A herd of elephants is shown in a savanna landscape during a golden sunset. The sun is low on the horizon, casting a warm, orange glow over the scene. The sky is filled with dramatic, dark clouds, and the sun's rays are visible breaking through. In the background, there are silhouettes of mountains. The elephants are in the foreground, standing in tall grass. The overall mood is serene and majestic.

STATUS OF
ELEPHANTS
IN INDIA

2022-23

Progress Report

Project: Elephant Estimation – Phase II

Duration of progress report: November, 2023 – February, 2024

Funds sanctioned: 3.0 Crore

Funds to be released: 1.5 Crore

India, home to the largest population of wild Asian elephants, faces several challenges in conserving the species, despite the cultural significance held by elephants. The historical human-elephant relationship dates back to the Harappan civilization, with elephants playing crucial roles in the economy and military. However, despite this historical care, elephants face challenges such as ivory trade demand, habitat loss, and hunting during various historical periods, including the British introduction of recreational killing. Current threats include habitat shrinkage, fragmentation, and increasing human-elephant conflicts, emphasizing the urgent need for comprehensive conservation policies in India. To inform any conservation policy, it is important to have a pulse on the current status, distribution, trends and threats.

The present distribution of elephants in India represents a mere fraction of their historical range, which spanned the subcontinent around six thousand years ago. Attempts to evaluate the elephant population and trends requires a synchronous sampling framework. The contemporary elephant population, primarily found in forested hilly tracts, remains relatively stable since 1984, with an estimated 27,000 individuals in 2017 (MoEFCC, 2017). The Synchronous All India Elephant Estimation program 2022-23 (SAIEE 2023), was undertaken to estimate the population of Elephants in India, in a framework similar to that used for the monitoring of Tigers, Co-predators and prey (Qureshi et al., 2023). For SAIEE-2023, India was divided into 100 sq km cells, which were further divided into 25 sq km, and 4 sq km cells. This design has been adopted for tiger estimation since 2006, where data about tiger, and other species like elephants has been collected since 2006, largely for distribution and relative abundance index (Jhala et al, 2008). Each grid is uniquely coded so that subsequent inferences could be compared on the same spatial scale and extent.

A total of 10,906 grids were sampled during Phase I and 1,614 grids were detected with elephant presence, covering an area of ~86,428 sq.km. Twenty seven sites were sampled using area search method, and 9,568 samples were processed for genetic mark recapture, across all landscapes, yielding 3,082 unique individuals, with a total effort of 5,402 km trails walked in Phase III. Status assessment in future exercises should be integrated with All India Tiger Monitoring, as it will be cost-effective and the effort invested would be maximised. The critical aspect to ensure conservation of Asiatic elephants in the country needs the support of local communities. There is an urgent need to devise policy mechanisms for uniform compensation across areas with elephant presence, prioritizing the well-being of these communities. With increasing human elephant interface, reducing habitat and connectivity, it is important to critically analyse and arrive at future strategies that will not exacerbate existing threats. Strengthening corridors and connectivity, restoration of habitat, improving protection strategies and mitigation of developmental projects are the need of the hour to ensure the well-being of these gentle giants.

