SAI20 SUMMIT 2024

Belém do Pará, Brazil
June 17 - 18

PANEL 2

Multidimensional Poverty in the context of climate change

SAI20 SUPREME AUDIT INSTITUTIONS BRAZIL 2024

G20 BRASIL 2024 BUILDING A JUST WORLD AND A SUSTAINABLE PLANET

AGENDA

Keynote Speaker

Dr. Sabina Alkire

Panellists

Mr. Xavier Mancero

Ms. Nina Rentel

H.E. Tsakani Maluleke

Specialist Speaker

Mr. Philipp D. Hauser

DR. SABINA ALKIRE

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Dr. Alkire will present the complexities of measuring multidimensional poverty and its relevance within the Sustainable Development Goals (SDGs) framework.

As a pioneer in poverty measurement, she will discuss the applications of multidimensional poverty indices (MPIs) and how these tools can address climate change.

Dr. Alkire's keynote will highlight how integrating climate variables into MPIs can aid policymakers in targeting vulnerabilities and enhancing policy coordination for sustainable development.

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Multidimensional Poverty and Climate Change: Integrated Approaches for Sustainable Development

SAI20 Summit – 17 June 2024

Sabina Alkire, OPHI, University of Oxford, UK

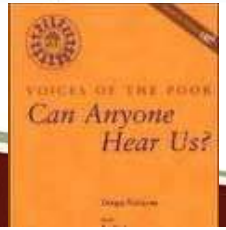
How Multidimensional Poverty Indices (MPIs)

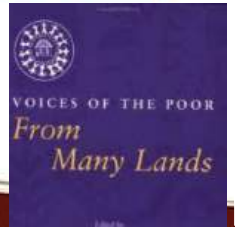
complement monetary poverty measures

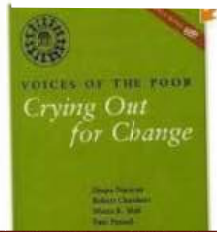
MPI aims to capture how poor people experience poverty

Main deprivations as expressed by people living in poverty in El Salvador and their corresponding indicators.

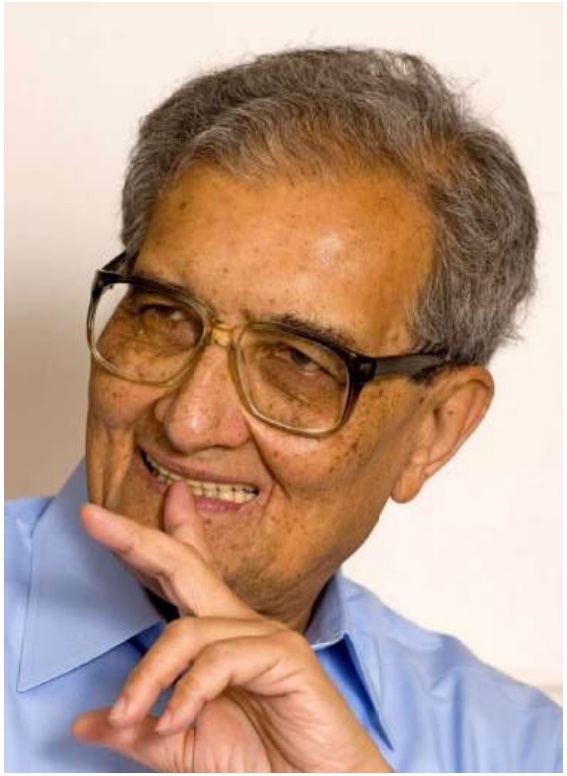
"Look at what I eat"	"The same and fried"	Food insecurity
"Look at where and how we live"	"With holes in the roof"	Inadequate roof materials
	"With dirt flooring"	Inadequate floor and walls materials
	"All crowded"	Overcrowding
	"Unable to protect ourselves"	Exposure to environmental risks and dangers
"See where we live and how"	"Look, with shame, but this is the bathroom..."	Lack of sanitation
	"...Here, there is no piped water"	Lack of drinkable water
	"We are scared to be evicted"	Land ownership insecurity
"We do nothing but the same"	"It is just that fun does not exist here"	Lack of public spaces for leisure activities
"Here, there is no job"	"Few job positions and poorly paid"	Unemployment Precarious employment
	"I work in whatever I can in whatever conditions"	Lack of social security
	"With no education there are no opportunities"	Low employability
	"There is not enough money, children have to work"	Child labour
"Worse if we get sick"	"Going to the doctor means one day less of work"	Lack of access to health services
"Or if one loses the little one owns"	"One does not go out in order to take care of the house"	Restrictions due to insecurity
	"I left for one day and robbers broke in"	Incidence of crime and felonies
"If I had been educated"	"We are not going to study anymore"	School non-attendance
	"This year s/he is not going to study, only next one"	Schooling lag







