

International Comparison Program (ICP) and Pacific Islands

Pacific Community Regional Conference on Poverty Analysis methods

Outline

- 1. What is the International Comparison Program (ICP)?**
- 2. What are purchasing power parities (PPPs)?**
- 3. How are PPPs used**
- 4. How are PPPs estimated?**
- 5. Participation of the Pacific Islands in the ICP 2011**



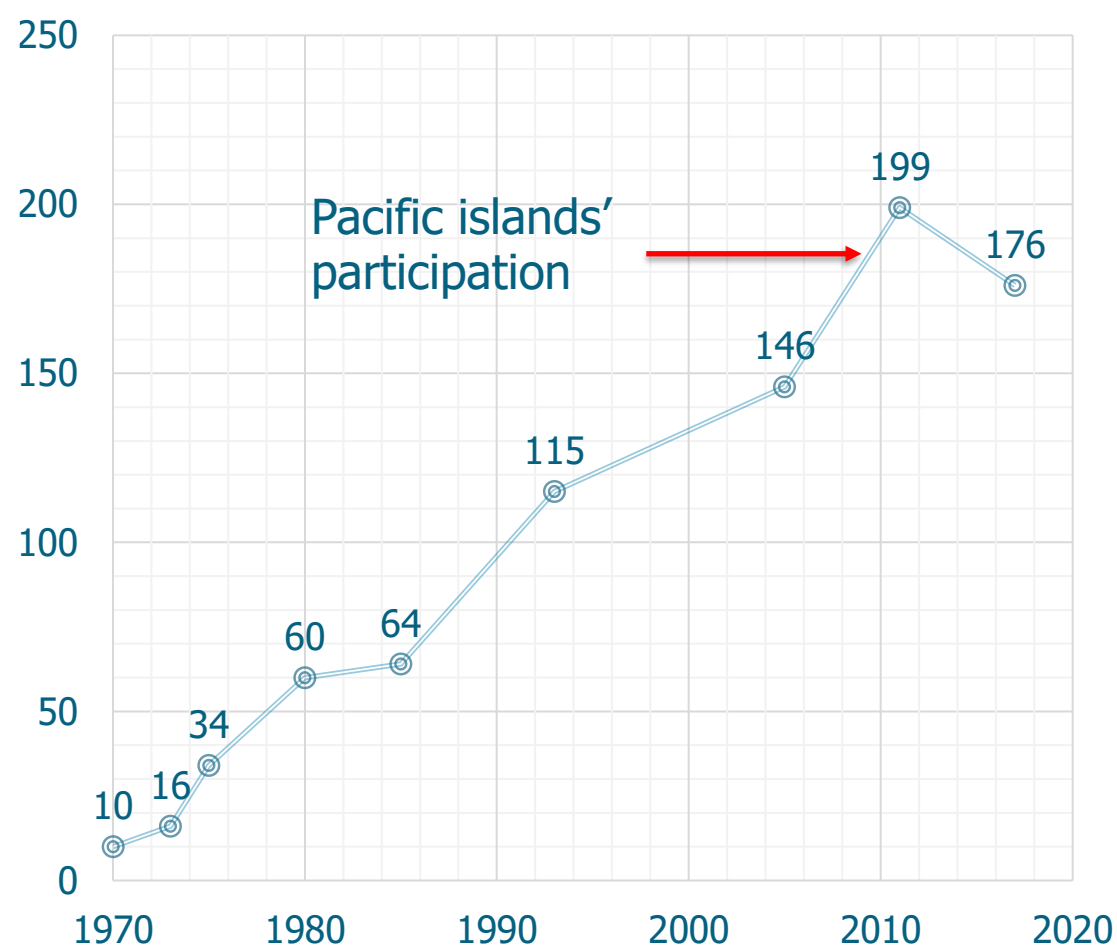
1. What is the International Comparison Program (ICP)?

International Comparison Program (ICP)

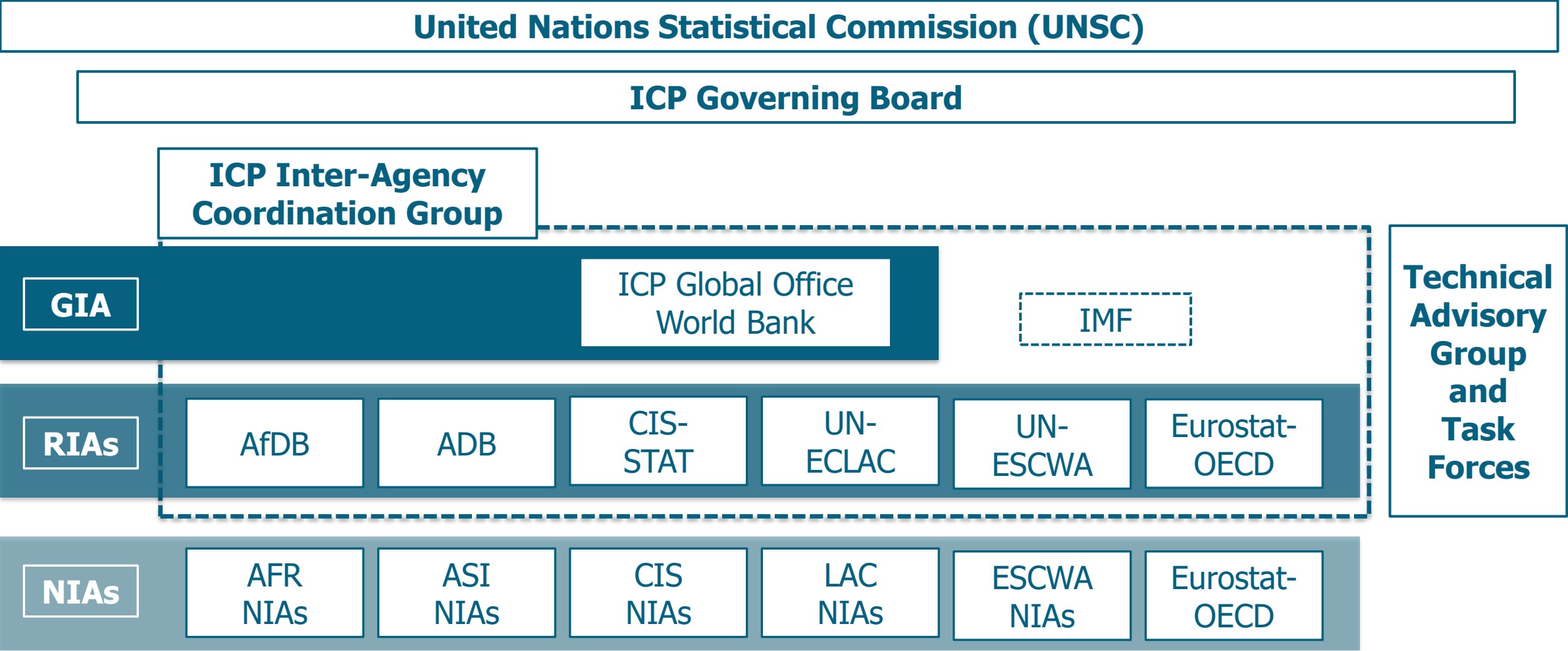
- The ICP is a **worldwide statistical initiative** led by the World Bank under the auspices of the United Nations Statistical Commission (UNSC)
- The ICP estimates **purchasing power parities (PPPs) and price level indices (PLIs)** for the world's economies
- **Nine ICP comparisons** have been conducted to date: 1970 | 1973 | 1975 | 1980 | 1985 | 1993 | 2005 | 2011 | 2017 | **2021 – 10th comparison*** | **ICP 2024 (next comparison)**
- ICP is conducted as a **global partnership** of countries, multilateral agencies, and academia

