



Wild Asian Elephant Management

Large scale Elephant habitat destruction has led to habitat fragmentation, reduction and disturbances. As a result human and elephant dominated areas moved closer together creating increasing conflict between them. Human Elephant Conflict is now the single biggest threat to wild Asian Elephants. Throughout all 13 range countries, many Government agencies, NGO's and scientists are working hard to reduce Human Elephant Conflict, unfortunately only with limited success so far.

Main obstacles are lack of knowledge and lack of coordination.

Basic data like population counts, population trends, movement patterns (seasonal) and HEC data are mostly inconsistent or missing.

We at NWA Foundation (Liechtenstein) therefore believe, that a comprehensive database and standard procedures are necessary to support and improve existing efforts and new initiatives.

Since 2016 we have started to develop I-ELE a comprehensive effort to address the shortcomings.



PRESENTS



I-ELE

HEC Management Framework
by NWA



I-ELE is a collaborative Human Elephant Management tool developed by NWA Foundation.

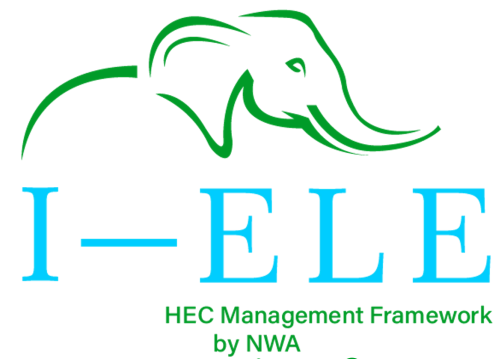




All components and data are freely available for Authorities, NGO's and Scientists involved in HEC mitigation.

*(Personal data and intellectual property rights are protected)





I-ELE is a free collaborative, cloud-based HEC Management Framework trying to assess all aspects of human elephant conflict mitigation. Focus is on comprehensive data collection and standardization of procedures.

Among others, the data base will include:

- extensive elephant demographics
 - crop loss data
- casualty and injury data for humans and elephants
 - property damage data
- HEC mitigation assessment and trend analysis
- identification of factors and practices influencing elephant behavior
 - seasonal HEC patterns

Standard protocols among others:

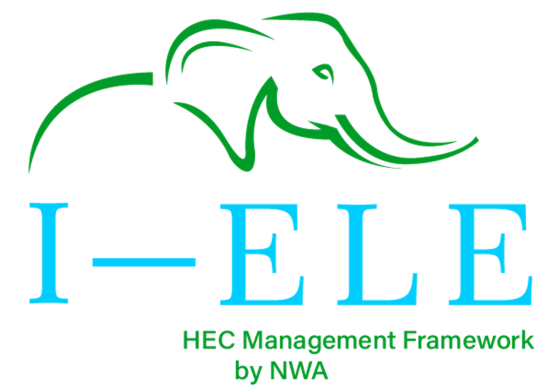
- tools and methods available and evaluated
 - HEC mitigation teams
 - habitat management
 - wildlife management





NWA Foundation has set aside sufficient long-term budgets for further development and maintenance to ensure smooth and continuous operation of I-ELE HEC Management Framework and its components.





Components



Cell phone application for real time Human Elephant Conflict warning and monitoring.



Standard Protocols is a cloud base library of standard procedure covering all aspects of HEC mitigation and wild elephant conservation



HEC Records is a mobile app-based HEC report feature built into HEC alert app.



A cloud based library of scientific papers related to HEC



A chat/messenger module built into HEC alert app



All HEC tools and methods evaluated



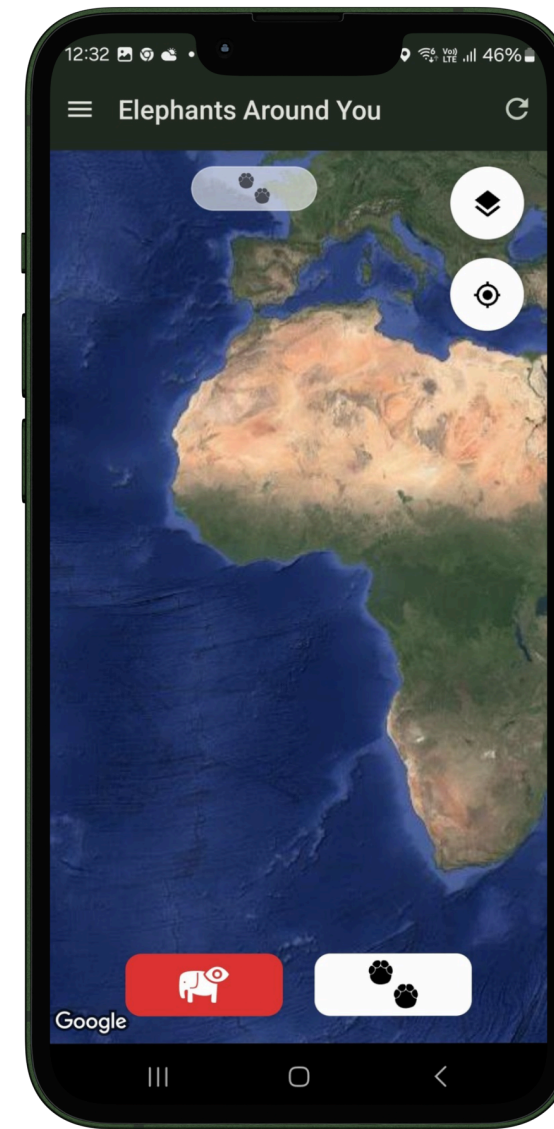
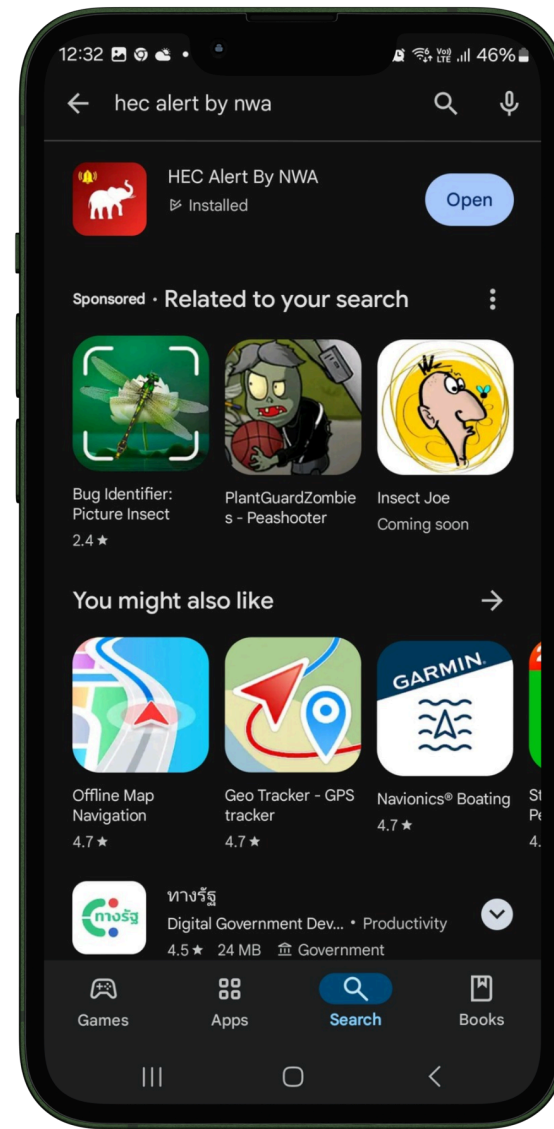
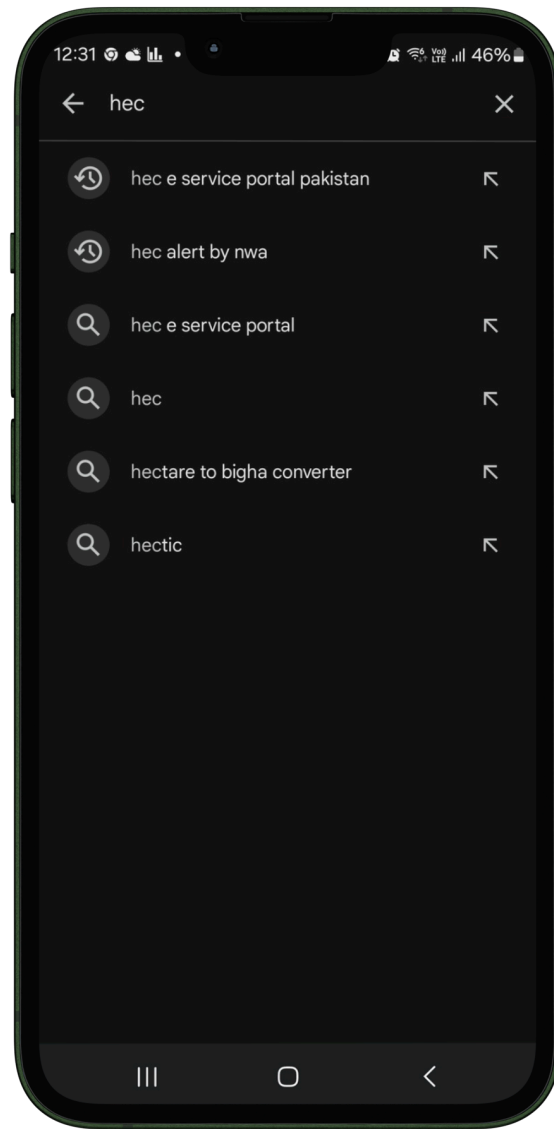
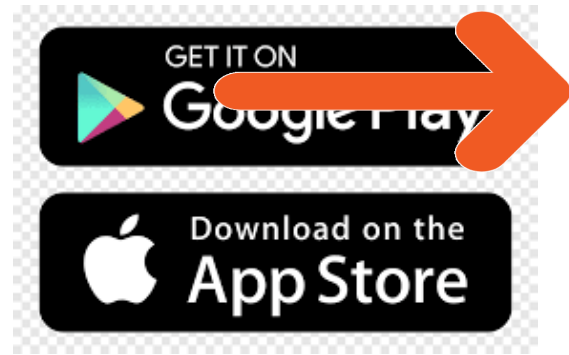
An extensive capture/recapture elephant identification software providing comprehensive demographic data from elephant photographs

