

Satellite Imagery Reveals Small-Scale Fishing Activity And Industrial Encroachment Across Africa

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Until now, the global footprint of small-scale fishing has gone unmapped.

Most small-scale fishing vessels are not equipped with Automatic Identification System (AIS) or Vessel Monitoring Systems (VMS) and thus untracked¹. Due to their small sizes, they are also largely invisible in publicly available low-resolution satellite imagery like Sentinel-1 and Sentinel-2². **With PlanetScope covering the majority of global coastal waters³, Global Fishing Watch is now mapping the diverse and dynamic footprint of global small-scale fishing, revealing the previously invisible conflicts they face.**

VESSEL DETECTION WITH PLANETSCOPE IMAGERY ACROSS THE GLOBAL COASTLINE

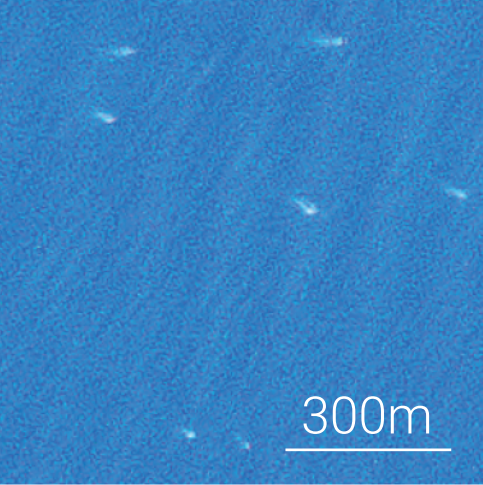
AI-powered framework
for detecting vessels and inferring information

1.8 petabytes
of PlanetScope imagery processed

26 million km²
of global coastal waters imaged

Oct. 2024-Present
continuous monitoring

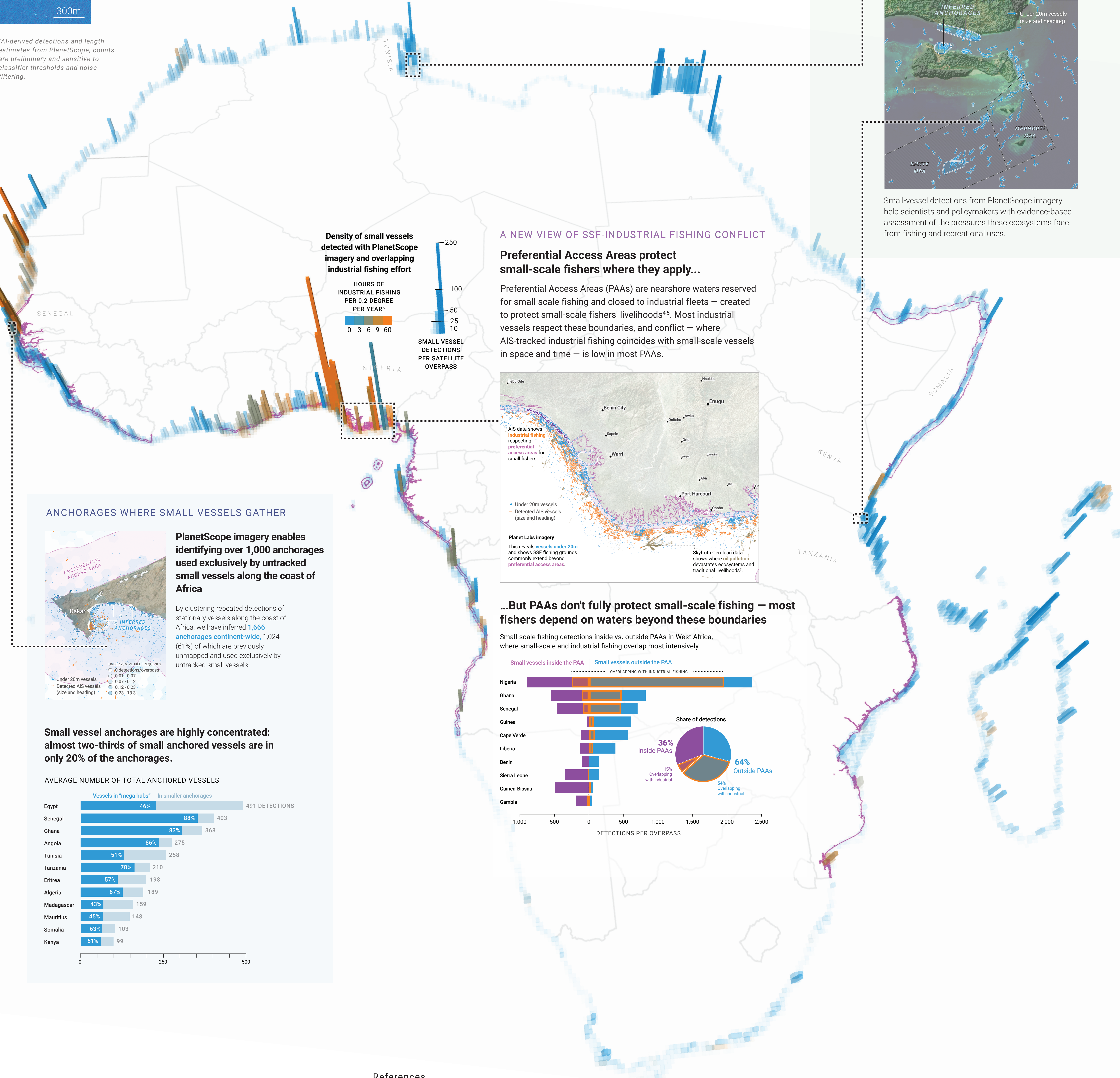
1-3 week revisit rate
for cloud-free imagery



