Updating and Reporting Activities

Thailand-BONs

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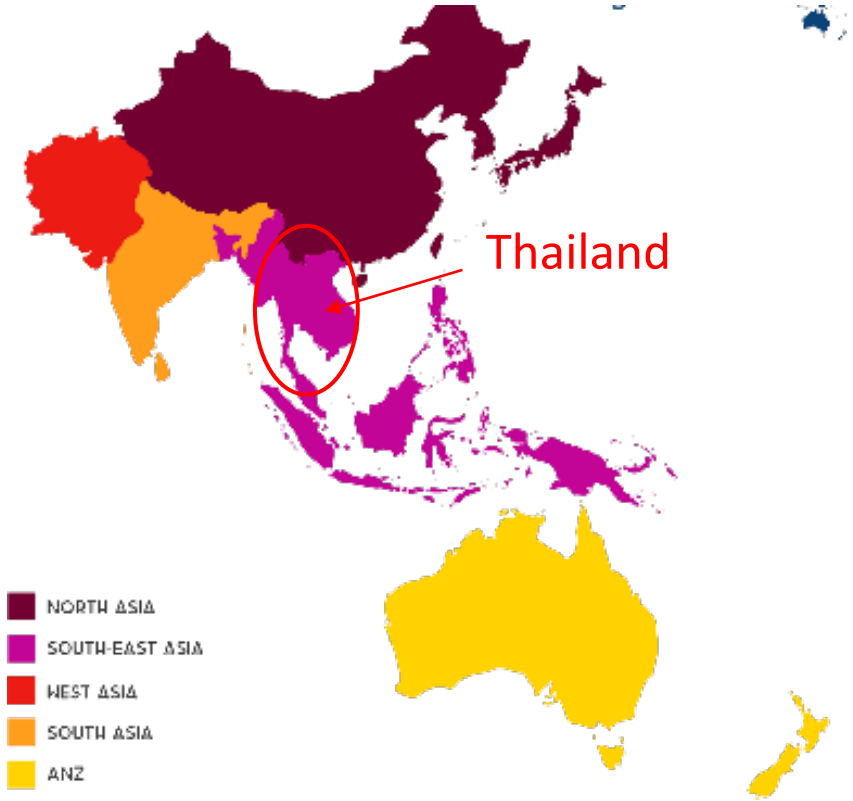
Professor, Kasetsart University
Co-chair, Asia-Pacific Observation Network (APBON)

1-2 February2023
Fukuoka, Japan

Thailand-BONs

Ground Observations



Long-term Ecological Research Permanent Plots (Terrestrial Ecosystems)

Nationwide Forest Inventory Plots

Wildlife monitoring (e.g. tiger, hornbills)

