



Innovative Science for Managing Wildlife-Human Interactions in Australia's Crowded Coasts

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Our Vision - To develop smart monitoring, active wildlife interventions and habitat-based solutions to reduce harmful wildlife-human interactions and promote sustainable coexistence in Australia's increasingly crowded coastal and marine environments

Why

- Wildlife populations are expanding and shifting in response to **environmental change** and human-altered landscapes. Together with increased urbanisation, this is leading to growing conflict at the human-wildlife interface, with impacts on **public safety, food security, infrastructure, and wildlife welfare**.
- For example, in Tasmania's crowded coasts and urban centres, **silver gull** populations now pose serious contamination risks for food industries, are a nuisance species for the tourism sector and contribute to frequent wildlife-vehicle collisions.
- Effective, acceptable and enduring solutions to monitor and reduce interactions are urgently needed (Fig. 1).

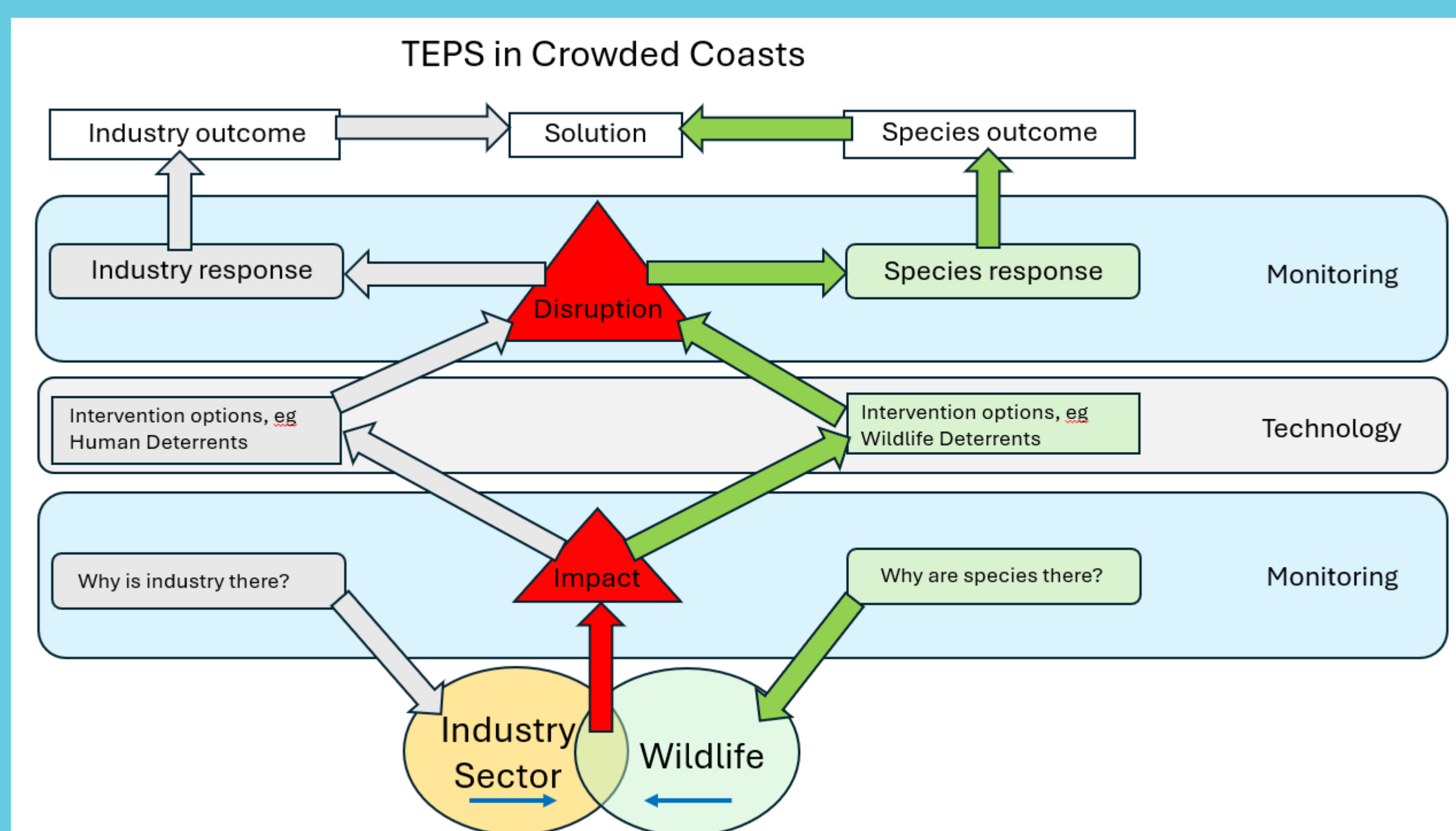


Figure 1. New monitoring and mitigation technologies are being developed and tested to minimise interactions between humans and wildlife and provide acceptable solutions.

What

- Our research is developing and trialling innovative **wildlife deterrent technologies** to manage and minimise harmful interactions between native protected species and human industries and infrastructure.
- Current projects span **urban industrial sites** (e.g. food manufacturing, Fig. 2), **road networks** (to reduce vehicle-wildlife collisions), and broader applications across **coastal environments**, such as marinas.



