





### LETTER FROM THE EXECUTIVE DIRECTOR

Dear Friends and Supporters:

This year was a watershed for new deployments of Global Park Defense technology and systems for park and wildlife protection. We now work in both marine and terrestrial endangered national parks and UNESCO World Heritage sites in ten developing countries.

On a number of fronts, we have proven that new technologies and park protection systems are now cost effective and reliable, and can be replicated in other endangered national parks anywhere there is strong park leadership and dedicated ranger teams.

The costs of using technologies has rapidly declined for almost all systems – UAV Drones, Thermal Cameras, Cellular Trailcams, Satellite Communications and Marine Radars, as Moore's Law and consumer-driven production has driven down prices 100 – 500% in the past five years.

Long-term protection is now within reach for a number of our endangered national parks where we work due to Carbon for Forest financing expected to provide \$400-500,000 a year for Cardamom National Park in Cambodia. New user fees for diving and fishing in Jardines de la Reina, Cuba are now generating over \$120,000 a year for Global Park Defense operations.

We believe that local-run tourism businesses providing long-term employment around national parks is the most effective catalyst to switching communities from exploitation (hunting, logging, land clearing) to long-term protection.

"National Parks are the last bastion for saving our major intact forests and ecosystems critical for endangered species to survive." - Jeff Morgan



Some highlights of Global Conservation's success include:

- We achieved our 600th arrest in our second year of operations in Thap Lan World Heritage, the center of Thailand's Rosewood Wars. Ranger inderdictions in the park are declining for the first time ever.
- A new cellular tower was installed in the heart of Cardamom National Park, Cambodia providing service to a major new Cellular Trailcam network to protect thousands of acres of pristine wildlife habitat threatened by illegal logging and wildlife poaching.
- In Leuser Ecosystem's one million acre Benkong Trumon Wildlife Sanctuary, we deployed Global Park Defense for protection of the highly endangered Sumatran Rhino, Elephant, Tiger and Black Bear.
- A new network of Cellular Trailcams now continuously monitors illegal activities encroaching into Maliau Basin in the DaMal World Heritage Park in Sabah Borneo, Malaysia. In 2018, we helped to restart the nomination for UNESCO designation after ten years.



- Mirador National Park completed its first year of ranger patrols now equipped with trucks and All-Terrain Vehicles to shut down illegal logging, hunting and looting of archaeological sites.
- In Africa, we launched our first Global Park Defense systems at Mana Pools World Heritage Park, Zimbabwe, and Queen Elizabeth National Park in Uganda.
- Marine Radar systems were successfully deployed in Baja Mexico to protect Cabo Pulmo National Park, one of the most important success stories in community-led marine protection.



We salute our major donors and co-funders this year including Rainforest Trust, March Conservation Fund, Dan Scales Fund, Full Circle Fund, Silicon Valley Community Foundation, The Campbell Foundation, Johnson Family Foundation and the William and Phyllis Draper Foundation.

We partner with the best scientific, community development, tourism and conservation finance leaders to enable long-term sustainability for each park, as well as local, state and national park, forestry and wildlife authorities.

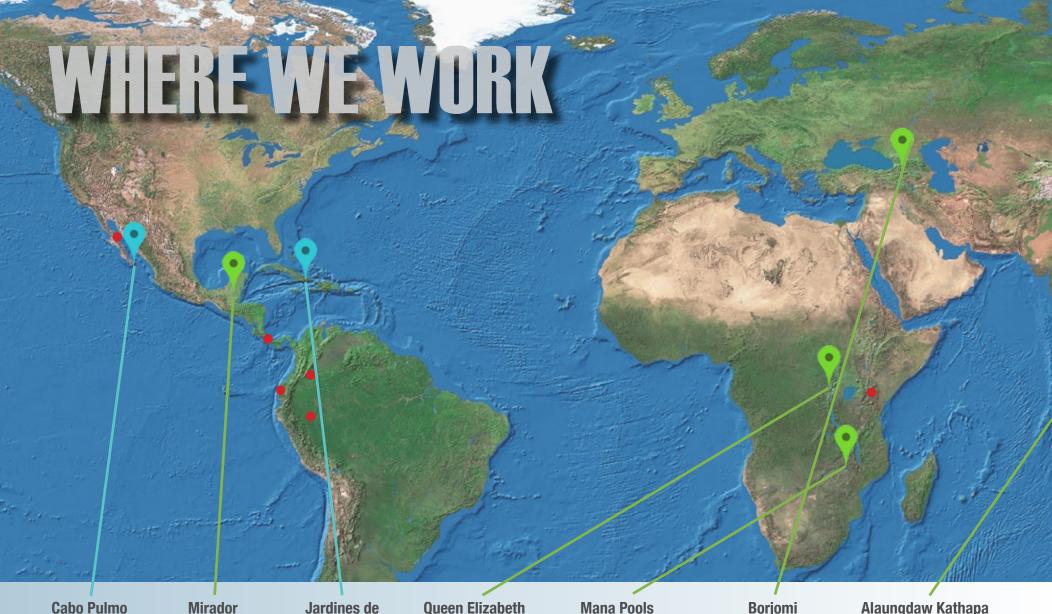
We work in the most highly-threatened regions and countries - Cambodia, Indonesia, Malaysia, Guatemala - many facing 10-20% deforestation rates over the past 10 years.

