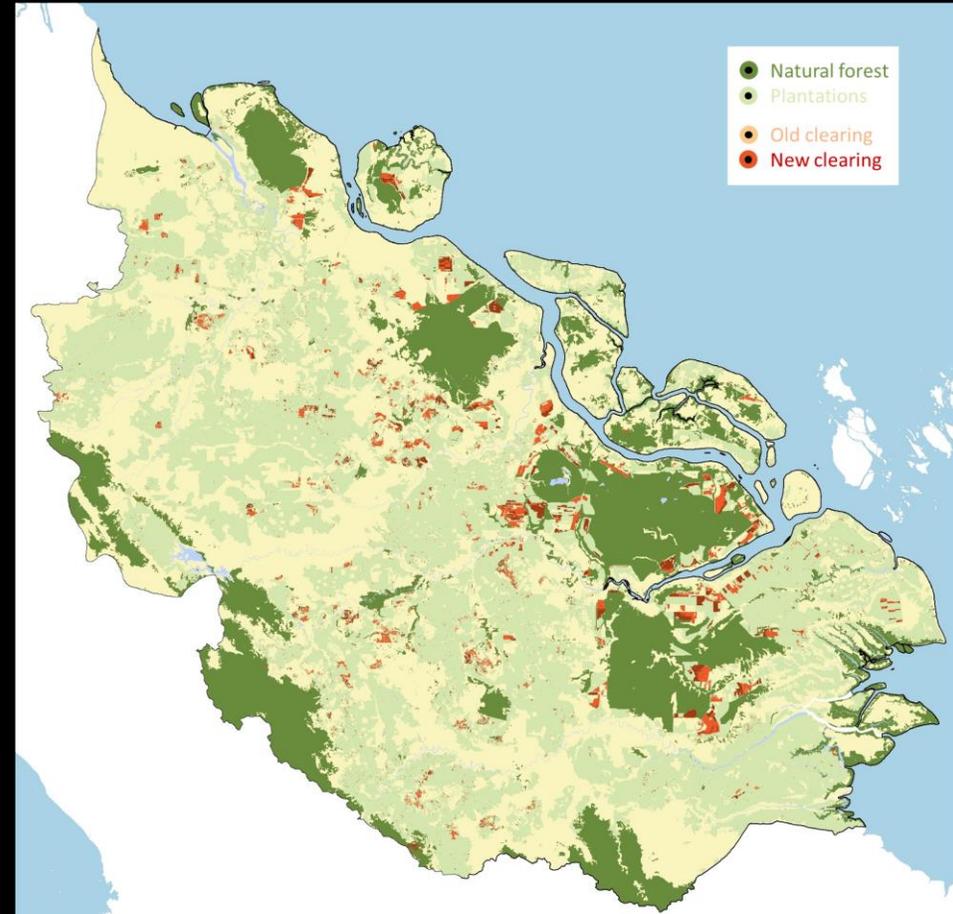
Lessons



WRI's work to overcome limitations of EW

Incorporation of new satellite data

- Incorporation of Sentinel-2 images into GLAD alerts to increase resolution and frequency
- Pilot test of Sentinel-1 radar data for alerts in Indonesia and Malaysia to overcome cloud cover

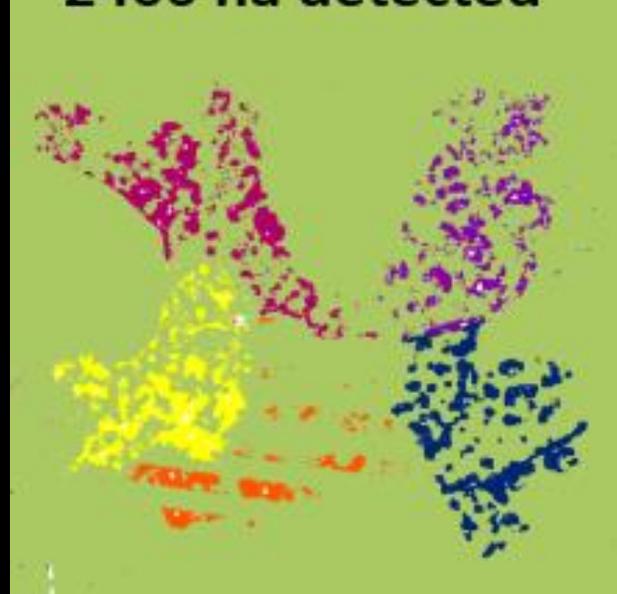


Pilot test to identify selective logging

Global Forest Watch
22 ha detected



Pilot test
2400 ha detected



Collaboration with Sheffield University researchers to pair satellite images with field data on selective logging

Enhanced identification of priority alerts

- Developing methods to identify priority alerts for particular users, e.g. based on cluster size, proximity to oil palm
- Machine learning to automate detection of drivers



Improve access to contextual information



- Incorporating new sources of satellite imagery for verification of alerts
- Expanding GFW's available data on concessions, land rights

Providing targeted trainings

Creating hands-on trainings and materials for particular user groups in government and civil society



Creating spaces to share lessons learned



- WRI convening the “Early Warning Working Group”
- Hosted a forum in July to share experiences, reflect on limitations, and lessons learned
- Increased emphasis on highlighting real examples of use

Thanks!

www.globalforestwatch.org