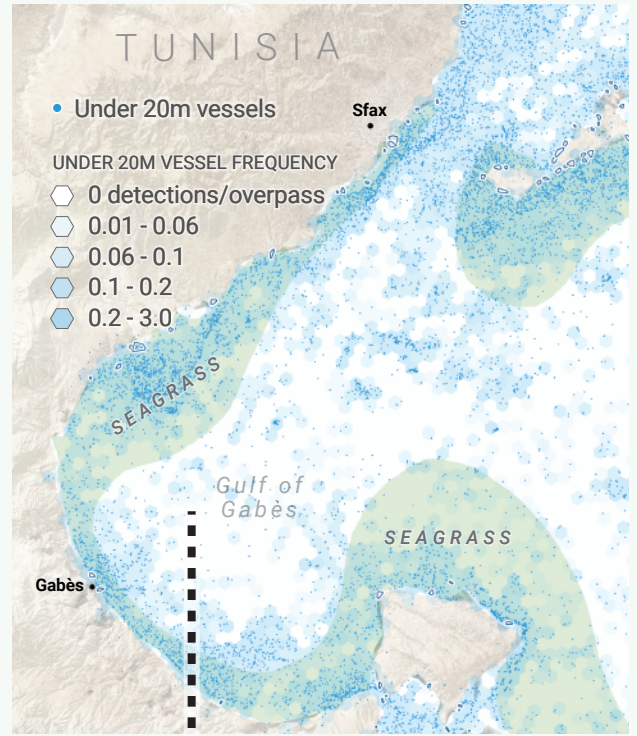
11,000 sub-20m vessels in Africa detected in a single satellite pass⁴

The sharper PlanetScope imagery with 3.7-m spatial resolution⁵ resolves the previously unmapped small-vessel activities at scale, such as the wooden pirogues fishing off Senegal as shown by the image at left.

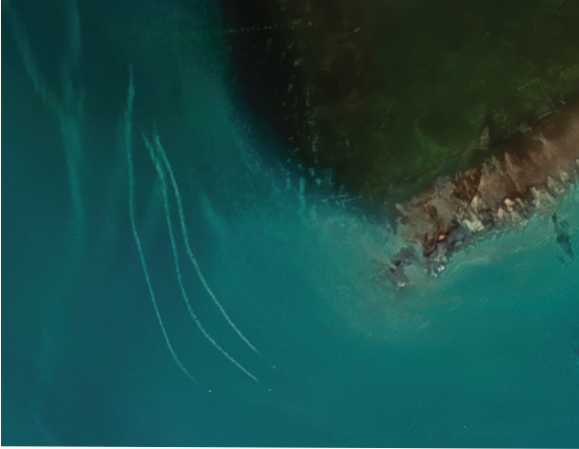
⁴ AI-derived detections and length estimates from PlanetScope; counts are preliminary and sensitive to classifier thresholds and noise filtering.