* Postponed from 2020

of Participating Countries

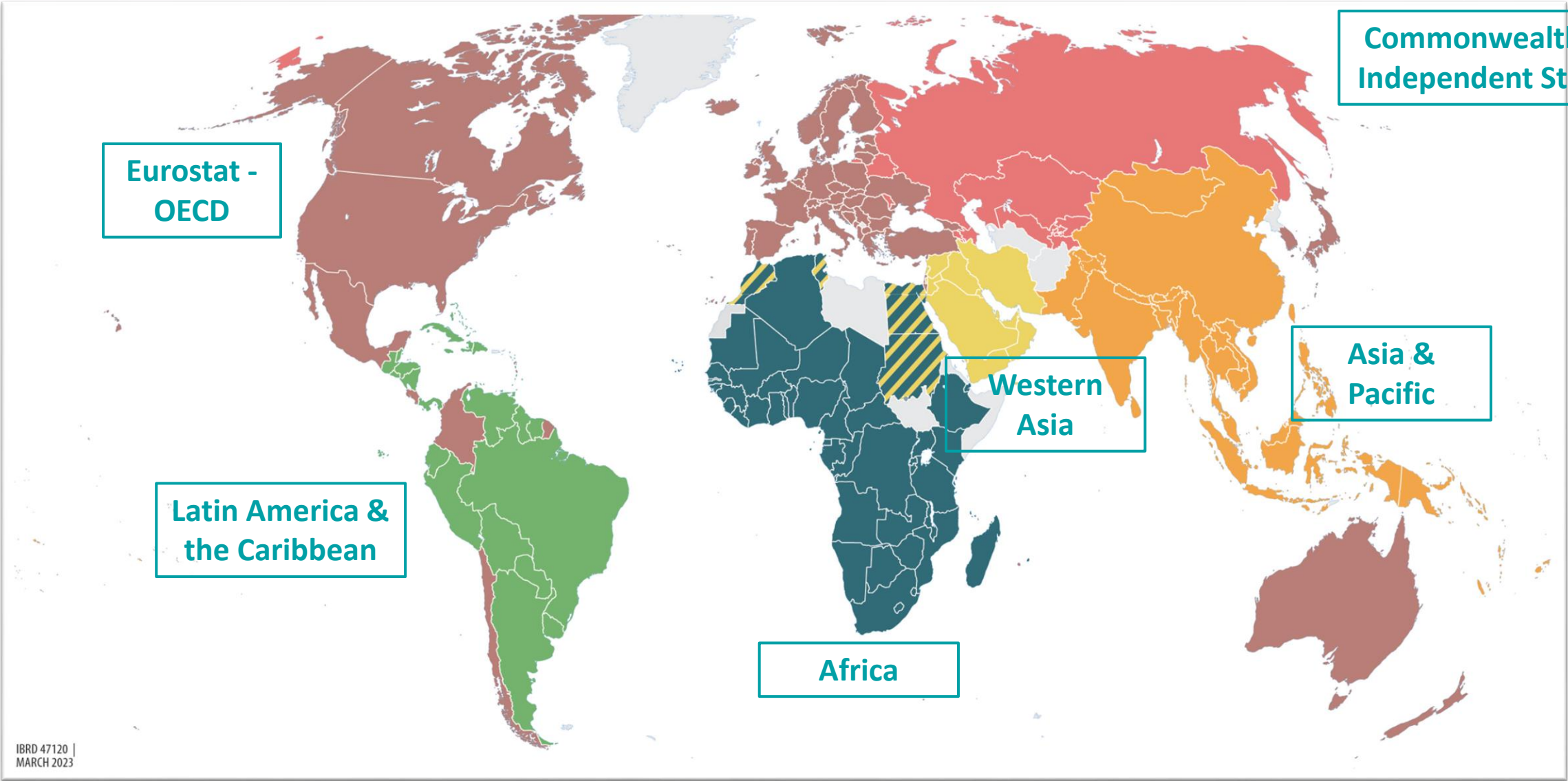


ICP Partnership and Governance Structure



Global Implementing Agency (GIU) | Regional Implementing Agency (RIA) | National Implementing Agency (NIA)

ICP Regions



IBRD 47120 |
MARCH 2023

The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of the World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries



2. What Are Purchasing Power Parities (PPPs)?

Purchasing Power Parities (PPPs)

