

DAWNA TENASSERIM: MYANMAR AND THAILAND

Annual Report 2019

TOP 10 THINGS

YOU SHOULD KNOW ABOUT
THE DAWNA TENASSERIM



YANGON

BANGKOK



01. IT IS BIG. VERY BIG

At almost almost 180,000 km² (roughly the size of Cambodia), it is one of the biggest stretches of connected forest in Southeast Asia that you have (likely) never heard of.

03. THE DAWNA TENASSERIM IS THE LAND OF CATS

This landscape is home to at least seven of the nine cat species found in Southeast Asia: tiger, leopard, clouded leopard, Asian golden cat, jungle cat, marbled cat and leopard cat.

05. ASIAN ELEPHANTS ARE A REGIONAL SYMBOL BUT ARE ON THE DECLINE

Once roaming across most of Asia, they're now restricted to just 15% of their original range. The Dawna Tenasserim is a vital remaining habitat for many of the elephants still left in Myanmar and Thailand.

07. IT IS A CROSS-ROADS OF BIOGEOGRAPHIC ZONES

One of the reasons the Dawna Tenasserim is special is that it is the meeting point of four different biogeographic zones: Indo-Burmese (Northern Triangle temperate forests), Indo-Chinese (majority of the Dawna Tenasserim with its spectacular biodiversity), Sundaic (the remainder of Sumatra's lowland forests) and Sino-Himalayan (high biodiversity Himalayan forests).

09. THE DAWNA TENASSERIM IS A BIRD WATCHER'S PARADISE

This ecoregion's 568 bird species make it the second highest for Indochina in terms of species richness.

02. IT IS ANCESTRAL HOMELAND TO INDIGENOUS COMMUNITIES

The largest ethnic group within the Dawna Tenasserim is the Karen. 'Karen' refers to a number of ethnic groups who speak 12 related 'Karenic languages' that are part of the Tibeto-Burman language group.¹

04. IT'S A TIGER CONSERVATION LANDSCAPE

At present, the Dawna Tenasserim, and in particular the Western Forest Complex in Thailand, harbors the largest population of tigers within the Greater Mekong and offers one of the best hopes for the survival of tigers within Southeast Asia.

06. ITS FORESTS ARE ANCIENT AND DIVERSE

The great forests of the Dawna Tenasserim are not uniform throughout the landscape. The west-facing slopes (on the Myanmar side) face the Bay of Bengal and receive 4 to 5 times more precipitation than the dry, east-facing slopes in Thailand.

08. IT HAS PHENOMENAL BIODIVERSITY

The Dawna Tenasserim is a treasure trove that contains a wide range of globally important and endangered species populations, including tiger, Asian elephant, gaur, banteng, clouded leopard, Malayan tapir, dhole, Asiatic golden cat and Siamese crocodile.

10. HOME OF THE ORCHID!

The Dawna Tenasserim is the origin of about 1300 species and 180–190 genera of orchids, comprising the majority of tropical orchid genera in the world.

1. ERIC WIKRAMANAYAKE, ERIC DINERSTEIN, COLBY J. LOUCKS, DAVID M. OLSON, JOHN MORRISON, JOHN LAMOREAUX, ET AL. TERRESTRIAL ECOREGIONS OF THE INDO-PACIFIC: A CONSERVATION ASSESSMENT. WASHINGTON, DC: ISLAND PRESS, 2000. 643 PP. ISBN 1-55963-923-7 (PAPER).

RESULTS ACHIEVED



SHOWING ITS STRIPES

Dawna Tenasserim's tigers are breeding



A SMARTER ROAD TO DAWEI

WWF key recommendations included in road design



DAWNA TENASSERIM

landscape rebranded and growing global visibility



LAND OF CATS:

Report highlights the 7 cat species which call the Dawna Tenasserim home



GETTING CLOSER

over US\$1,100,000 secured for transboundary conservation work initiatives

TIGERS - DAWNA TENASSERIM SHOWS ITS STRIPES



@DNP AND WWF THAILAND

In Mae Wong Klong Lan - late 2019 - three tiger cubs from two mothers were photographed.

Two of the cubs (one male & one female) are around 7 months old and were the offspring of the tiger known as 'MKF5' who has been monitored by WWF since 2014. This is the 3rd litter of cubs for MKF5.

One cub (unknown sex), around five months old, is the offspring of 'MKF8' and was camera-trapped around the same time. This mother is a new resident female who entered the population in 2018. The changing demographics in favor of resident, breeding females gives us great hope for the tigers in Mae Wong Klong Lan

At the other end of the landscape, in Kaeng Krachan National Park where WWF supports

wildlife monitoring through camera trapping since 2018, evidence of a second tiger has been found! In addition to the female tiger camera-trapped by WWF in 2018, a male tiger was camera-trapped by park authorities in 2019. Following the tiger footprints found in Kuiburi National Park (part of the Kaeng Krachan Forest Complex) in early 2019, camera trapping to determine the status of tigers in this national park has also started.

With support from the Tigers Alive Initiative, both WWF programmes in Myanmar and Thailand have embarked on the development of WWF Landscape Tiger Recovery Plans.