Please take the time to review our progress in the following pages, follow us on social media, subscribe to our new YouTube channel, and get involved. We need your support.

Thank you again to our supporters and co-funding partners from San Francisco to Silicon Valley, and New York to Hong Kong. Our supporters enable us to directly fund park and wildlife protection where it is needed most - in developing countries with the highest biodiversity and the last intact wildlife habitats.

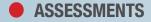
Sincerely,

Jeff Morgan Executive Director

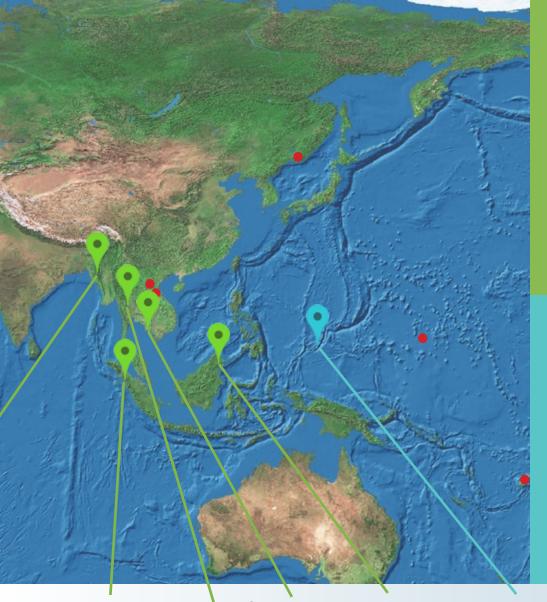


Cabo Pulmo National Marine Park Mexico Mirador National Park Guatemala Jardines de le Reina National Marine Park Cuba

Queen Elizabeth National Park Uganda Mana Pools World Heritage Zimbabwe Borjomi National Park Republic of Georgia Alaungdaw Kathapa National Park Myanmar









**Land Parks** 



**Marine Parks** 

Leuser Ecosystem Sumatra Indonesia Cardamom National Park Cambodia

DaMal World Heritage - Sabah Borneo - Malaysia Palau Northern Reefs

Thap Lan World Heritage Thailand We Protect Endangered UNESCO World Heritage Parks in Developing Countries



National Park, Guatemala and the Leuser Ecosystem in Sumatra, Indonesia.

Being a proud Rotarian for 30 years, and travelling as their friend around the world, he is proud of their collaborative effort to eradicate polio. Ha also has a deep passion for international forest and wildlife conservation.

John and the Swift Foundation are important funders of community-led conservation working with local and indigenous peoples to create viable protection in developing countries.

Working in Papua New Guinea, based at the WAU Ecology Institute on an agro-forestry project, he joined Ph.D. students studying tropical forest biology. There he developed a strong understanding of the role Indigenous people and nature play in biodiversity.

John joined us this year on our Asia Mission to Leuser Ecosystem in Sumatra, Indonesia and DaMal World Heritage in Sabah, Borneo, Malaysia. He viewed first-hand how we set up Global Park Defense, and train up ranger teams in patrolling and using new technologies and systems.

