Multidimensional Poverty

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UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE
CONFERENCE OF EUROPEAN STATISTICIANS
Workshop on Harmonization of Poverty Statistics to Measure SDG 1 and 10
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Poverty is multidimensional

…goes against the expansion of people's ability
to freely choose what they want
to do or be in life

SDG 1.2.2: By 2030 « reduce at least by half
the proportion of men, women and children
of all ages living in poverty in all its
dimensions according to national definitions

A new approach is needed:

*Life is diminished in many ways, constantly
Amartya Sen, Nobel Prize Winner*

Why a Multidimensional Poverty Index (MPI)?

A dashboard is very useful

Across 101 countries and 5.2 billion people (UNDP, 2020):

- **53%** of the considered population lack **clean cooking fuel**
- **40.2%** lack adequate **sanitation** by MDG definitions
- **26.5%** live in houses where **floors are dirt**, sand, or natural
- **26.8%** have someone in their household who is **undernourished**
- **21.8%** lack **electricity**
- **16.9%** of people live in houses where **a child has died**
- **13.6%** live in a household in which **no member has completed five years of schooling**.

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Totals 13.2 billion deprivations across 5.2 billion people.

Simple question: How many people have more than one deprivation?

A dashboard doesn't consider the interrelationships between indicators

Society I

	Education	Assets	Shelter	Water
1.	D	ND	ND	ND
2.	ND	D	ND	ND
3.	ND	ND	D	ND
4.	ND	ND	ND	D
	25%	**25%**	**25%**	**25%**

Society II

	Education	Assets	Shelter	Water
1.	ND	ND	ND	ND
2.	ND	ND	ND	ND
3.	ND	ND	ND	ND
4.	D	D	D	D
	25%	**25%**	**25%**	**25%**

ND: Not Deprived

D: Deprived

The Alkire-Foster Method shows who is deprived in multiple indicators at the same time

Society I

		Education	Assets	Shelter	Water	
1	1.	D	ND	ND	ND	
1	2.	ND	D	ND	ND	
1	3.	ND	ND	D	ND	
1	4.	ND	ND	ND	D	
		25%	**25%**	**25%**	**25%**	
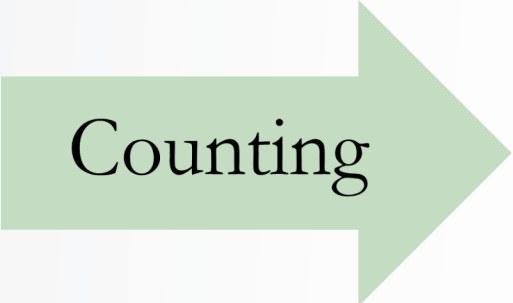
Society II

		Education	Assets	Shelter	Water	
1.	ND	ND	ND	ND		0
2.	ND	ND	ND	ND		0
3.	ND	ND	ND	ND		0
4.	D	D	D	D		4
	25%	**25%**	**25%**	**25%**		

Counting

The Alkire-Foster Method: steps for identifying a poor person

1. Define a **list** of relevant indicators
2. Define a threshold *(deprivation cutoff)* for each indicator
3. Identify **deprivations** for each person in each indicator
4. Assign a relative **weight** or relative deprivation **value** to each indicator
5. Sum the weighted deprivations = **deprivation profile** or **deprivation score**
6. Identify the **poor** by using a threshold *(poverty cutoff)* and comparing it with the deprivation score

The Alkire-Foster Method to measure multidimensional poverty

➢ It enables to calculate:

  ➢ **The incidence of multidimensional poverty or the poverty rate (H)** as the percentage of the population that is identified as multidimensionally poor

  ➢ **The intensity of poverty (A)** which is the percentage of weighted deprivations that poor people experience, on average

  ➢ **The Multidimensional Poverty Index (MPI)**, calculated as the multiplication between the poverty rate (H) and the poverty intensity (A), and measures the **level of poverty within the country**

Indicators

Education

- School Attendance
- Educational Attainment
- School Lag
- Early Childcare

Water & sanitation

Health

- Nutrition
- Food Security
- Access to Healthcare
- Health Insurance
- Child Mortality

Housing, basic public services & infrastructure

- Housing Materials
- Electricity
- Overcrowding
- Cooking Fuel
- Assets
- Land &/ Livestock
Garbage Disposal

Employment & social protection

- Unemployment
- Informal Work
- Precarious Work
- Child Labour
- Pensions
- Birth Registration
- Social Transfers / Security

Environment & safety

- Exposure to Hazards
- Proximity to Polluted Areas
- Physical Safety/Crime
- Security

Policy makers use *their* MPIs to:

1. **Complement** <u>monetary poverty statistics</u>
2. **Track poverty** over time
3. **Allocate resources** by sector or region
4. **Target** marginalized groups, or households
5. **Coordinate** policy across sectors and levels of government
6. **Set goals** and **evaluate** progress
7. **Leave no one behind** by identifying the poorest of the poor
8. Promote **transparency and accountability**