The camera trap images of a gaur taken down by a tiger in Mae Wong National Park made global news in December 2019.

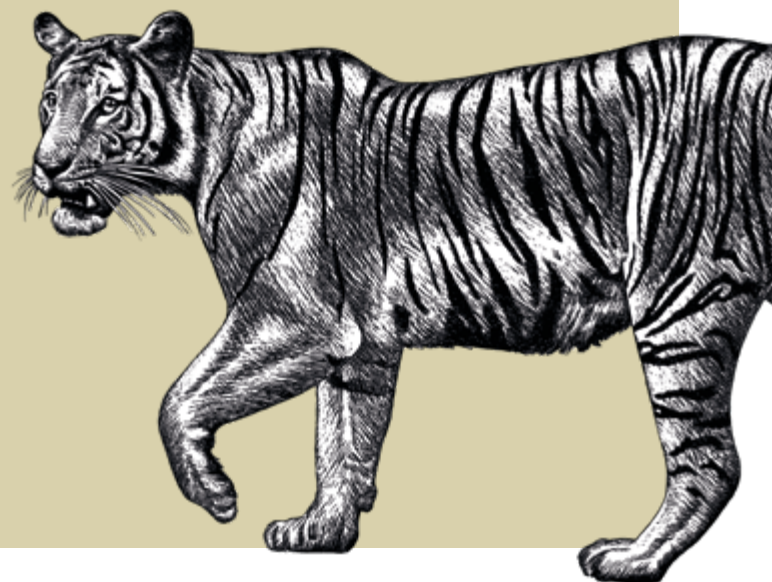




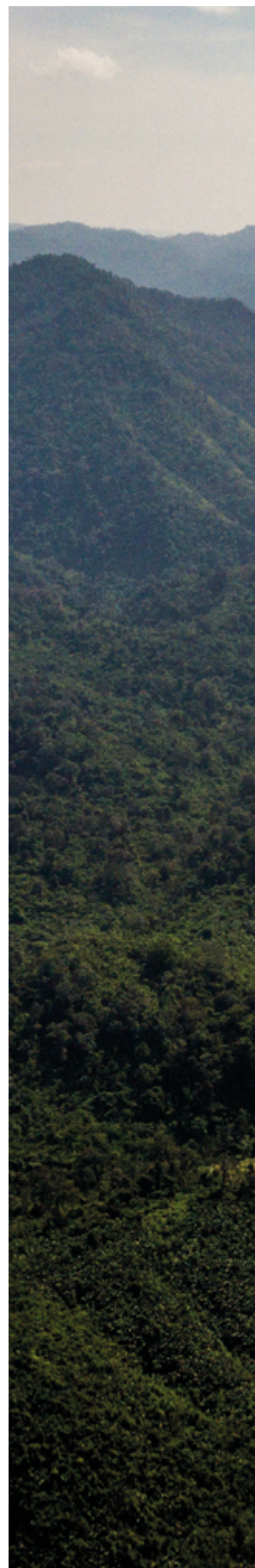


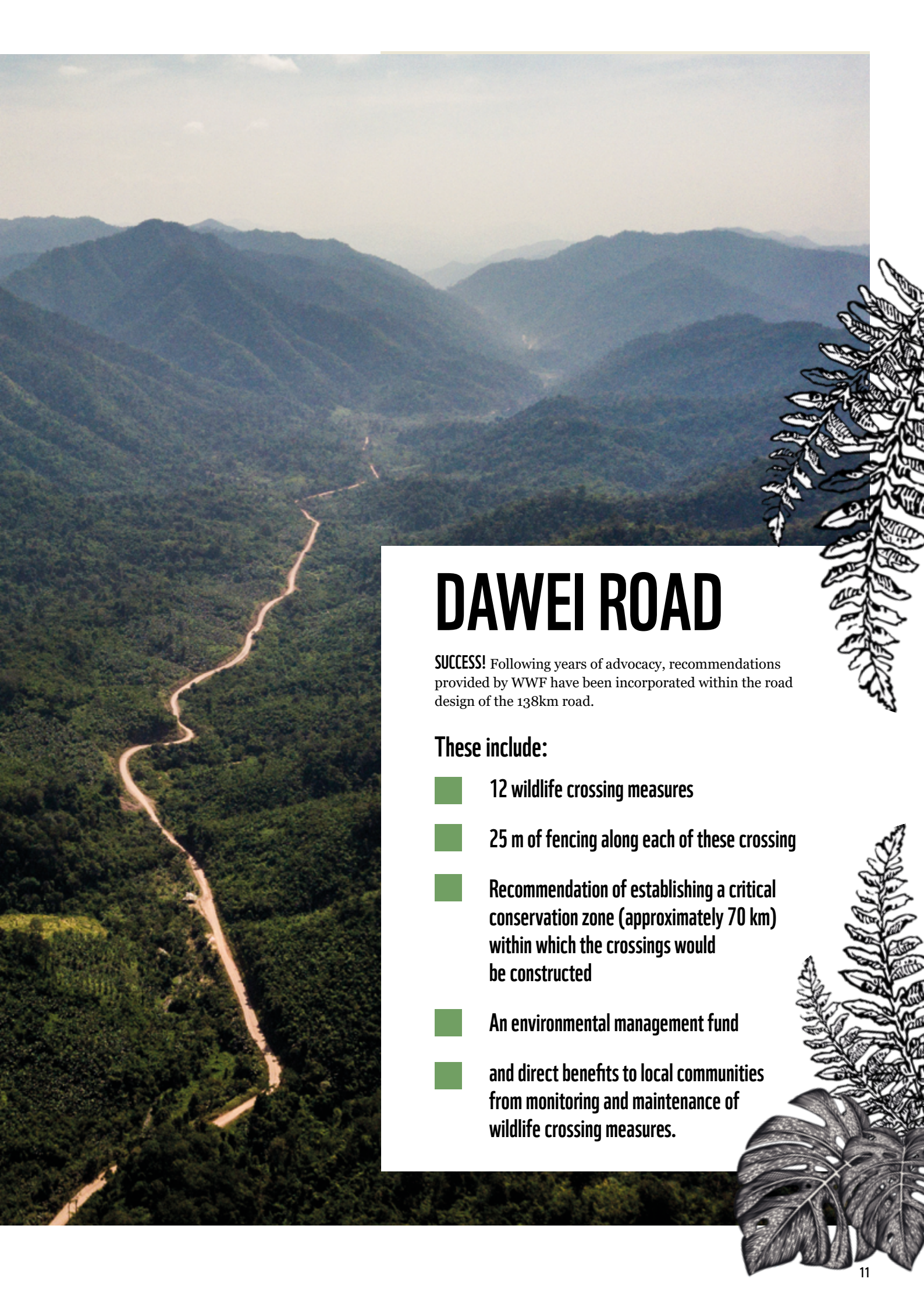
ANNOUNCEMENT OF MYANMAR TIGER NUMBERS

In July 2019, the Myanmar Forest Department released a new minimum number of tigers in the country: 22 individuals. Due to logistical challenges, inaccessibility and political conflict only eight percent of the 46,000km² of potential tiger habitat has been surveyed so far. The results now offer hope that with sufficient measures including, most urgently, protection, Myanmar could once again be home to a thriving tiger population.



5 TIGER HEARTLANDS IN THE DAWNA TENASSERIM





DAWEI ROAD

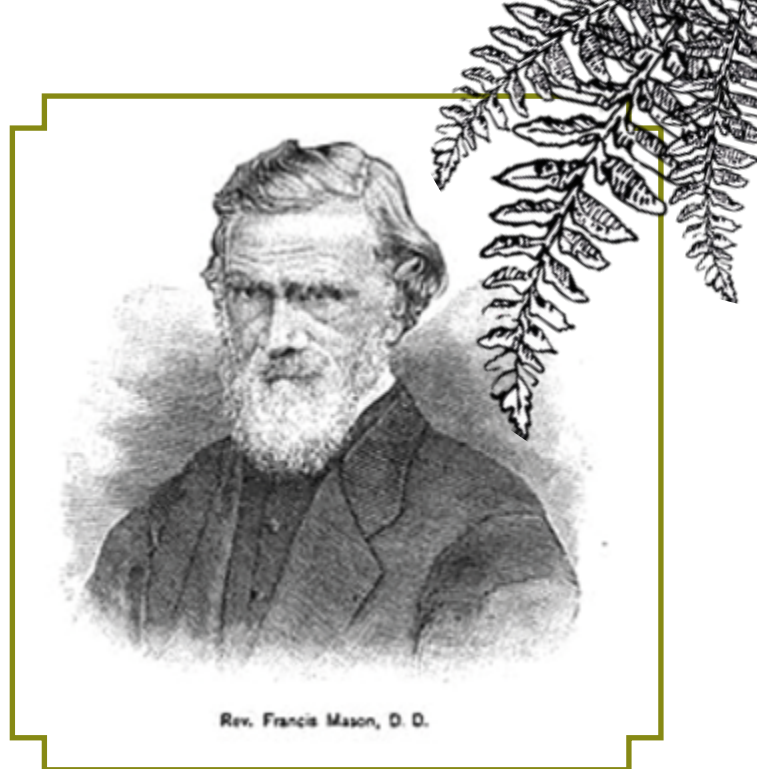
SUCCESS! Following years of advocacy, recommendations provided by WWF have been incorporated within the road design of the 138km road.

These include:

- 12 wildlife crossing measures
- 25 m of fencing along each of these crossing
- Recommendation of establishing a critical conservation zone (approximately 70 km) within which the crossings would be constructed
- An environmental management fund
- and direct benefits to local communities from monitoring and maintenance of wildlife crossing measures.



DAWA TENASSERIM PHOTOGRAPHIC EXHIBITION AT THE BANGKOK ARTS AND CULTURE CENTRE



MAP-A-THON:

WWF, in collaboration with Smithsonian Institution, is striving to fill the information gaps on potential impacts of infrastructure on forest, wildlife movements, and biodiversity corridors, and organized a 5 day 'map-a-thon'.

