

Package: planetaryhdi (via r-universe)

September 24, 2026

Type Package

Title Planetary Pressures Adjusted Human Development Index Data

Version 0.1.1

Description Provides data on Planetary Pressures Adjusted Human Development, adjusted by carbon emissions per capita (production related) and materials footprint per capita.

License CC BY 4.0

Encoding UTF-8

LazyData true

Depends R (>= 3.5)

Language en-GB

Config/Needs/website rmarkdown, dplyr, knitr, readr, stringr, gt, kableExtra, ggplot2, sf, rnatualearth, rnatualearthdata

Date 2024-12-10

URL <https://github.com/openwashdata/planetaryhdi>

BugReports <https://github.com/openwashdata/planetaryhdi/issues>

X-schema.org-keywords open data, washdata, human development index, planetary pressures, carbon dioxide emissions, material footprint, sdgs

X-schema.org-spatialCoverage Worldwide

X-schema.org-temporalCoverage 2021-01-01/2022-12-31

Config/roxygen2/version 8.0.0

Repository <https://openwashdata.r-universe.dev>

Date/Publication 2026-09-24 05:05:35 UTC

RemoteUrl <https://github.com/openwashdata/planetaryhdi>

RemoteRef HEAD

RemoteSha f9cfb691c9cc0335ed71cd91cc7c6eff7502cc38

Contents

planetaryhdi	2
Index	4

planetaryhdi	<i>planetaryhdi: Planetary Pressures Adjusted HDI for countries and aggregates, 2022</i>
--------------	--

Description

Planetary pressures-adjusted HDI (PHDI) for 195 countries and territories and 15 UNDP aggregates (development groups, regions and the world), from the UNDP Human Development Report 2023/2024. Values refer to 2022, except carbon dioxide emissions per capita and its index, which refer to 2021. PHDI is HDI adjusted for production-based carbon dioxide emissions and material footprint per capita. The dataset also includes information on percentage difference in HDI after adjusting for planetary pressures and change in rank when the HDI is corrected for these pressures.

Usage

planetaryhdi

Format

A tibble with 210 rows and 12 variables

- hdi_rank** Rank by HDI
- country** Name of the country
- hdi** Human Development Index (HDI): A composite index measuring average achievement in three basic dimensions of human development (a long and healthy life, knowledge and a decent standard of living). See Technical note 1 at https://hdr.undp.org/sites/default/files/2023-24_HDR/hdr2023-24_technical_notes.pdf for details on how the HDI is calculated.
- phdi** Planetary pressures-adjusted HDI (PHDI): HDI value adjusted by the level of carbon dioxide emissions and material footprint per capita to account for the excessive human pressure on the planet. It should be seen as an incentive for transformation. See Technical note 6 at https://hdr.undp.org/sites/default/files/2023-24_HDR/hdr2023-24_technical_notes.pdf for details on how the PHDI is calculated.
- pct_diff_hdi** Percentage Difference in HDI and Planetary HDI (calculated as: [HDI - PHDI] / HDI)
- rank_diff_hdi** Difference in rank between PHDI and HDI. Expressed as Rank(phdi) - Rank(hdi)
- adj_factor** Adjustment factor for planetary pressures: Arithmetic average of the carbon dioxide emissions index and the material footprint index, both defined below. A high value implies less pressure on the planet.

tco2_per_capita_prod Carbon dioxide emissions per capita (production): carbon dioxide emissions produced as a consequence of human activities (use of coal, oil and gas for combustion and industrial processes, gas flaring and cement manufacture), divided by midyear population. Values are territorial emissions, meaning that emissions are attributed to the country in which they physically occur.

co2_emissions_index Carbon dioxide emissions (production) index: Carbon dioxide emissions per capita (production-based) expressed as an index using a minimum value of 0 and a maximum value of 76.61 tonnes per capita. A high value of this index implies less pressure to the planet.

material_footprint_per_capita Material footprint per capita: Material Footprint (MF) is the attribution of global material extraction to domestic final demand of a country. The total material footprint is the sum of the material footprint for biomass, fossil fuels, metal ores and non-metal ores. This indicator is calculated as raw material equivalent of imports (RMEIM) plus domestic extraction (DE) minus raw material equivalents of exports (RMEEX). Per-capita MF describes the average material use for final demand.

material_footprint_index Material footprint index: Material footprint per capita expressed as an index using a minimum value of 0 and a maximum value of 140.82 tonnes per capita. A high value of this index implies less pressure to the planet.

iso3c ISO 3166-1 alpha-3 country code

Source

Obtained from the UNDP Human Development Report 2023/2024 Statistical Annex, PHDI table (<https://hdr.undp.org/data-center/documentation-and-downloads>), published under the Creative Commons Attribution 3.0 IGO licence.

Examples

```
# Countries with the largest drop from HDI to PHDI
head(planetaryhdi[order(-planetaryhdi$pct_diff_hdi), c("country", "hdi", "phdi", "pct_diff_hdi")])
```

Index

* **datasets**

planetaryhdi, [2](#)

planetaryhdi, [2](#)