Boating up the river into Leuser Ecosystem with FKL Ranger teams, we visited one of the world's most critical orangutan habitats with Dr. lan Singleton. We saw FKL's work to purchase the entire riverfront opposite the national park which was being destroyed for illegal palm plantations.



John's support and critical ideas on improving partnerships, community involvement and forest conservation in our projects in Asia and the Americas has been invaluable. Together, we look forward to protecting many of the developing world's most endangered national parks in the coming years.

John is an organic farmer on his ranch in San Luis Obispo. He has been a long-time supporter and current board member of Conservation International and past director of World Neighbors and Pathfinder International.

### 25 25

Global Conservation is on a mission, along with their supporters and partners, to deploy Global Park Defense to 25 endangered World Heritage Parks by 2025. UNESCO World Heritage and National Parks across the developing world urgently need international support combined with modern technologies and communications to achieve real and sustainable protection.

Global Conservation is the only organization focused on protecting the most important and endangered UNESCO World Heritage and National Parks in developing countries.

We are working with our conservation partners and supporters to bring Global Park Defense to 25 Global Parks by 2025. UNESCO World Heritage and National Parks are our last bastions for saving critical rainforest ecosystems being cut down and destroyed for palm oil, logging, mining, ranching and agriculture.

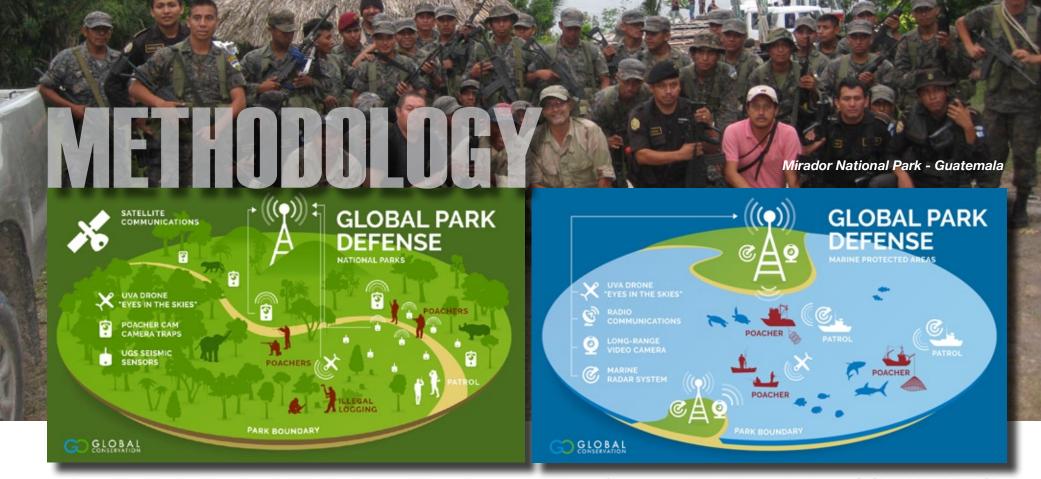
In most cases, national park authorities and rangers lack the critical skills, technology and systems, communications and equipment necessary to protect their national parks from increasing wildlife poaching and illegal logging and mining.

Global Park Defense can be implemented in 2 to 3 years and increase ranger patrol and park protection effectiveness in 80% of coverage of core wildlife and critical ecosystems.

Bringing Global Park Defense increases the effectiveness of park rangers and implements critical park protection and surveillance systems needed to reverse destruction and loss. National governments in developing countries are supported to become effective protectors of their UNESCO World Heritage including endangered wildlife and intact forests and ecosystems.

Global Park Defense is a scalable model and system with appropriate technology and training for each park to dramatically increase the effectiveness of rangers and park authorities to protect their world heritage.

Mana Pools National Park - Zimbabwe



By working directly with park authorities, local communities, park ranger teams, law enforcement and the military to implement GLOBAL PARK DEFENSE, Global Conservation focuses on achieving 'No Kill, No Cut' protection in highly threatened UNESCO World Heritage and National Parks.

### THREAT ASSESSMENT

Global Conservation begins with a detailed Threat Assessment and Protection Plan working with leading experts to focus patrol efforts on the highest threat wildlife habitats and core primary forests. Planning combines local knowledge and community inputs with critical monitoring from cellular trailcams, satellites, drones and advanced mapping.