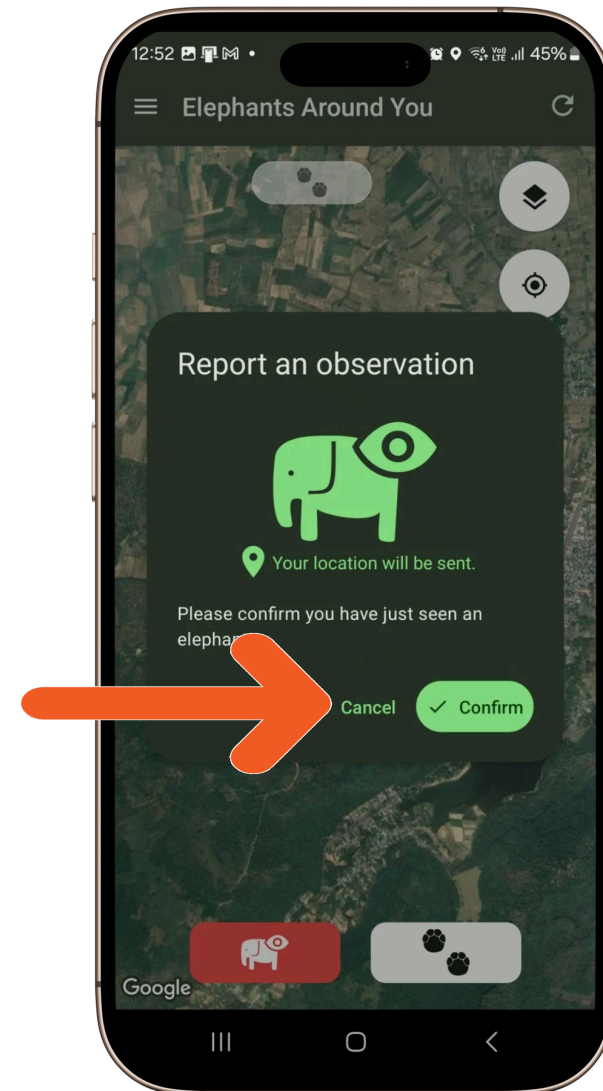
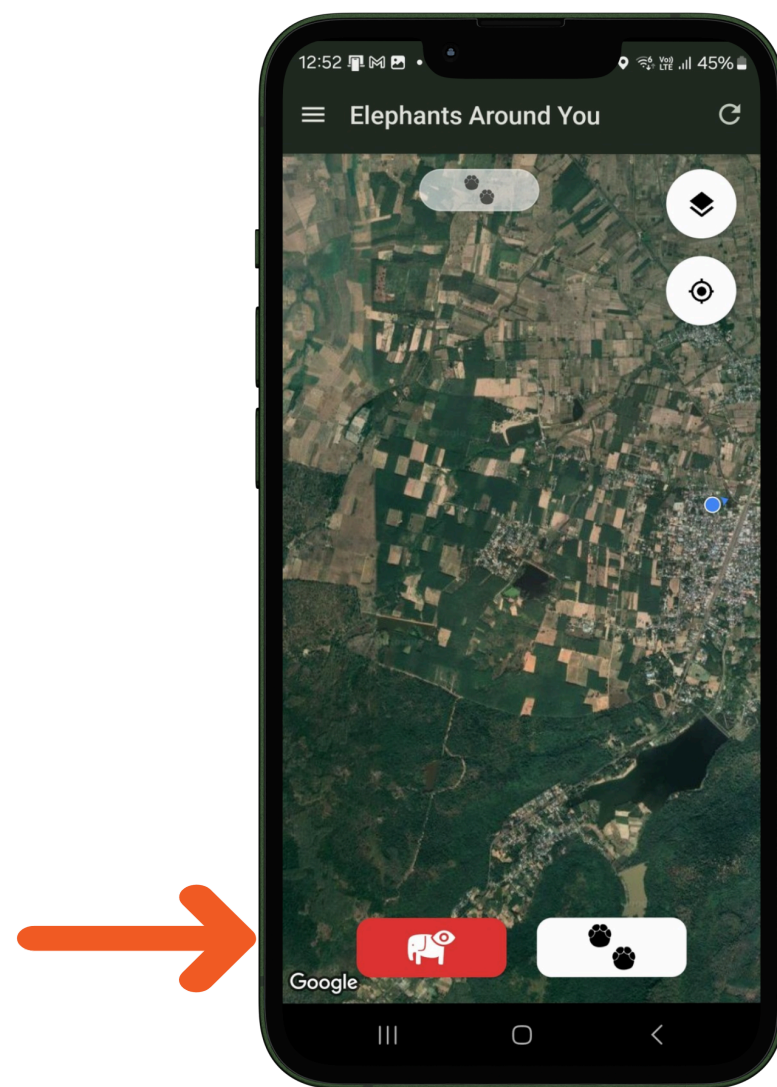
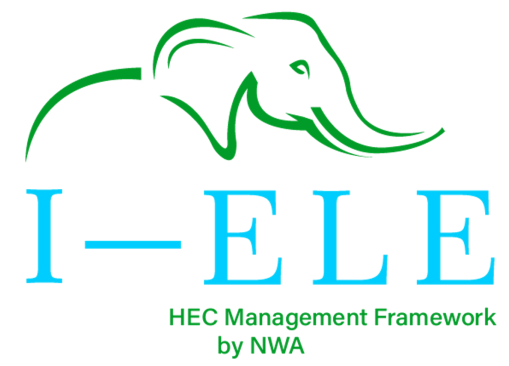