National and International Networking

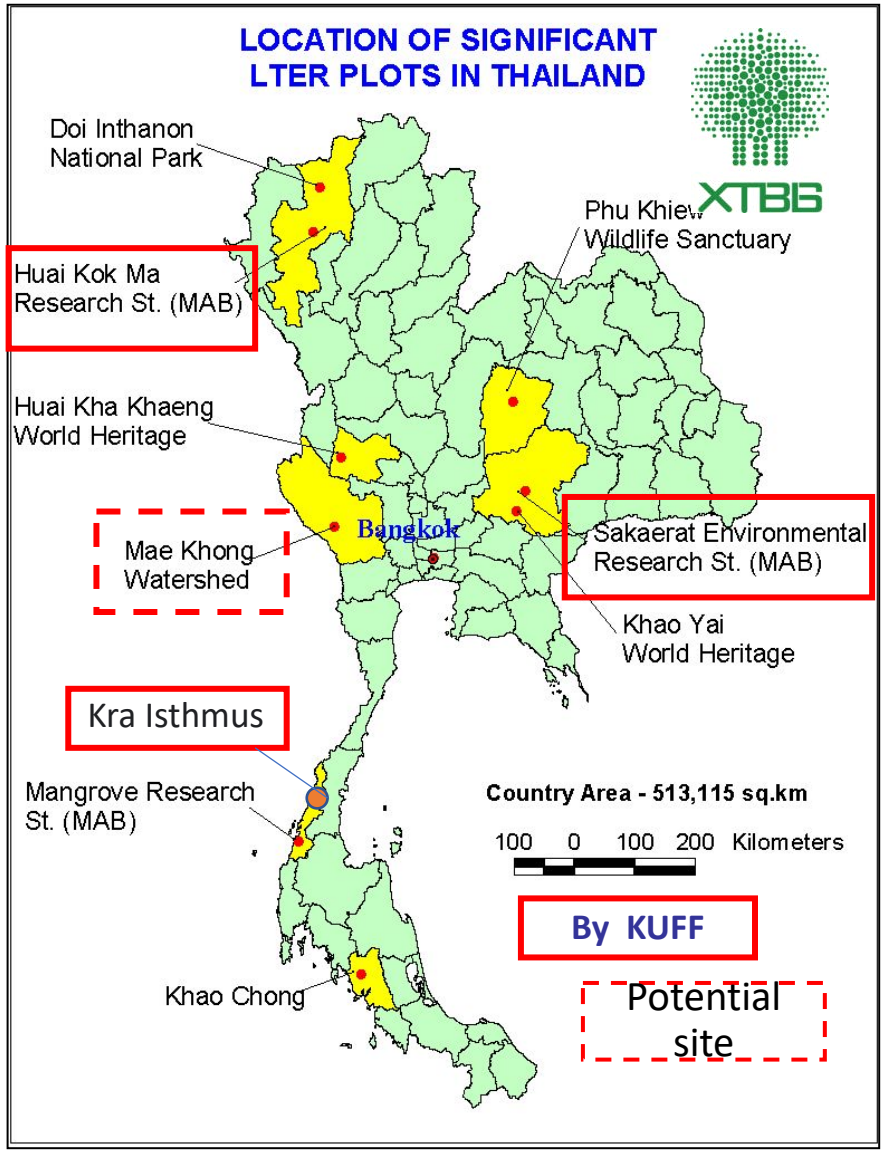
Thai Forest Ecological Research Network

GEOSS/GEOBON

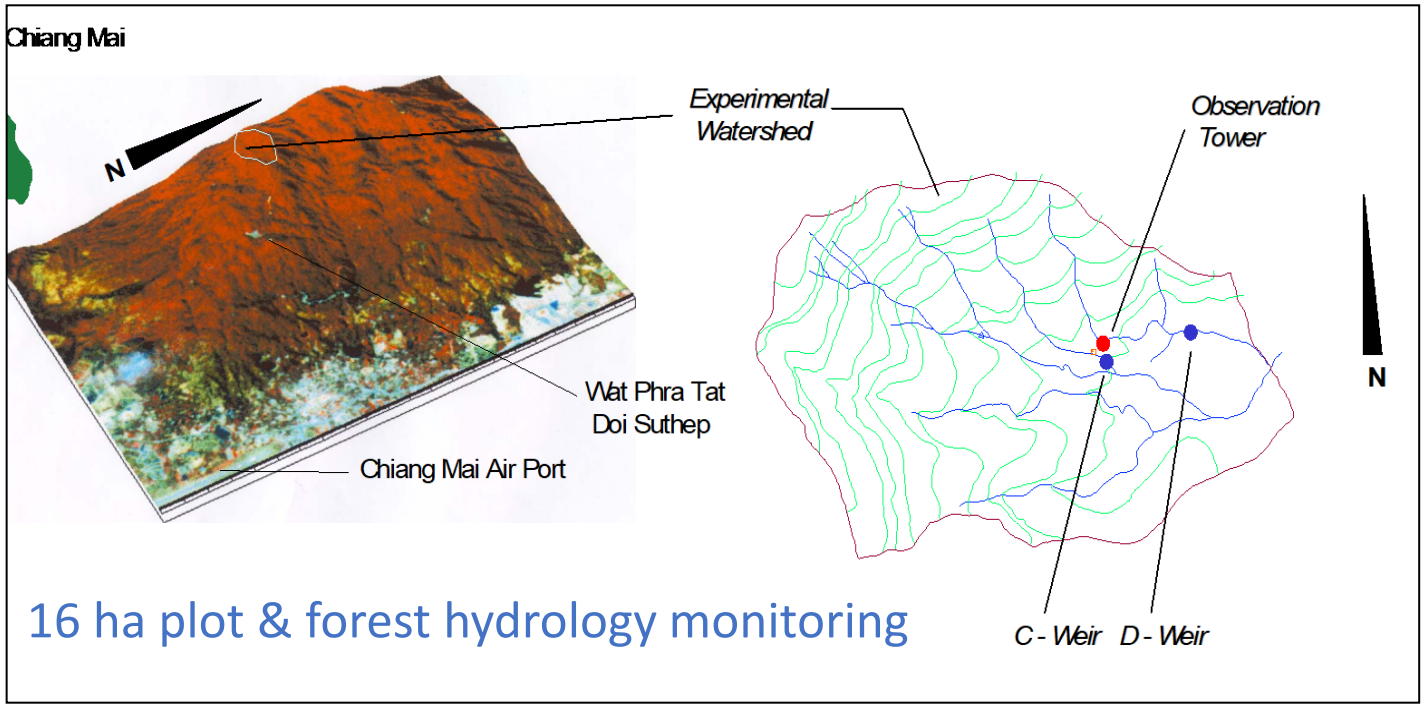
GBIF

KBA

Thailand-ILTER



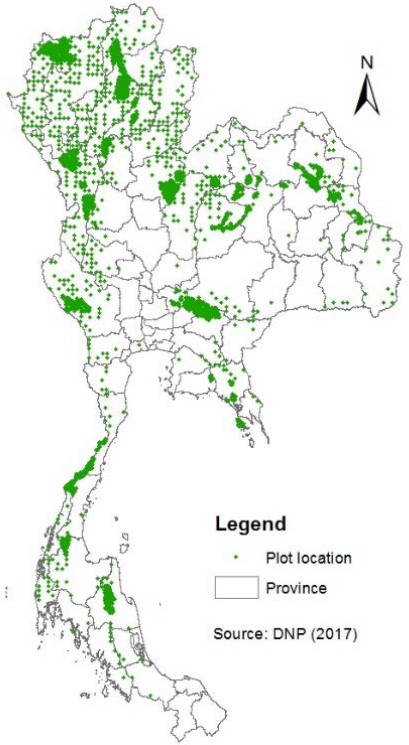
Kok Ma MAB

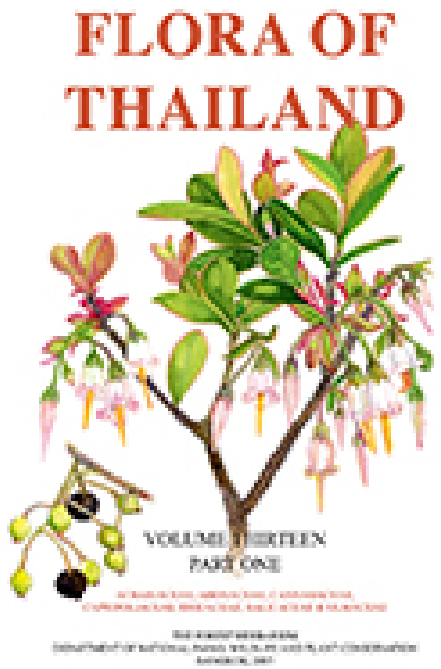


16 ha plot & forest hydrology monitoring

Sakaerat MAB

Nationwide Forest Inventory Plots





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SPECIAL FEATURE

Data rescue—collection of precious and laborious in situ observed data

Systematic forest inventory plots and their contribution to plant distribution and climate change impact studies in Thailand

