

2026 APIs, gfwr, Python package and Data Download Portal Products - Differences

Summary

	API Portal	gfwr (R package)	gfwr-api-python-client (Python package)	Data Download Portal
Access via Global Fishing Watch site	Map & data > Our APIs > SEE DOCUMENTATION	Map & data > Our APIs > Documentation > SDK or gfwr documentation page	Map & data > Our APIs > Documentation > SDK or Python package documentation page	Map & data > Datasets & Code > Download Data
Purpose	Allows programmatic access to our Products data via APIs, enabling other organizations to integrate GFW data in their platforms API version = 3	Provides convenient functions to freely pull our data directly into R API version = 3.0 Package version = 2.x	Access GFW APIs in Python-based workflows API version = 3.0 Package version = 1.x	Offers static files from published papers, including DOI and other datasets updated less frequently, typically monthly or annually.
Data Format	- JSON - CSV - MVT - PNG - TIFF	Tables and lists native to the R scientific programming language (can be saved to any format later)	- JSON - CSV - PNG - TIFF	- CSV - TIFF
Use Case	Developers can easily integrate our near-real-time data into their existing platforms.	Researchers can easily access more recent data in their preferred coding language.	Analysts, data scientists, GIS users, Python developers, etc.	Researchers can download and cite more stable data sources for their publications.

Data delay	It depends on each dataset, but as reference: 2012 until ~72 hours ago for AIS fishing activity and vessel events 2019 until ~ 2 months ago for vessel registry data - Vessel insights: 2020 until ~72 hours ago	Same as API	Same as API	Static data from publications are not updated. Other datasets are created monthly, annually, or less frequently like versioned fishing effort datasets are created every 2 to 4 years.
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Data Differences

References:

- : data available and same data to other products
- : data available, is similar data compared to API, but there are some differences
- : data not available

To learn about:

- [data releases, please check here](#)
- all data issues, please check [open issues here](#) and [resolved issues here](#)

Data Available	API Portal (Version 3)	gfwr (using API Version 3)	Python package (using API Version 3)	Data Downloads
AIS Fishing Effort	● AIS fishing effort gridded data using the most current GFW vessel list and algorithms. The list of what vessels are fishing is updated monthly. Read more about apparent fishing efforts here. Data Delay: 2012 until ~72 hours ago Available in 4Wings API	● same as API Portal Last report endpoint was implemented to check report status and avoid timeout errors (524)	● same as API Portal	● Fishing effort dataset: includes fishing gridded data with more quality steps and measures. (<i>static file - 2012-2024</i>). Learn more about the difference between this dataset and the Map and APIs here.
Vessel Information	● Vessel information from AIS and public regional and national registries for <i>all vessel types</i>	● same as API Portal	● same as API Portal	● AIS Vessel data as part of the Fishing effort dataset (<i>static file - 2012-2024</i>) <i>but only for fishing vessels</i>.

Data Available	<u>API Portal (Version 3)</u>	<u>gfwr (using API Version 3)</u>	<u>Python package (using API Version 3)</u>	<u>Data Downloads</u>
	Data Delay: 2012 until ~72 hours ago for AIS self-reported data 2019 until ~ 2 months ago for vessel registry data Available in Vessel API			● Paper: Park et al. (2023). Tracking elusive and shifting identities of the global fishing fleet (<i>static file - 35,000 fishing and fishing support vessels between 2012 and 2021</i>)
AIS Fishing Events	● AIS fishing events Data Delay: 2012 until ~72 hours ago Available in Events API	● same as API Portal	● same as API Portal	● not available yet
AIS Encounter Events and AIS Loitering Events	● AIS encounters events between <i>some</i> vessel types: fishing-carrier, fishing-support, fishing-bunker, fishing-fishing, tanker-fishing, carrier-bunker and support-bunker. API includes more encounters types compared to the Map. - Data Delay: 2012 until ~72 hours ago ● AIS loitering events for all vessel types - Data Delay: 2012 until ~72 hours ago Available in Events API	● same as API Portal	● same as API Portal	● Paper: Miller et al. (2018). Identifying Global Patterns of Transshipment Behavior (<i>static file - 2012 - 2018</i>) includes Encounter and Loitering event ● Paper: Revealing the Supply Chain at Sea: A Global Analysis of Transshipment and Bunker Vessels (<i>static file - 2012-2019</i>) includes Encounter and Loitering event ● Carrier vessel portal events (<i>updated monthly - 2013 to current month</i>) Authorizations are calculated differently.