NATURE AT PERIL: WWF produced the “Nature in Peril: the risk to forest and wildlife from the Dawei-Htee Khee Road,” report and presented it at a workshop organized by the Ministry of Construction, Myanmar in July.

MAKING THE DAWNA TENASSERIM A HOUSEHOLD NAME:

The launch of the re-branded Dawna Tenasserim took place in November – inspired by the work of Francis Mason, the first documenter of the Dawna Tenasserim biodiversity in the 1850s. His landmark publication,

“The natural products of Burmah, or notes on the fauna, flora and minerals of the Tenasserim provinces, and the Burman empire”

is still referred to today by feline and wildlife experts interested in the region.

The first **Dawna Tenasserim Photographic Exhibition** was held in Bangkok at the Bangkok Arts and Culture Centre (BACC) 19 February – 3 March 2019, introducing over 70,000 people to the species and cultures in this amazing landscape. The exhibition then moved to WWF Poland with other countries such as Austria to follow.

DEFORESTATION FREE COMMODITIES, SUSTAINABLE RUBBER AND AGROFORESTRY

Commitment by companies operating in the agricultural sector to Sustainable Development Goals, sustainable agriculture, zero-deforestation, zero-poaching and the maintenance and enhancement of High Conservation Value areas is growing.

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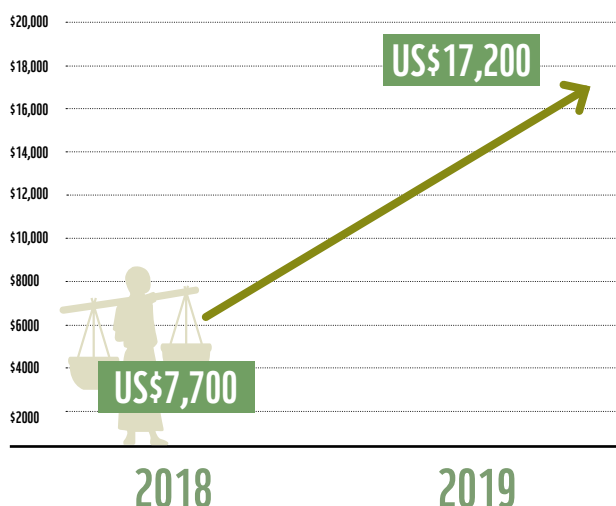
In Myanmar, WWF has provided training and established demonstration plots for Participatory Action Research (PAR) and Farmers Field Schools (FFS). This included rubber agroforestry which cocoa and coffee intercropped with natural rubber for diversification of production, income and livelihoods.

Biodiversity-friendly enterprises such as Elephant Foot Yam, bamboo, cacao and areca leaf plate production through the establishment and support of producer groups is growing. To date, a total of 45 households (26 percent women) are actively involved in livelihood improvement through WWF projects.

Income of producers' groups from Elephant Foot Yam has increased twofold (from US\$7,700 in 2018 to US\$17,200 in 2019). The livelihood initiative helps us to improve overall economic wellbeing, building trust and reducing pressures on forests.

An exchange visit of smallholder farmers from Myanmar to a sustainable cacao agroforestry production site in Chantaburi, Thailand was organized as a pilot visit to future study exchanges between Myanmar smallholders and Thailand. There are livelihood opportunities available as cocoa demand is far greater than supply currently in Thailand.

INCREASE OF PRODUCER GROUP INCOME SINCE 2018



SUSTAINABLE NATURAL RUBBER

A Memorandum of Understanding (MoU) with the Tanintharyi Rubber Planters and Producers Association (TRPPA) not only committed members to zero-deforestation but also to the identification, management and monitoring of High Conservation Value areas.

A traceability system developed by WWF is currently being implemented in Dawei District and will be integrated with a monitoring system for deforestation and High Conservation Value area management.