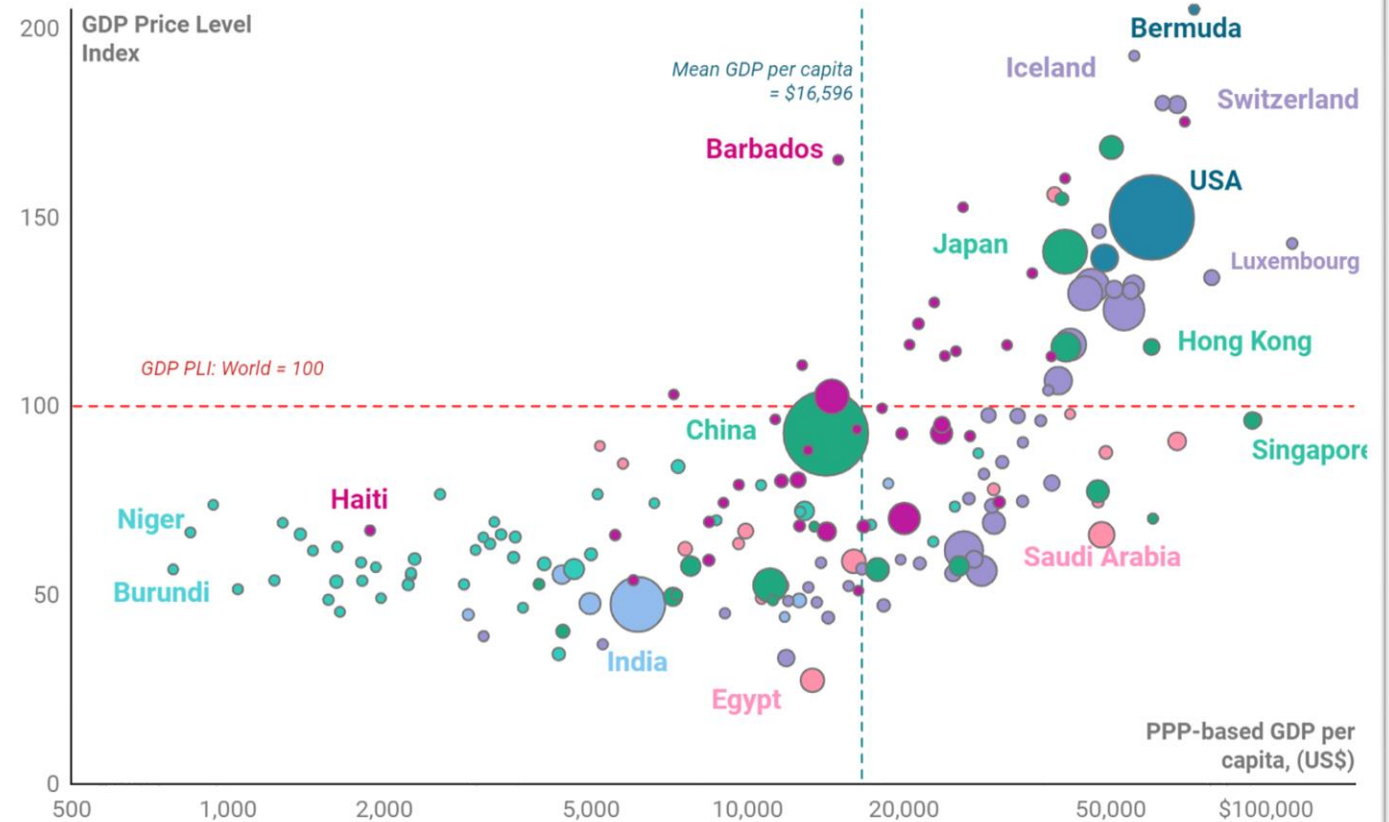
- PPPs are **currency conversion factors** and **spatial price indexes**
 1. PPPs convert different currencies to a common currency
 2. PPPs control for differences in price levels between economies
- Among other uses, PPPs are used to convert countries' **Gross Domestic Product (GDP)** at its expenditure components into a common currency
- PPPs are also used as an indication of **countries' price levels**
- **PPPs are needed**, because:
 1. Market exchange rates can fluctuate significantly
 2. Price levels between countries can vary significantly

Price levels between Countries Vary Significantly

Balassa-Samuelson effect: Typically, higher income economies have higher price levels, while lower income economies have lower price levels

PPP-based GDP, GDP per capita and GDP price level index, 2017

South Asia North America Sub-Saharan Africa East Asia & Pacific Europe & Central Asia Latin America & Caribbean Middle East & North Africa



Bubble size for each economy shows its relative PPP-based GDP.

Source: ICP 2017

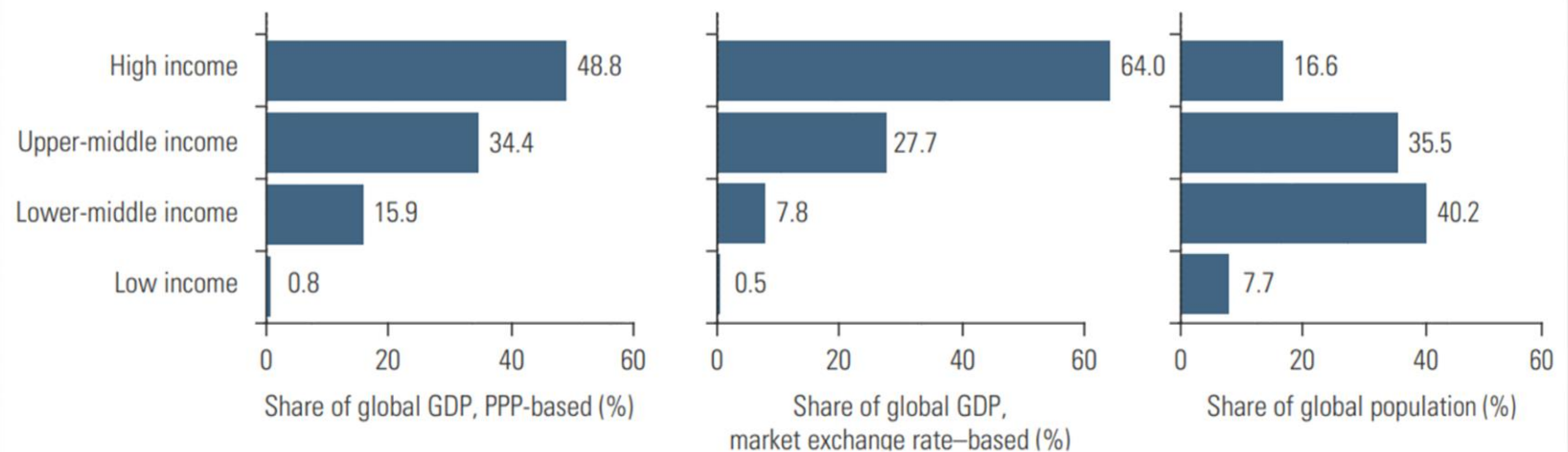
PPPs and Market Exchange Rates (MERs)

- **MER-based cross-country comparisons** of GDP at its expenditure components reflect both differences in economic outputs (volumes) and price levels
- **PPP-based cross-country comparisons** of GDP at its expenditure components only reflect differences in economic outputs (volumes), as PPPs control for price level differences between the economies