Amartya Sen:
Poor people often experience poverty as multidimensional.
measure poverty of capabilities



Human lives are battered and diminished in all kinds of different ways, and the first task… is to acknowledge that deprivations of very different kinds have to be accommodated within a general overarching framework

Nobel Laureate Amartya Sen (2000)

Capabilities are the freedoms to enjoy valuable beings and doings

They **recognise diversity,** such as disabilities and different life goals

Deepa's Situation of Poverty

Deepa is deprived in 44.4% of dimensions.

Anyone who is deprived in 33.3% or more is multidimensionally poor

Deepa is considered MPI poor

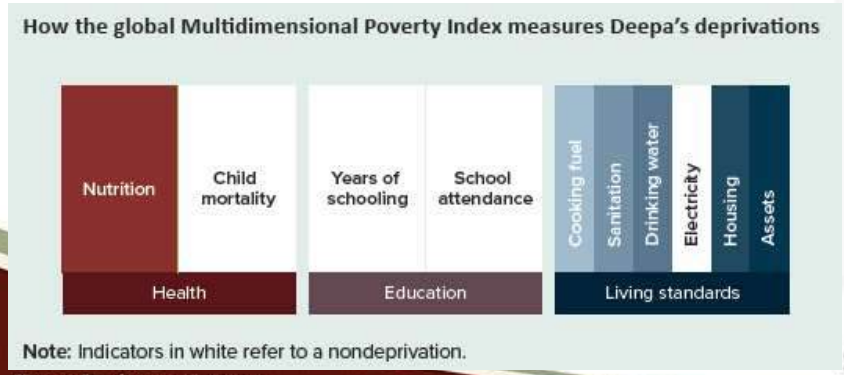
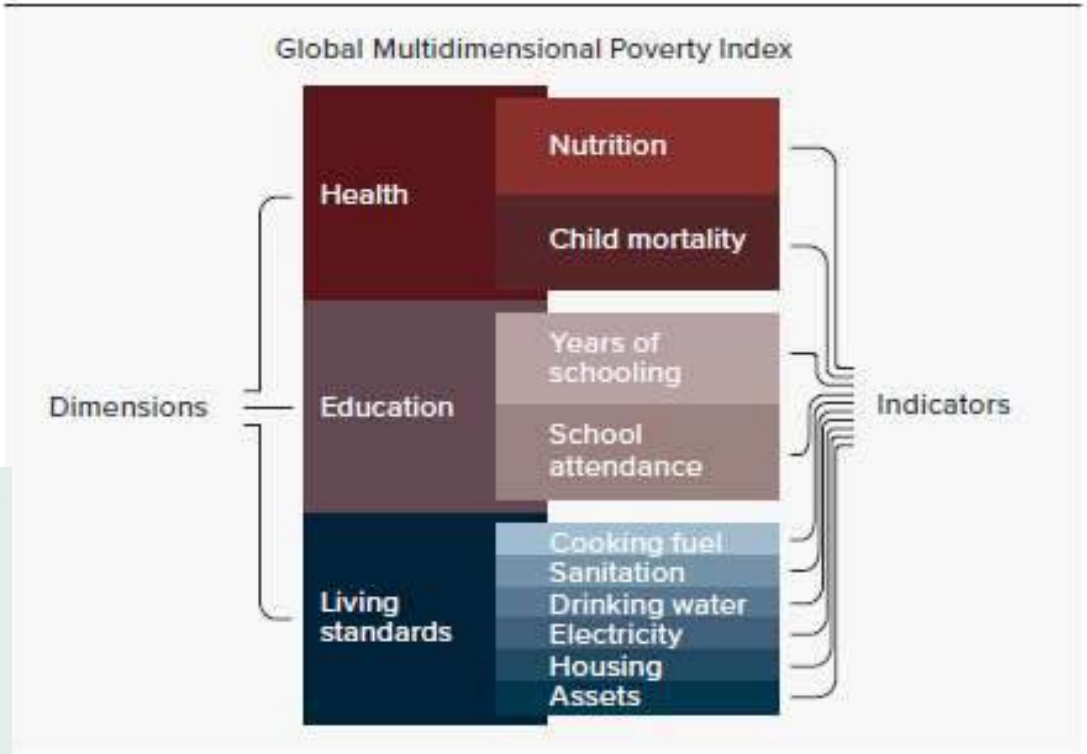


Figure 1 Structure of the global Multidimensional Poverty Index



Source: HDRO and OPHI.

