**Main Hawaiian Island Ocean Health Index Metrics**

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| Goal | Sub-Goal | Metric | Reference Point | Data Used |
| Food Provision | Fisheries | Pelagic & Bottom Fisheries | Single species catch weighted by sustainability metric (biomass at maximum sustainable yield (B/Bmsy and SB/SBmsy) for pelagic and bottom fish fisheries) | DLNR-DAR catch data, NOAA Stock Assessment Data |
| Reef Fisheries | Single species commercial catch and non-commercial catch weighted by sustainability (Spawner Potential Ratio: above 30% for assessed reef fisheries) | DLNR-DAR catch data, NOAA Stock Assessment Data, non-commercial catch data multiplier from McCoy et al. in prep |
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| Mariculture | Fishponds | 30% of historical fishponds are active or undergoing restoration | TNC updated fishpond layer |
| Yield | Lbs produced estimated to county by ratio of operators per county for finfish and shellfish | USDA available:https://quickstats.nass.usda.gov/ |
| Sustainability | Sustainability risk assessment scaled from 0-1 based on biosecurity threat, invasive species threat, and feed type (protein vs. plant) | DLNR-DAR species list |
| Artisanal Fishing Opportunities | . | Fish Availability | Biomass of harvested reef fish to pristine biomass ratio | NOAA Hawaii Report Card |
| Need | 2015 state poverty level (10.6%) | DBEDT |
| Shoreline Access | # of shoreline access points per 1 mile of coastline | County data on shoreline access points |
| Recreation |  | Shoreline Access | # of shoreline access points per 1 mile of coastline | County data on shoreline access points |
| Coastal Parks | # of county, state, and national parks per resident per km coastline | DBEDT, County park maps |
| Goal | Sub-Goal | Metric | Reference Point | Data Used |
| Sense of Place | Lasting Special Places | Preserved Historic Places &  Wahi Pana | Reference Point TBD | OHA database of sacred places; Hawaii Historic Preservation Plan, DBEDT State and National register |
| Marine Managed Areas | 30% of marine areas actively managed | NOAA MPA Inventory |
| Coastal Conservation Districts | % of coastal area (1km from shoreline) and weight of conservation protection | [http://dlnr.hawaii.gov/occl/conservation-district/; geodataportal.hawaii.gov](http://dlnr.hawaii.gov/occl/conservation-district/;%20geodata.portal) |
| Connection to Place | TBD | To be developed: Proposed metrics: Place names, cultural practices, stewardship |  |
| Sustainable Tourism |  | Preservation of Natural Resources | 30% of marine areas actively managed and 30% of priority watersheds protected | DLNR |
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| Economic | Visitor generated GDP growth target of 2.5% annually | DBEDT, HTA |
| Sentiment | Community sentiment of tourism at 80% | HTA |
| Clean Waters |  | Sediment | Sediment input | Number of impaired coastal waters/target number of improved coastal waters |
| Nutrients | Nutrient models |
| Chemicals | Chemical input compared to EPA standard - Data GAP |
| Pathogens | Zero beach closures and/or levels that do not exceed closure levels or proxy is # of cesspools | Number of shoreline postings due to sewage or other water pollution |
| Watersheds | Percent of native vegetation cover in watersheds | TNC native watershed data |
| Streams | To be developed | Number of impaired streams/target number of restored streams |
| Marine Debris | Weight of marine debris to region maximum | DLNR-DAR aerial marine debris map |
| Goal | Sub-Goal | Metric | Reference Point | Data Used |
| Biodiversity | Species | Reef Fish Biomass | Current reef fish biomass/pristine reef fish biomass | NOAA Hawaii Report Card |
| ESA Status | ESA status for marine mammals, turtles, marine Birds, dune/beach plants | Hawaii biogeographic assessment and ESA registry https://www.fws.gov/endangered/ |
| Habitats | Coral Reefs | Condition: Combined metric that includes coral cover, macroalgae cover, cca cover; Extent: area of hard-bottom nearshore habitat | NOAA Hawaii Report Card |
| Watersheds | Acres of native dominated forest today compared to pristine conditions | T |
| Anchialine Ponds | Condition: presence of 'opae ula, ruppia, pinao (damsel or dragonflies) and absence of invasive species; Extent: currently known number or area | Not included in statewide assessment because not found on every island |
| Wetlands | Unknown coastal wetland historical extent or current health so scored 50% until condition data or prior extent data is available. Trend in wetland extend from NOAA CCAP | Database being developed by DNLR-DAR; USFWS National Wetlands Inventory clipped to 1km of the coast and deepwater habitats removed |
| Beaches | Beach extent from NOAA ESI. Condition based on % of beaches accreting (not eroding) and trend is the short term annual erosional rate | NOAA ESI and Fletcher et al 2012 (https://pubs.usgs.gov/of/2011/1051/pdf/ofr2011-1051\_report\_508.pdf) |
| Soft-Bottom | % of soft-bottom habitats not impacted by dredging | Dredging data from cumulative impact mapping |
| Intertidal | Proxy of intertidal habitat destruction estimated as resident population / km of coastline | Because proxy, used instead as a pressure layer |
| Goal | Sub-Goal | Metric | Reference Point | Data Used |
| Coastal Protection |  | Wetlands | Unknown coastal wetland prior extent so scored 50% until condition data or prior extent data is available. Trend in wetland extend from NOAA CCAP | NOAA CCAP wetlands clipped to 1km of coastline |
| Beaches | Beach extent from NOAA ESI. Condition based on % of beaches accreting (not eroding) and trend is the short term annual erosional rate | NOAA ESI and Fletcher et al 2012 (https://pubs.usgs.gov/of/2011/1051/pdf/ofr2011-1051\_report\_508.pdf) |
| Coral Reefs | Extent from cumulative impact maps (derived from NOAA habitat maps), condition is combination of metric scores from NOAA report card (% coral cover, % macroaglae, and % CCA), trend is from NOAA % coral cover derived annual change from NOAA CREP report. | NOAA Hawaii Report Card |
| Carbon Storage |  | Wetlands | To be determined: Unknown coastal wetland prior extent and condition. Trend in wetland extend from NOAA CCAP | NOAA CCAP wetlands clipped to 1km of coastline |
| Livelihoods & Economies | Livelihoods | Jobs | Wages/livable wage | NOAA ENOW (ww.coast.noaa.gov; DBEDT |
| # of jobs per sector not declining | NOAA ENOW (ww.coast.noaa.gov) |
| Economies | Revenue | Revenue per sector not declining | NOAA ENOW (ww.coast.noaa.gov) |