



WRI INDONESIA

Innovative Applications of Geospatial Information in Supporting Natural Resources and Disaster Management in South East Asia Region

Arief Wijaya



Geosmart Asia, 22-24 August 2017, Putra Jaya, Malaysia



WRI INDONESIA

Fires Episode 2015

2015 fire season – worst in almost 20 years due to el Nino coupled with anthropogenic Factors

Sending over 500,000 people seeking for medical assistance

World Bank predicted total economic loss of 16 Billion USD

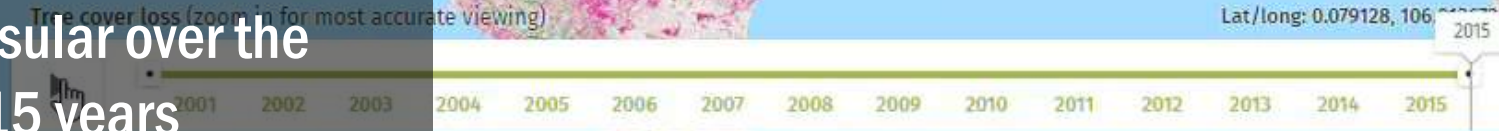


FOREST CHANGE

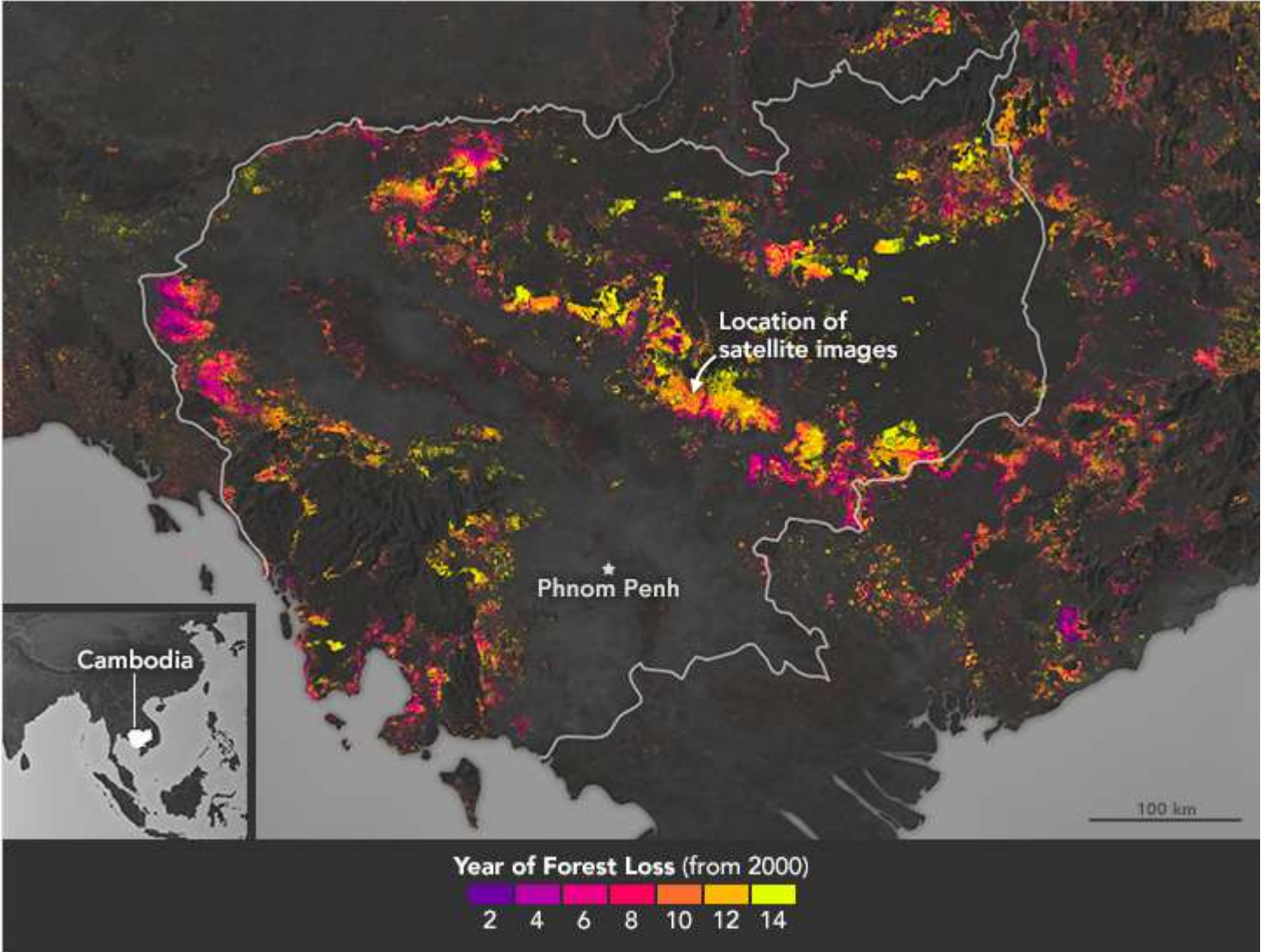
- Tree cover loss (annual, 30m, global, Hansen/UMD/Google/USGS/NASA)
- Displaying loss with >30% canopy density.
- Tree cover loss is not always deforestation.
- NOTE: 2015 tree cover loss is only for the tropics.
- 2015 data coverage

