{rokbox title=| Las Baulas National Park (PNMB) on the Pacific coast of Costa Rica and garbage container distribution in 2021 along the terrestrial area of the park, buffer zone, and urban areas: A) Ventanas, B) Playa Grande North, and C) Playa Grande South. :: Image: Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-indirect-effects-fast-growing-urban-development-bibi-2026-thumb-et-al.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-indirect-effects-fast-growing-urban-development-bibi-2026-et-al.jpg{/rokbox}

Keilor E. Cordero-Umaña, Kortney Stevens, Adam Yaney-Keller, Javier López Navas, Frank V. Paladino, James R. Spotila, **Pilar Santidrián Tomillo**, 2026. **Indirect effects of fast-growing urban development on wildlife in a coastal protected area of Costa Rica.** Wildlife Management.Volume90.Issue3.April 2026. https://doi.org/10.1002/jwmg.70174

Abstract:Urban development facilitates predictable anthropogenic food subsidies (PAFS), allowing opportunistic species to thrive. Access to PAFS can drive population increases in certain species, producing cascading effects that may directly or indirectly affect others, including species already in decline or of conservation concern. We studied the effect of PAFS in a Protected Area in Costa Rica, Parque Nacional Marino Las Baulas (PNMB), which was established to protect sea turtles. We quantified urban growth since the Park was established, assessed the effects of PAFS in trash containers on the presence and activity of wildlife species, and evaluated the increase in sea turtle nest predation over time. Since the Park was established (1991), there has been a > 10-fold increase in the number of buildings in the area, mainly within its buffer zone. We identified 8 native species extracting food from garbage containers at PNMB, with northern raccoons (*Procyon lotor*) comprising most detections (84%), and 4 other species that are potential predators of sea turtle eggs. The number of detections and access to garbage containers was influenced by location and type of container. Areas with more development had more wildlife detections around garbage containers. Additionally, the percentages of sea turtle clutches predated and clutches that were relocated to avoid predation increased since predation was first monitored in the 2011–2012 nesting season. We hypothesized that urban development promoted PAFS at PNMB, possibly increasing the number of raccoons, which in turn, increased predation of sea turtle nests. Although further research is needed to confirm this link, limiting urban development and improving waste management are essential to protect sea turtle nests at PNMB.

Keywords:Costa Rica,food subsidies,garbage management,nest predation,PAFS,Parque Nacional Marino Las Baulas, *Procyon lotor*,sea turtles,urban growth.