Complement monetary poverty measures

The MPI can provide complementary information to monetary poverty measures

Example: Pakistan National MPI

Example: Philippines National MPI

CURRENTLY, the government has two measures to determine how many Filipinos remain poor. The first measure is based on the FIES while the other, which is the most recent one that was developed by the PSA, is the Multidimensional Poverty Index (MPI).
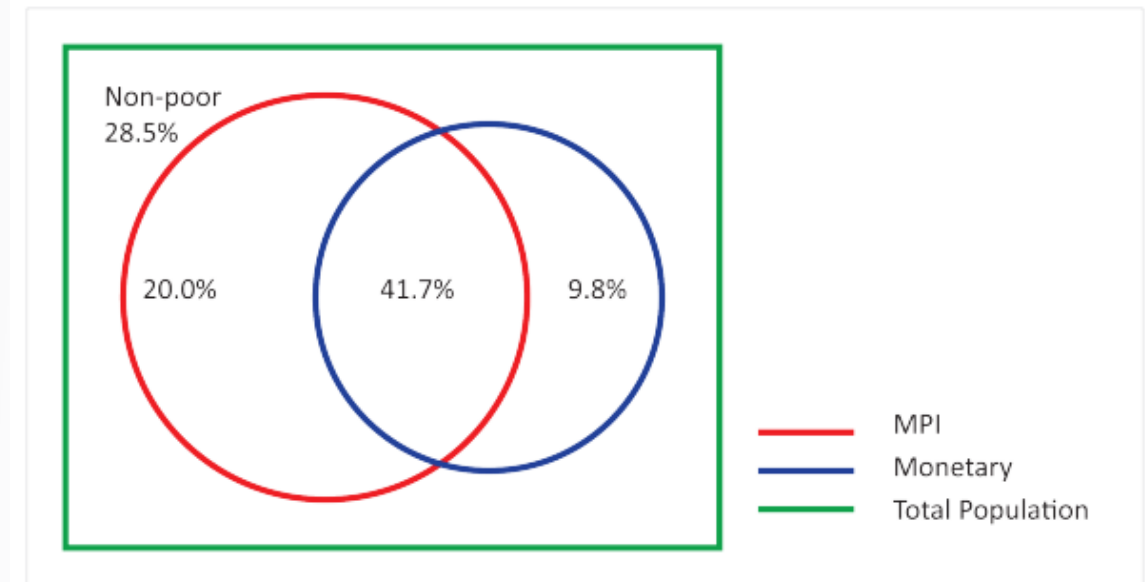
Complement monetary poverty measures

If the monetary and multidimensional poverty measures use the same data source, you can analyse the overlaps and mismatches – which people are poor in one measure, but not the other.