### ADVANCED SURVEILLANCE

Global Conservation is working with the best and most cost-effective park defense technologies to support rangers in high threat areas including:

CELLULAR TRAILCAMS: Based on low-cost consumer technologies, Trailcams use satellite, cellular or radio connections to send real time surveillance photos of poachers and other illegal trespassers from around the park to ranger patrols with location, heading and facial images for later prosecution. Cellular Trailcams are deployed on all roads, trails and rivers to provide real-time surveillance of all illegal activities allowing rapid targeting of ranger interdictions.

Global Park Defense is a multi-year integrated program of threat assessment, advanced surveillance, SMART Patrols, comunity involvement and partnerships for long-term sustainability.

THERMAL CAMERAS: Thermal cameras provide long-range surveillance across large land areas and marine protected areas from mobile observation posts.

MARINE RADARS: Marine radars provide alerts of illegal activities by fishing boats across large marine protected areas.

UAV DRONES: UAV drones run aerial reconnaissance up to 40 kilometers night and day to identify illegal logging and poacher camps.

SATELLITES: Satellites provide daily updates on fires, forest clearing, illegal logging and mining camps, new road construction, and major changes to the park ecosystem so that patrol teams can be immediately alerted to prevent forest loss.



### **COMMAND & CONTROL**

Command and control systems give park authorities, ranger teams and law enforcement a complete view of all threats, patrol movements, interdictions and arrests, location of cameras and sensors, and aerial surveillance.

### **SMART PATROLS**

SMART Patrols combine systems, technology and training to enable transparent monitoring of the effectiveness of anti-poaching efforts by park authorities and community groups. SMART has proven to be highly effective to empower park staff, boost motivation and increase interdictions and arrests. SMART provides timely and accurate information on where, how and by whom poaching, illegal logging and other direct threats to biodiversity are occurring.

### COMMUNITY INVOLVEMENT

National Parks in developing countries have large stakeholder groups in the surrounding communities which are critical to long-term protection. Global Conservation funds community involvement programs including Ecoguards, tourism cooperatives, park ranger and management training.

### **CRITICAL PARTNERSHIPS**

Global Conservation brings critically important co-funders, government and private investment, and strategic partners to assist in conservation finance, park infrastructure, communications, scientific research and community-led tourism.

### **LONG-TERM FINANCING**

Global Conservation assists in developing Carbon for Forest financing for our national parks where we work, as well as Visitor User Fees to fund park and wild-life protection for sustainable financing after our multi-year Global Park Defense projects end.

Each Global Park Defense deployment requires \$400-500,000 over 5 years for training, equipment and communications systems. Global Conservation requires national governments to increase the number of salaried Park Ranger teams and pay all salaries, benefits and insurance.

We are rolling out Global Park Defense in the most important and endangered National Parks in each country to become a Center of Excellence, from which we expect Global Park Defense to be adopted by hundreds of other parks in the coming years.



Our step-by-step methodology takes each national park and UNESCO World Heritage site through four stages:

- Planning threat assessment, security and surveillence design, ranger deployments
- 2) Partnerships wildlife and forestry, government, telecommunications and co-funding
- Protection community involvement, law enforcement and military support
- 4) Sustainability governmental budgeting, tourism revenues and park financing



# FCCUSCINE PROTECTION

### Cabo Pulmo, Mexico

Global Park Defense for Marine Protected Areas (MPAs) is based on a Marine Radar system, longrange camera and advanced software to target Marine Patrolling into proven high threat areas to identify illegal fishing vessels and crews. Moving from random to highly-targeted patrolling is a 'force multiplier' for over-stretched marine ranger teams.

MPAs are critical tools for protection against illegal fishing and destruction of reefs across the world. Most are just "paper parks" with no actual protection - ie. marine wardens, patrol vessels, community patrolling or enforcement.

In Marine Park Protection, Global Conservation has deployed Marine Monitor radar systems in five National MPAs - Cabo Pulmo in Mexico, Palau Northern Reefs, Jardines de la Reina in Cuba, Channel Islands Natl. Park and La Jolla, California.

Cabo Pulmo National Marine Park has been an ideal proving ground for using consumer marine radar technology to monitor Mexico's most important marine national parks 24/7 enabling rapid interdiction of illegal fishing within its precious and sensitive "No Take" areas.