With MERs: The size of higher-income economies is inflated and vice-versa

With PPPs: The comparison reflects the real size of the economies

Figure 1.1 Share of global PPP-based and market exchange rate-based GDP and share of global population, by region and income group, 2017





3. Selected PPP Uses

PPPs for Policy Making: Guide to Using ICP Data

Purchasing Power Parities for Policy Making

A Visual Guide to Using Data from
the International Comparison Program



The Guide illustrates the use of PPP-based indicators and ICP data for monitoring programs and policy initiatives:

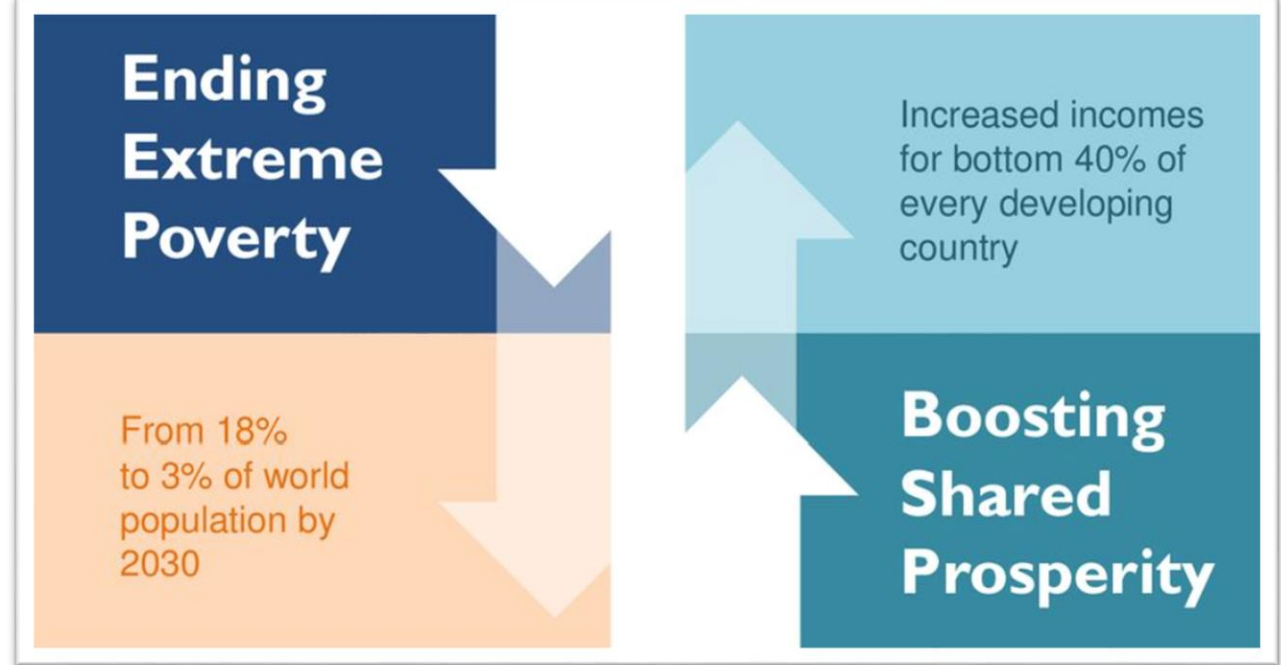
- Economy and price levels
- Poverty and inequality
- Trade and competitiveness
- Labour costs, wages, and social safety nets
- Food and nutrition
- Health
- Education
- Energy and climate
- Infrastructure
- Human Development
- Administrative uses
- *Technical note of correct use of PPPs*

PPP Uses and Applications: SDGs, WBG Twin Goals, WDI

PPP-based indicators are used in 8 of 17 SDGs



PPP-based indicators used in WB Twin Goals



PPP-based indicators in the *World Development Indicators*: 43+ indicators on

Poverty | Social protection & Labor | Economy & Growth
| Climate and energy | Environment | Health

PPP Uses and Applications: Poverty



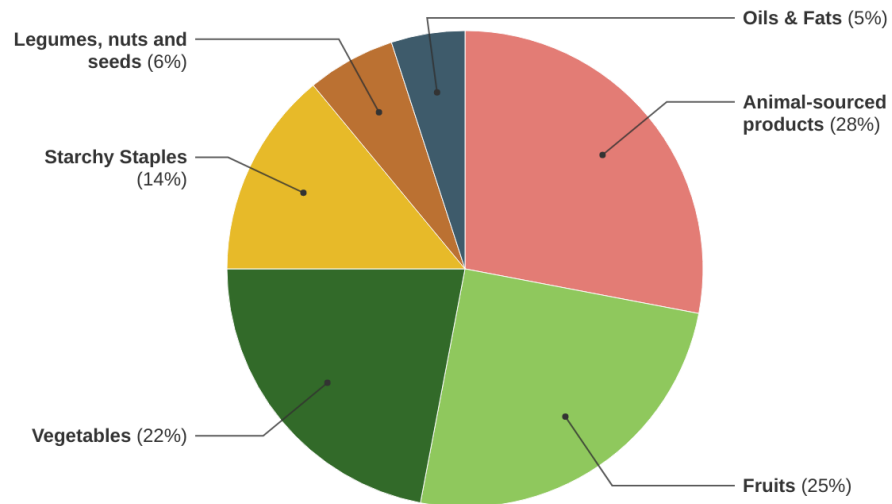
- The World Bank **announced** in May 2022 that it will update its global poverty numbers from October 2022 to reflect 2017 PPPs
- The October 2022 World Bank publication **Poverty and Shared Prosperity 2022: Correcting Course** sets out the impetus for the update and releases new poverty lines:
 - Extreme poverty \$1.90 → \$2.15
 - Lower-middle income \$3.20 → \$3.65
 - Upper-middle income \$5.50 → \$6.85
- **NOTE (!)** poverty estimates for the Pacific Islands are based on the 2011 household consumption PPPs