Example: Malawi National MPI

Figure 14: Overlap of multidimensional and monetary poverty

Non-poor 28.5%

20.0%   41.7%   9.8%

— MPI
— Monetary
— Total Population

Source: National Statistical Office, MPI 2016-2017
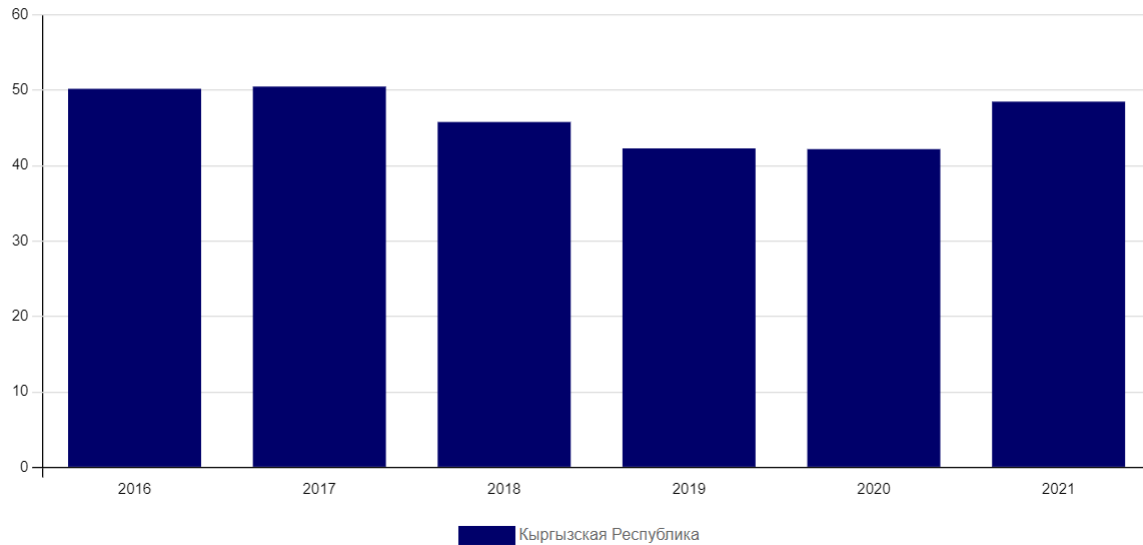
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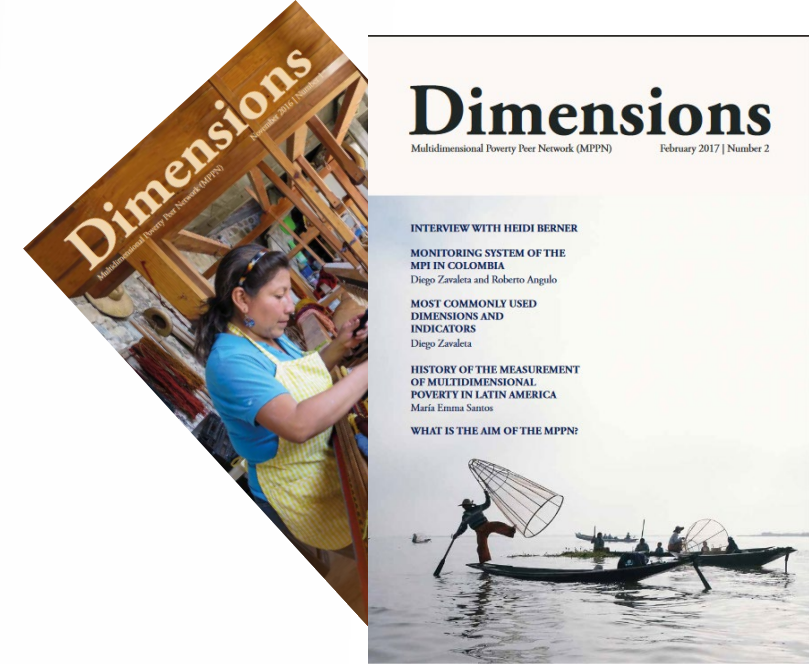
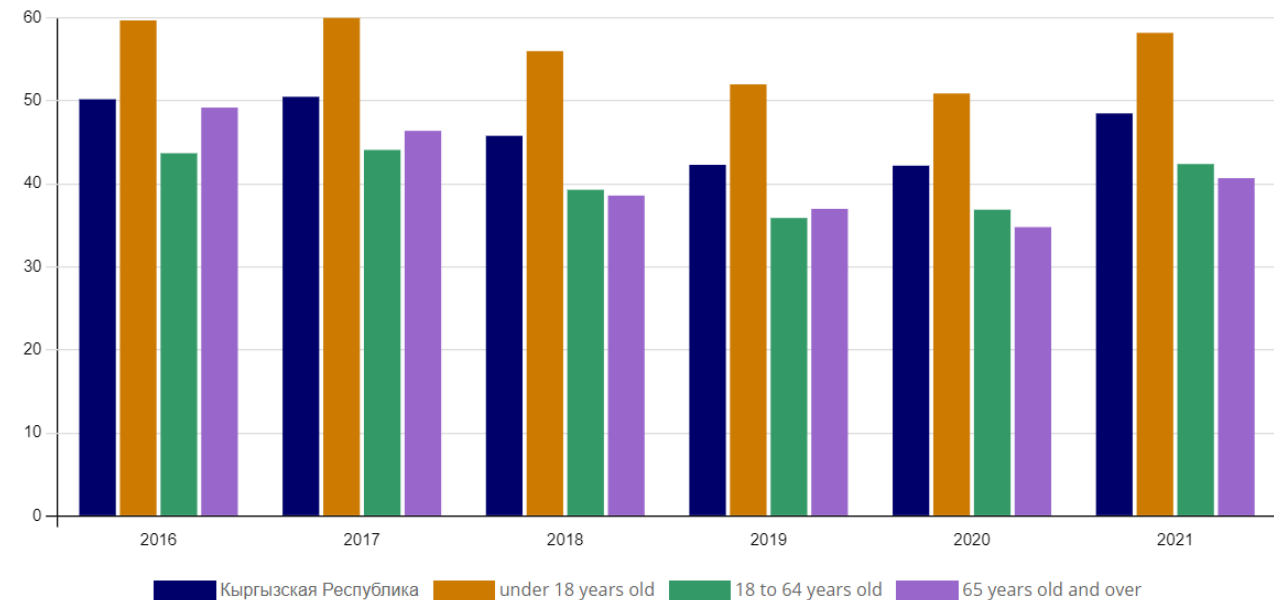# Republic of Kyrgyzstan MPI evolution 2016-2021:
Incidence dropped from 50% in 2016 to 42.2% in 2020, increasing to 48.5% between 2020 and 2021

Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions

Children under 18 years old and 65 and older people have reduced poverty the most

Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
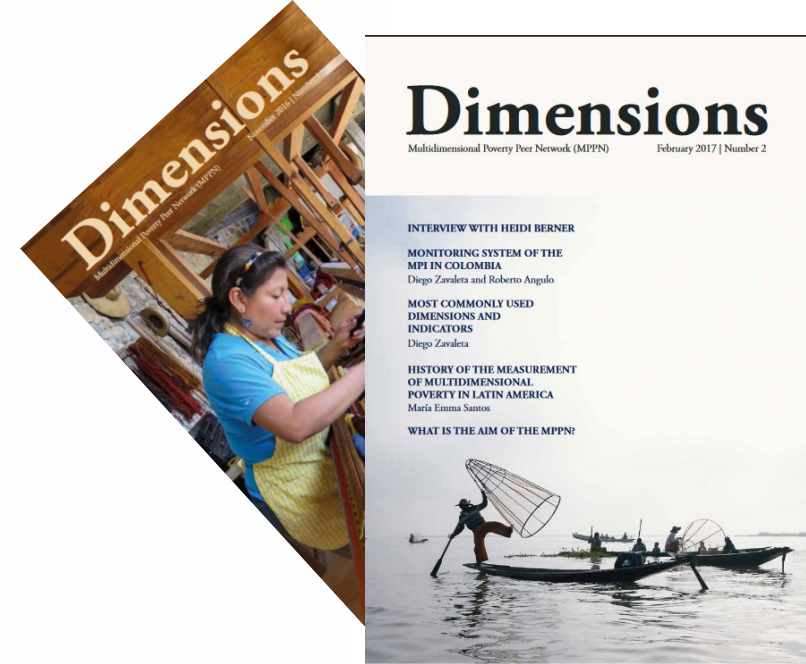
Track poverty over time

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Allocate resources/budget

Costa Rica:

As the 2015 MPI showed big mismatches between policy objectives in MPI and allocations, then-President Solis issued a Presidential Decree that MPI must be part of budget allocation formulae in the future.