Map navigation controls: zoom in (+), zoom out (-), pan, and search.

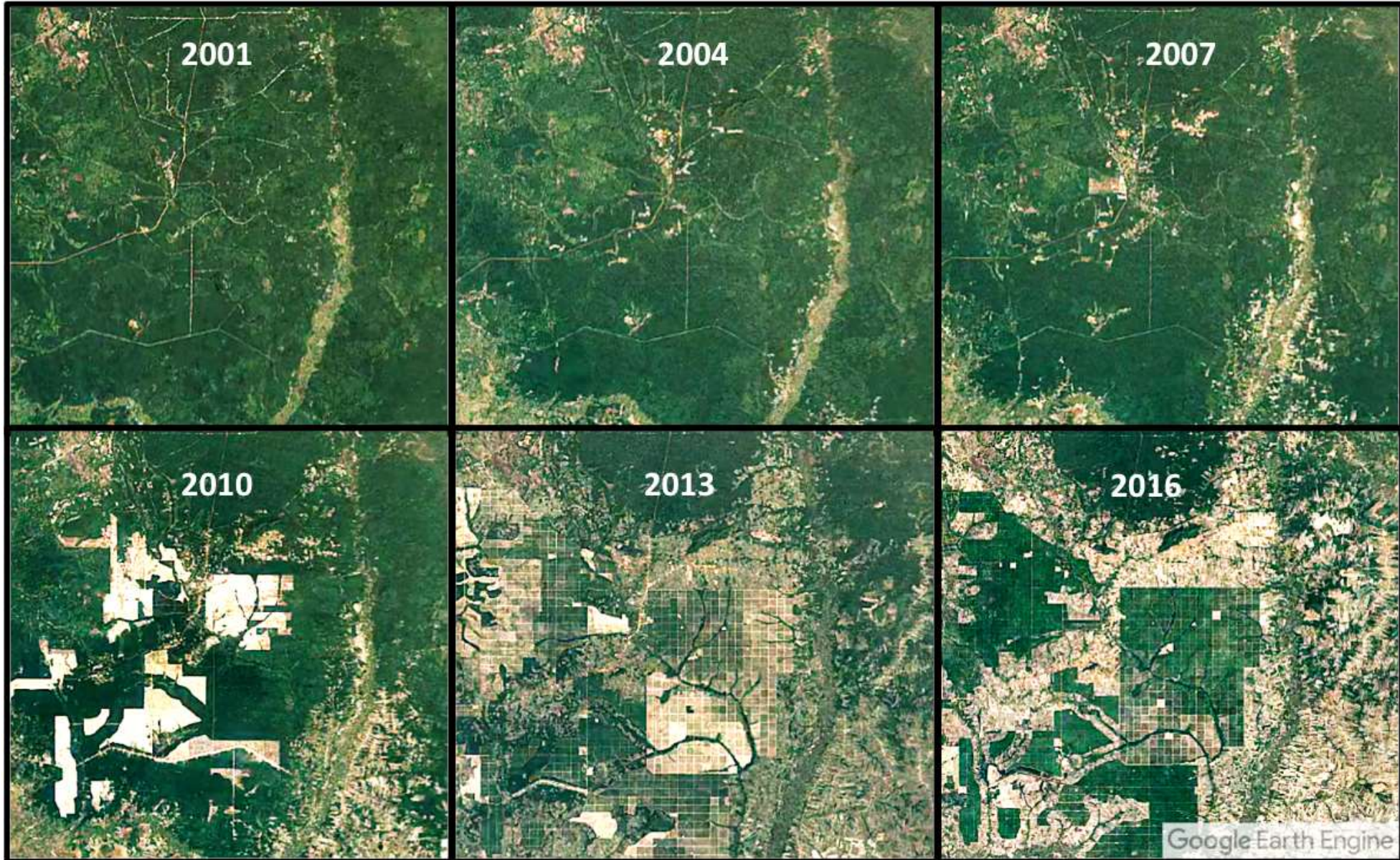
Intensified forest clearing in SE Asia Peninsular over the past 15 years



