

# Systematic Bird Monitoring Program for India

# Concepts

- eBird & Citizen Science
  - All species, Semi-structured, massive, continuous
- Systematic Bird Atlas
  - All species, Structured, massive, short-period
- Long-term Bird Observations (LTBO)
  - Structured, small-scale, continuous, target-species
- Target surveys
  - Structured, local, short-period, all/target species
- Bird Ringing
  - Structured, small-scale, semi-continuous, target-species

What is the objective?

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How birds are faring

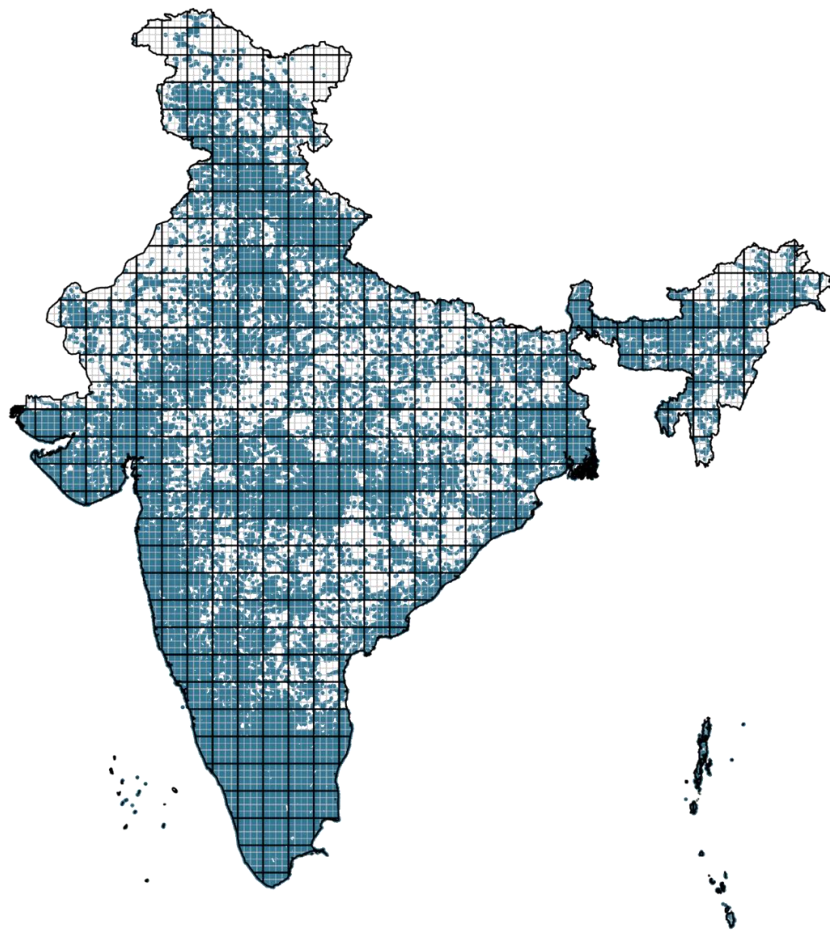
- Decline, Increase or Stable

*Range, trends, and  
conservation status*



**STATE  
OF INDIA'S  
BIRDS**  
2023





# Structured vs Semi-structured - What are the pitfalls

- Entire range of the species is not covered.
- Sampling within a large grid can be biased
- Casual observers may be partial to certain interesting species
- Most visited sites may be over-represented
- Across time, birding areas can change within the same grid
- Variable distance, variable time handling needed
- Observer variability is high

# What is structured/systematic monitoring

- Random sampling
  - Visit random sites vs where we can/want
- Control for bias
  - Reduce variables, keep most things static
- Repeat surveys
  - Use replicates by keeping all else same.
- Tailored for species/species-groups
  - Varying survey techniques
- Adapt but don't compromise
  - Good understanding of what can be relaxed without affecting quality

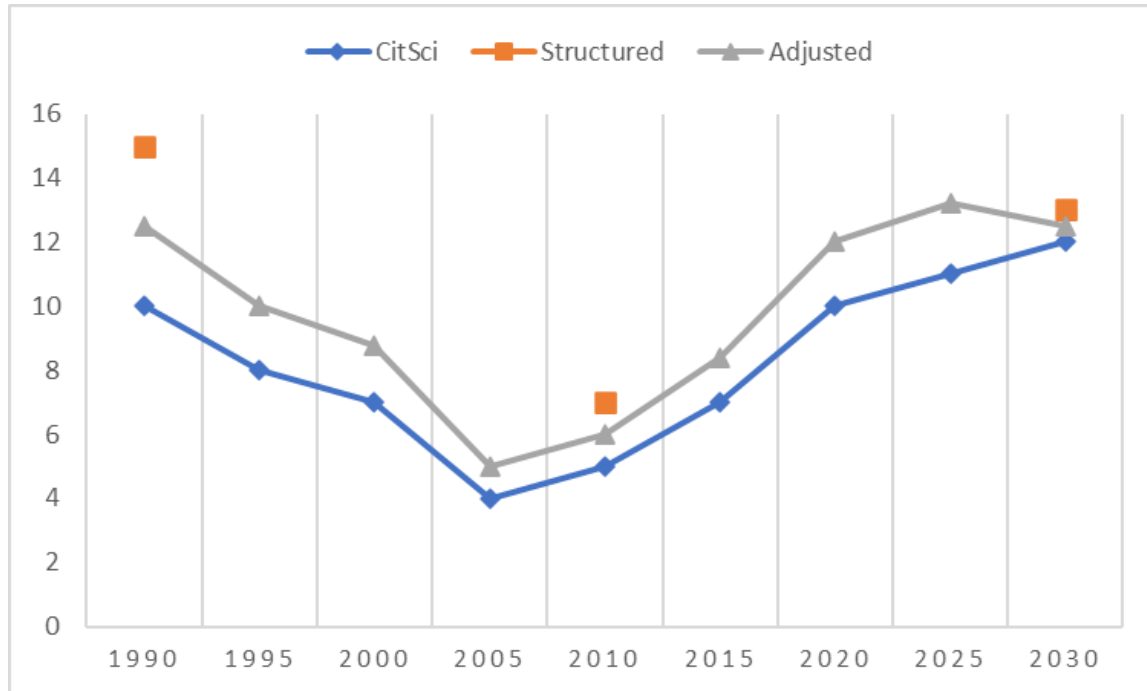


## However, systematic monitoring is costly !

- Forced travels
- Trained surveyors
- Strict protocols
- Limited time-periods for surveying
- Repeating surveys, across seasons, across years

# Structured vs Semi-structured - Can we do both?

- Conduct targeted structured surveys at intervals
- Calibrate continuous semi-structured surveys with results from structured surveys



# How do we strategise?

- ❖ Stratify by habitats ?
- ❖ Target species ?
- ❖ Upgrade existing programs?
- ❖ Share resources between states?
- ❖ Competency building programs / certifications ?