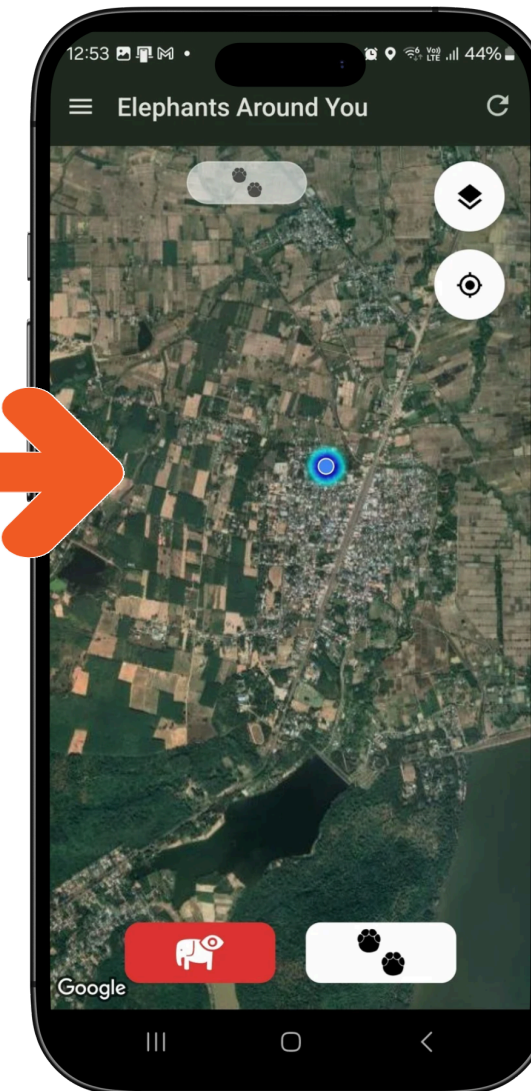
HEC Alert by NWA is an early warning and HEC reporting application. All users can report the sighting of elephants and receive notifications from within 25 kilometers. HEC alert is available to all users.

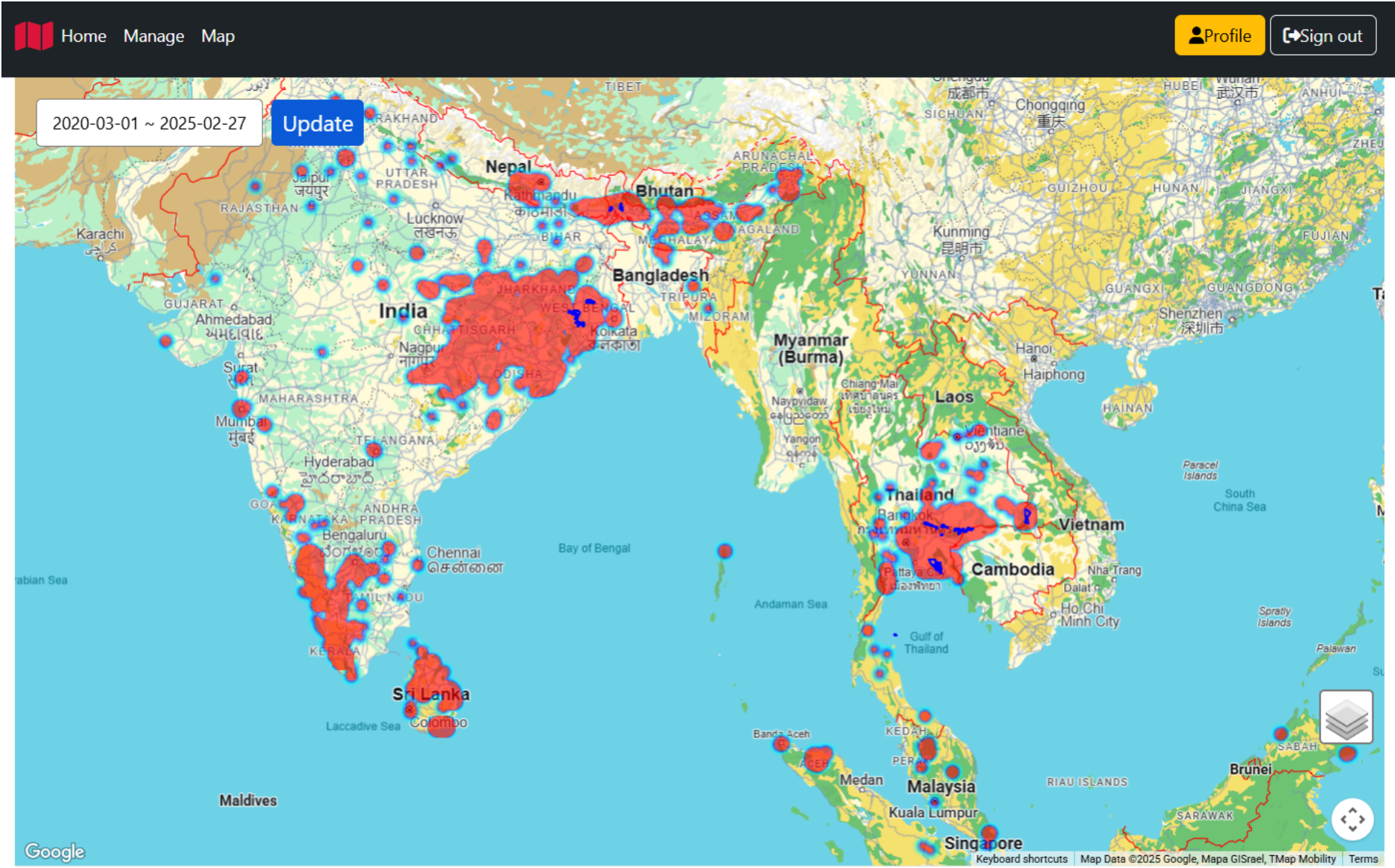
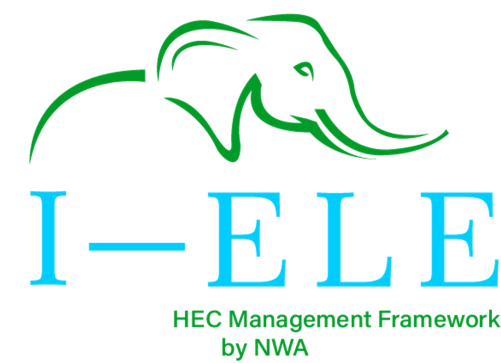