The MPI reduction accelerated on a fixed budget.

MPI in Costa Rica

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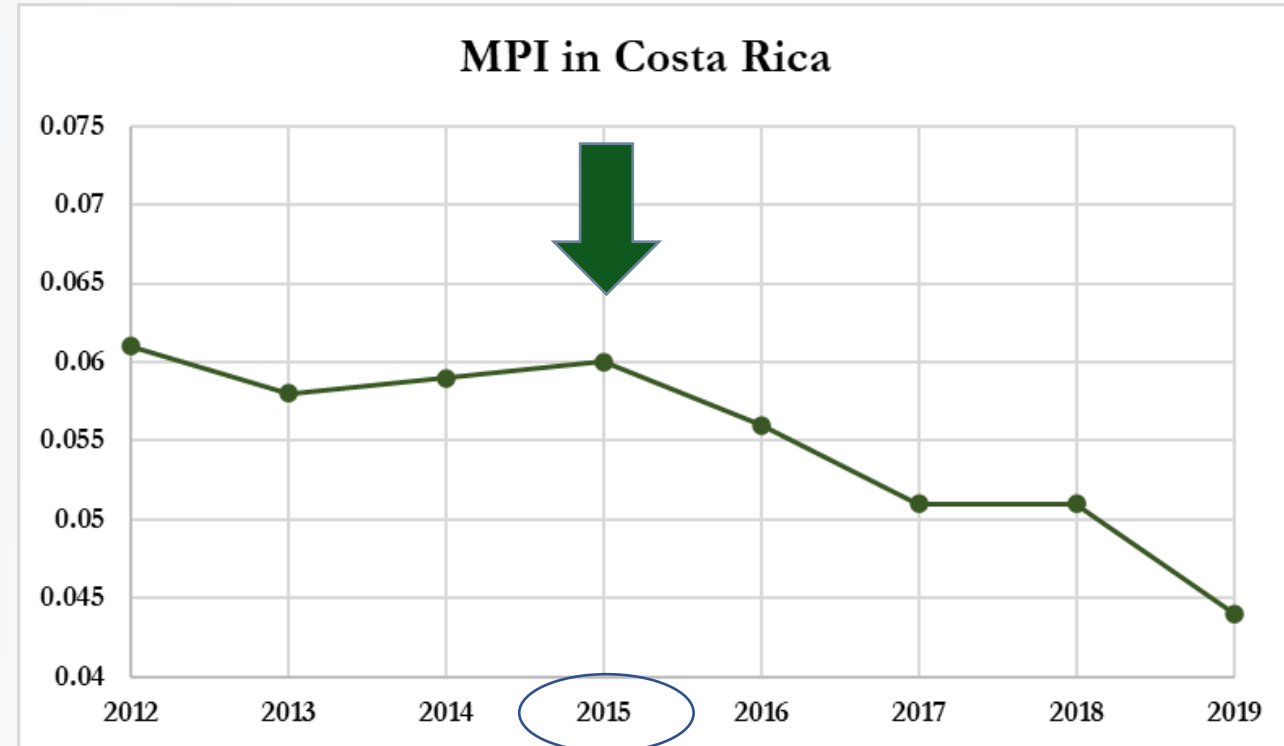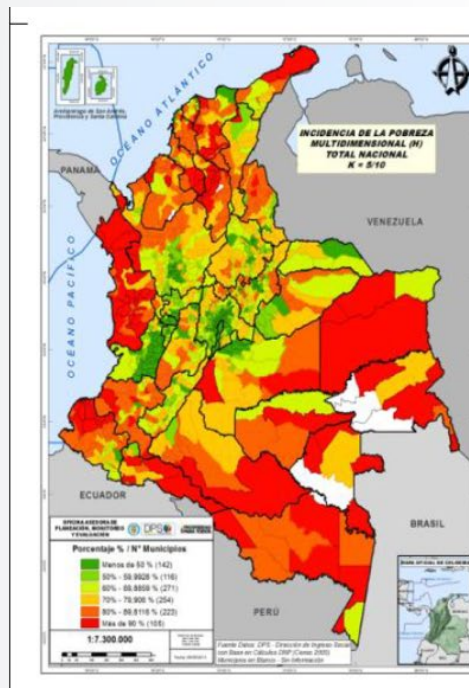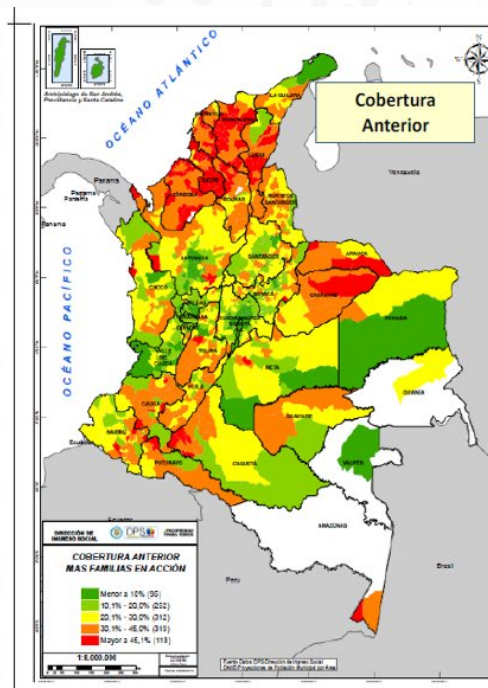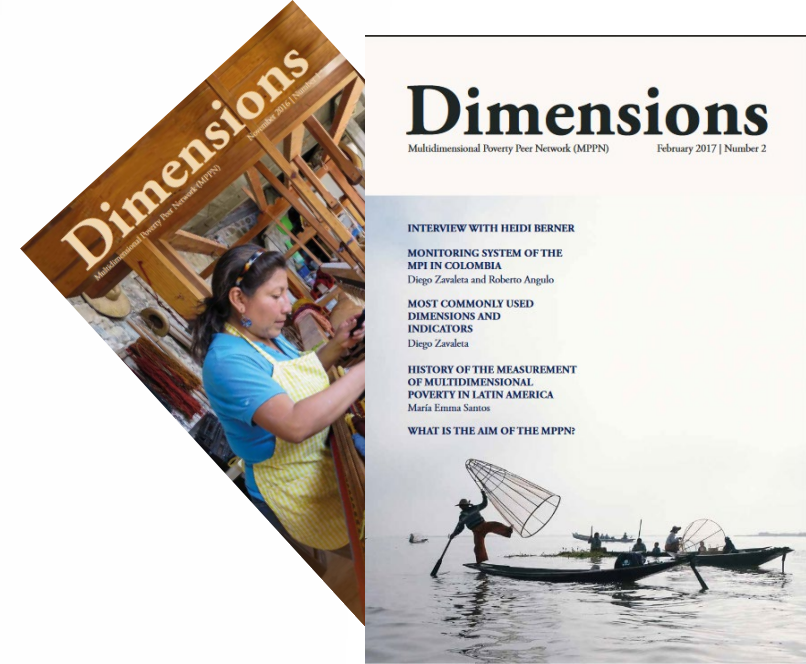# Geographical Targeting