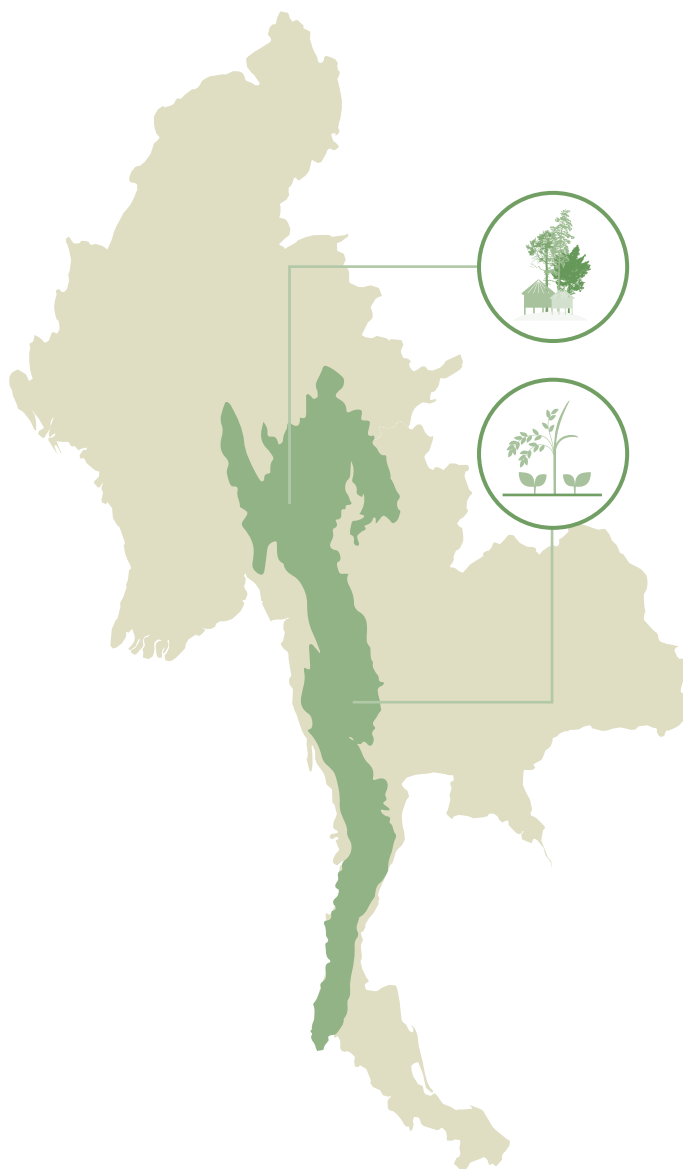


@WWF MYANMAR



AGROFORESTRY AS WAY FORWARD

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IN MYANMAR

WWF is supporting growing of 30,000 cocoa seedlings which will be used to establish additional demonstration plots for agroforestry land restoration and cocoa seed orchards. This will bring a source of seed and planting stock closer to priority conservation villages.

IN THAILAND

A flagship project for WWF Thailand, the Sustainable Consumption and Production (SCP) project includes implementation sites in the Dawna Tenasserim (Chiang Mai province). The project has developed a model to reduce deforestation referred to as FLR 349² and is being promoted as a locally appropriate approach for restoration and protection of degraded ecosystems, as well as for improving social equality.

To date, 400 hectares have been converted by the project to sustainable agroforestry practices. A market for sustainable food products has also been promoted in collaboration with the project partners: TOPS Market (a retailer under Central Group), together with farmers and local food markets through social enterprises and cooperatives. This successful project is coming to an end this year and is an opportunity for new investment in an innovative model for sustainability.

² FLR349 IS A MODEL FOR THE RESTORATION AND PROTECTION OF DEGRADED HEADWATER ECOSYSTEMS AND IMPROVING SOCIAL EQUALITY.



IN MYANMAR:

FOREST LANDSCAPE RESTORATION

IN THAILAND:



A total of 245 ha in three restoration sites are undergoing (agroforestry-based) restoration initiatives.

Enrichment planting and fire break establishment 45 ha

Resource inventory and completion of restoration plan in 2 villages

Restoration Opportunities Optimization Tool applied to priority areas



A total of 400 ha in northern Thailand restored to agroforestry from maize mono-cropping

Mixed system involving indigenous tree species and perennial crops including cacao and fruit trees



WILDLIFE AND WILDLIFE CRIME

IN THAILAND

Protected Areas and Wildlife Conservation

SITES	NO. OF PATROL TEAMS (RANGERS)	NO. OF PATROLS	NO. OF DAYS	NO. OF NIGHTS	DISTANCE (KM)	AREA COVERAGE FOR 6 MTHS (%)
MAE WONG	7 (40)	130	603	473	2,825	62
KHLONG LAN	4 (28)	93	392	299	1,791	75
KHLONG WANG CHAO	7 (64)	134	632	498	4,121	82
KUIBURI NATIONAL PARK	7	610	705	95	MORE THAN 4,000 KM	67.5

IN MYANMAR

Protected Areas and Wildlife Conservation

3 Protected areas with law enforcement support

8 Number of Wildlife Protection Units active

80 Rangers active

4 Areas with wildlife surveys (total)

179,772_{HA}

Total ha under law enforcement support (estimate)

The strategy of transboundary illegal wildlife trade (IWT) work in the Dawna Tenasserim includes:

- assessment of IWT in the Dawna Tenasserim
- Counter Trafficking and Organized Crime training for border officials
- exploring opportunities to support border management of IWT through sniffer dogs.



RENEWABLE AND SUSTAINABLE ENERGY

in Myanmar



12 Villages electrified with renewable energy



21 Women trained as solar technicians



1265 Households electrified with renewable energy

WORKING WITH LOCAL COMMUNITIES AND CIVIL SOCIETY

Partnering with civil society and local communities

Working with partners Seub Foundation, Sathapat and Eco-tourism and Elephant Conservation Club WWF is building capacities in both intermediary NGOs as well as communities:

1. **MAE WONG:** dam related strategy development, promoting alternative water management
2. **SRISAWAT:** Promoting non-hunting area, establishing community forest management/ conservation group
3. **LAIWO:** Promoting traditional knowledge for sustainable natural resource management
4. **KUIBURI:** ecotourism as a solution to Human Elephant Conflict (HEC)

- MAE WONG NATIONAL PARK
- THUNG YAI NARESUAN WILDLIFE SANCTUARY
- SRI SAWAT SUB DISTRICT
- KURI BURI NATIONAL PARK



In Thailand The meaning of 'Wo'

In Lai Wo sub-district, Thung Yai West Wildlife Sanctuary, the indigenous Karen people uphold traditional agricultural methods and rules of life called "Wo." This is being threatened by monoculture agriculture (namely maize) and by modern, market based social pressures. WWF works in supporting the Karen people in LaiWo sub-district, Thung Yai West wildlife sanctuary to develop awareness about "Wo" and develop land management rules based on it.