Report location in
the map





HEC Admin

- Areas
 - HEC areas
 - Forests
 - Landscapes
 - Regions
 - Countries
- Observations
 - Observations
- Reports
 - Reports
- Elephants
 - Identities
 - Sightings
 - My Sightings
- Teams
 - Teams
 - Members
- Images
 - Images
- Roles
 - Roles
- Users
 - Users

Observations

Country

Type

Owner Name of User contains

Owner email address contains

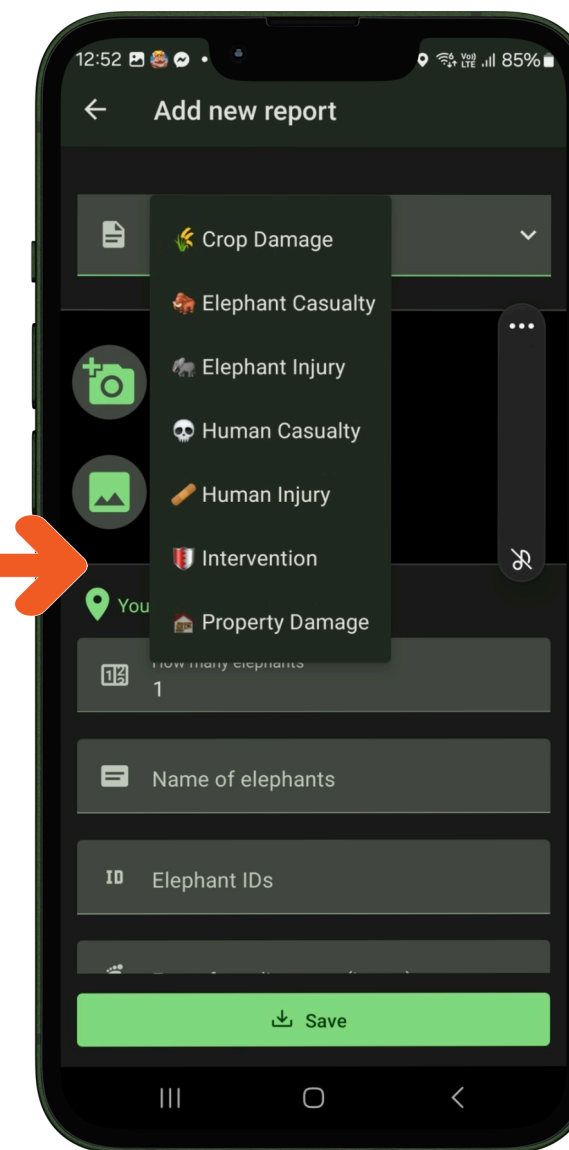
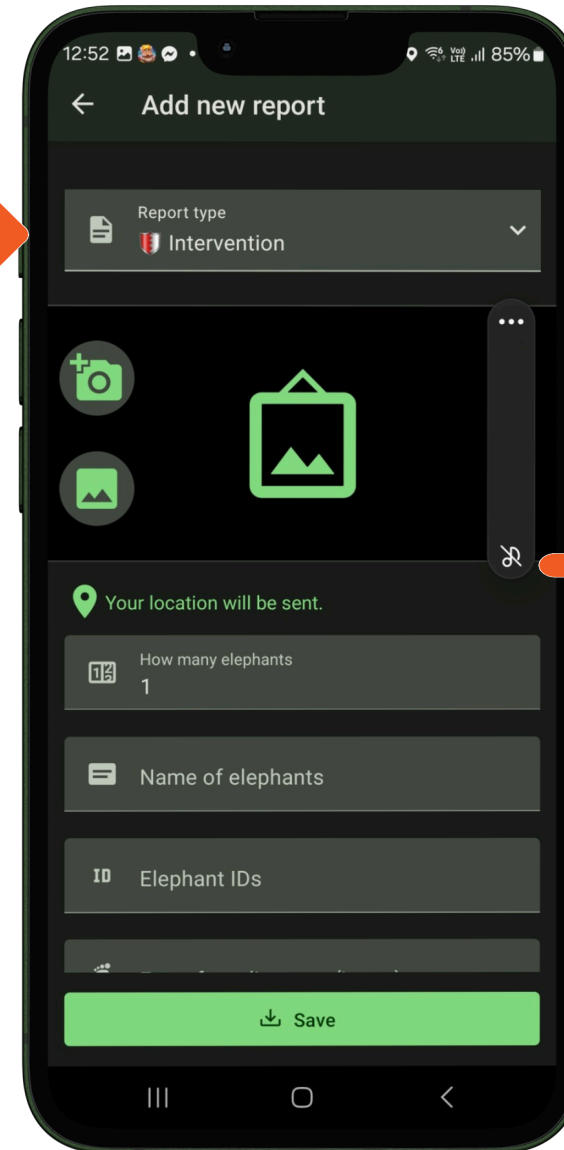
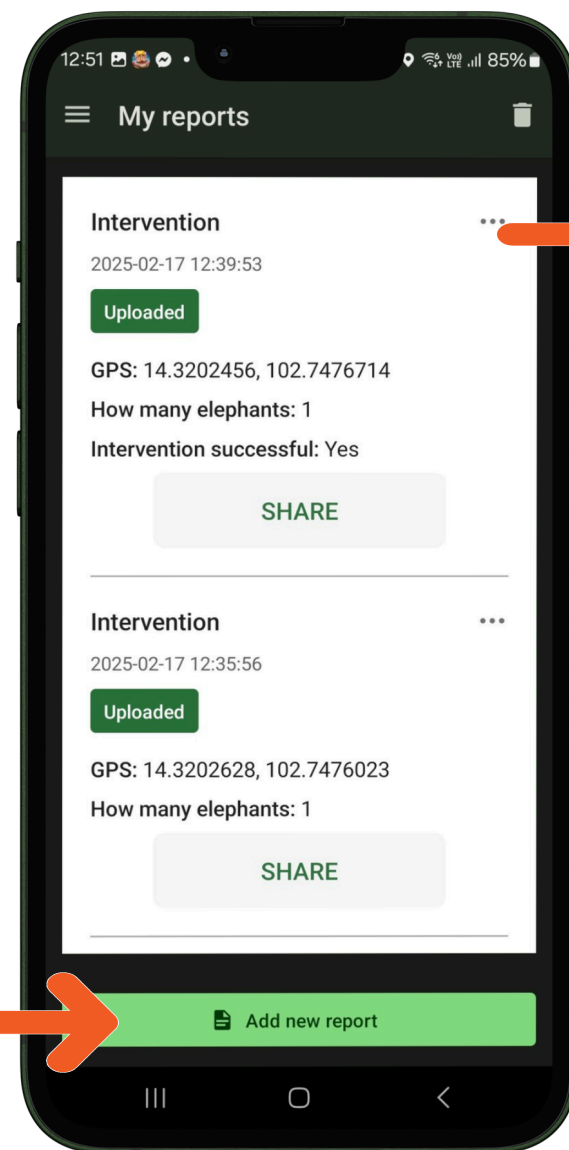
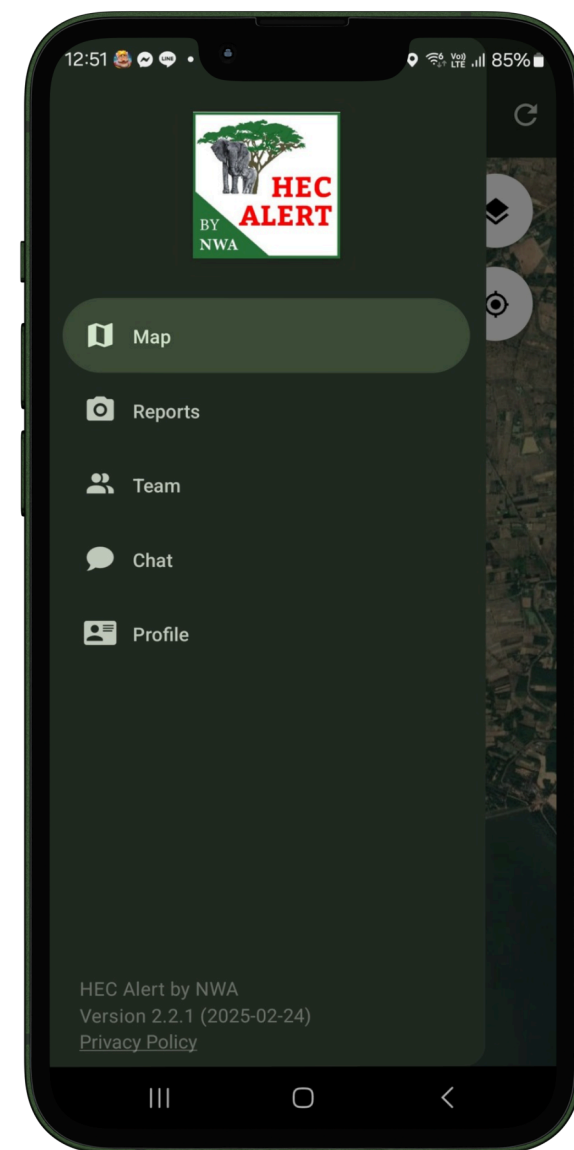
Search	Type	Name	Email	Member	Position	Created
		Abdul Sahalom	abdulsahalom787@gmail.com		13.0342, 75.8212	27 Feb 2025, 3:01 a.m.
		Sharif Uddin	sharufuddin19981@gmail.com		13.0804, 75.6977	27 Feb 2025, 1:21 a.m.
		Sharif Uddin	sharufuddin19981@gmail.com		13.0547, 75.7600	27 Feb 2025, 12:35 a.m.
		SABARI A.R	shabarresh@gmail.com		11.5407, 77.2194	26 Feb 2025, 8:46 p.m.
		SABARI A.R	shabarresh@gmail.com		11.5407, 77.2194	26 Feb 2025, 8:45 p.m.
		SABARI A.R	shabarresh@gmail.com		11.5407, 77.2193	26 Feb 2025, 8:41 p.m.
		SABARI A.R	shabarresh@gmail.com		11.5407, 77.2193	26 Feb 2025, 8:41 p.m.
		Sowndhariya ns	nssowndhariya@gmail.com		11.1514, 76.8149	26 Feb 2025, 7:03 p.m.
		Sowndhariya ns	nssowndhariya@gmail.com		11.1514, 76.8149	26 Feb 2025, 7:03 p.m.
		24 -Nirupama s... Sahu	ranjagol167@gmail.com		20.7039, 85.2974	26 Feb 2025, 6:29 p.m.