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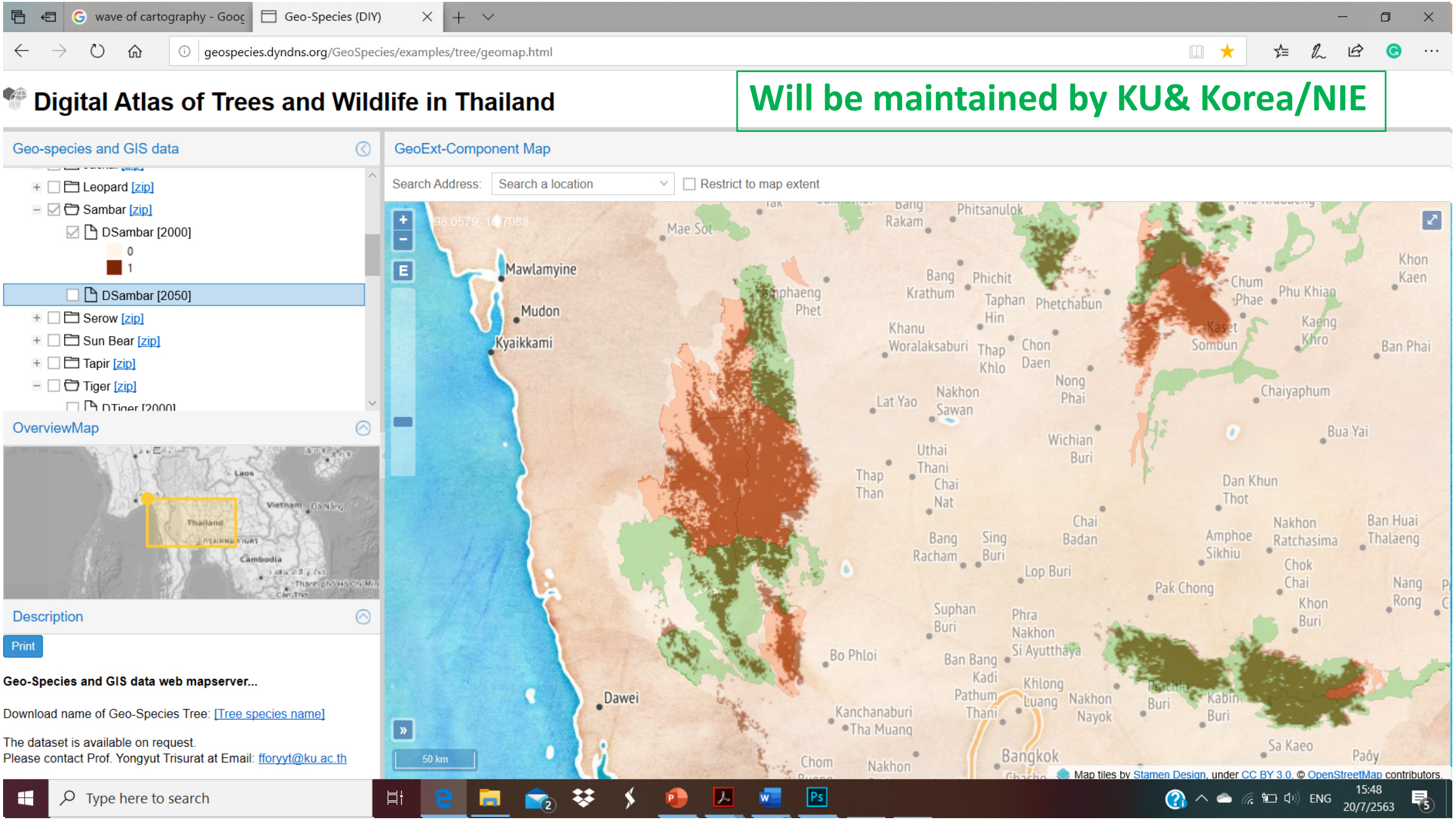
Abstract