Deforestation and tree biomass loss in Central Cambodia



Timber harvesting in Central Cambodia



CHALLENGES AND CURRENT SITUATION

UNSUSTAINABLE
LAND USE PLANNING

LACK OF LAW
ENFORCEMENT

LIMITED, INACCURATE,
OUTDATED SPATIAL
DATA



POPULATION
GROWTH



INCREASING
DEMAND FOR
NATURAL
RESOURCES-
BASED PRODUCTS



MORE LAND
NEEDED FOR
AGRICULTURE



INCREASING
DEFORESTATION &
CARBON
EMISSIONS

FEATURED INSIGHT

A factory is being built in your neighborhood. Can you do anything about it?



by [World Resources Institute](#)

★ 6,574

Featured insights



[VIEW MORE >](#)



Drought

Water is a fundamental resource. Globally, 70 percent of freshwater use is for agriculture, 22 percent for industry, and 8 percent for household activities. Understanding how this resource changes over time can help us ensure robust economy and sustainable food supply for all.

Displayed layers

- Droughts (SPEI)
- Agricultural areas (EarthStat)
- GRACE Groundwater trend 
- Forecasts / Climate projections 



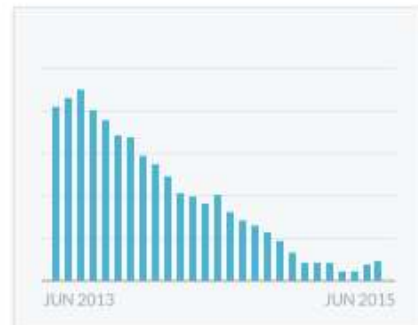


Explore

SEARCH

14 datasets



 FILTER


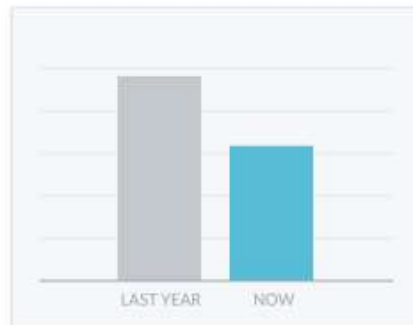
Global Water Risk

World Resources Institute

CSV

★ 6,500

ACTIVE



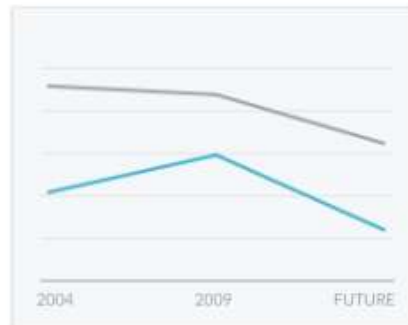
CARMA: Energy plants

CARMA, CGD

CSV

★ 4,002

ACTIVE



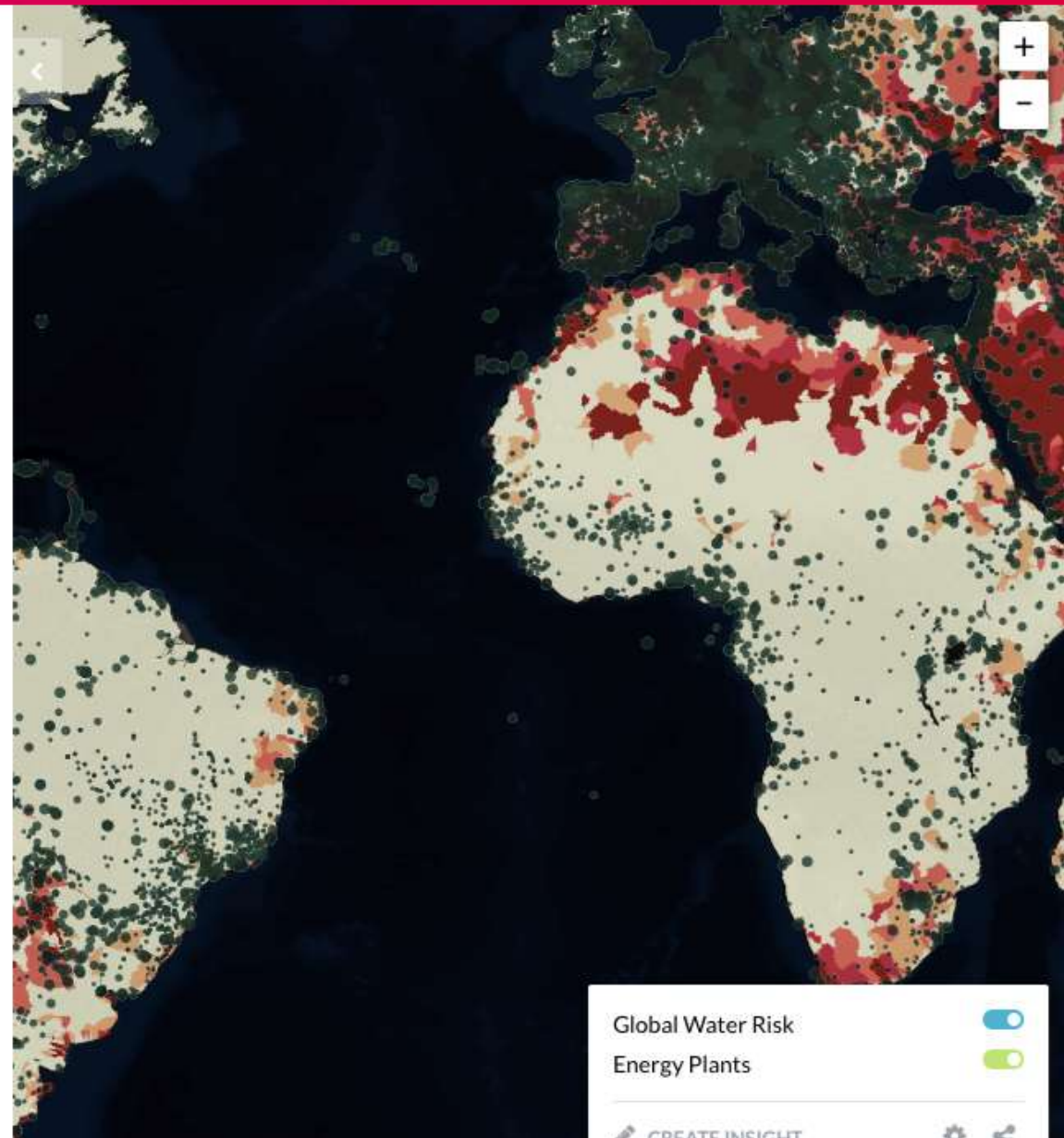
Aqueduct: country flood risk data projections