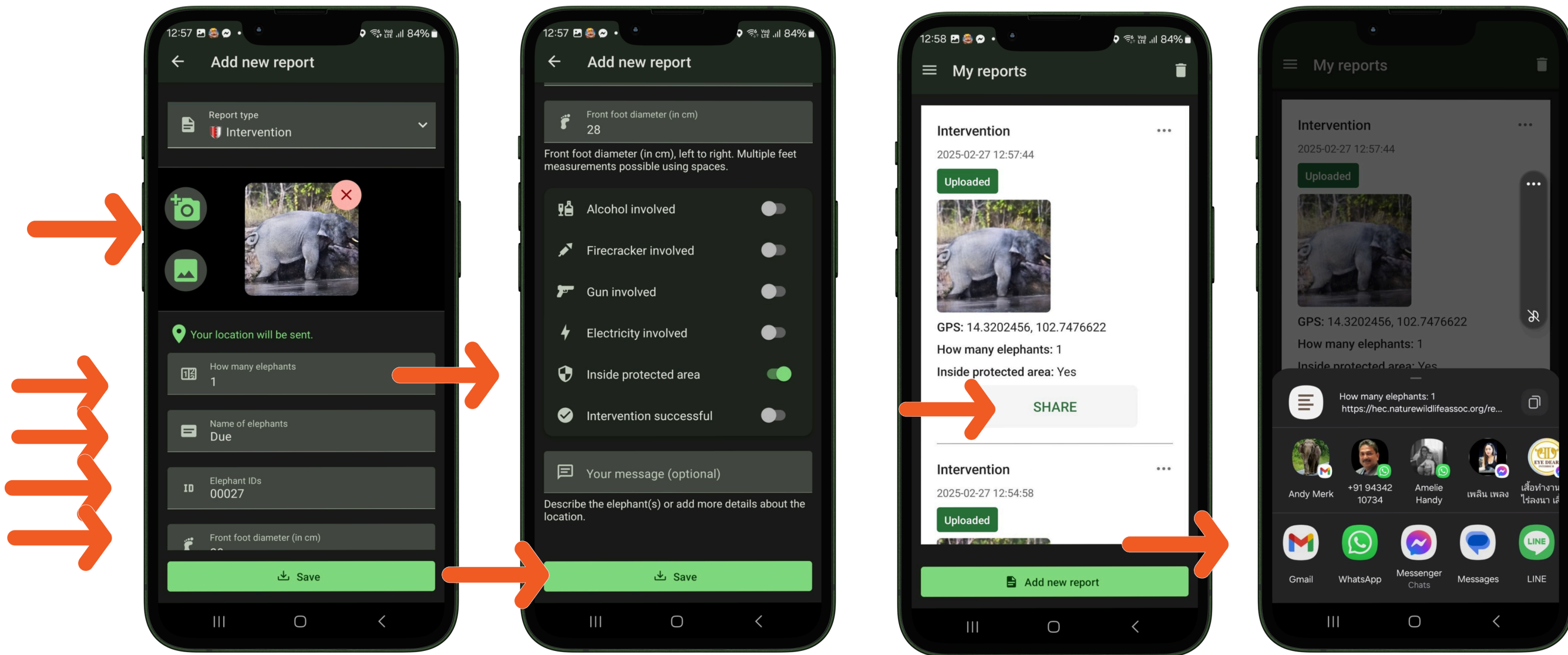




HEC Records is a reporting module built into HEC Alert.
This app allows for various reports like crop damage,
casualty report, and others.
Available only for Quick Response Teams and officials.









HomeManageMap

ProfileSign out

HEC Admin

Successfully signed in as khaoyainews.