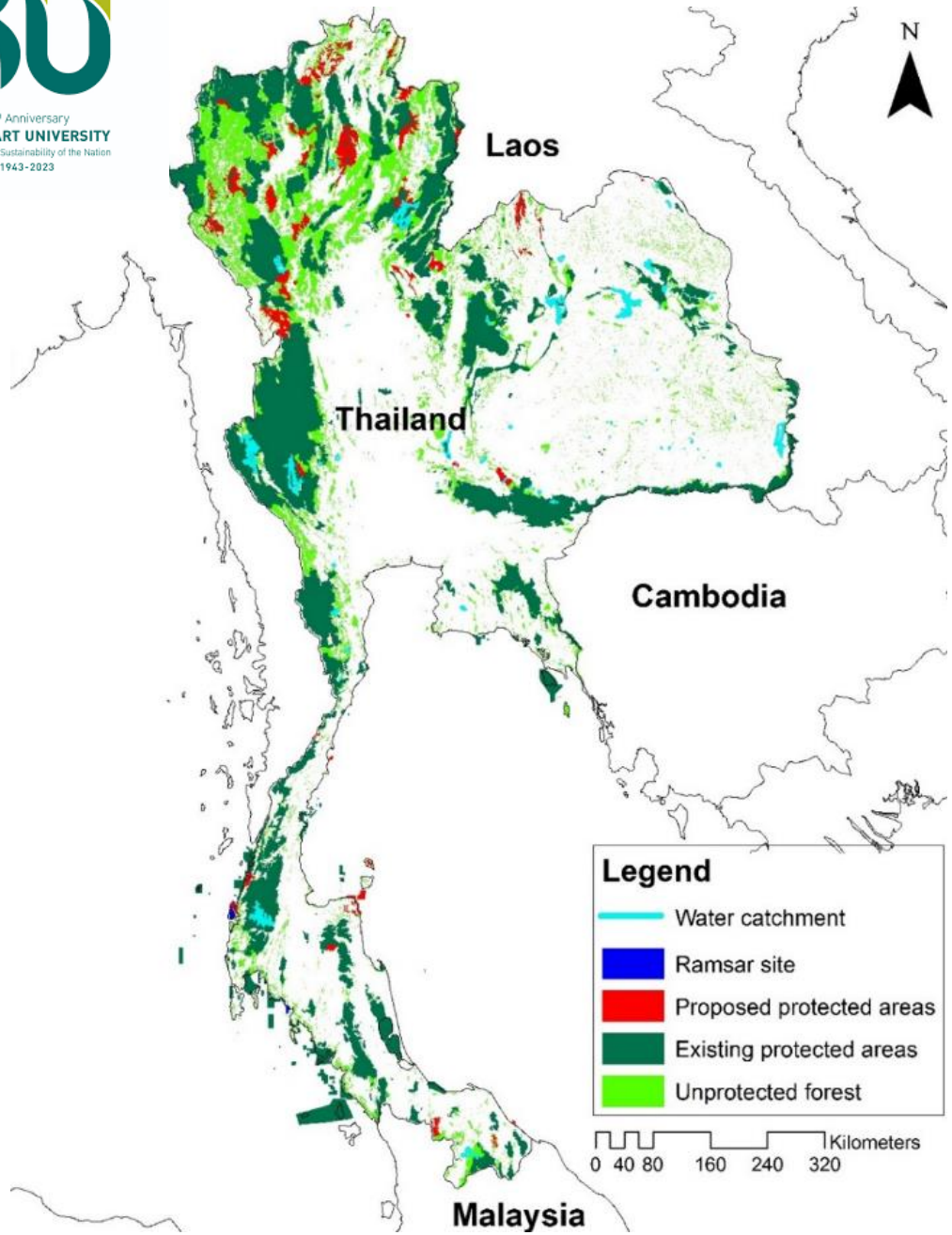
Thailand is recognized as having high species richness both flora and fauna. The systematic plant taxonomy and collection was initiated in 1957–1958. However, the distribution of specimen collections is uneven and mainly located near road networks. The Royal Forest Department (RFD) has since 2001 initiated the systematic uniformly fixed grids of 20 km × 20 km for measuring trees and their environments with the financial and technical support from the International Tropical Timber Organization. After the reorganization of the RFD in 2002, the Department of National Parks, Wildlife and Plant Conservation of Thailand, which then was separated from the RFD, has carried on this project and added the uniformly fixed grids ranging from 2.5 km × 2.5 km to 10 km × 10 km over the entire protected areas in Thailand. Throughout three project phases (2001–present), there are over 3,150 plots collected from 59 provinces, while the remaining 18 provinces do not have monitoring plots because of either the security issue or no forest covers. There were, based on altogether 24,605 occurrence records of trees with a diameter greater than 4.5 cm at breath high level from 363 species from 81 families and 222 genera. Trees belong to Dipterocarpaceae, Lamiaceae, Burseraceae, Phyllanthaceae, Malvaceae and Fabaceae families are dominant. Besides for simple estimation of tree density and volume, the data were used for bio-geographical and climate change impact studies.

RFD/DNP

Spacing	Year	Number of plots	Extent	Responsible agency	Remarks
1.5 km × 1.5 km	2001–2003	903	Country	RFD/ITTO	Designed and pilot project
20 km × 20 km	2004–2007	1,285	Country	RFD/ITTO	Entire country but 158 plots un-established
10 km × 10 km	2004–2005	10,372	Country	RFD/DNP	Only inside remaining forest cover
5 km × 5 km	2006–2010	14,152	Protected area	DNP	Using a 0.1 ha plot center
10 km × 10 km	2011	859	Country	DNP	Using a 0.1 ha plot center
2.5 km × 2.5 km [a]	2012–present	4,500	Protected area	DNP	Using a 0.1 ha plot center



http://geospecies.dyndns.org/GeoSpecies/examples/tree/



diversity

MDPI

Article

Can Thailand Protect 30% of Its Land Area for Biodiversity, and Will This Be Enough?

Nirunrut Pomoim [1,2], Yongyut Trisurat [3], Alice C. Hughes [1,4] and Richard T. Corlett [1,4,*]