The MPI can enable group-based targeting through disaggregations of different population sub-groups.

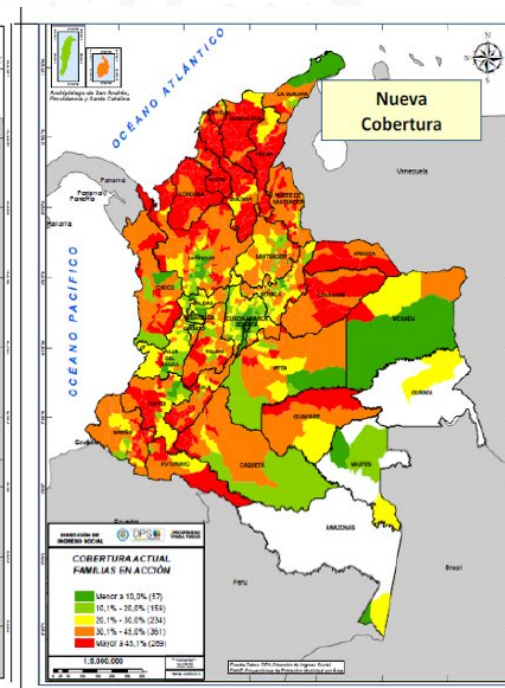**To target social programs to the poorest municipalities (Colombia)**

MPI Poverty

Previous Coverage

New Coverage

Individual Targeting

If an MPI is computed from census, administrative, or other data that is collected on all relevant individuals/households, it can be used for targeting at the individual level.

Example: Honduras MVI for Covid response

Honduras developed an MVI using registry data, with additional questionnaires online and through community groups. This measure was then used to identify beneficiaries for a voucher that could be redeemed for food, medicine, and biosafety equipment.

Dimension	Indicator
High-risk population	60 years old or more people
	People with chronic diseases
	Unemployment because of health problems
Health, food, household and services	Access to food
	Access to water
	Access to sanitation
	Overcrowding
Economic resilience	Housing payments
	Goods and assets
	Financial services
	Comunication
Financial means and work security	Type of employment
	Permanent employment
	Sector
	Social security