Areas

HEC areas

Forests

Landscapes

Regions

Countries

Observations

Observations

Reports

Reports

Elephants

Identities

Sightings

My Sightings

Teams

Teams

Members

Images

Images

Roles

Roles

Reports

Report type

Country

Search

Code	Type	Name	Email	Created	Modified
329vhnbn	Intervention	ภาคินัน พงษอมร	phakhinayhngsxml@gmail.com	12 hours ago	12 hours ago
tzjqql49	Intervention	สุ ทัต	suithis260@gmail.com	14 hours ago	14 hours ago
wtx7nx66	Intervention	สิริวัช มังคะโน	mingkhano9899@gmail.com	14 hours ago	14 hours ago
kazq6gkq	Intervention	Andy Merk	khaoyainews@gmail.com	22 hours ago	22 hours ago
6zpxkwgc	Intervention	Andy Merk	khaoyainews@gmail.com	22 hours ago	22 hours ago
v7jbaxr3	Intervention	ภาคินัน พงษอมร	phakhinayhngsxml@gmail.com	1 day, 4 hours ago	1 day, 4 hours ago
42r4j8pl	Intervention	สุ ทัต	suithis260@gmail.com	1 day, 11 hours ago	1 day, 11 hours ago
qegewmjz	Intervention	Chada Boottong	chanakon187@gmail.com	1 day, 13 hours ago	1 day, 13 hours ago
gry8hkg2	Intervention	สิริวัช มังคะโน	mingkhano9899@gmail.com	1 day, 14 hours ago	1 day, 14 hours ago
qwl8zgfe	Intervention	ไพฑูรย์ สันพินาย	ptoon9184@gmail.com	1 day, 16 hours ago	1 day, 16 hours ago
b979lawz	Intervention	ภาคินัน พงษอมร	phakhinayhngsxml@gmail.com	2 days, 13 hours ago	2 days, 13 hours ago

Reports

Intervention kazq6gkq

Reported by

Andy Merk
khaoyainews@gmail.com

Intervention location

MapSatellite

Elephant count: 1

Elephant names: Due

Elephant IDs:

Elephant Foot Diameter:

HIDE PROTECTED AREAS

☐ Intervention success?

☐ Involved Alcohol?

☐ Involved Firecracker?

☐ Involved Firecracker?

☐ Involved Gun?

☐ Involved Electricity?

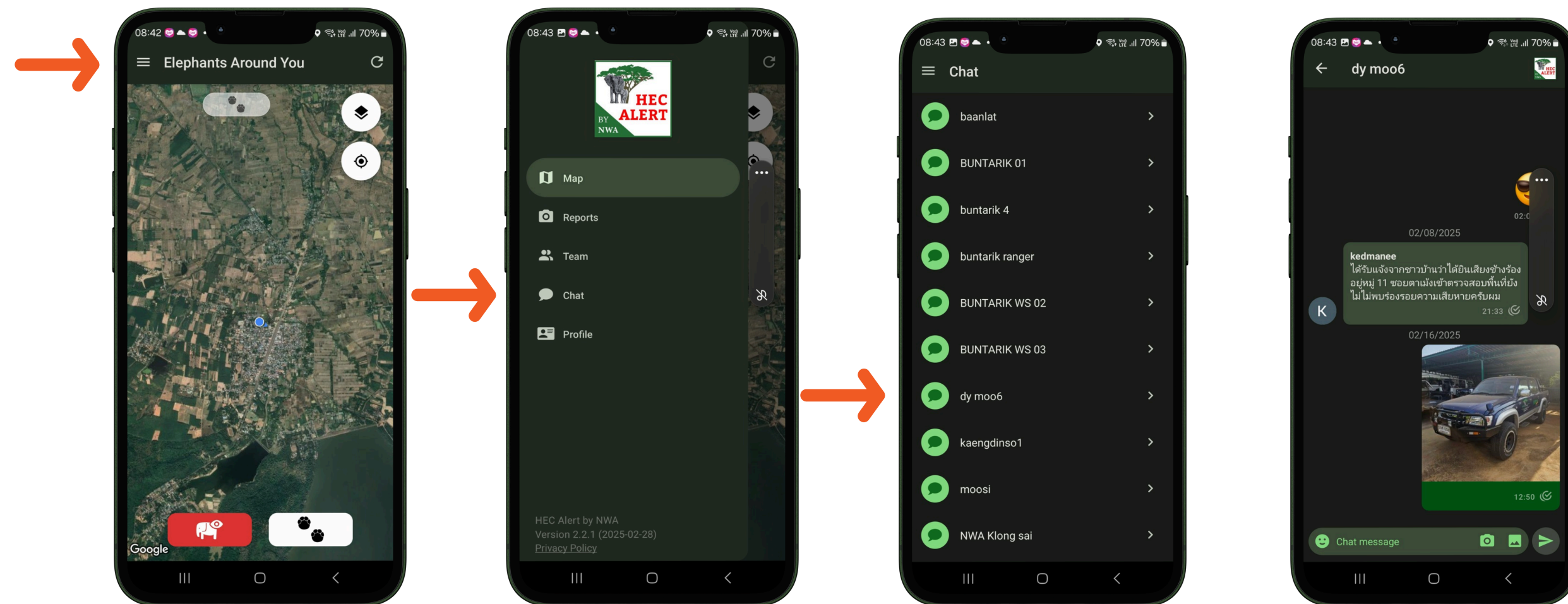
Main image

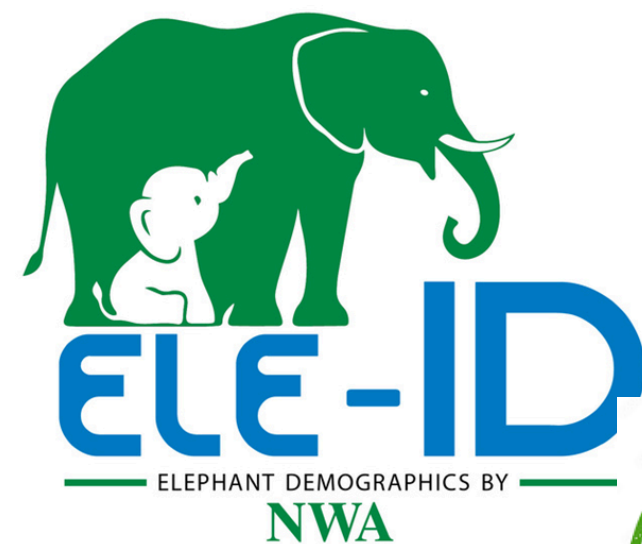




HEC CHAT by NWA is a chat/messenger module built into HEC Alert.
Available for Quick Response Teams and Officials only

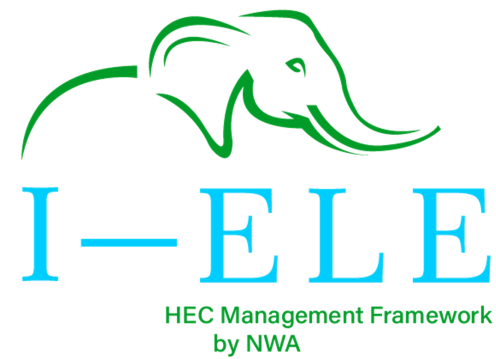






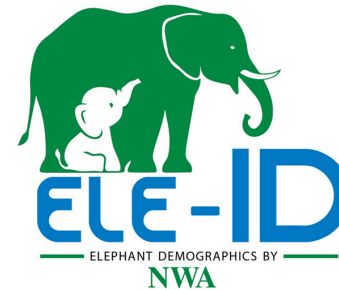
A collaborative elephant identification software based on photographic capture/recapture method. Combined with extensive data collection this project will lead to comprehensive elephant demographics