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2 University of Chinese Academy of Sciences, Beijing 100049, China
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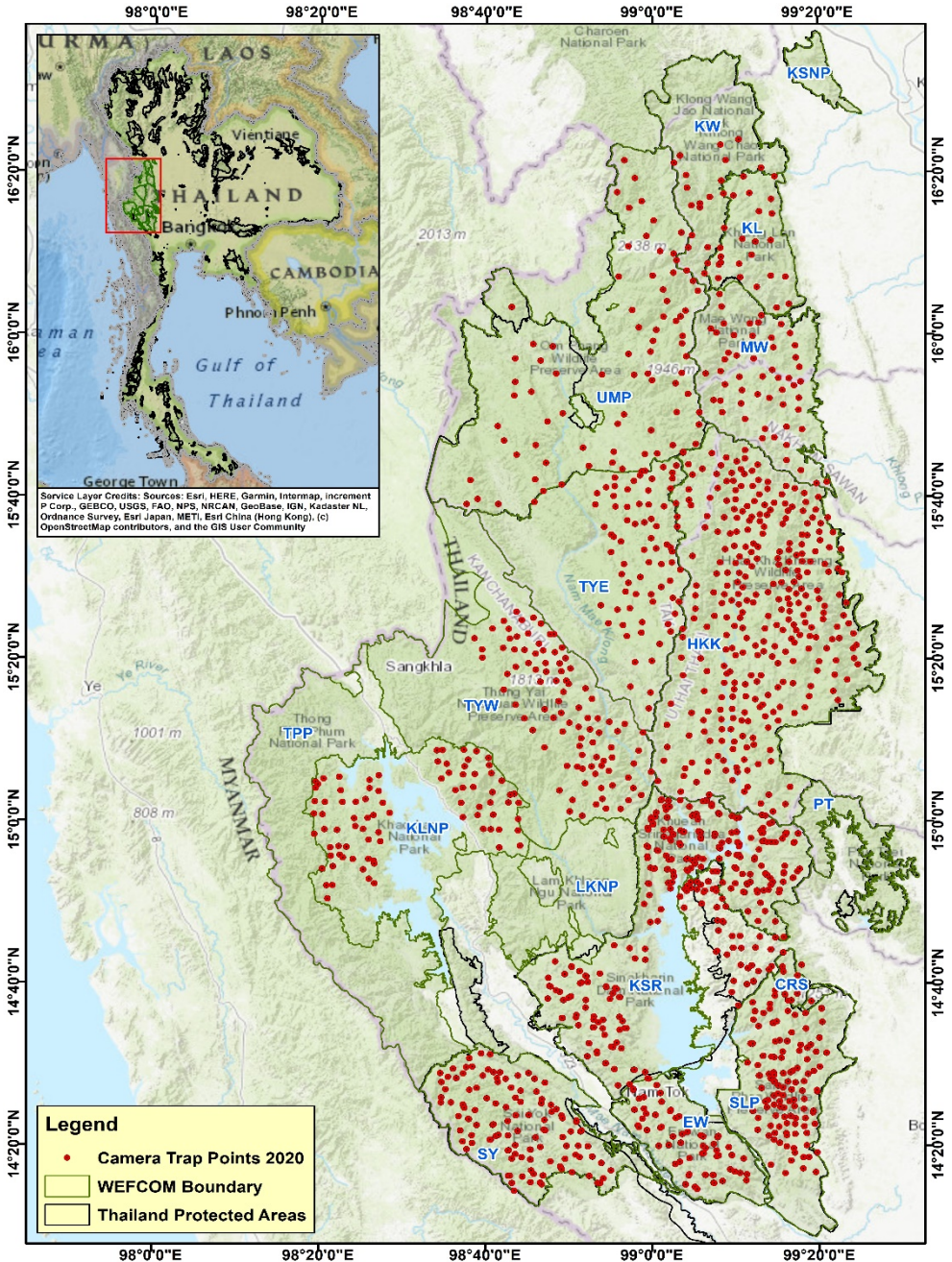
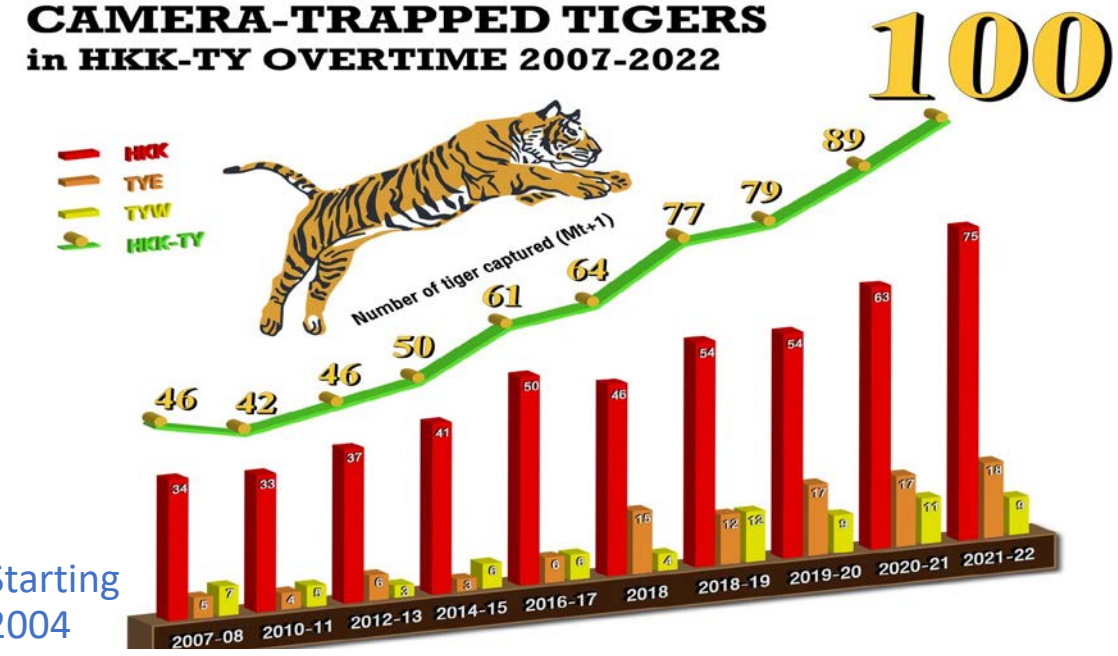
Abstract: The draft post-2020 Global Biodiversity Framework asks CBD parties to conserve at least 30% of the planet by 2030 'through a well-connected and effective system of protected areas … with the focus on areas particularly important for biodiversity'. We use Thailand as a case study for the ability of a densely populated, hyper diverse, tropical, middle-income country to meet this target at a national level. Existing protected areas (PAs) total 24.3% of Thailand's land area. Adding forest on government land adjacent to existing PAs, plus unprotected areas of Ramsar sites, raises this to 29.5%. To assess the importance for biodiversity, we used modeled distributions of birds and mammals plus, as proxies for other biodiversity components, elevation, bioclimate, forest type, and WWF ecoregion. All modeled species occur in the current PA system but <30% meet representation targets. Expansion of the system increases the proportion of mammals and birds adequately protected and increases the protection for underrepresented bioclimatic zones and forest types. The expanded system remains fragmented and underrepresents key habitats, but opportunities for increasing protection of these are limited. It is also still vulnerable to climate change, although projected impacts are reduced. Additional protection is needed for wetland and coastal habitats, and limestone karsts.