HABITATS AND MARINE PROTECTED AREAS

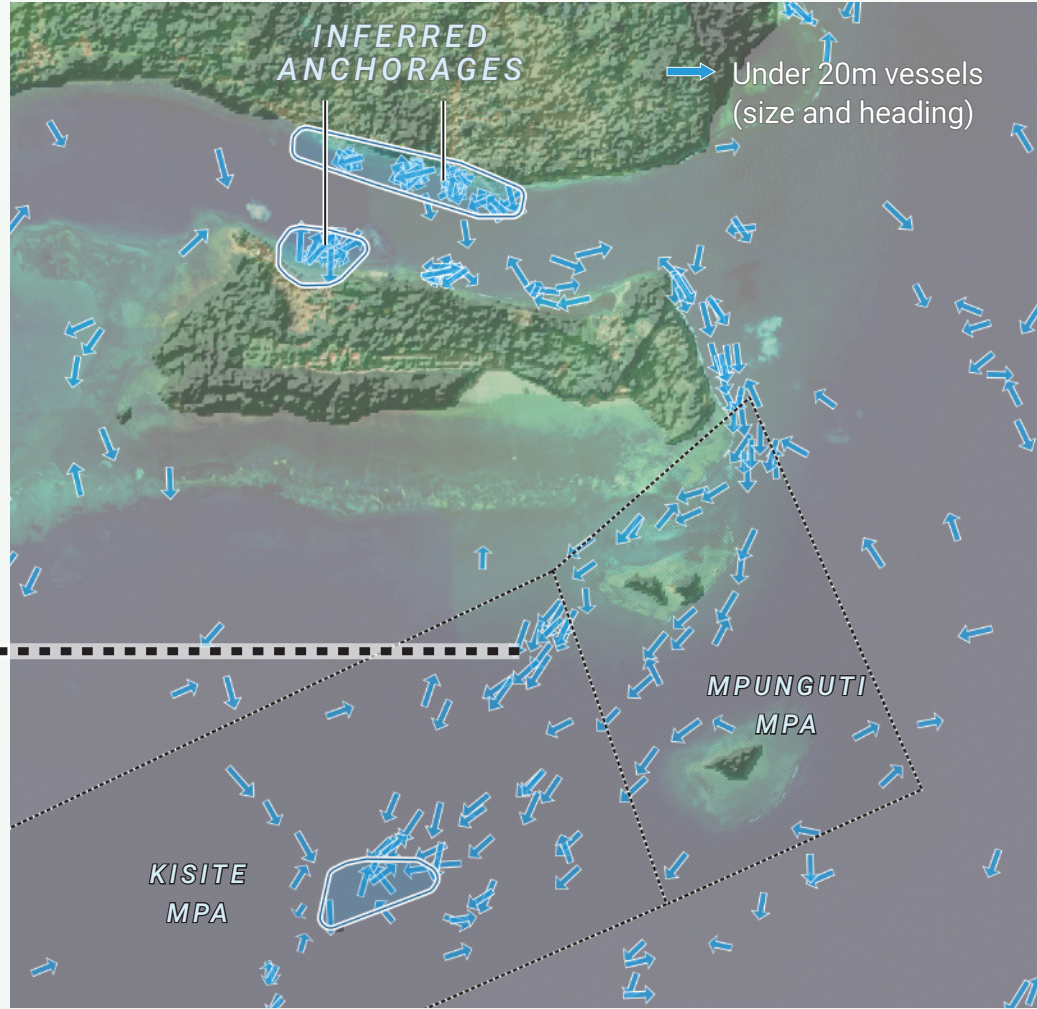


PlanetScope imagery reveals fishing pressure faced by vulnerable habitats



47% of under-20m vessel detections in the Gulf of Gabès, Tunisia overlap with seagrass meadows⁸.

Boat activity in Marine Protected Areas⁹ and critical habitats is now visible



Small-vessel detections from PlanetScope imagery help scientists and policymakers with evidence-based assessment of the pressures these ecosystems face from fishing and recreational uses.

References

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4. Belhabib, D. et al. (2020). Catching industrial fishing incursions into inshore waters of Africa from space. *Fish and Fisheries* 21(2), 379–392.
5. Basurto X. et al. (2024) A global assessment of preferential access areas for small-scale fisheries. *npj Ocean Sustain* 3(1), 56.
6. Kroodsma, D.A. et al. 2018. Tracking the global footprint of fisheries. *Science* 359(6378), 904–908.
7. SkyTruth Cerulean (https://skytruth.org/cerulean)
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9. UNEP-WCMC (2026). Protected Area Profile for Kisite from the World Database on Protected Areas, June 2026. (www.protectedplanet.net)



Access references and additional content here at
globalfishingwatch.org