Data Available	<u>API Portal (Version 3)</u>	<u>gfwf (using API Version 3)</u>	<u>Python package (using API Version 3)</u>	<u>Data Downloads</u>
AIS Port visits	● AIS port visits for all vessel types Data Delay: 2012 until ~72 hours ago Available in Events API	● same as API Portal	● same as API Portal	● Carrier vessel portal events (updated monthly - 2013 to current month) There are less events, since additionally filters are applied.
Vessel insights	● Vessel insights for all vessel types Data Delay: - Coverage, Fishing events, AIS off event from 2020 until ~72 hours ago - RFMO IUU list from 2020 until ~ 2 months ago for vessel registry data Available in Events API	● not available yet	● same as API Portal	● not available yet
AIS Vessel Presence	● AIS vessel presence gridded data based on hourly AIS signals across all vessel types equipped with AIS transponders. Data Delay: 2012 until ~96 hours ago Available in 4Wings API	● same as API Portal	● same as API Portal	● AIS Vessel Presence gridded data as part of the Fishing effort dataset (static file - 2012-2024) but only for fishing vessels.
AIS Off events	● AIS off events	● same as API Portal	● same as API Portal	● Paper: Welch et al. (2022) - Hotspots of unseen fishing vessels

Data Available	API Portal (Version 3)	gfwf (using API Version 3)	Python package (using API Version 3)	Data Downloads
	Data Delay: 2017 until ~72 hours ago Available in Events API			(static file - 2017-2019)
AIS Voyages	● not available yet	● not available yet	● not available yet	● All Vessels Voyages Confidence 4 (monthly update - Jan 2017 - current month)
Anonymized AIS training data	● not available	● not available	● not available	● Anonymized AIS training data (static file - last update: Mar 2020)
Distance from shore	● not available	● not available	● not available	● Distance from shore in meters (static file - last update: Mar 2020)
Bathymetry	● not available	● not available	● not available	● Bathymetry (static file - last update: Mar 2020)
Anchorage	● not available yet	● not available yet	● not available yet	● Anchorage (~ annual update - last update: 2022)
Predicted setting and hauling events by drifting longliners broadcasting AIS	● not available	● not available	● not available	● Paper: Kroodsma et al. (2023). Global prevalence of setting longlines at dawn highlights bycatch risk for threatened albatross (static file - 2017-2021) Dataset of predicted setting and hauling events by drifting longliners broadcasting AIS between the years 2017 and 2021

Data Available	<u>API Portal (Version 3)</u>	<u>gfwr (using API Version 3)</u>	<u>Python package (using API Version 3)</u>	<u>Data Downloads</u>
Object detection - vessel detection	● SAR vessel detection dataset including footprints Same data as in the Map but there are missing some fields compared to the Data Downloads: length_m or any of the scores like presence_score, matching_score, or fishing_score. Data Delay: 2017 until ~5 days ago Available in 4Wings API	● same as API Portal	● same as API Portal	● Paper: Paolo et al. (2024). Satellite mapping reveals extensive industrial activity at sea (static file - 2017-2021) ● Vessel detection from Sentinel-1 SAR (daily update with monthly files - Jan 2017 - 5 days ago). Includes footprints and additional fields compared to the Map and APIs: length_m or any of the scores like presence_score, matching_score, or fishing_score.
Object detection - fixed infrastructure	● Sentinel 1 and Sentinel 2 Fixed infrastructure in MVT format The API and Map display the same subset of data, filtered by label = noise and limited regions. In contrast, the Data Download Portal contains the complete, unfiltered dataset. Data Delay: 2017 to 3 months ago Available in Datasets API ● Fixed infrastructure detections from Sentinel-1 and Sentinel-2 in CSV or JSON formats (monthly update with all data since Jan 2017 - 3 months ago). Includes all data including noise. Same data as in the Data Download Portal Available in Bulk Download API	● not available yet	● same as API Portal	● Paper: Paolo et al. (2024). Satellite mapping reveals extensive industrial activity at sea (static file - 2017-2021) ● Fixed infrastructure detections from Sentinel-1 and Sentinel-2 (monthly update with all data since Jan 2017 - 3 months ago). Includes all data including noise.

Data Available	<u>API Portal (Version 3)</u>	<u>gfwf (using API Version 3)</u>	<u>Python package (using API Version 3)</u>	<u>Data Downloads</u>
Vessel Monitoring System (VMS) - Country specific data	not available Only available in the Map	not available Only available in the Map	not available Only available in the Map	not available Only available in the Map
Marine Manager Environmental datasets (like Chlorophyll-a concentration, etc)	not available Only available in Marine Manager	not available Only available in Marine Manager	not available Only available in Marine Manager	not available Only available in Marine Manager
Night light detections (VIIRS)	not available Only available in the Map	not available Only available in the Map	not available	not available Only available in the Map