check for updates

Citation: Pomoim, N.; Trisurat, Y.; Hughes, A.C.; Corlett, R.T. Can

Tiger Population Monitoring

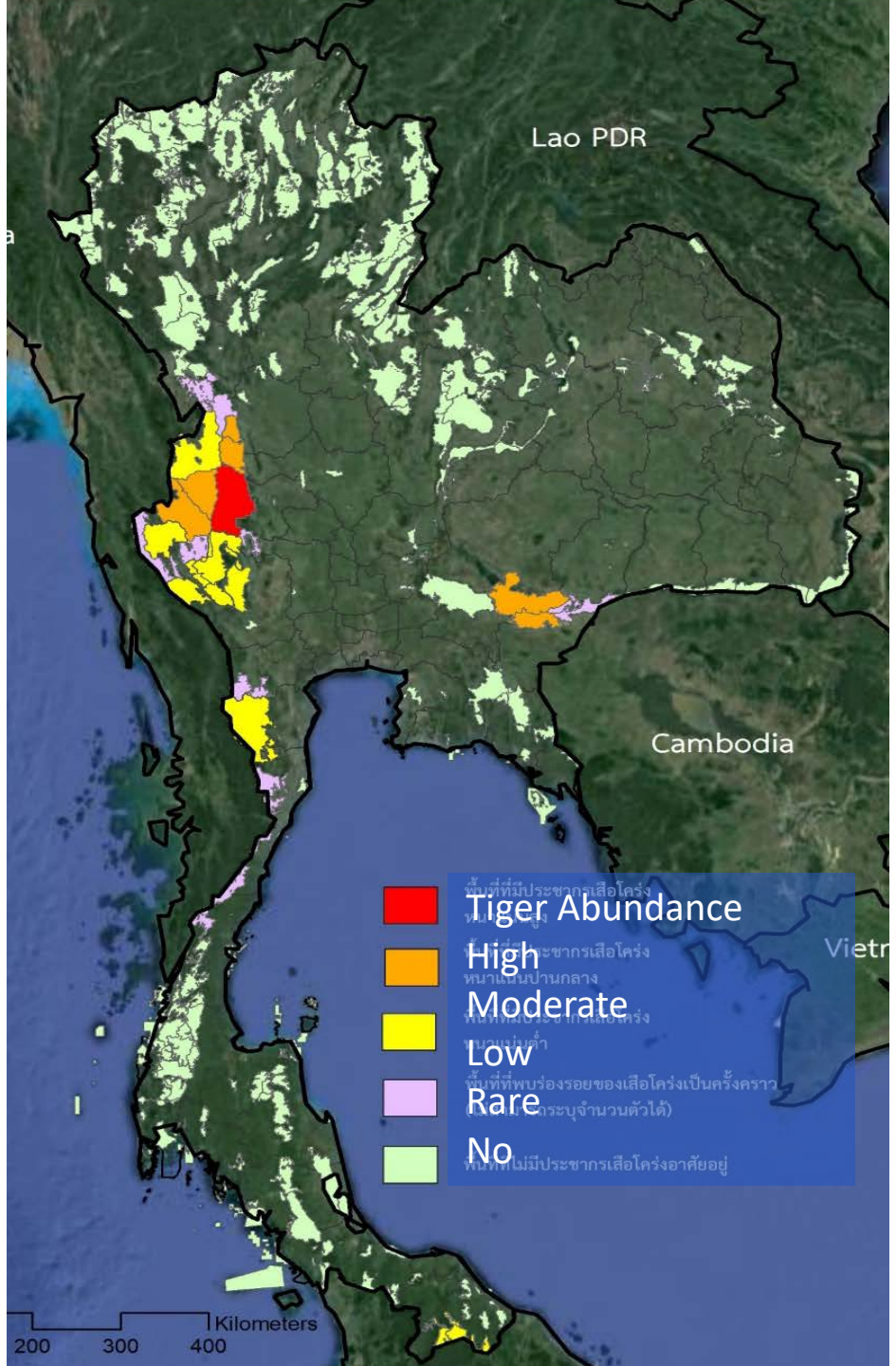




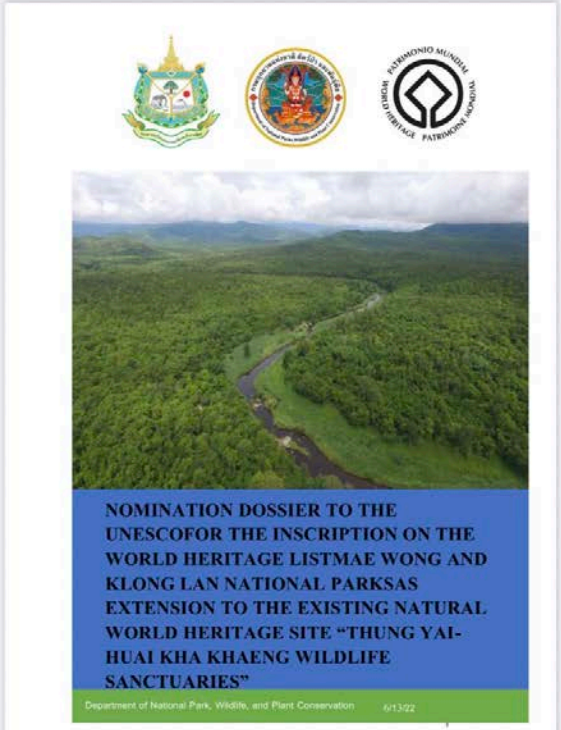
Starting 2004

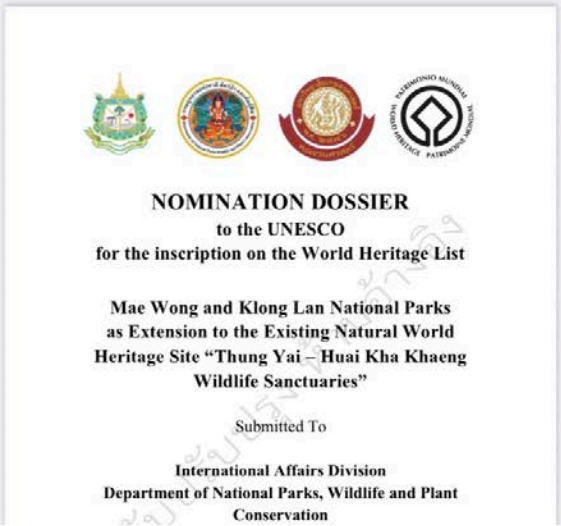
Estimated Tiger Population in Thailand

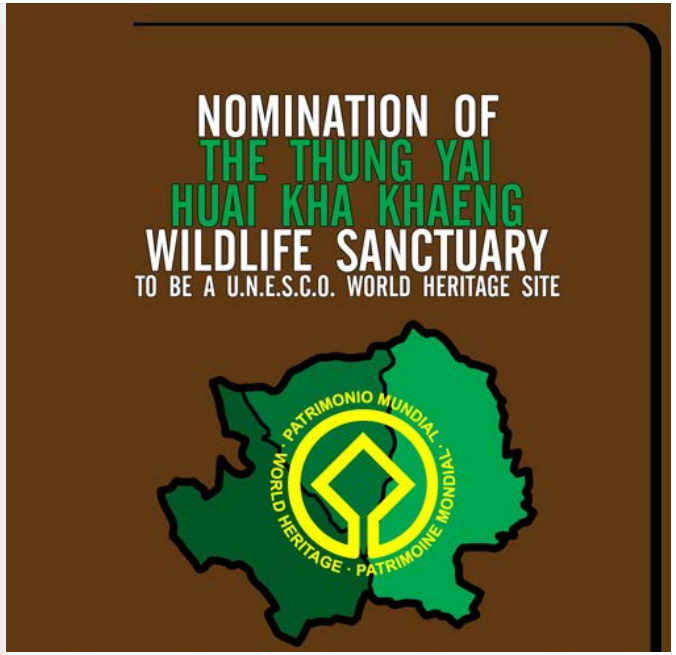
	Protected Area	2010	2022
1	Huai Kha Khaeng WS	36-49	75
2	Thungyai (East) WS	7-13	19
3	Thungyai (West) WS	7-9	9
4	Klong Lan NP	[a]12	16
5	Mae Wong NP		