Figure 2. Silver gulls roosting on the roof of Boags Brewery in Launceston, Tasmania

How

- We are trialling a **monitoring and precision deterrent system** combining low-powered lasers, directional audio, and monitoring to detect and deter gulls with minimal disruption.
- On-site cameras allow tracking of gull activity, breeding and roosting patterns to determine optimal deterrent mechanisms and timing.
- We are developing **AI-based technologies** that will trigger deterrents only when needed, minimising public nuisance and habituation (Fig. 3).

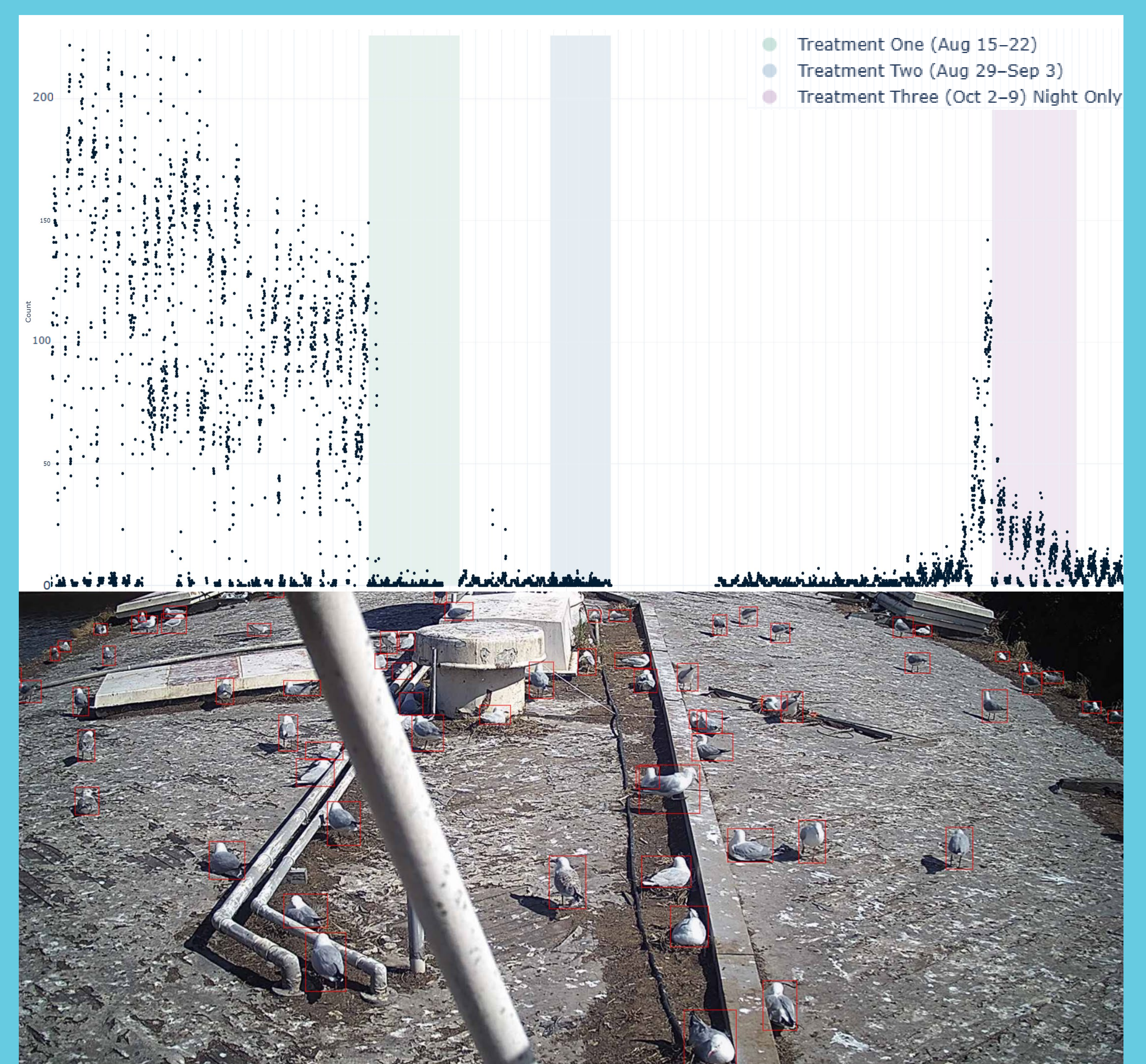


Figure 3. Artificial intelligence (AI) counts every 15 minutes (top) and detections (bottom) of silver gulls in the urban environment. Coloured bars represent periods when deterrents were in use.

Impact

This research will contribute to:

- Improved food security and public safety.**
- Wildlife conservation** by enabling **ecologically sustainable redistribution** of affected species.
- Cost-effective, scalable deterrent technologies** for industrial and public infrastructure.
- New knowledge and monitoring frameworks** for managing wildlife-human interactions under changing environmental conditions.

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