Due to increasing pressure on the world's fishing resources, illegal fishing and commercial overexploitation is now threatening almost every coastal-based community, and their livelihoods based on communal fishing which had been well-managed for centuries.

### **CABO PULMO MARINE LIFE**

- 34 WHALE AND DOLPHIN SPECIES
- BREEDING AND NURSERY GROUNDS FOR 30,000 CALIFORNIA SEA LIONS
- 25 SPECIES OF CORALS
- 90% OF THE WORLD'S HEERMANN'S GULLS
- FEEDING AND WINTERING GROUNDS FOR 5 OF 8 SEA TURTLE SPECIES
- HOME OF THE POISONOUS YELLOW-BELLIED SEA SNAKE

### **Global Park Defense: Marine Protection**

We are excited to support the R&D work to create a mobile version of the Marine Monitor which is self-contained on a mobile trailer system which can be transported by truck anywhere it is needed. We can now fit two fully-working M3s in a shipping container and deploy globally.

Palau Northern Reefs has now been running all year achieving its 12th arrest, and is becoming a Center for Excellence in Marine Protection in other states of Palau, and other countries across the Pacific.

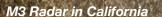
Global Conservation is scaling up Marine Monitor deployments in UNESCO World Heritage Parks like Jardines de la Reina, Cuba, and Cabo Pulmo National Marine Park in Baia Mexico.

This year, we begin support for Nan Madol, Micronesia. Our partners, Anthropocene Institute, ProNatura Mexico and One Reef in the Pacific have been invaluable in co-funding and deployments, service and support.

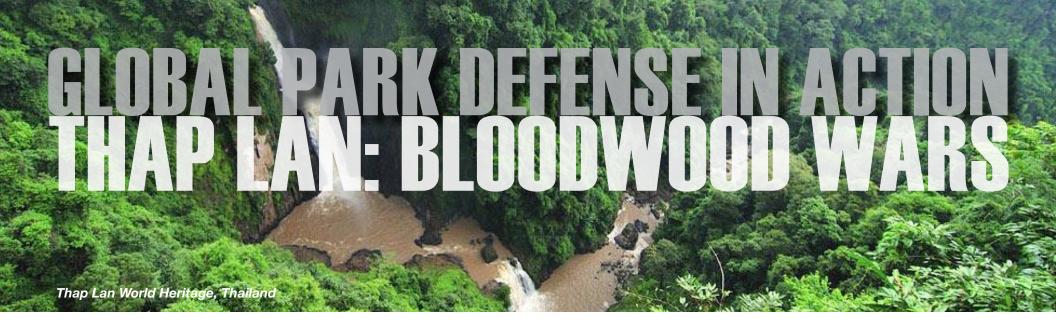
We want to work in intact Marine Protected Areas (MPAs) which are still intact despite over-fishing with magnificent coral reef systems, barrier reefs, patch reefs, nesting beaches, unique atolls and spawning and aggregation sites for globally protected fish species.

MPA Protection is critical in the face of increasing international and local fishing depleting the last fish for even local take. Given the decline in fisheries, both states in Palau have recently established marine law enforcement programs to reverse trends and protect their near shore territorial waters.





FURUNO



In 2018, we achieved our 600th arrest of Thai and Cambodian rosewood poachers previously illegally logging thousands of Siamese Rosewood trees and hunting wildlife in Thap Lan Park.

We also lost a number of rangers who were killed trying to stop illegal logging. The combination of those deaths and the species' red-hued timber has led conservationists to call it "bloodwood."

Until Global Conservation, illegal logging operations run by transnational crime syndicates enjoyed an advantage over park staff because of superior numbers, funding and weaponry. That equation changed with the deployment of Global Park Defense systems, technology and training.

Prior to 2016, Thap Lan saw fewer than 30 arrests and illegal loggers were working without fear of arrest.

Global Conservation is assisting Thailand's Department of Parks and Wildlife, in partnership with WCS Thailand, to give the country a fighting chance. We are supporting a multi-year deployment of Global Park Defense, combining SMART Patrols, Cellular Trailcams, Command Centers, and training for night patrolling and violent crime.