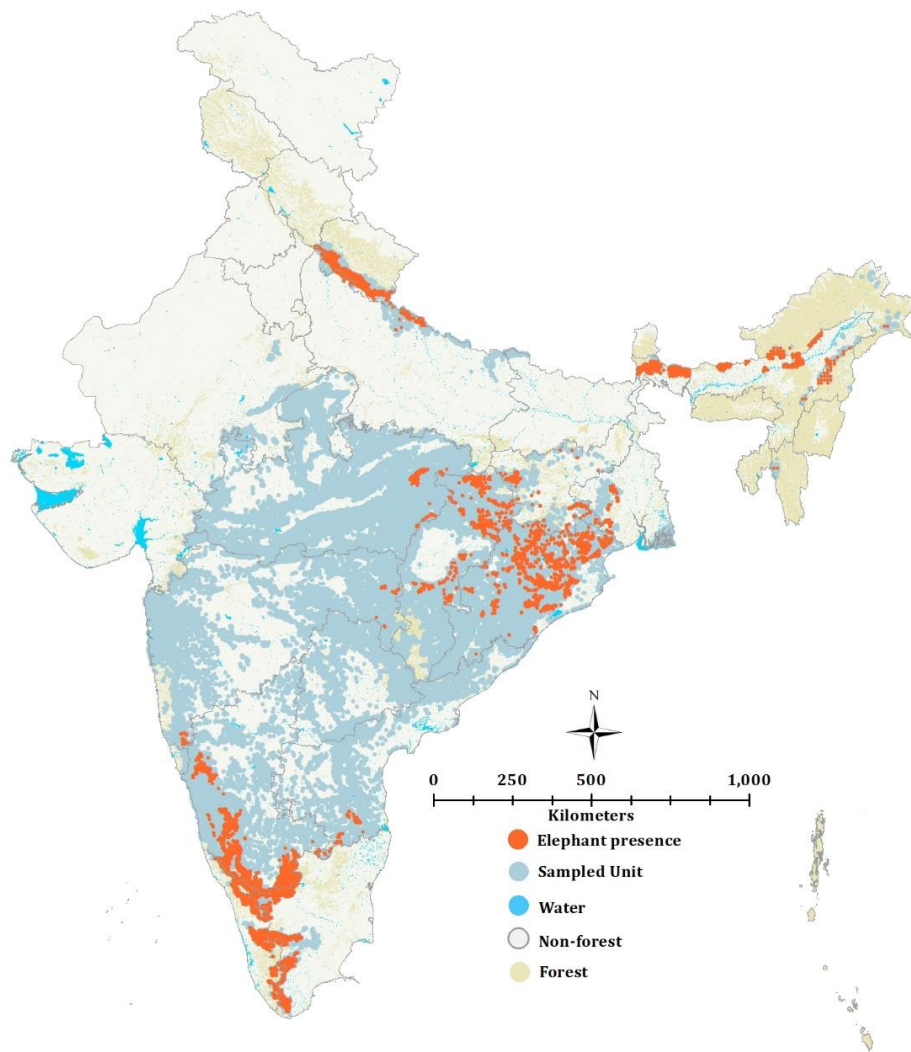


Figure 1: Elephant sampling, and presence mapped as part of SAIEE-2023

State/Landscape	Number of trails	Total length of trails_km	Number of transect	Total length of transect_km	Number of Plots
Bihar	232	1775	499	981	1372
Uttar Pradesh	1270	6412	1237	2408	4396
Uttarakhand	2735	12389	2522	4299	8256
Shivalik	4237	20576	4258	7688	14024
Andhra Pradesh	3456	16597	3430	6637	11090
Chhattisgarh	9855	46176	8422	16185	31664
Jharkhand	976	4600	732	1457	4570
Madhya Pradesh	26757	139651	26341	54256	96924
Maharashtra	16331	78016	16124	31210	56512
Odisha	9623	52633	9531	19522	33544
Rajasthan	988	4449	981	1911	3422
Telangana	6633	29188	5599	10502	18264
Central India	74619	371310	71160	141680	255990
Karnataka	8874	45323	10002	18297	31742
Kerala	1522	7463	1201	2361	4156
Tamil Nadu	1892	11019	1845	3681	5376
Goa	174	765	165	324	526
Western Ghats	12462	64570	13213	24663	41800
Assam	389	1816	483	856	1356
North Bengal	786	4011	586	1203	2174
Mizoram	87	330	NA	NA	8064
Arunachal Pradesh	309	840	NA	NA	
Nagaland	178	568	NA	NA	
North-East	1749	7565	1069	2059	
Sundarbans	315	1339	NA	NA	595
India Total	93382	465360	89700	176090	324003

Figure 2: Effort undertaken for sampling as part of AITE – 2022 and SAIEE-2023

Table 1: Genetic sampling across all the landscapes as part of SAIEE-2023

Landscape	No. of sites sampled	Sites Sampled	No. of dung samples collected	No. of unique individuals
Western Ghats	9	<ul style="list-style-type: none"> • Bandipur • Nagarhole • Bhadra • Kali • Biligiri Ranganatha Swamy Temple • Mudumalai • Sathyamangalam • Kalakad Mundanthurai • Periyar 	4597	1754
Terai	4	<ul style="list-style-type: none"> • Corbett • Landsdowne • Rajaji • Katerniaghat 	2543	627
Central India	9	<ul style="list-style-type: none"> • Bandhavgarh • Similipal • Satkosia • Atgarh • Dhekenal • Palamau • Dalma • Tamor Pingla • Guru Ghasidas 	1894	380
North East	2	<ul style="list-style-type: none"> • Manas • Buxa 	534	321

Currently 90% of the work is completed, and the remaining genetic work is in progress. The payment of only 40% of the expenditure is completed, and remaining payments for genetic and field work needs to be completed in priority.