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National MPIs link to SDGs

- Two types of MPIs: National vs Comparable

National and Comparable Multidimensional Poverty Indices (MPIs)

We cover trends in the two main types of MPIs: national and comparable

- **National MPIs: Official statistics** that are **used in policy** to allocate budget, target interventions, design policy, monitor progress, coordinate interventions, and report as **SDG Indicator 1.2.2.** Their dimensions and indicators are tailored to each country **context** so they **cannot be compared or aggregated**.
  - Mexico, India, South Africa, EU (AROPE), United States have MPIs – with others in progress.

- The **Global MPI:** a measure of acute multidimensional poverty across 10 indicators for 6.1 billion people in 110 countries. It is published annually with extensive disaggregations. It **is used for comparisons and aggregates.**
  - **Regional MPIs**: have been published for Arab States (twice) and LAC (CEPAL 2014). Several regional MPIs are now under development for LAC.
  - OPHI will build a comparable **Environmentally-Augmented MPI for LAC** in 2024/2025.

National MPIs link to SDGs

- Who is using MPIs as accountability tools or performance indicators?

Atkinson: Metrics matter if they a) motivate; b) monitor; c) shape policy

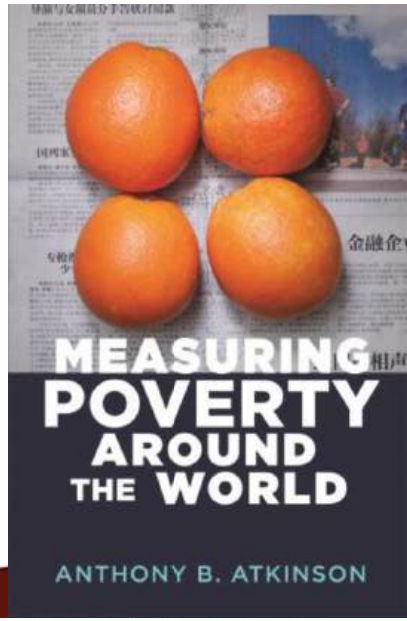
Poverty statistics matter because <u>they motivate people</u> to tackle a key challenge. (p 1)

Statistical evidence about the extent and nature of poverty has been a major factor influencing political action …. **The statistics are a <u>performance indicator</u>.** (p30)

The role of **performance monitoring has acquired much greater salience** with the adoption… of **<u>targets</u>** for the reduction or elimination of poverty." (p30)

This is true in the SDGs – and will be true post-2030 also.

MPIs are increasingly taking a motivational role



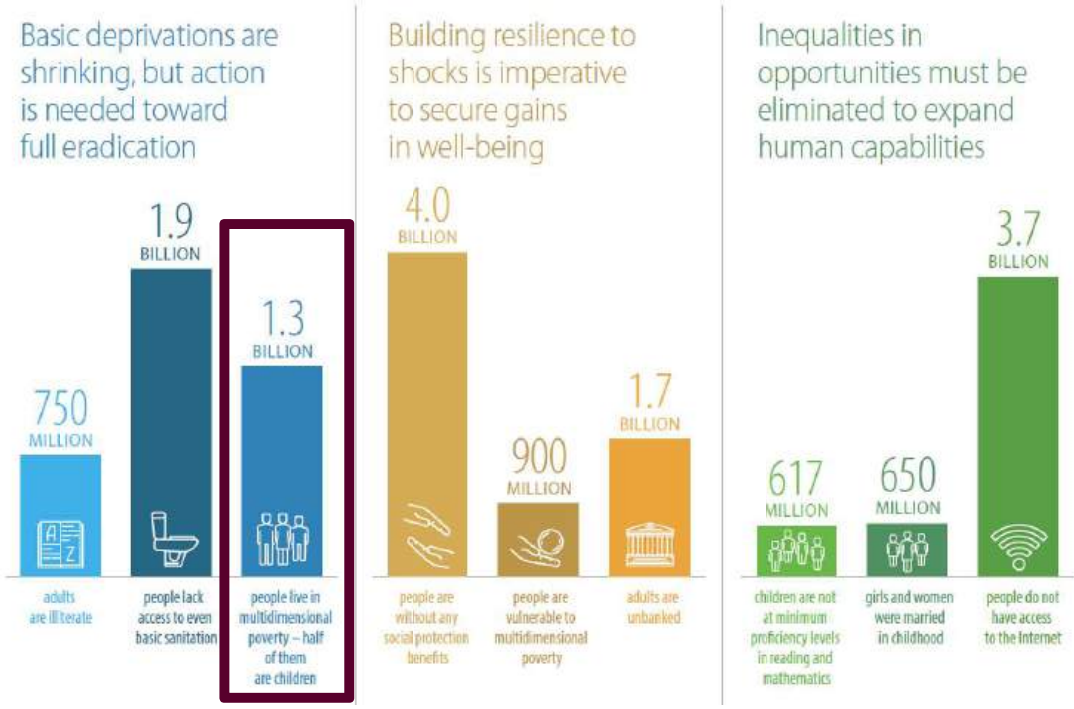
The global MPI is used to monitor the Third UN Decade for the Eradication of Poverty (2018-2027)