PPP & ICP Data Applications: Food Prices for Nutrition Project

Food Prices for Nutrition

Share of Cost of a Healthy Diet by Food Group, Fiji

2017



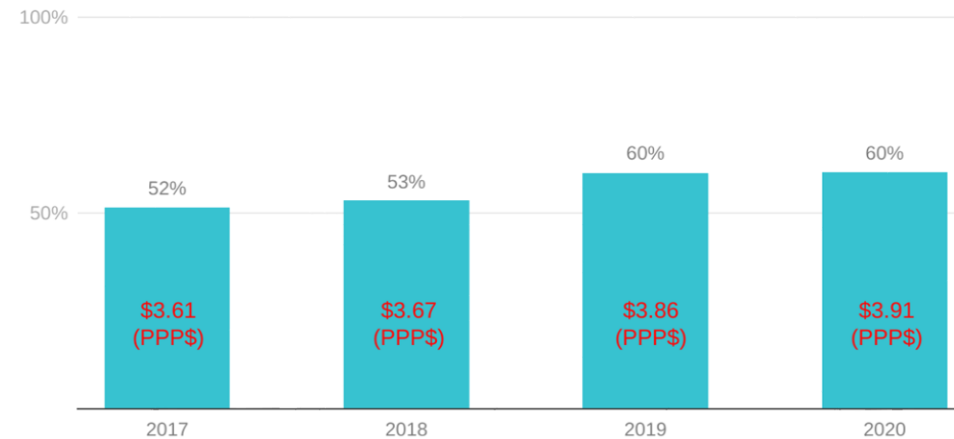
ICP retail food data prices are used to select and cost the least-cost food items for a healthy diet that meets dietary guidelines.

Source: Food Prices for Nutrition

- ICP data on **food prices** and **expenditures** are the major input into new diet cost and affordability metrics
- Metrics assess **people's access to safe and nutritious food** and help to monitor progress towards food security around the world as well as inform agricultural and food systems interventions

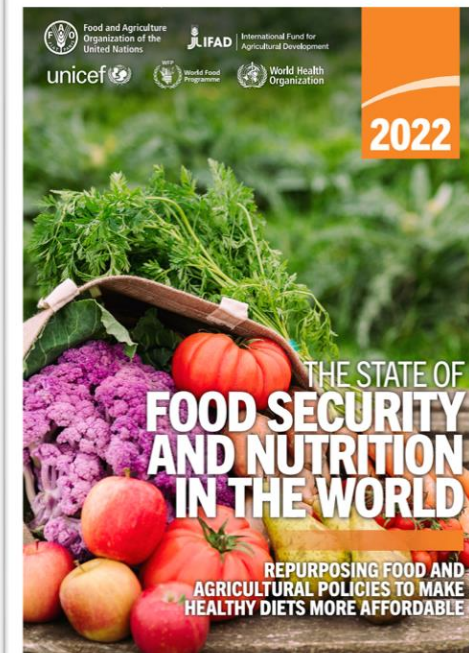
Share of population who cannot afford a healthy diet, Fiji

Cost of a healthy diet in current PPP\$ shown in red for each year.



ICP food price data and World Bank Poverty and Inequality Platform data on income distributions are used to establish the share of population that cannot afford a least-cost healthy diet.

Source: Food Prices for Nutrition



PPP Uses and Applications: Administrative Uses



**Country group
aggregates
and growth
rates in the
IMF World
Economic
Outlook**



**Allocation of
the European
Union
structural and
cohesion
funds**

**World and G20 output and growth rates in
OECD Economic Outlook**



**World Bank and IMF Shareholding and
Drawing Rights**



...More Current and Coming Uses on the Global ICP Website

[WHO WE ARE](#)[WHAT WE DO](#)[WHERE WE WORK](#)[UNDERSTANDING POVERTY](#)[WORK WITH US](#)[WB LIVE](#)[Home](#)[Data](#)[Uses](#)[Knowledge and Outreach](#)[Methodology](#)[Research](#)[Governance](#)[History](#)[FAQ](#)



4. How are PPPs estimated?

PPP Data Requirements

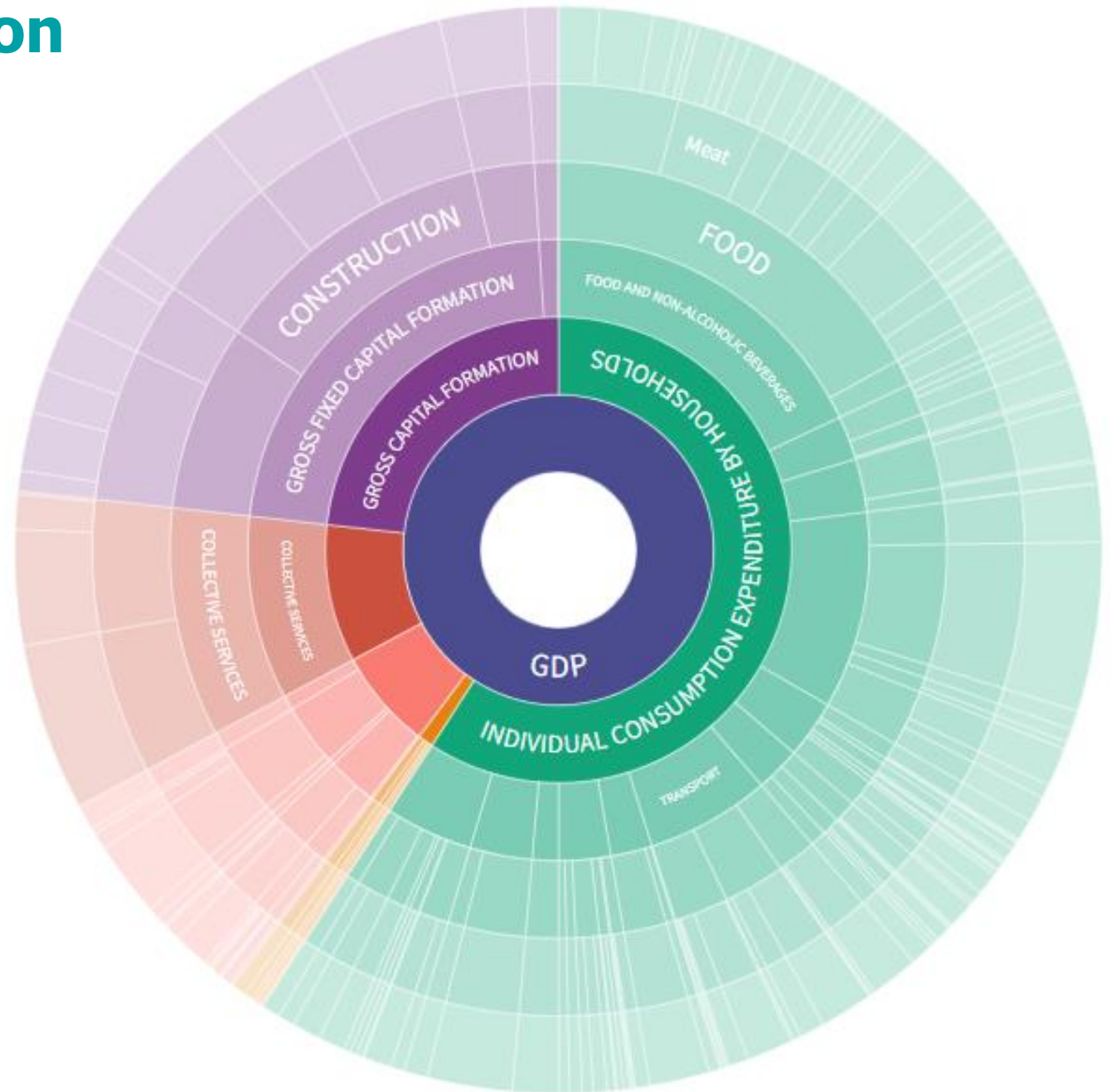
- National annual average PRICES for a common basket of goods and services (regional items & global items)
 - **Household consumption** ← **Pacific islands' participation**
 - Housing
 - Private education
 - Government compensation
 - Machinery and equipment
 - Construction and civil engineering
- National accounts EXPENDITURES on GDP and its components
 - GDP is broken down into 155 units ("basic headings")
- Population and Market Exchange Rates data