Global Park Defense includes training for rangers on night patrolling, park protection systems, armed combat and improving patrol effectiveness, all needed to protect the last intact forests and wildlife habitats.

Focused on breaking up the Thai syndicates, middle men and operators funding and providing illegal teams with chainsaws and supplies, Global Park Defense technology and systems gives Thap Lan Park Rangers a 'force multiplier' by targeting patrols and improving park-wide protection. Hundreds of Cellular Trailcams are being deployed in high threat locations, entry trails, and along the borders of Thap Lan World Heritage to detect the movement of poachers so that park rangers can take near-real-time actions.



### Recent articles on the Bloodwood Wars tell of deaths and, with the help of Global Park Defense, increased arrests.















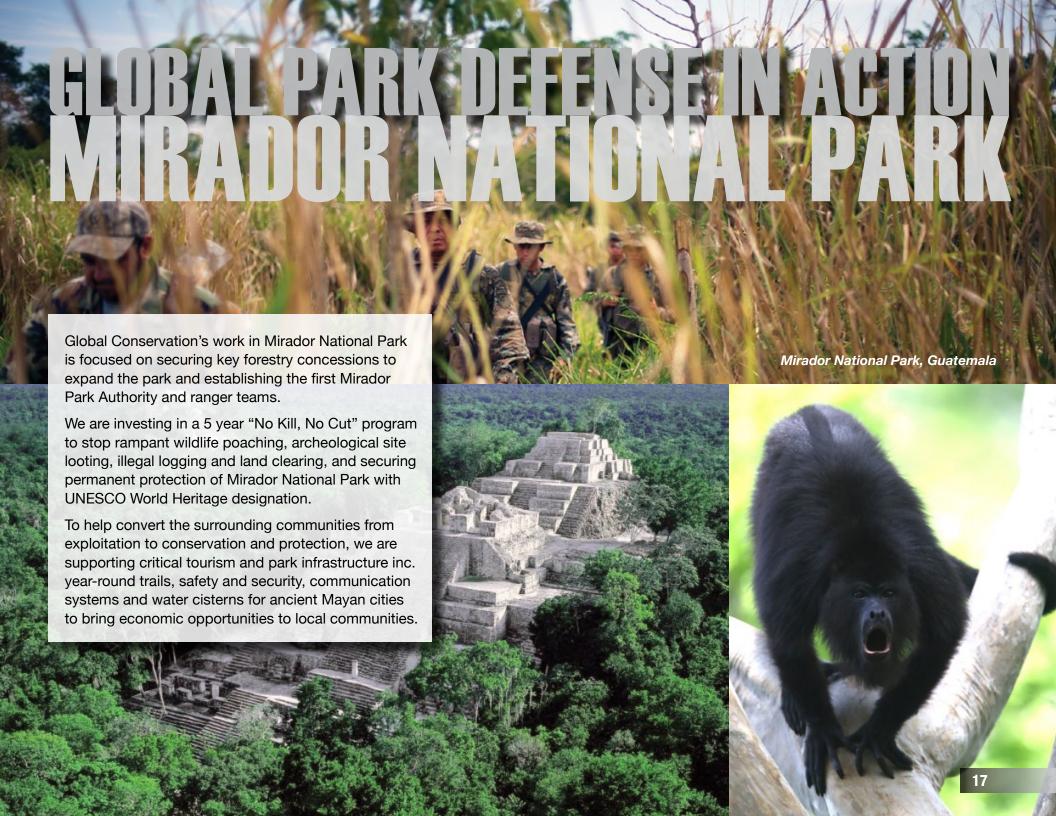
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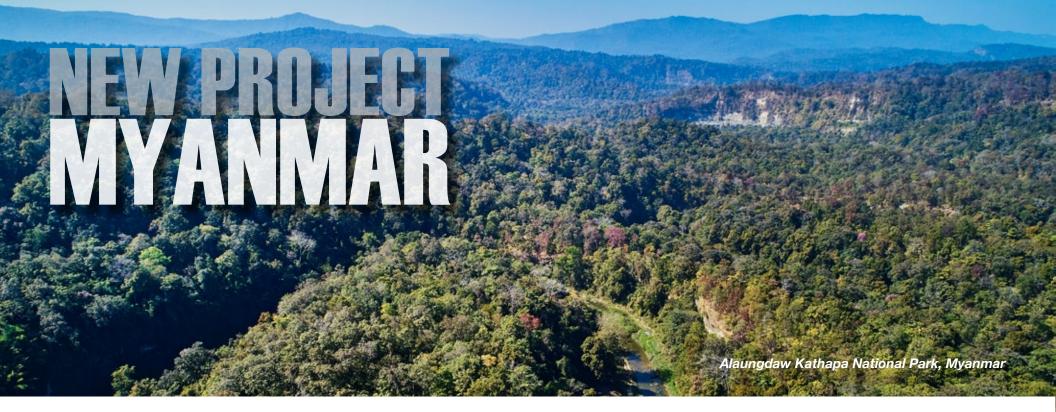
Often referred to as the Heart of Borneo, the Danum Valley – Maliau Basin – Imbak Canyon (DaMal) contains one of the last intact primary forests and wildlife habitats in Asia for endangered megafauna species. It is the last place on earth where elephants, clouded leopards, bears and orangutans co-exist together in the wild.