Population data

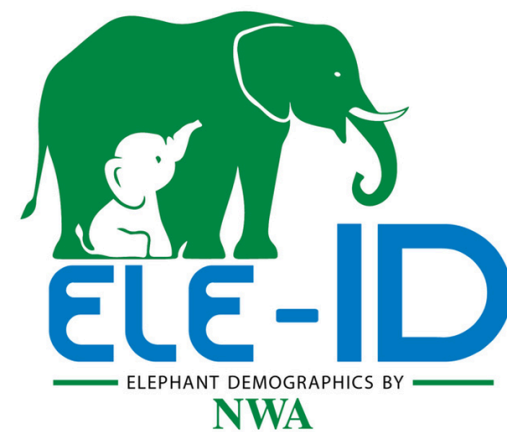
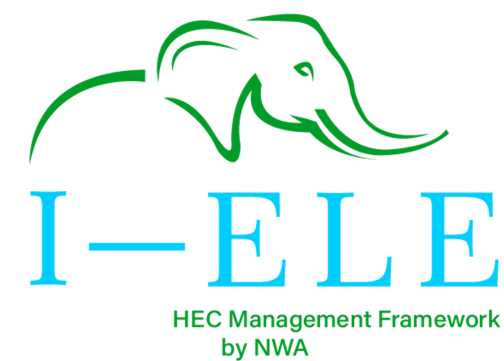
- Population size
 - Age groups
 - Birthrate
- Population trend
- Male/female ratio
- Elephant distribution
- Elephant movement/migration
 - Crop raiding patterns



Individual data

- Gender
 - Age
- Footprint size
- Tusk characteristics
- Tail characteristics
- Ear characteristics
- Habits and character traits
- Depredation best practice





HomeManageMap

ProfileSign out

HEC Admin

Areas

HEC areas

Forests

Landscapes

Regions

Countries

Observations

Observations

Reports

Reports

Elephants

Identities

Sightings

My Sightings

Teams

Teams

Members


Images

Images

Roles

Sighting jmukk3v8


Reported



44 years male elephant

Created 10 months, 2 weeks ago (Updated 10 months, 2 weeks ago)


Reported by



Andy Merk

khaoyainews@gmail.com

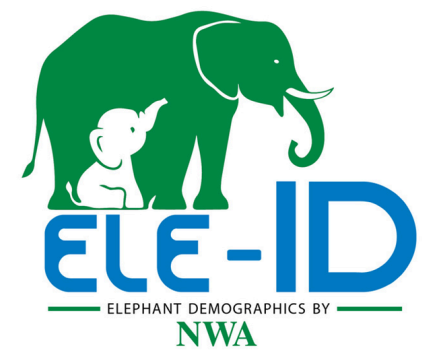
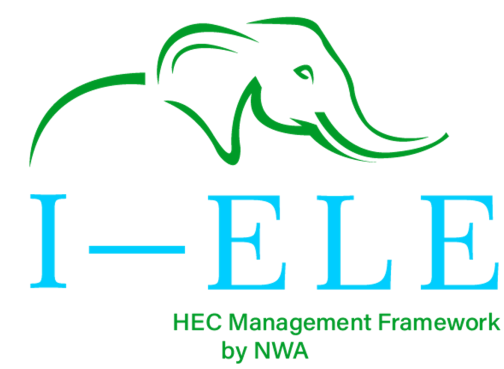
Approved by




Andy Merk

khaoyainews@gmail.com

Observed 28 Feb 2014



 Comment


Data


♂ Male


● 44


🐾 0.0 cm


Methods


 don't know


 don't know


 don't know

 don't know

 don't know

 don't know

 don't know

 don't know

Landscape

🌐 SEA 1

Behaviour

⚠ Don't know

👥 Don't know

Main Images



Front



Rear

Side Images

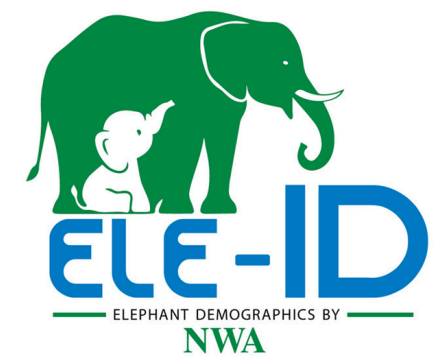
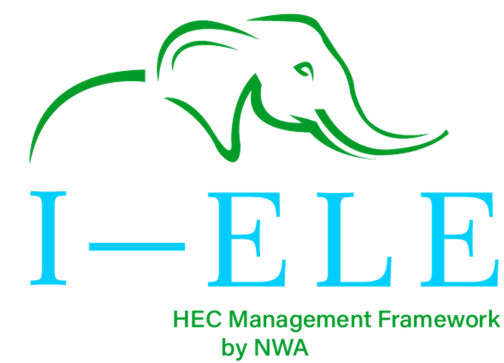


Left side



Right side





Ear Images



Left Ear



Right Ear

Tusk Images



Tusks

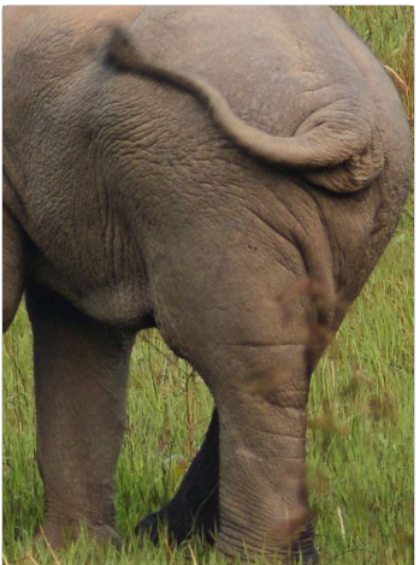


Left Tusk

• Large tusk or tush



Tail Images



Tail Length

• Normal tail

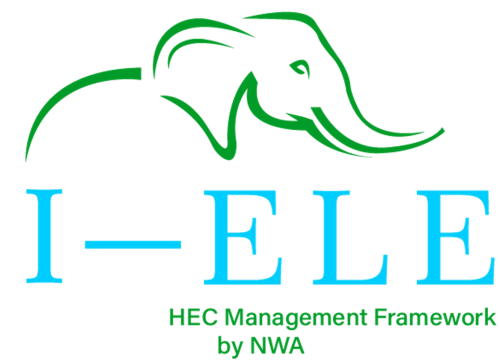


Tail Hair

• Have hair

Features Images

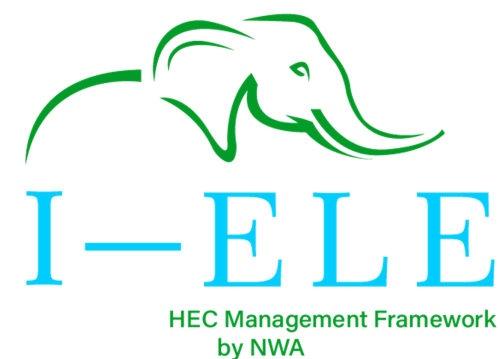




alamy - 2EAMP3T

Standard Protocols is a cloud based library of standard procedure covering all aspects of HEC mitigation and wild elephant conservation. It is a collaborative tool accepting submissions from NGO's, Government agencies and scientists.





NWA standard and best practice for elephant depredation teams

Depredation teams are the single best solution to reduce crop raiding, if done properly.