ICP Expenditure Classification

The **ICP expenditure classification** is based on the **SNA 2008 classification** and follows the **international classifications** [COFOG | COICOP | COPNI | CPA]

- 6 Main aggregates
- 28 expenditure categories
- 63 expenditure groups
- 126 expenditure classes
- 155 basic headings

<https://blogs.worldbank.org/opendata/how-does-icp-measure-price-levels-across-world>

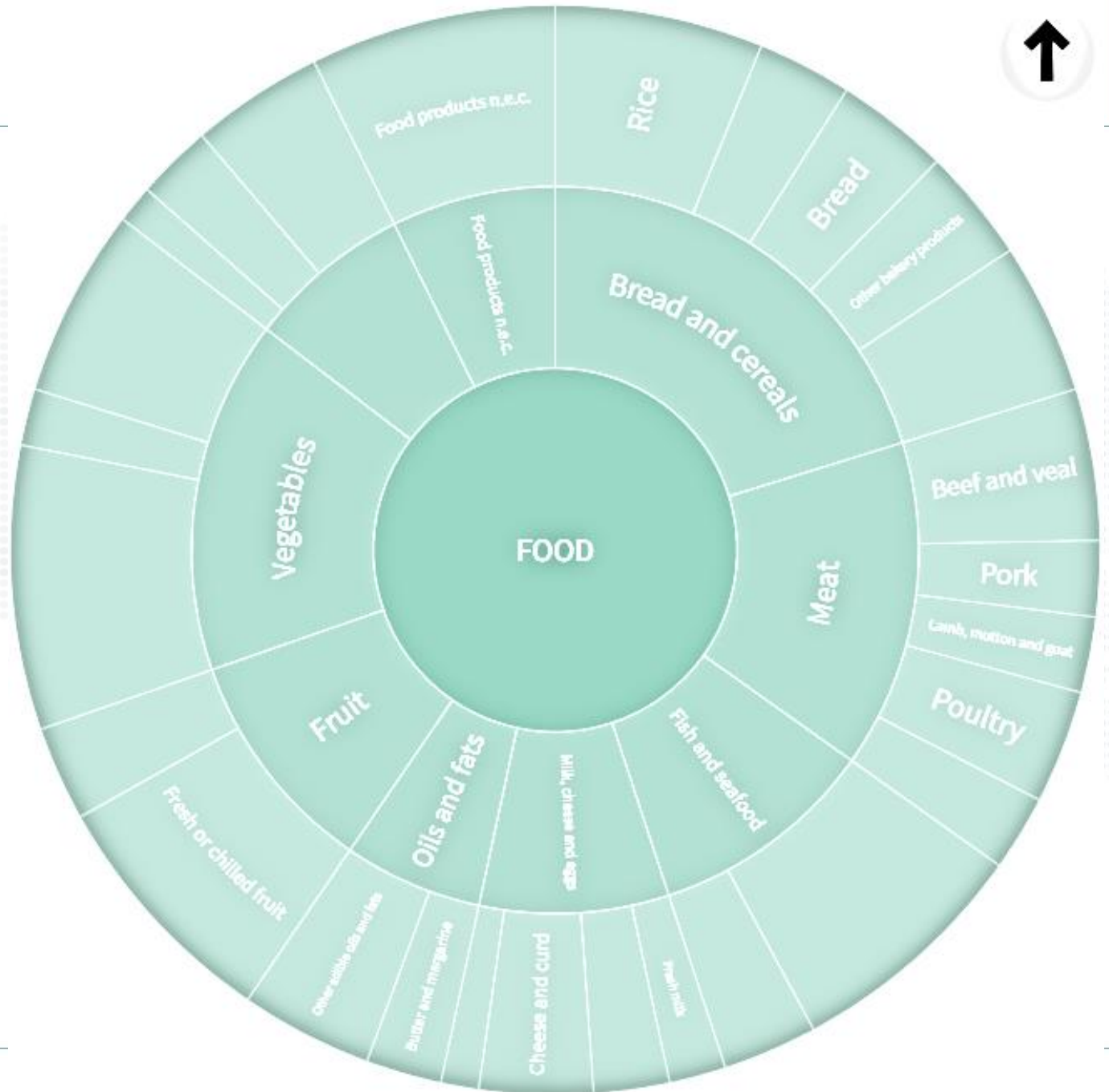


ICP Expenditure Data

NSOs report their expenditure data for each ICP classification level, from the basic heading level up to the GDP

