

# Package ‘wdi2’

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**Type** Package

**Title** Download World Development Indicators from the World Bank Indicators API

**Version** 0.1.0

## Description

A modern, flexible interface for accessing the World Bank’s World Development Indicators (WDI) API <<https://datahelpdesk.worldbank.org/knowledgebase/articles/889392-about-the-indicators-api-documentation>>.

Similar to the existing 'WDI' package, 'wdi2' allows users to download, process, and analyze indicator data for multiple countries and years. However, 'wdi2' differs by relying on 'httr2' for multi-page request and error handling, providing support for downloading multiple indicators with a single function call, using progress bars to keep users informed about the data processing, and returning the processed data in a tidy data format in line with Wickham (2014) <[doi:10.18637/jss.v059.i10](https://doi.org/10.18637/jss.v059.i10)>.

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**URL** <https://github.com/tidy-intelligence/r-wdi2>

**BugReports** <https://github.com/tidy-intelligence/r-wdi2/issues>

**Depends** R (>= 4.1)

**Imports** cli, dplyr (>= 1.0.0), httr2 (>= 1.0.0), purrr (>= 1.0.0), tibble, tidyr (>= 1.0.0)

**Suggests** knitr, rmarkdown, testthat (>= 3.2.0)

**Config/testthat/edition** 3

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**VignetteBuilder** knitr

**NeedsCompilation** no

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check\_for\_failed\_request  
*Check for failed API request*

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### Description

This function checks the response body from an API request to determine if the request failed. If the request contains an error message, the function will raise an error with a detailed message including the message ID and value.

### Usage

```
check_for_failed_request(body)
```

### Arguments

body	The response body from the API request, typically in JSON format, which may contain an error message if the request failed.
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### Details

This function inspects the first element of the response body to check for an error message. If a message is found, the function retrieves the `id`, `key`, and `value` fields from the error message and constructs an error using `cli::cli_abort()`. The function is intended to ensure failed API requests are handled gracefully.

### Value

This function does not return a value. If the request contains an error message, it raises an error and halts execution.

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download_indicators	<i>Download World Bank indicator data for specific countries and multiple indicators</i>
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## Description

This function retrieves indicator data from the World Bank API for a specified set of countries and indicators. The user can specify one or more indicators, a date range, and other options to tailor the request. The data is processed and returned in a tidy format, including country, indicator, date, and value fields.

## Usage

```
download_indicators(  
  countries,  
  indicators,  
  start_date = NULL,  
  end_date = NULL,  
  language = "en",  
  per_page = 1000,  
  progress = TRUE  
)
```

## Arguments

countries	A character vector of ISO 2-country codes, or "all" to retrieve data for all countries.
indicators	A character vector specifying one or more World Bank indicators to download (e.g., c("NY.GDP.PCAP.KD", "SP.POP.TOTL")).
start_date	Optional. The starting date for the data, either as a year (e.g., 2010) or a specific month (e.g., "2012M01").
end_date	Optional. The ending date for the data, either as a year (e.g., 2020) or a specific month (e.g., "2012M05").
language	A character string specifying the language for the request, see <a href="#">list_supported_languages</a> . Defaults to "en".
per_page	An integer specifying the number of results per page for the API. Defaults to 1000.
progress	A logical value indicating whether to show progress messages during the data download and parsing. Defaults to TRUE.

## Details

This function constructs a request URL for the World Bank API, retrieves the relevant data for the given countries and indicators, and processes the response into a tidy format. The user can optionally specify a date range, and the function will handle requests for multiple pages if necessary.

If the progress parameter is TRUE, messages will be displayed during the request and parsing process.

The function supports downloading multiple indicators by sending individual API requests for each indicator and then combining the results into a single tidy data frame.

### Value

A tibble containing the indicator data for the specified countries and indicators. The following columns are included:

**indicator\_id** The ID of the indicator (e.g., "NY.GDP.PCAP.KD").

**country\_id** The ISO 2-country code of the country for which the data was retrieved.

**date** The date of the indicator data (either a year or month depending on the request).

**value** The value of the indicator for the given country and date.

### Examples

```
# Download single indicator for multiple countries
download_indicators(c("US", "CA", "GB"), "NY.GDP.PCAP.KD")

# Download single indicator for a specific time frame
download_indicators(c("US", "CA", "GB"), "DPANUSSPB", start_date = 2012, end_date = 2013)

# Download single indicator for different frequency
download_indicators(c("MX", "CA", "US"), "DPANUSSPB", start_date = "2012M01", end_date = "2012M05")

# Download single indicator for all countries and disable progress bar
download_indicators("all", "NY.GDP.PCAP.KD", progress = FALSE)

# Download multiple indicators for multiple countries
download_indicators(c("US", "CA", "GB"), c("NY.GDP.PCAP.KD", "SP.POP.TOTL"))
```

---

```
list_supported_countries
```

*List all supported countries and regions from the World Bank API*

---

### Description

This function retrieves and processes a list of all countries supported by the World Bank API, along with metadata such as region, administrative region, income level, and lending type. The user can specify the language of the API response.