DaMal World Heritage will protect one of the last major primary forest ecosystems in Asia, including critical lowland forests protecting endangered species facing extinction in other parts of Malaysia and across Asia. DaMal World Heritage, Sabah, Malaysia

Global Park Defense is being deployed with a newly dedicated PROTECT team focused on anti-poaching and law enforcement in DaMal core conservation areas. Key activities include:

- Ground surveillance equipt. inc. Cellular Trailcams.
- Command & Control systems and joint patrolling with law enforcement agencies.
- Detailed mapping of DaMal forests and ecosystems using sophisticated LiDAR & multi-sensor analysis.
- Planning for UNESCO World Heritage including improved park management, tourism development planning, and best placement of roads and tourism facilities to alleviate the impact on wildlife and sensitive forest habitats.





### Global Park Defense for Myanmar's Oldest and Largest National Park; In Pursuit of UNESCO World Heritage

Global Conservation signed our agreement in 2018 with the Myanmar Ministry of the Environment; Department of Forestry

to begin Global Park Defense deployment this year in Alaungdaw Kathapa National Park (AKNP), Myanmar's oldest national park.

Beginning this year we are also assisting to declare AKNP to become a UNESCO World Heritage site.

Myanmar faces some of the highest deforestation rates of any country in the world – over 12% over 10 years.

Global Conservation is investing in critical Global Park Defense technologies, systems and training needed to effectively protect core wildlife habitats from illegal logging, wildlife poaching and illegal hunting. Alaungdaw Kathapa National Park is the only national park in Asia with a famous religious site for Buddhism integral to the

park, and the name of the park is named after Buddhist Royalty.

Alaungdaw Kathapa National Park is located in Monywa Township, Sagaing Region, includes the upper catchment basins of the Petpa, Patolon and Taungdwin rivers. At 160,500 hectares, it is the largest national park in Myanmar.

About 150,000 pilgrims visit the national

park during the religious festival from January to April each year to worship the holy remains of Lord Alaungdaw Kathapa which are kept in the natural cave located inside the park. It was named after a shrine to Kathapa located within the park. The shrine has a



### SATELLITES

Global Conservation uses satellite monitoring works to protect forests and biodiversity in the Americas, Asia and Africa. With GLAD deforestation alerts on Global Forest Watch, park authorities can detect illegal gold mining and logging in protected areas within days. By getting timely and precise information into the hands of government authorities on the ground they can take action within 24-48 hours of receiving an alert.

Cardamom National Park is one of Global Conservation's leading priorities to protect the last major intact tropical rainforest of Cambodia, and habitat for hundreds of threatened and endangered wildlife species, including the country's last Asian Elephants.

Cambodia has one of the fastest rates of forest loss in the world, cleared for rubber plantations and timber. Between 2001 and 2015, the country lost a total of 1.44 million hectares—or 5,560 square miles—of forest – with loss increasing by 14% per year.

Cambodia's Forests – 2000 and Today

"All it takes is fifteen years to lose it all forever." Suwanna Gauntlett Wildlife Alliance



# CARBON FOR FORESTS New Financing for Park and Wildlife Protection

Global Conservation's Carbon for Forest is the first forest-based carbon offset program which directly funds the protection and restoration of national parks, using Advanced Satellite Monitoring combined with ISO-standard monitoring and verification.

