



FACTSHEET

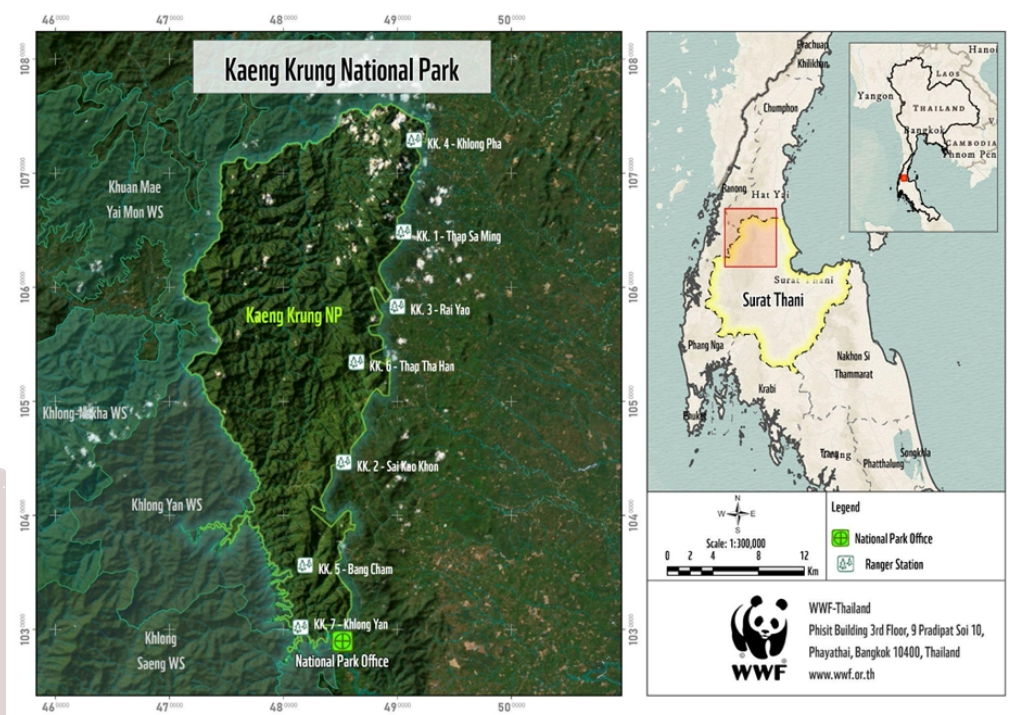
EYES ON THE FOREST • 2024



EYES ON THE FOREST

BACKGROUND

The Eyes on the Forest Project is a collaborative deforestation monitoring initiative in partnership with the Thailand Department of National Parks, Wildlife, and Plant Conservation (DNP). Utilising specially equipped drones, also known as UAVs (Unmanned Aerial Vehicles), the project aims to prevent forest loss and degradation. This technology enables protected area managers to visualise forest removal areas with higher spatial resolution and near real-time conditions. Since its pilot launch in 2019 in Kaeng Krung National Park, part of the Khlong Saeng-Khao Sok Forest Complex, the tool has demonstrated numerous additional applications for tropical forest conservation, including aerial patrols, communications, forest health assessments, and restoration planning.



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WHAT WE DO:

- **Monitoring deforestation** in the Dawna Tenasserim Landscape (DTL Thai side) using government data references and satellite imagery analysis.



- **Pilot areas for field operations:** Kaeng Krung National Park, Protected Areas (Khao Sok-Khlong Saeng Forest Complex) in Surat Thani, located in the southern region of Thailand.



- **Collaboration with the Department of National Parks Wildlife and Plant Conservation (DNP)** in targeted areas for technology development aimed at deforestation monitoring, planning for forest restoration, database systems development, including GIS and remote sensing, patrolling, wildlife management, and rapid survey and mapping using Unmanned Aerial Systems (UAS).