In Myanmar, WWF has supported

- the consultation process and the participation of civil society groups in consultation processes on the revisions to the Forest Laws and Forest Rules.
- Indigenous Community Conserved Areas (ICCA) working group to develop systematic engagement of civil society in the recognition of ICCAs in the country.

- Dawna Tenasserim landscape
- Protected areas
- Thailand boundary





EYES ON THE FOREST (Thailand Dawna Tenasserim):

This 3-year project is dedicated to tracking and responding to threats to forest cover in the Dawna Tenasserim. The project, operating on the Thai side of the Dawna Tenasserim, will see all deforestation drivers, including agriculture, roads, and other infrastructure be assessed, avoided where possible and minimized if avoidance is not possible, using offsets or compensation as a last resort. Innovative new approaches for WWF Thailand are being piloted, including the use of drones and other forms of new technology to ground truth land cover.

REDUCING DEFORESTATION

Through support from WWF Greater Mekong Forest Hub and Tigers Alive Initiative, an analysis of forest fragmentation in the Dawna Tenasserim has underscored the urgency of addressing drivers of deforestation, particularly in Myanmar, and in tiger heartlands adjacent to the Myanmar-Thailand border.

An economic assessment of the drivers of deforestation within the broader Dawna Tenasserim landscape highlighted maize, rubber and cassava, but with different underlying drivers in Myanmar and Thailand which has led to differentiated approaches to address these commodity-based drivers.

We are beginning further study into maize and rubber, in particular, an assessment of the socio-economic dimensions of the maize supply chain.

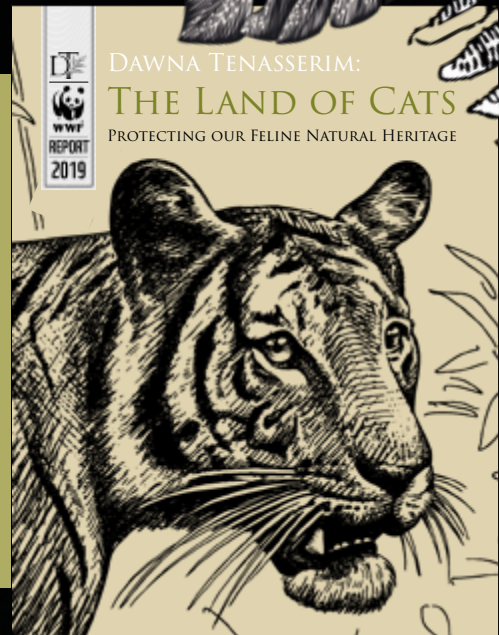




LAND OF CATS

FELINES OF THE DAWNA TENASSERIM

was a highlight publication of 2019 featuring the abundance of feline biodiversity in the landscape.



INDOCHINESE LEOPARD

Now Listed as Critically Endangered

The Indochinese leopard (*Panthera pardus delacouri*), a genetically distinct subspecies, today occurs only in 6.2 percent of its historical range. Extinct in Singapore, likely gone in Laos and Vietnam, nearly extirpated in Cambodia and China, and with much reduced populations in Malaysia, Myanmar and Thailand. The survival of the subspecies is dependent on only two major stronghold populations: Peninsular Malaysia and the Dawna Tenasserim.

HABITAT IMPROVEMENT

Relatively low prey abundance is suspected to be behind the slow increase of priority species such as tigers in the Dawna Tenasserim.

Protected areas in India often have 90 ungulates/km² versus the Western Forest Complex where even areas of high abundance may have only seven ungulates/km².

Monitoring in Mae Wong Klong Lan for the past seven years has shown that occupancy of ungulates has remained stable over time, suggesting no significant growth in prey populations. This may be due partially to the habitat in parts of the Dawna Tenasserim landscape, where rainfall is sparse or where a paucity of grasslands exists, providing limited fodder. Therefore, habitat improvement is a key intervention to increase populations of tigers and other priority species

Khlong Din Khem is the first habitat improvement site of Mae Wong. Using bulldozers and machetes, it was cleared of bamboo and shrubs, followed by regeneration of local grass species. In 2019, the Mae Wong team along with local rangers made two artificial salt licks (salts, mineral blocks and calcium phosphate) in this area.

In drought-ridden Kuiburi (an area hard hit in 2019 by Thailand's worst drought in 40 years), 388 rai (62.08 ha) of established grasslands have been maintained, including 14 salt licks and 14 water holes.