Deltares and VU University of Amsterdam

CSV

★ 3,465


ADD TO MAP

Global Water Risk Energy Plants

CREATE INSIGHT




Global water risk



Low risk High risk

Power plants



10MW 10,000MW

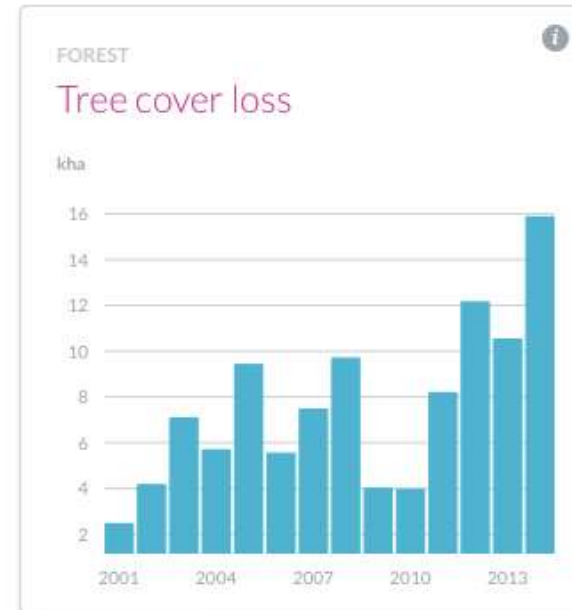
Global Water Risk

Energy Plants

[CREATE INSIGHT](#)

Malawi dashboard

[CHANGE COUNTRY](#) [TOPICS](#) [FULL SCREEN](#)



Featured apps



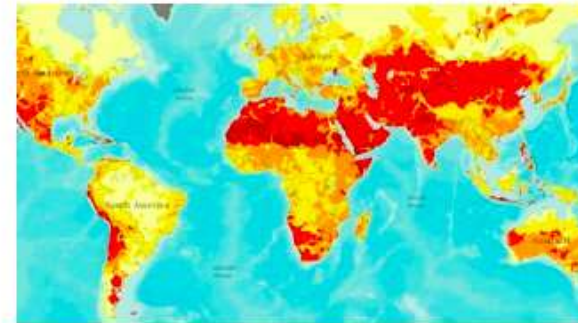
SkyDipper

★ 6,332



Carbon Footprint Calculator

★ 6,574



Current and Future Water Security

★ 6,332



Flood Risk Analyzer

★ 2,324



Track Climate Change and Country Actions

★ 4,572



Index of Environmental Rights

★ 5,439



Resource Watch will be open source



...so its technology, data, & user community can be leveraged by others



Catalyzing Civic Engagement

Jane Goodall Institute (@JaneGoodallInst) · Follow

Crowdsourcing data helps fight fires in Indonesia thx to @globalforests & others. goo.gl/tCpfHT



36 retweets · 24 likes · 9:41 AM · 16 Dec 2015

Greenpeace USA (@greenpeaceusa) · Following

Whoa. Indonesia's forest fires are producing more emissions than the entire US economy! bit.ly/1pxytEr



229 retweets · 101 likes · 7:30 PM · 16 Oct 2015

People's Movement to Stop Haze · March 10 at 10:55am · 48

The causes of fire & haze are not the commodity, but the improper use of fire.

At Chiang Rai, Chiang Mai, Lamphun, Lamphang, Phrae, Nan, Phayao, Mae Hong Son, and Tak where, air pollution reaches hazardous levels. Authorities are warning villagers they will face fines of up to THB3,000 for burning paddy. Village community leaders, across North Thailand, are issuing announcements forbidding even the burning of household garbage until the end of April.



Sustainable Management of Peatland Forests in Southeast Asia: ASEAN Peatland Forests Project...

Air pollution caused by wide-spread burning of rice fields and forests in North Thailand and neighbouring Laos and Myanmar troubles the region annual from...

ASEANPEAT.NET

Like · Comment · Share

People's Movement to Stop Haze, Teng K.S. and 9 others · Top Comments

5 shares

Write a comment...