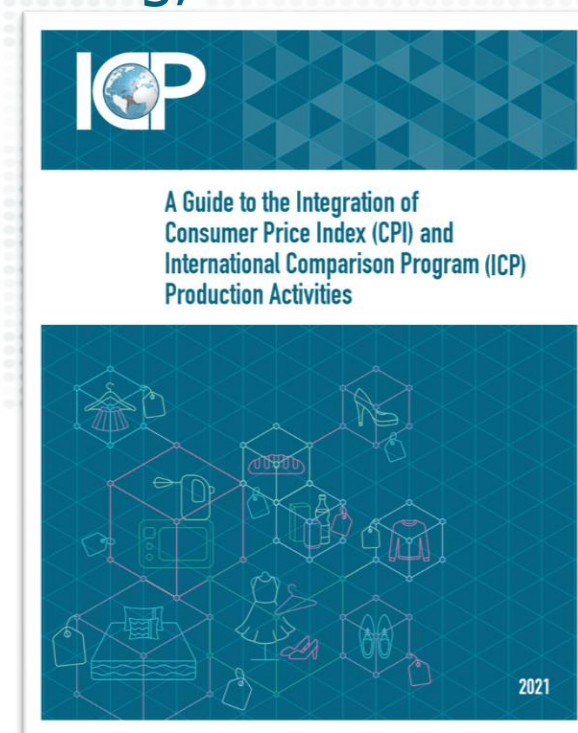
For example, the expenditure group “Food” is subdivided into:

- 9 expenditure classes
- 27 basic headings



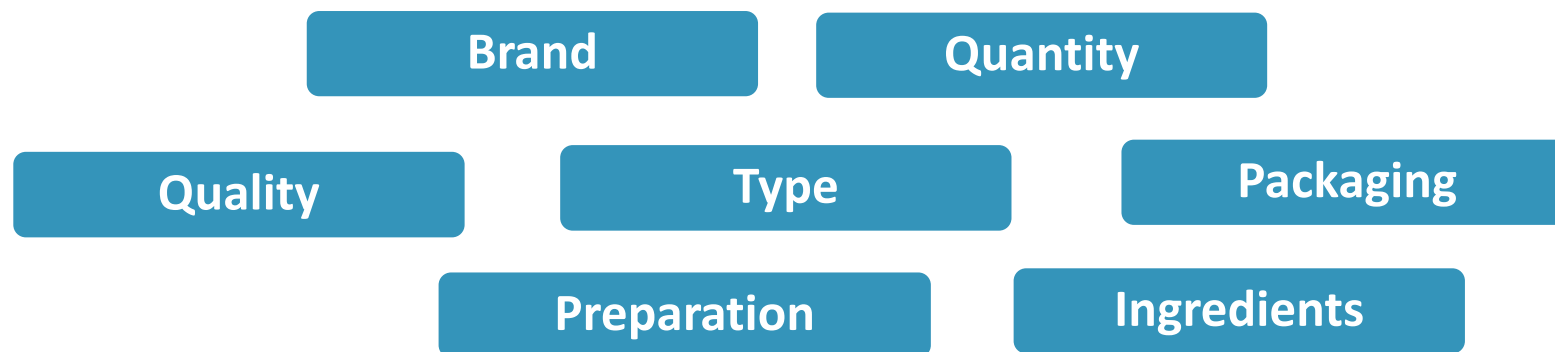
ICP Price Data

- NSOs collect prices for a **common basket of goods and services** that cover all sectors that comprise an economy's GDP or household consumption
- **Household consumption comprises around 60% of GDP** and includes items for food, clothing, utilities, transportation, education, housing, etc.
- ICP participating economies are **not required to price all items** in the common basket of goods and services but ideally **at least one item per basic heading**
- ICP prices **can be sourced from the CPI** if they match items on the common basket of goods and services →



ICP Structured Product Descriptions

- All ICP items are defined by **Structured Product Descriptions (SPDs)**
- **SPDs** describe, in a clear, systematic, and harmonized manner, the main **price-determining characteristics** for each item
 - **GOAL is to ensure intra- and cross-country comparability of prices**
- Examples of price-determining characteristics for **food items**:



Example of ICP Structured Product Descriptions

	Long-grain rice, not parboiled	Basmati rice	Brown rice, family pack
Brand	(S)	(S)	
Brand Type	Well Known	Well Known	Brandless
Minimum quantity	0.5	0.5	4
Maximum quantity	1.2	1.2	10
Unit of measurement	Kilogram	Kilogram	Kilogram
Type	Long grain, white rice (milled rice)	Long grain, basmati, white rice (milled rice)	Long grain, brown rice (husked, whole-grain rice)
Packaging	Pre-packed; paper or plastic bag	Pre-packed; paper or plastic bag	Pre-packed; paper or plastic bag
Quality	High grade	High grade	
Parboiled	No	No	No
Milling		Extra-well-milled	Hulled (husked)
Share of broken rice	Very low (less than 5%)	Very low (less than 5%)	Low (less than 15%)
Aromatic (fragrant)	No	Yes	No
Exclude	Premium rice (e.g. basmati rice, jasmine rice), sticky rice, quick cooking rice	Jasmine rice, sticky rice, quick cooking rice	Premium rice (e.g. basmati rice, jasmine rice), sticky rice, quick cooking rice
Specify	Brand	Brand	Label, if any
Reference Quantity	1	1	1
Reference unit of measurement	Kilogram	Kilogram	Kilogram

PPP Estimation

- **In simplest form, a PPP is a ratio of country X price over country Y price for an item**
 - Big Mac in XX: e4.99 | Big Mac in YY: \$3.99 | PPP XX: 1.25 (YY=1.00)
- **Global ICP PPPs are estimated in two stages:**
 - **Stage 1:** Regional PPPs are estimated by regional implementing agencies
 - Regional base country = 1
 - **Stage 2:** Global PPPs are estimated by the World Bank
 - Global base country (USA) = 1
- **A few key ICP PPP characteristics:**
 - Base country invariance | Transitivity | Fixity

Combining Price and Expenditure Data to Calculate PPPs

PPPs are first estimated based on prices at the basic heading level

Item Code	PRICES, LCU	Basic heading	Economy A	Economy B	Economy C	Economy D
110111101	Long-grain rice	Rice	1020.22	70.02	780.00	5.10
110111102	Short-grain rice	Rice	1000.00	80.33	728.48	4.25
...
110111301	Bread loaf	Bread	2500.71	199.37	3451.15	15.25
110111302	Bread rolls	Bread	3561.45	192.91	5965.37	30.54

PPPs are then aggregated to each ICP classification level up to GDP

Item Code	EXPENDITURES, LCU	Classification level	Economy A	Economy B	Economy C	Economy D
1101110	Bread and cereals	Class	773.75	5.92	12054.43	9248.76
1101111	Rice	Basic Heading	120.56	2.12	1945.66	690.09
...	...	Basic Heading
1101113	Bread	Basic Heading	81.61	19.71	2768.79	718.99