Protected areas in India



90

ungulates/km²

Western Forest Complex



7

ungulates/km²

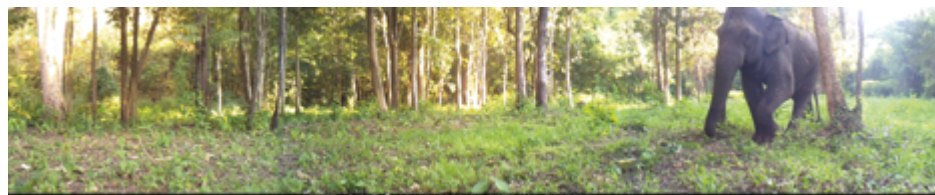
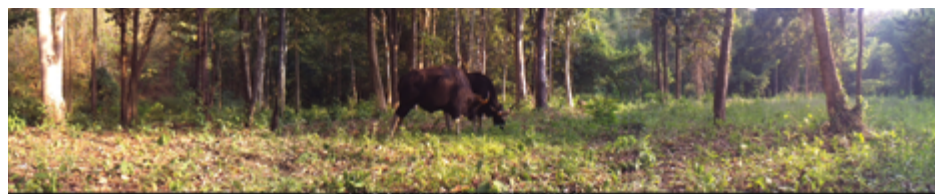
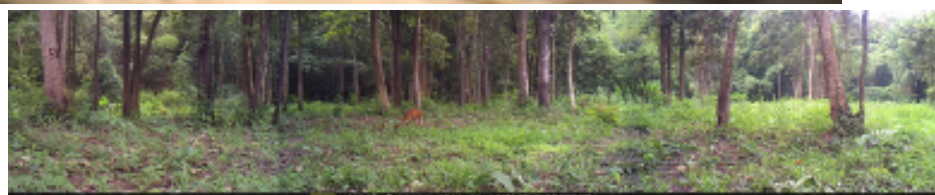


Making artificial saltlick by WWF and DNP staff.

MAKING ARTIFICIAL SALTICK BY WWF AND DNP STAFF.



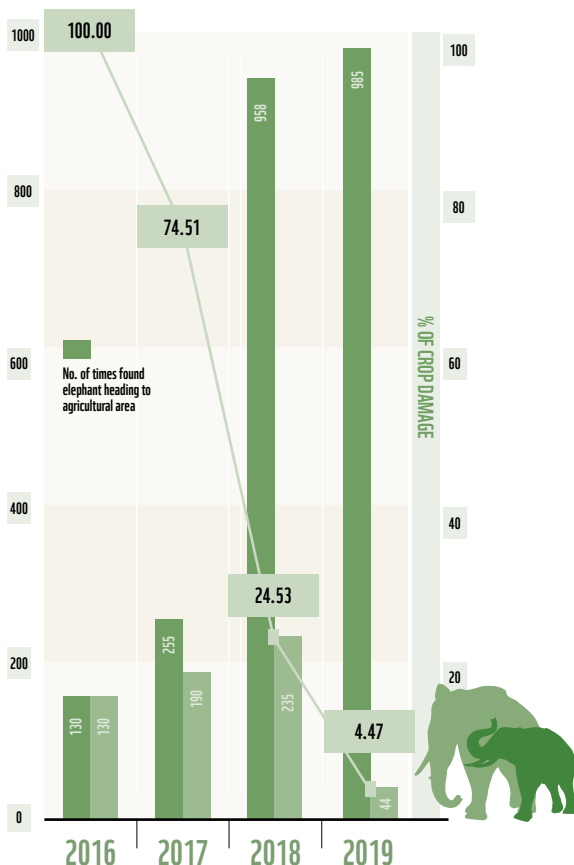
USING CAMERA TRAPS TO MONITOR THE VISITING ANIMALS IN GRASSLAND AND SALT LICK.



MUNTJAC @DNP AND WWF THAILAND
GAUR IN MAE WONG KLONG LAN @DNP AND WWF THAILAND
ELEPHANT IN MAE WONG KLONG LAN @DNP AND WWF THAILAND

HUMAN ELEPHANT CONFLICT

Thanks to a high-tech “eyes-in-the-sky” SMART Early Warning System developed by WWF as part of a corporate partnership with TRUE company, the rate of elephant incursions that damage crops in Thailand’s Kuiburi National Park significantly decreased from 24.53 percent (as of end of 2018) to 4.47 percent in 2019. This means that 95.53 percent of elephant incursions were prevented from damaging crops in 2019, a huge win for the local communities, plantation owners and elephant population.



Incidence of elephant incursions damaging crops in year 2019 compared with previous (note: dramatic rise of incursions in 2018 a result of establishing early warning systems).