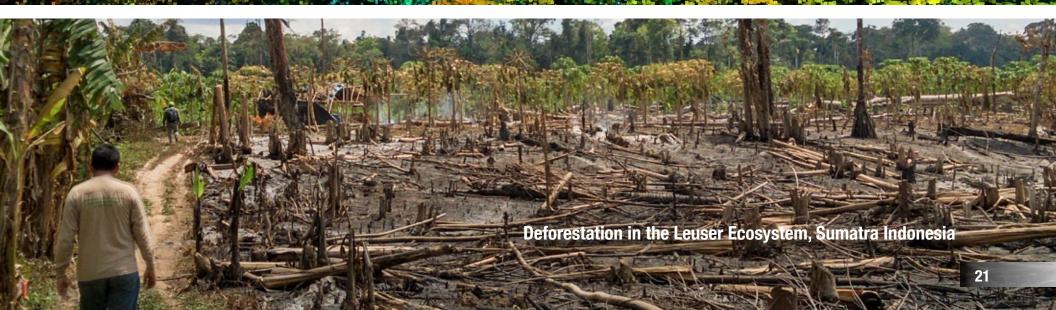
The planet has lost over 40% of our tropical forests over the past twenty years - over a billion acres - equal to the size of entire nations - Colombia, Thailand or Kenya. Rainforests once covered 14% of the earth's land surface; now they cover 6% and experts estimate that the last remaining rainforests - 2.4 billion acres or 5

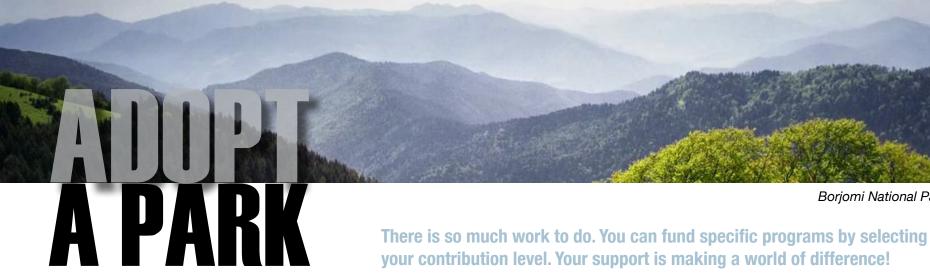
million square miles - could be consumed in under 40 years.

It is estimated that the Top 100 Large Carbon Emitters (LCEs) generate 80% of CO2 emissions in the world today.

Carbon for Forests works to provide verifiable carbon offsets combining five components:

- Ecosystem Prioritization
- Satellite Monitoring
- Carbon Value Verification
- Conservation Finance
- Global Park Defense





\$1,000

Borjomi National Park - Georgia

your contribution level. Your support is making a world of difference!

### DEPLOYMENT \_\_\_\_\_

**Fund Combat Trauma Kits** 

Deploy Global Park Defense	\$100,000 per year
PLANNING	
Park Master Plan	\$25,000
Threat Assessment	\$10,000
Ecotourism Plan	\$10,000
PROTECTION	
Fund Command Center	\$25,000
Fund a Ranger Team	\$10,000
Fund UAV Drones	\$10,000
Fund SatPhones	\$10,000
Deploy SMART Patrols	\$10,000
Fund Digital Radio Kits	\$10,000
Fund Cellular Trailcams	\$5,000
Fund Radios	\$5,000

Fund the protection of a park for a year!

**Global Conservation enables families,** foundations and corporations to "Adopt-A-Park," bringing critical resources for implementing **Global Park Defense.** 

Corcovado National Park - Costa Rica



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For Global Conservation financials, see our website or email the Executive Director at jmorgan@globalconservation.org.

Leuser Ecosystem - Indonesia



Global Conservation is a 501(c)(3) U.S. organization providing fully tax deductible donations for our supporters. If you are interested in supporting our critical mission, please contact our Executive Director. 100% of donations go directly to Global Park protection. Global Conservation takes great pride in our lean organization, project effectiveness, prudent use of funding, and scalability of our model. Join us and see what is possible with direct funding using a proven model for park protection in developing countries.