Item Code	PPPs, (Economy B=1)	Classification level	Economy A	Economy B	Economy C	Economy D
1101110	Bread and cereals	Class	15.57	1.00	17.18	0.09
1101111	Rice	Basic Heading	13.46	1.00	10.05	0.06
...	...	Basic Heading
1101113	Bread	Basic Heading	15.21	1.00	23.13	0.11

(!) Read more [HERE](#) | and [HERE](#)



5. Participation of the Pacific Islands in the ICP 2011

Participation of Pacific Islands in ICP 2011

- **20 Pacific Islands** economies participated in the ICP 2011
- Their participation was limited to the **individual consumption expenditure by households** and prices were collected quarterly over 2012
- **Pacific Islands were linked** to the rest of the world through economies that were in other regional comparisons and had global results:
 - Fiji (Asia and Pacific comparison)
 - Australia (Eurostat-OECD comparison)
 - New Zealand (Eurostat-OECD comparison)
- The PPPs for the Pacific Islands were not directly included in the global aggregations and **had no impact on the comparisons** of the other economies

Participating Pacific Islands in ICP 2011 [20]

- 
- A faint, light blue world map is visible in the background of the slide, centered behind the text.
- American Samoa
 - Cook Islands
 - French Polynesia
 - Guam
 - Kiribati
 - Marshall Islands
 - Micronesia, Fed. States
 - Nauru
 - New Caledonia
 - Niue
 - Northern Mariana Islands
 - Palau
 - Papua New Guinea
 - Samoa
 - Solomon Islands
 - Tokelau
 - Tonga
 - Tuvalu
 - Vanuatu
 - Wallis and Futuna

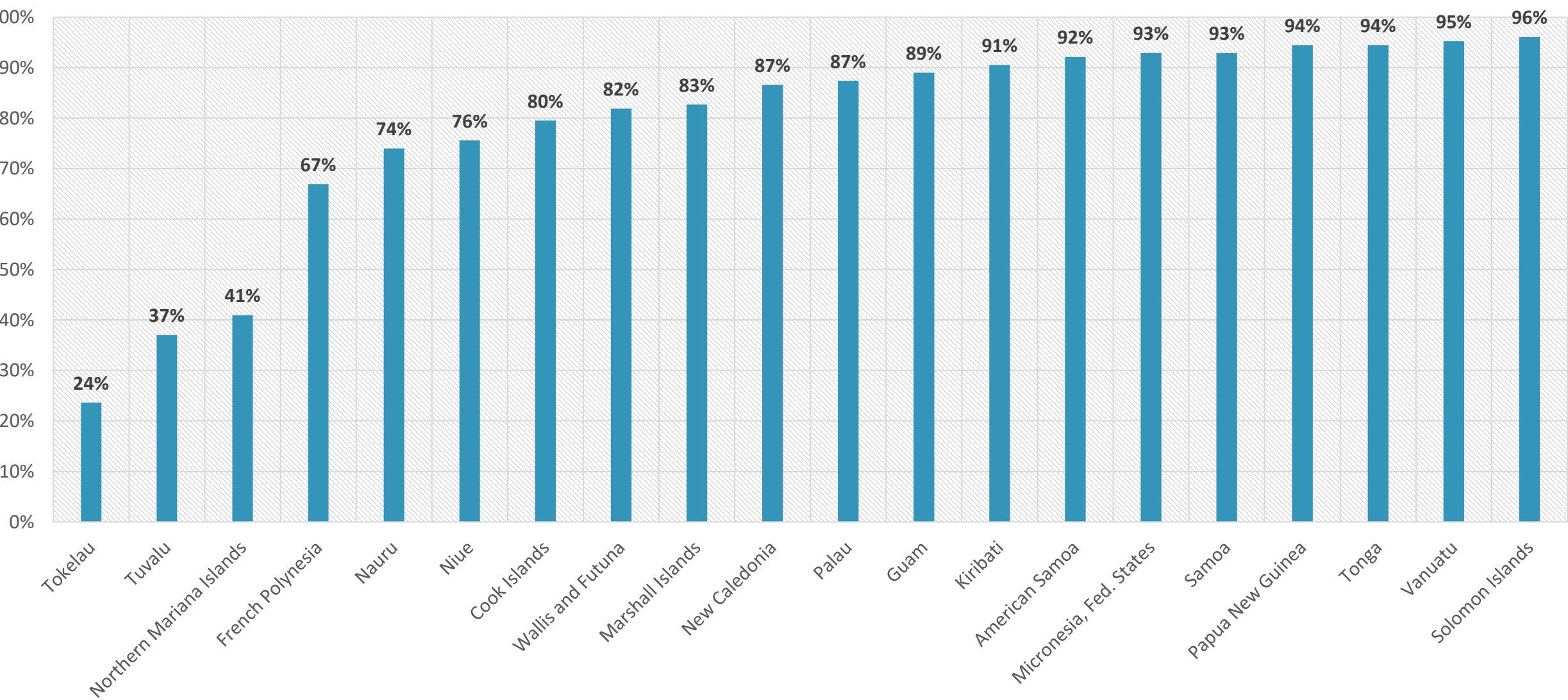
ICP 2011 Expenditure Data

- **Expenditure data from the NSOs:**
 - 14 economies
- **Expenditure data from the U.S. Department of Commerce:**
 - American Samoa
 - Guam
 - Northern Mariana Islands
- **No expenditure data for:**
 - Niue
 - Tokelau
 - Wallis and Futuna

ICP 2011 Pacific Islands Item List (HHC)

ICP HHC Classifications	2011 Global Core Item List	2011 Pacific Islands Item List	2021 Global Core Item List
FOOD AND NON-ALCOHOLIC BEVERAGES	189	64	199
ALCOHOLIC BEVERAGES, TOBACCO AND NARCOTICS	16	7	18
CLOTHING AND FOOTWEAR	53	7	57
HOUSING, WATER, ELECTRICITY, GAS AND OTHER FUELS	16	12	16
FURNISHINGS, HOUSEHOLD EQUIPMENT AND ROUTINE HOUSEHOLD MAINTENANCE	75	8	70
HEALTH	64	1	75
TRANSPORT	65	10	60
COMMUNICATION	13	7	31
RECREATION AND CULTURE	53	4	55
RESTAURANTS AND HOTELS	28	2	27
MISCELLANEOUS GOODS AND SERVICES	30	4	28
TOTAL	602	126	636

Items Priced from the PAS item list per Island, ICP 2011, %



PPP-based HHC Expenditures and PLIs (World = 100), 2011

Size of bubble
indicates the relative
size of PPP-based
expenditure for each
country