WILDLIFE RESEARCH AND MONITORING

THAILAND:

Kaeng Krachan National Park:

- 30 camera traps set for wildlife (tiger) monitoring

Kuiburi National Park:

- 20 pairs of camera traps for wildlife (tiger) monitoring
- 9 camera traps to monitor wildlife use of water holes, saltlicks and grasslands

Mae Wong Klong Lan:

- 39 camera traps pairs

MYANMAR:

SITE 1: 45 camera traps set

SITE 2: 18 camera traps deployed

Site 3: Occupancy surveys conducted



GURNEY'S PITTA (*Hydornis gurneyi*)

The tiny, vibrantly colored bird, first described in the Tanintharyi region of Myanmar in 1875, was thought to have gone extinct when not recorded for a century. In 1986, a small population of Gurney's pitta was found in Thailand. In 2003, the IUCN down-listed the bird from Critically Endangered to Endangered after surveys estimated the population in Myanmar to be double the 11 pairs previously assumed. Currently however, urgent action is needed to protect the habitat of these spectacular birds where there is still hope that the Thai population may persist, in addition to coastal areas of Tanintharyi in Myanmar.

x45



x18



x39



x30



x20



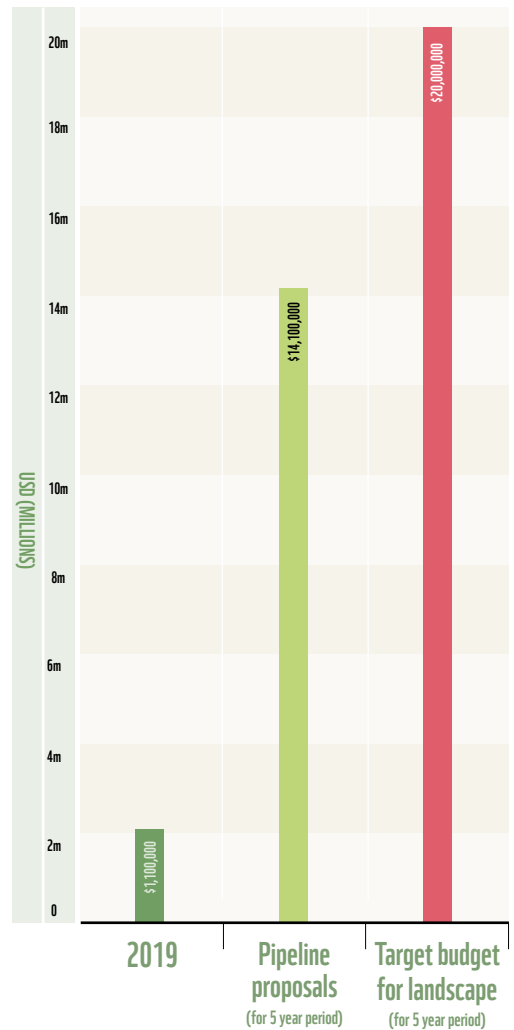
x9





GROWING FINANCIAL BASE OF SUPPORT

for Actions in the Transboundary Landscape





WE ARE GRATEFUL FOR SUPPORT IN 2019 FROM:

Myanmar:

WILDLIFE MONITORING & PROTECTION

- **Basket funding support to Dawna Tenasserim** (Donor: WWF Switzerland)
- **From Conflict to Collaboration** (Donor: WWF Denmark/ Jensen Fund)
- **Tiger Sweden Project – basket funding** (Donor: WWF Sweden)
- **Protecting Key Species Populations and Building Programme Development Capacity in DTL** (Donor: WWF Poland)
- **Wildlife College** (Donor: WWF US, WWF Singapore)

FOREST CONSERVATION

- **WWF DK-Danida Framework Agreement for Greater Mekong** (Donor: WWF Denmark)
- **NRM in Tanintharyi region** (Donor: WWF Germany/BMZ/Bengo)
- **The Ler Mu Lah project** (Donor: WWF Australia/Beven and Glenys Jones)

SUSTAINABLE LIVELIHOODS

- **Sustainable Rubber** (Donor: WWF Japan, WWF Singapore, WWF US, DaNa Facility/DFID)
- **Making the Dawei Road Sustainable** (Donor: WWF US/SALL)
- **NRM in Tanintharyi region** (Donor: WWF Germany/BMZ/Bengo)

INFRASTRUCTURE, POLICY & CIVIL SOCIETY ENGAGEMENT

- **SIDA-GM Civil Society Project** (Donor: Sweden)
- **Making the Dawei Road Sustainable** (Donor: WWF US/SALL)

RENEWABLE ENERGY

- **WWF DK-Danida Framework Agreement for Greater Mekong** (Donor: WWF Denmark)

Thailand:

WILDLIFE MONITORING & PROTECTION

- **Dawna Tenasserim Basket Funds** (Donor: WWF Austria, WWF Belgium WWF Switzerland)
- **Kuiburi and Kaeng Krachan Wildlife Conservation Project** (Donor: WWF US, WWF Japan, WWF Australia, Samsung, WWF Singapore, FFI)
- **Mae Wong Khlong Lan Tiger Recovery Project** (Donor: WWF Germany, WWF US, WWF Sweden, B.Grimm)
- **Support to Umphang Wildlife Sanctuary** (Donor: WWF Switzerland)
- **Tiger Sweden Project – basket funding** (Donor: WWF Sweden)

CIVIL SOCIETY ENGAGEMENT

- **SIDA-GM Civil Society Project** (Donor: Sweden)





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