

# NON-INVASIVE TURTLE NEST MONITORING USING RTI TECHNOLOGY

A WILDLABS CONSERVATION TECH PROJECT

## THE PROBLEM

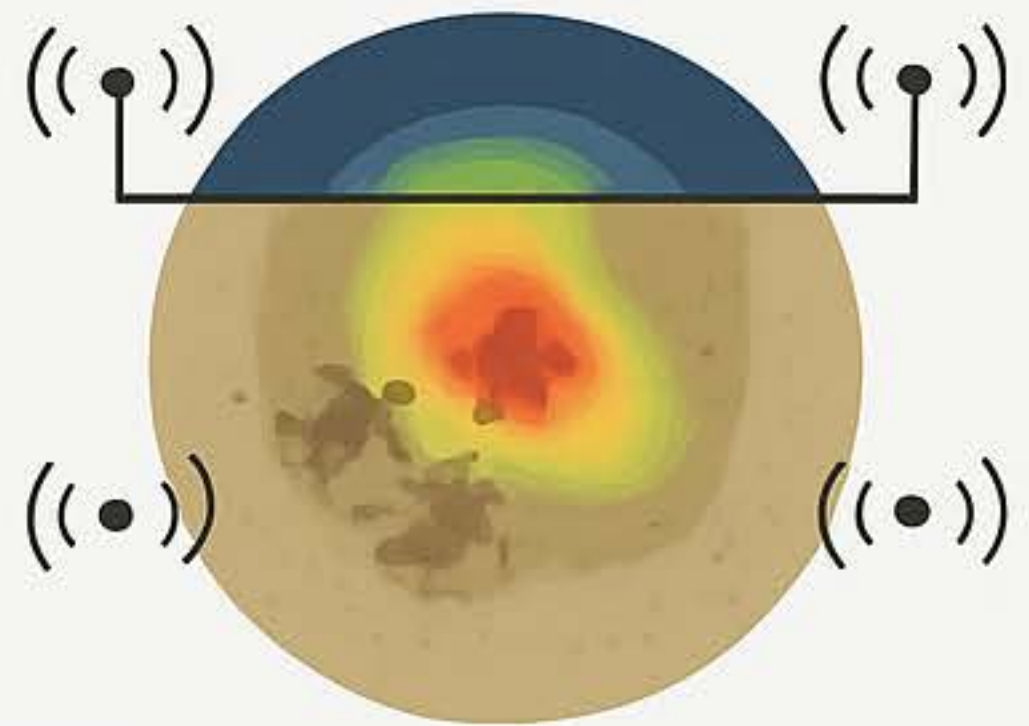
Sea turtle hatchlings emerge from underground nests in a cryptic, energy-demanding process.

Current monitoring methods often require disturbing the nest or attaching devices to hatchlings **NON-INVASIVELY**.



## HOW IT WORKS

- A mesh of 10 wireless nodes is placed around the nest
- As hatchlings dig upward, their movement disrupts radio signals between nodes.
- A central processor reconstructs **REAL-TIME IMAGE** of movement intensity within sand.
- **NO TABS, NO DISTURBANCE, FULLY PASSIVE**



## WHERE & WHY

Pilot Site: Malaysia (Peninsular East Coast)

- Universiti Sains Malaysia
- Harbin Institute of Technology
- Keele University

Collaboration with:

Universiti Sains Malaysia  
Harbin Institute of Technology  
Keele University  
Universiti Malaysia Terengganu

## IMPACT & NEXT STEPS

- Generate high-resolution data on hatchling emergence timing and group behavior
- Train local conservation teams in deploying and interpreting RTI systems
- Adapt RTI for other underground-nesting species