6	Klong Wang Choa NP		
7	Umphang WS		
8	Khuan Sri Nakharin NP		3
9	Salakpa WS		2
10	Khao Lham NP		3
11	Sai Yok NP		3
12	Erawan NP		1
13	Thap Lan NP	[d]8	15
14	Pang Sida NP		
15	Ta Phaya NP		
16	Dong Yai WS		
17	Kaeng Krachan NP	[c]4	1
18	Kui Buri NP	[b]6	
20	Bang Lang NP	1	1
21	Hala Bala WS		
	Total	81-102	148

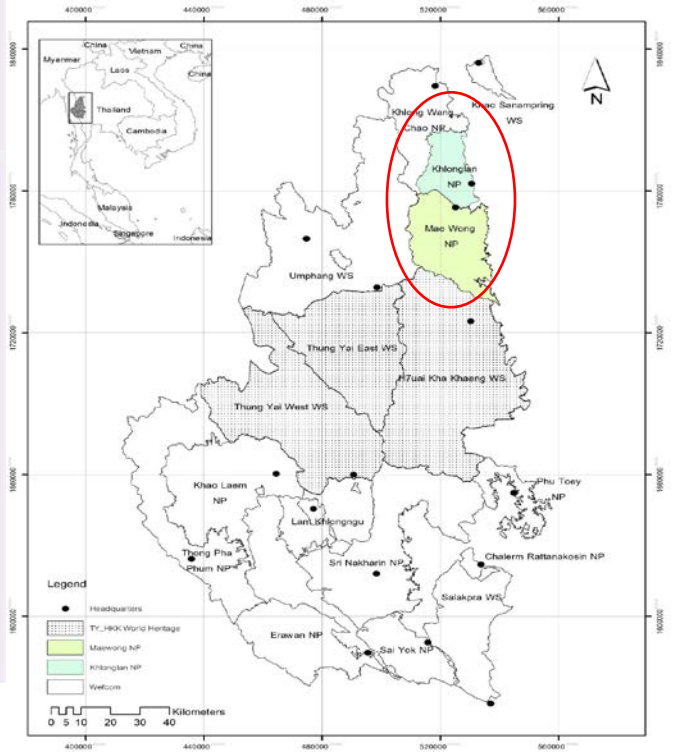


Extension of Thung Yai-Huai Kha Khaeng World Heritage Site

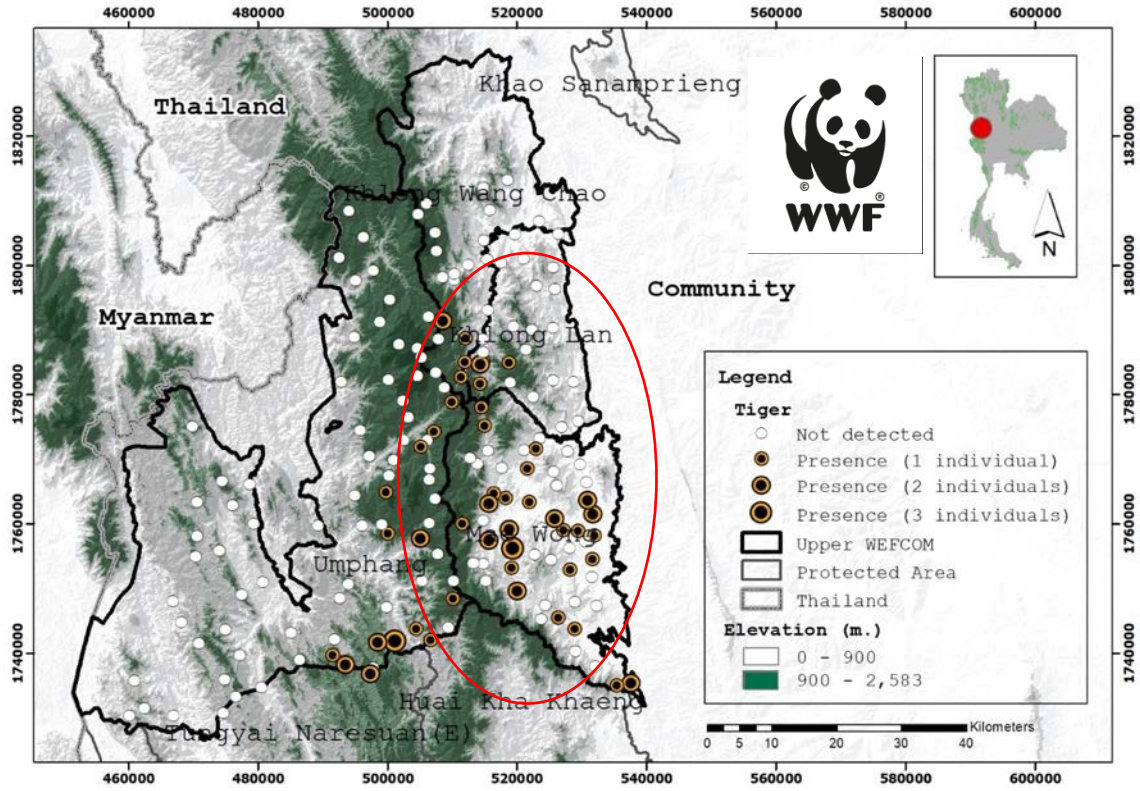








Tiger Monitoring



DNP &WWF (2022)