### Usage

```
list_supported_countries(language = "en", per_page = 1000)
```

## Arguments

language	A character string specifying the language for the request, see <a href="#">list_supported_languages</a> . Defaults to "en".
per_page	An integer specifying the number of results per page for the API. Defaults to 1000. Must be a value between 1 and 32,500.

## Details

This function sends a request to the World Bank API to retrieve data for all supported countries in the specified language. The data is then processed into a tidy format and includes information about the country, such as its ISO code, capital city, geographical coordinates, and additional nested metadata about regions, income levels, and lending types.

## Value

A tibble containing country information along with associated metadata. The tibble includes the following columns:

**id** The identifier for the country.

**iso2\_code** The ISO 2-character country code.

**name** The full name of the country.

**capital\_city** The capital city of the country.

**longitude** The longitude of the country.

**latitude** The latitude of the country.

**regions** A nested tibble containing information about the region the country belongs to.

**admin\_regions** A nested tibble containing information about the administrative region the country belongs to.

**income\_levels** A nested tibble containing information about the income level classification of the country.

**lending\_types** A nested tibble containing information about the lending type classification of the country.

## Examples

```
# List all supported countries in English
list_supported_countries(language = "en")
```

```
# List all supported countries in Spanish
list_supported_countries(language = "zh")
```

---

`list_supported_indicators`*List all supported World Bank indicators*

---

## Description

This function retrieves a comprehensive list of all indicators supported by the World Bank API. The indicators include metadata such as the indicator ID, name, unit, source, and associated topics. The user can specify the language of the API response and whether to include additional details.

## Usage

```
list_supported_indicators(  
  language = "en",  
  per_page = 32500,  
  include_details = FALSE,  
  progress = TRUE  
)
```

## Arguments

<code>language</code>	A character string specifying the language for the request, see <a href="#">list_supported_languages</a> . Defaults to "en".
<code>per_page</code>	An integer specifying the number of results per page for the API. Defaults to 32,500. Must be a value between 1 and 32,500.
<code>include_details</code>	A logical value indicating whether to include additional details such as unit and topics in the result. When FALSE, only basic information (ID, name, source) is returned. Defaults to FALSE.
<code>progress</code>	A logical value indicating whether to show progress messages during the data parsing process. Defaults to TRUE.

## Details

This function makes a request to the World Bank API to retrieve metadata for all available indicators. It processes the response into a tidy tibble format. If the `include_details` parameter is FALSE, the result will only include basic indicator information (ID, name, source note, and organization). If `include_details` is TRUE, additional metadata such as the indicator's unit, source ID and value, and associated topics will be included.

If the `progress` parameter is set to TRUE, messages will be displayed during the request and parsing process.

## Value

A tibble containing the available indicators and their metadata. Depending on the value of `include_details`, the tibble includes the following columns:

- indicator\_id** The ID of the indicator (e.g., "NY.GDP.PCAP.KD").
- indicator\_name** The name of the indicator (e.g., "GDP per capita, constant prices").
- unit** The unit of measurement for the indicator, if available (e.g., "US Dollars"). Included only if `include_details = TRUE`.
- source\_id** The ID of the data source providing the indicator. Included only if `include_details = TRUE`.
- source\_value** The name or description of the source of the indicator data. Included only if `include_details = TRUE`.
- source\_note** Additional notes or descriptions about the data source.
- source\_organization** The organization responsible for the data source.
- topics** A nested tibble containing topics associated with the indicator, with two columns: `topic_id` and `topic_value`. Included only if `include_details = TRUE`.

### Examples

```
# List all supported indicators in English
list_supported_indicators(language = "en")

# List all supported indicators in Spanish
list_supported_indicators(language = "es", include_details = TRUE)
```

---

list\_supported\_languages

*List supported languages for the World Bank API*

---

### Description

This function returns a tibble of supported languages for querying the World Bank API. The supported languages include English, Spanish, French, Arabic, and Chinese.

### Usage

```
list_supported_languages()
```

### Details

This function provides a simple reference for the supported languages when querying the World Bank API.

### Value

A tibble with two columns:

**language\_code** The ISO 639-1 code of the language (e.g., "en" for English).

**language\_name** The full name of the language (e.g., "English").

**Examples**

```
# List all supported languages  
list_supported_languages()
```



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