Ambrose Orca Lee The Thai people are acting where it really count - local village leadership. Like · Reply · 1 · March 11 at 5:43pm

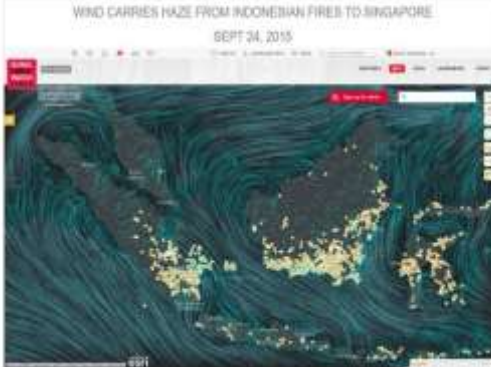
Animah Kosai The Thais have a deep love for nature. They really "get it". We should follow their example.

RIAU Siaga Kemarau (@WIDIAU) · Follow

Data titik api & arah angin di Indonesia (24/09) versi @globalforests. Sumatera bag. selatan & Kalimantan membara.

View translation

WIND CARRIES HAZE FROM INDOONESIAN FIRES TO SINGAPORE
SEPT 24, 2015



Fitri Ismah (@FitriIsmah) · Follow

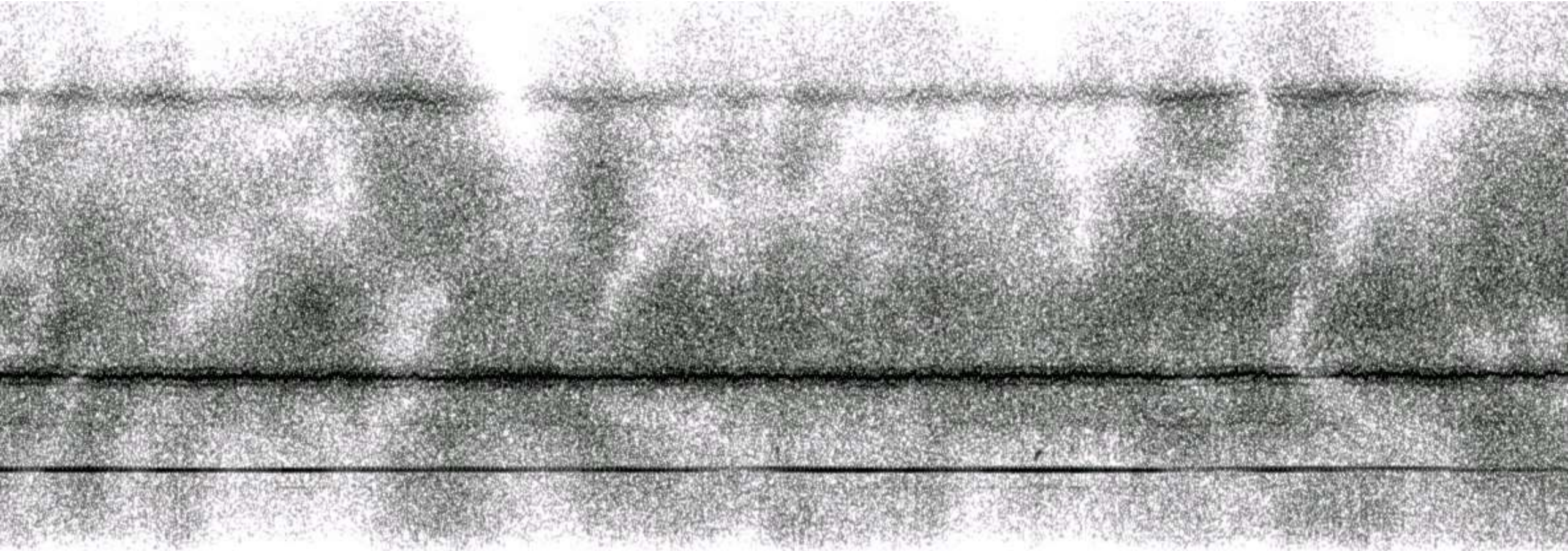
#MelawanAsap #RevolusiLangitBiru @UNDP @UNICEF @WorldResources @WRRReport @hrw @globalforests



Drowning in data



Finding a signal in the noise



E. O. WILSON

“We are drowning in information, while starving for wisdom. The world henceforth will be run by synthesizers, people able to put together the right information at the right time, think critically about it, and make important choices wisely.”





Thank you!

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