Chasing elephants around will only lead to more problems, so the best way is to prevent elephants from leaving the protected areas and enter the human habitat and agricultural areas.

Depredation teams are highly mobile and can use their brain to quickly adapt to the elephants' changing tactics.

All teams need to be highly motivated, disciplined, trained, and properly equipped.

NWA provides walkie talkies, headlights, measuring tapes, hammocks, cooking stove, alarm fences and extensive, repeated training as well as accident insurance. In some cases, other equipment is needed and provided.

Initially a clear "defense line" has to be established and all elephant exit points identified along the entire length of responsibility.

Then a maximum number of exit points must be blocked, to reduce the number of "lookouts".

Every day these lookouts must be manned by team members, while the rest of the team will stand by in a central position, relaxing.



Upon detection of sounds from elephants, the standby team rushes to the indicated area and all lookouts must remain in their original position. Elephants then must be blocked from crossing at the exit point by using light and noise, no fireworks, gunshots etc. Cars or tractors can be used as well. Once the elephants retreated the whole process must be repeated.

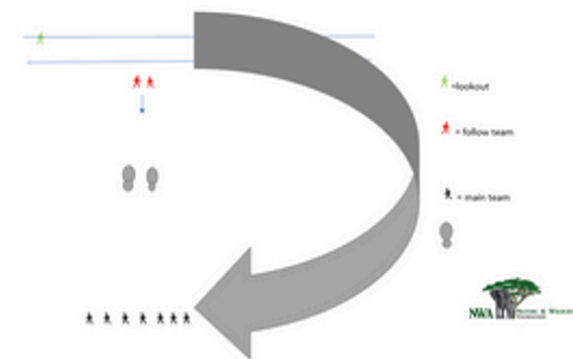
Alarm fences in "double L" layout can be used instead of lookouts in suitable areas.



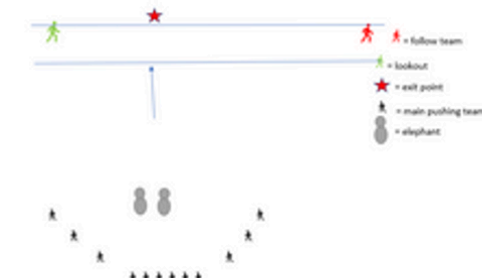
After alarm is triggered, the standby team must rush to the side of the alarm and create noise and shine lights. This must then be repeated.



If any elephants get through and escape into farmland, immediately rush the team around and in front of these elephants to block them, one or 2 team members should quietly follow the elephant and keep track of the elephants position and communicate the position to the team regularly, do not try to get to close, let the elephant walk slowly. Never push the elephants.



Once elephants are blocked and visible, quickly spread out in a U-formation in front of the elephants and start pushing the elephants back to the exit point; just push them hard once with light and sounds and follow in a distance, they will head back to the exit point; the follow teams now need to withdraw immediately while the lookout should watchout for the elephants returning to the exit point.



HEC Standard Practice

Prevention/early action

If the presence of elephants in or near the project areas is known, it is best to stop when from leaving the forest by trying to block their approach

If possible, we should try to track the elephants during the day and predict their probable approach routes.

Always safety first!

Normally it should be enough to create a disturbance (noise) along the forest edge.



HEC Standard Practice

Execution

1. Always drive all elephants together first otherwise they will try to get together.
2. Always try to drive the elephants back the same way they came they know this way best.
3. Form a U-shaped driving team behind them and push them, they should walk, but not run. Never stop, or they will try to turn back.
4. Do try to avoid stressing elephants.
5. Never use firecrackers, gunshots or fire, use light, rattling noise and your voice instead.
6. Always watch the elephant's reaction, if they get agitated, try something different.

Always safety first!



HEC Standard Practice

Preparation:

1. Establish number of elephants
2. Establish position of all elephants
3. Establish likely approach route of elephants
4. Try to prepare for mob control, traffic stoppage etc.
5. Lay out a clear easy to understand plan
6. Make sure to discuss details with all members

Always safety first!





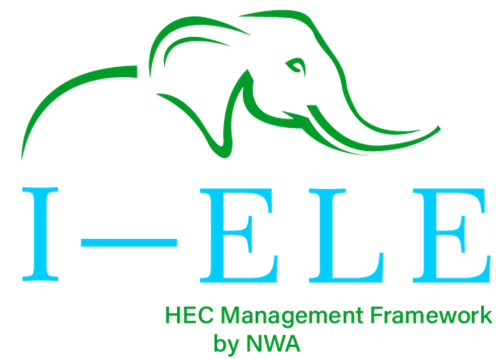
The HEC Toolbox library must contain all tools and methods used in HEC mitigation.

As HEC is different in every area, a combination of the most suitable tools should be selected accordingly.

All tools and devices must be evaluated to several criteria to create a comprehensive list. Both individual tools and combinations of tools must be evaluated, including combinations of multiple tools.

These are tools, not solutions!





Criteria for evaluation:

A Ethics: all tools that are not ethically acceptable have to be dropped!

B Legal: all tools that are not legally acceptable have to be dropped!

C Cost: low-cost solutions are preferable.

D Effectiveness (short/long-term): will elephants learn to adapt to the tool?

E Cost effectiveness: how effective is a tool relative to cost?

F Complexity: simple, easy to use tools are the key.

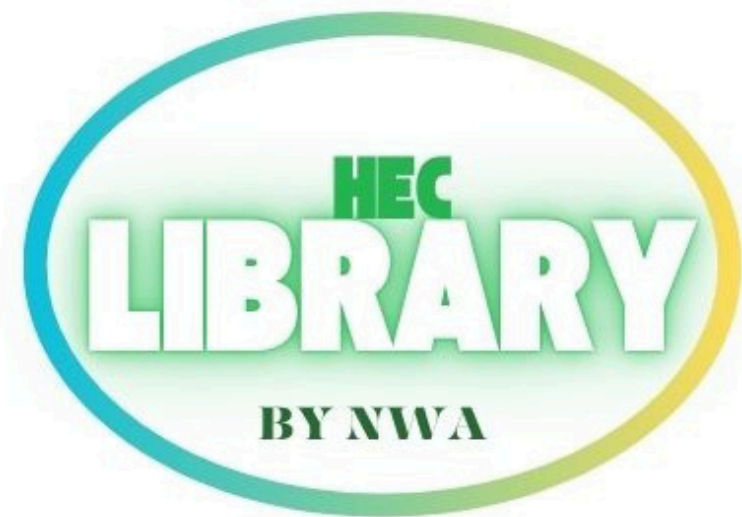
G Safety/Risk: is there potential danger to wildlife or humans?

H Scalability: can the tool be used in larger areas?

I Improvability: can or need the tool be further developed?

J General acceptance: use of tools can affect villagers negatively.





HEC Library is a collective approach to provide access to scientific papers related to Human Elephant Conflict.





ele cloud
DATABASE BY
NWA

**Ele cloud is a vast database
containing all data generated in
I-ELE.**





**All data can be filtered with search terms
to provide all statistics necessary for
HEC and wild elephant management.**



alamy - 2EAMP3T





www.naturewildlifeassoc.org

Nature&Wildlife Foundation
c/o The Ampersand Treuunternehmen reg.
Pflugstr. 7
FL 9490 Vaduz
Liechtenstein

contact@naturewildlifeassoc.org