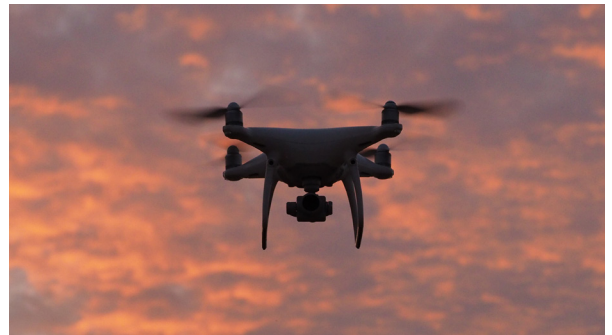
- **Knowledge sharing and capacity building for the rangers** to operate the technology for forest and wildlife management.

- **Enhance the wildlife management system:** Provide technological support (UAVs, offline camera traps, real-time camera traps) for wildlife monitoring and management.



KEY ACHIEVEMENTS

- **To reduce and prevent forest encroachment**
 - High-resolution aerial photography from the UAV system has been used to comprehensively cover 100% of the targeted land-use and natural forest transition areas in Kaeng Krung National Park, enabling effective monitoring of forest changes.
 - Partial analysis of UAV imagery revealed that there were a total of 93 plots requiring inspection. Among these, 6 plots were found to have encroached on forest land, covering approximately 2.75 hectares. Consequently, there are 10 cases, totaling 6.46 hectares, for FY24.
- **To enhance the restoration system**
 - Restoration areas and seedling species were completely identified based on research conducted by the National Park Research and Innovation Center, Surat Thani of the DNP.
- **Strengthening Management Systems in Protected Areas (Forest and Wildlife)**
 - 40 automatic camera traps have been set up to track wildlife, particularly mammals, in the area. Kaeng Krung National Park
 - 9 patrolling teams were established, and the patrol covered approximately 67.35% of the total areas in the park. The evidence of threats was discovered, including 7 cartridge casings, 3 snares, 1 fishing tool, and 15 poaching camps
 - 35 DNP officers from across the country participated in the training on "Unmanned Aerial Vehicle Surveying and Mapping from Aerial Photography in Protected Areas," held from June 24 to 30, 2024



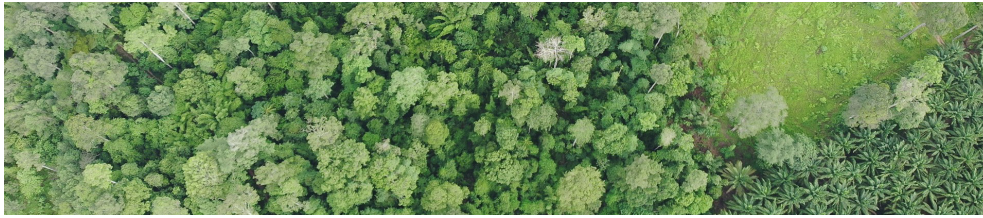
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CHALLENGES

- The UAS operation for aerial photography mapping requires surveying the takeoff and landing points, as land use in Kaeng Krung National Park consists of rubber plantations, durian, and palm oil, with tall trees making the operation challenging.
- The process of monitoring forest encroachment, following detection from drone imagery, necessitates field verification to confirm the accuracy of the data for subsequent actions concerning the identified areas.
- The sustainability of applying technological systems to support the management of natural resources and the environment depends on the capability of field personnel to independently execute operations, analyse data, and utilise the information for decision-making processes. Future considerations must account for the limitations in personnel and budget of the field units. Consequently, the decision to develop or adopt technological systems presents a challenge in ensuring that the chosen systems are simple, not overly complex, cost-effective, easy to operate and maintain, while still being efficient and effective in application.



NEXT STEPS

- Efforts to prevent and monitor forest encroachment must continue uninterrupted, particularly focusing on the interface zones between natural forests and controlled land-use areas, known as 'Control Zones,' which are identified as having the highest risk of encroachment and poaching. This includes the development of technological systems and data management solutions that facilitate easy access to and utilisation of information, thereby supporting informed decision-making in the management of these areas.
- Expanding operations to additional protected areas in other regions by applying knowledge, lessons learned, and experiences gained from pilot projects.
- 20 real-time camera traps and UAV system will be deployed to manage wild elephants and prevent illegal activities related to natural resources in Kaeng Krung National Park
- For the forest restoration efforts planned in FY25, appropriate seedling species will be selected based on area-specific characteristics, including slope steepness, aspect, sunlight exposure, moisture levels, and proximity to water sources.



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