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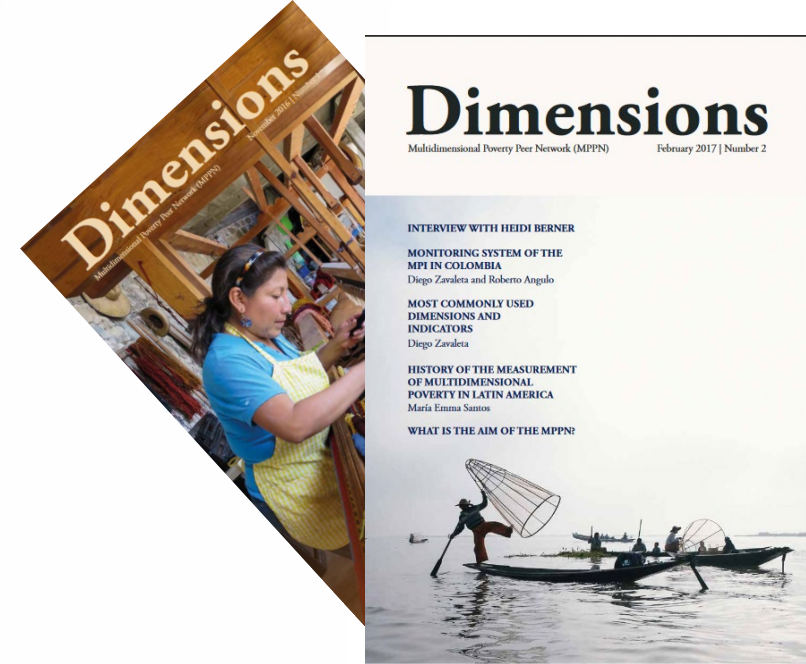
Coordinate policy

The MPI can be used as a policy coordination tool across governmental levels (e.g., federal and state)

A roundtable of Ministers and the President was formed to meet and assess progress towards the MPI targets.

Colombia Example

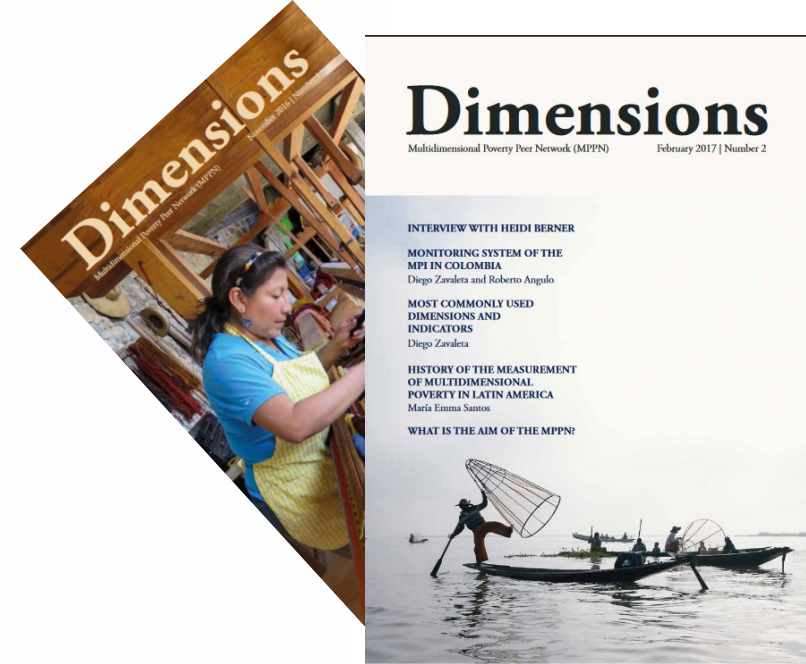### Development of Colombia Multidimensional Poverty Index

2010 At end of last term, President Uribe begins the process of implementing a National MPI in Colombia

2011 President Santos turns the MPI into a metric to coordinate the work of ministries and uses it for targeting. Puts it in the National Plan and uses it as part of his peace program. In 8 years multidimensional poverty in Colombia falls from 31% to 19% - thousands get out of poverty.

2013 Santos travels to Oxford to officially launch with Professor Amartya Sen the Multidimensional Poverty Network - which now has 60 countries worldwide. Colombia is a member of the steering committee of the Network.

2018 New Government of President Duque maintains the MPI and uses it as a key metric in the Development Plan.

2020 MPI is used as a tool in the COVID crisis to focus resources at the national level. The City of Bogotá adapts the MPI and uses the adapted metric to expand its aid during the crisis.

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Set goals and evaluate progress

Example: Colombia National MPI

It set targets for the MPI and different indicators (using microsimulations).

● 0%-10% avance   ● 10%-25% avance   ● >25% avance

Pobreza	Línea Base PND 2008	Dato 2011	Dato 2012	Análisis	Goal	
MPI (Multidimensional Poverty)	**34.7%**	**29.4%**	**27.0%**	●	**22.5%**	
A — Educational achievement (≥15 yrs)	58.8%	54.6%	53.1%	●	52.8%	
A — Literacy (≥15 yrs)	14.2%	12.0%	12.1%	● ★	12.0%	
B — School attendance (6-16)	5.4%	4.8%	4.1%	●	3.5%	***
B — No school lag (7-17)	33.4%	34.1%	33.3%	●	33.1%	
B — Access to child care services (0-5)	12.1%	10.8%	9.4%	●	10.6%	
B — Children not working (12-17)	5.5%	4.5%	3.7%	●	2.9%	
C — Long-term unemployment	9.6%	9.1%	10.0%	● ★	9.3%	***
C — Formal employment	80.6%	80.4%	80.0%	●	74.7%	
D — Health insurance	24.2%	19.0%	17.9%	●	0.5%	
D — Access to health services	8.9%	8.2%	6.6%	●	2.4%	
E — Access to water source	12.9%	12.0%	12.3%	● ★	10.9%	
E — Adequate sewage system	14.1%	14.5%	12.1%	●	11.3%	
E — Adequate floors	7.5%	6.3%	5.9%	●	5.6%	
E — Adequate external walls	3.1%	3.2%	2.2%	●	2.1%	***
E — No critical overcrowding	15.7%	14.2%	13.1%	●	8.4%	