KU GBIF

APBON Asia Pacific Biodiversity Observation Network

KBA KEY BIODIVERSITY AREAS

Asia Regional Engagement Meeting and Symposium on Open Science and Data Use

Data Use for International Platforms for Policies

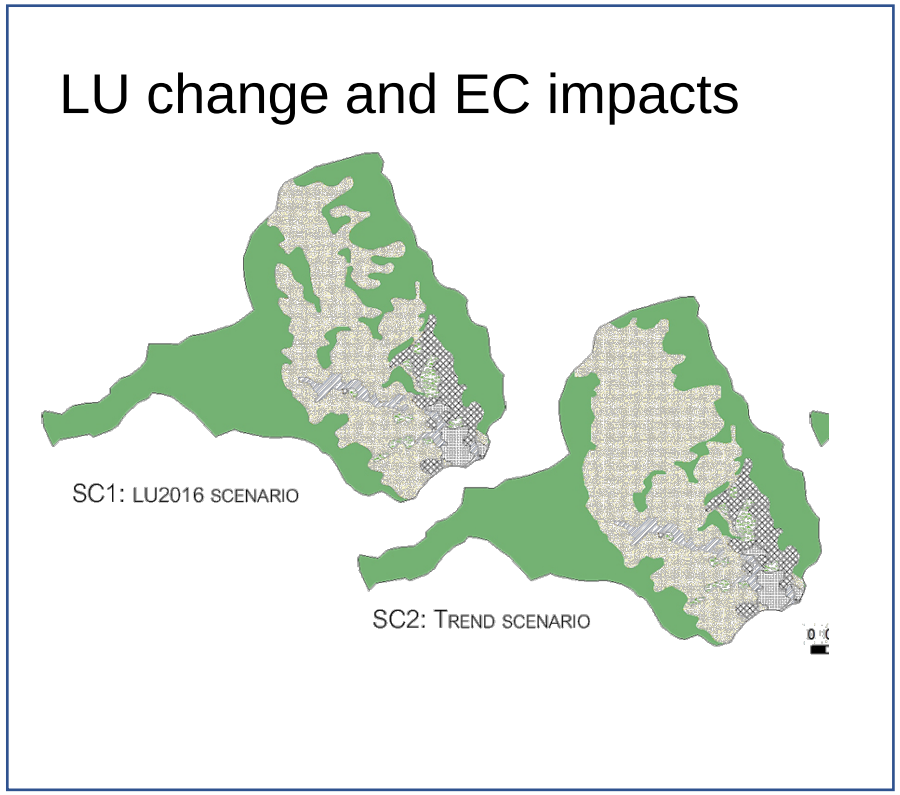
Yongyut Trisurat
Professor, Kasetsart University
Co-chair, Asia-Pacific Observation Network (APBON)

22-24 November 2022
Chulalongkorn University, Bangkok

KASETSART UNIVERSITY

APBON
Asia-Pacific Biodiversity Observation Network

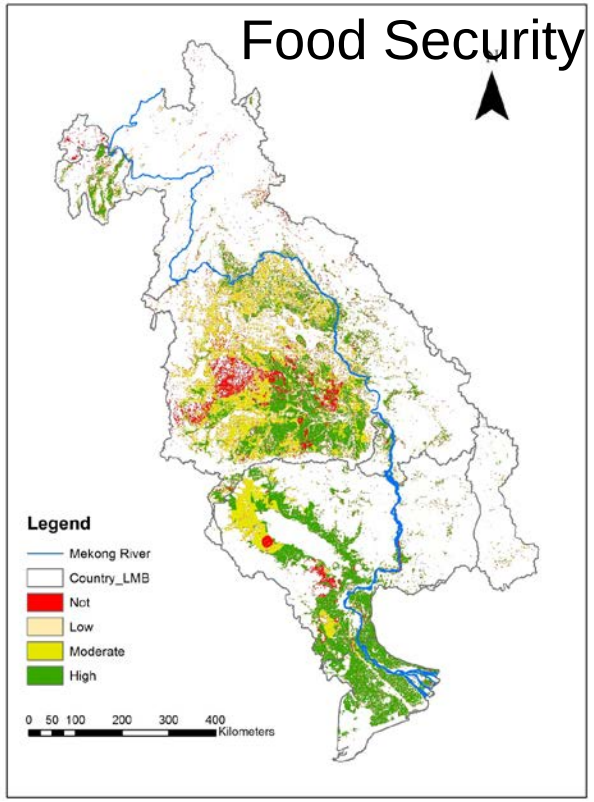
EO contributes to integrating Nature into Economic Activities



Yongyut Trisurat
Kasetsart University
Co-chair, APBON

15th AOGEO SYMPOSIUM

Sep 30, 2022



APBON
Asia Pacific Biodiversity Observation Network

GEO VIRTUAL SYMPOSIUM 2022
GLOBAL ACTION FOR LOCAL IMPACT

KU
KASETSART UNIVERSITY

Geo-informatics for Conservation Partnership of Sarus Crane in the LMB

Yongyut Trisurat
Kasetsart University and APBON
3 May 2022

GEO GROUP ON EARTH OBSERVATIONS

#EO4IMPACT

8th International Hornbill Conference

The 8th International Hornbill Conference

May 22–24, 2023

THAILAND

Happy Hornbills, Healthy Forests