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Leave No One Behind

Disaggregating by population groups can show which groups are being left behind

Figure 8 The poorest states in India saw the fastest absolute reduction in Multidimensional Poverty Index (MPI) value from 2015/2016 to 2019/2021
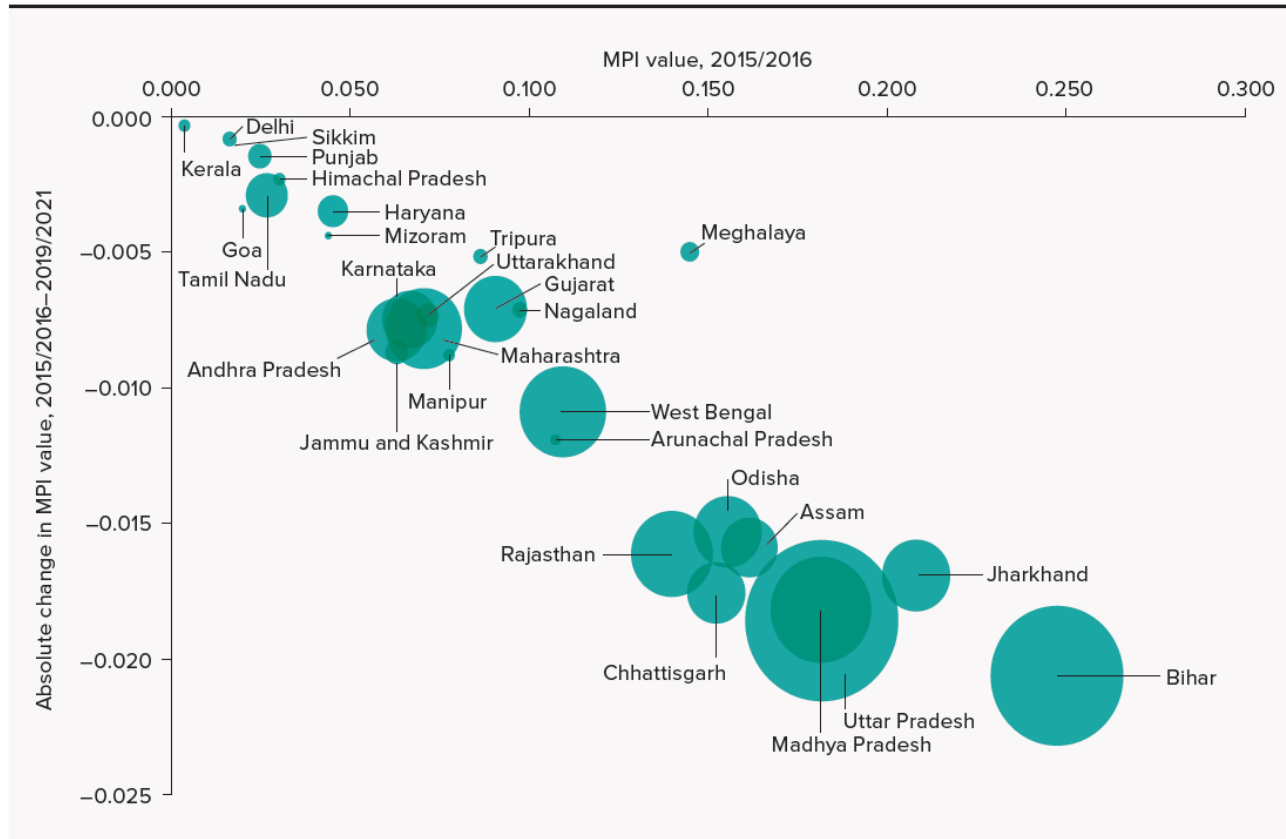
Note: The size of the bubble is proportional to the number of poor people in 2015/2016.
Source: Alkire, Kanagaratnam and Suppa 2022c.

Within Country Trends in India 2005/6 to 2015/6 to 2019/21

India's **poorest groups,** including its children, rural areas, states, and scheduled tribes had the fastest absolute reduction 2005/6 to 2019/21

National MPIs are always disaggregated by age; Children are usually poorer than adults.

Examples of MPIs with Child-Disaggregation	Children have higher MPI and H than Adults?
Afghanistan	Yes
Angola	Yes
Armenia	Yes
Bhutan	Yes
Chile	Yes
Costa Rica	Yes
El Salvador	Yes
Ghana*	Yes
Maldives	Yes
Mexico	Yes
Namibia	Yes
Nepal	Yes
Seychelles	Yes
Sierra Leone	Yes
Pakistan*	Yes
Global MPI	Yes

In the Global MPI 2021:

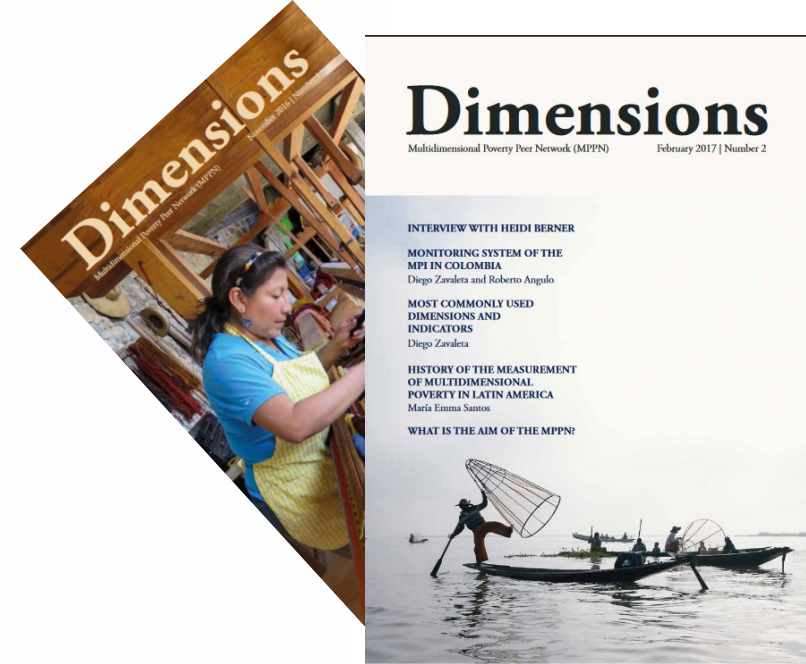**Half** of the world's **poor people** are children under 18 years of age

One in three children are poor
One in six adults are poor.

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Ideal: Link individual Child MPI directly to National MPI

1. A Child MPI that is **linked** to a National MPI (same dataset) can **synergise & activate action.**

2. **Linking** Child Poverty to a National MPI: high impact
   - Easy to understand (most Dimensions are the same)
   - Policy recommendations for shared indicators converge

3. Strategic Analyses => an **Integrated approach**:
   - Build Child MPI by adding extra dimension to National MPI
   - Example: Sri Lanka (put child indicators into HIES)

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Promote transparency and accountability

The MPI can be a tool for transparency and accountability of government poverty-reduction policies.

More and more countries are joining the international community of global leaders in measuring and using the MPI as a permanent and official statistic for poverty reduction in their countries

2009: Mexico
2010: Bhutan
2011: Colombia
2015: Chile, El Salvador, Costa Rica and Viet Nam
2016: Ecuador, Pakistan, Honduras, Mozambique and Armenia
2017: Panama, Dominican Republic, and Nepal
2018: Nigeria, Philippines, and Rwanda
2019: Guatemala, Afghanistan, Sierra Leone, Angola, Thailand
2020: Seychelles, Maldives, Palestine and Ghana
2021: Namibia, Paraguay, South Africa, India, Sri Lanka, Malawi
2022: Uganda, Nigeria

KAZAKHSTAN: example of a country in the region currently building its pilot MPI

- BNS works with UNECE in building an structure for the pilot MPI

- July 2022: OPHI does a technical workshop at Nur-Sultan:
  - Learn about the Alkire-Foster method
  - Intense work in linking the pilot MPI structure with national development plans and strategies
  - Reformulate the pilot MPI structure: drop some indicators and add other – more policy focused
  - Learn to compute the pilot MPI using Stata and SPSS
  - Obtain main national and regional results
  - Present this great (3-days work!) to government officials and international organisations

- BNS receiving additional feedback from policy makers – currently working on finalising the pilot MPI

- Future work: analysing trends over time

KAZAKHSTAN: example of a country in the region currently building its pilot MPI
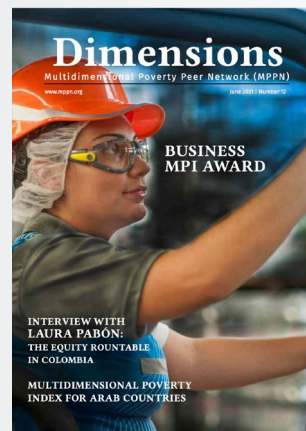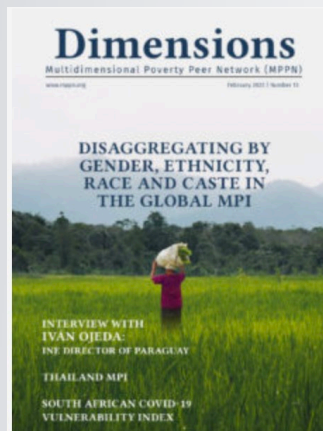
CHALLENGE & LESSONS

- Time: **key** pillars
    - Strong commitment and engagement of the **whole** team
    - Division of group activities for parallel work – policy and technical

- Language: **essential**
    - Great synergies between all the team members
    - Fantastic interpreters

- Statistical software: solutions
    - Simultaneous work in SPSS and in Stata contributed to:
        - Peer learning
        - Double checking results
    - Detailed analysis of the codes to understand computation of the steps to build the MPI

Multidimensional Poverty Peer Network (MPPN)

- MPPN is a **South-South Network** for peer-to-peer knowledge exchange on issues of multidimensional poverty

- Senior officials from **62 countries** and **19 international agencies**

- **Activities:** Annual Meeting, UNGA side event, UNSC side event, thematic webinars, quarterly teleconferences, *Dimensions* magazine

www.mppn.org

Thank you!