"Ending poverty is not just about people's income but also their access to basic needs, such as quality education and health care, clean water and sanitation, decent housing and security."

"The poorest of the poor are subject to overlapping dimensions of poverty and inequalities."

"**The overarching objective** regarding non-income dimensions of poverty is to **promote integrated approaches and policy frameworks to address multidimensional poverty.**"

The plan of action will therefore work to… ensure the availability of **multidimensional data on poverty…** that is high quality, accessible, timely, reliable and disaggregated.



Monitoring Global Poverty (World Bank 2017) & GSDR

The World Bank study ***Monitoring Global Poverty*** led by Sir Tony Atkinson recommended the use of monetary and non-monetary measures to monitor poverty, and explicitly commended a multidimensional poverty indicator based on the **MPI** methodology (World Bank, 2017, Recommendation 19).

The 2019 ***Global Sustainable Development Report: The Future is Now*** written by an Independent Group of Scientists appointed by the UN Secretary-General, observed that the global MPI presented a 'more sobering picture' than the extreme monetary poverty measure, and used **global and National MPIs** in their analysis.

National MPIs are used to Monitor the SDGs

- **Goal 1 of 17 goals:** **End Poverty in all its forms everywhere**
- **Each MPI** also shows direct interlinkages between **Other SDG Indicators.**

- **2nd out of 169 Targets :** **Multidimensional Poverty** **Target 1.2**
- **3rd out of 232 distinct SDG Indicators:** **Multidimensional Poverty** **Indicator 1.2.2**
- **MPI advances SDG strategies of Breaking Silos and Leaving No One Behind**
  Information Platform to build Integrated Policies; Disaggregated Data to track the poorest.

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Indicator 1.2.2

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

1 NO POVERTY

SDG 1.2 is monitored using National MPIs for SDG indicator 1.2.2:

- SDG Target 1.2 & Indicator 1.2.2: "*By 2030, reduce at least by half the proportion of men, women, and children living in poverty in all its dimensions according to national definitions.*"

- Reported for 79 countries (May 2024)
  - 44 countries and 2.9 billion people have a National MPI
  - 34 countries and 543 million people use Eurostat's AROPSE
  - 2 countries (Burundi, Tonga) use Non-MPI, Non-AROPSE methodologies.
  - 5 additional countries have an individual child MPI but no official national MPI.

Draft analysis by Sabina Alkire & Jakob Dirksen using 2023 UN DESA Population Division Estimates

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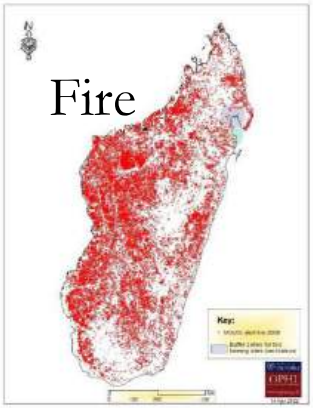
Poverty & Climate:

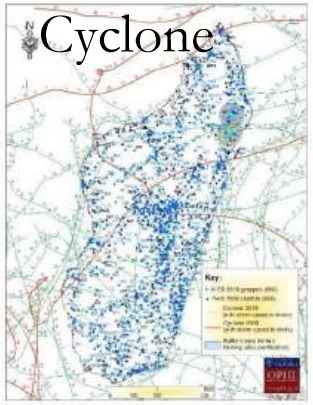
Precision Mapping of the worst-affected

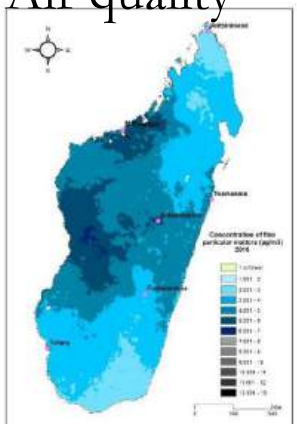
Environment and MPI: Geospatial merging

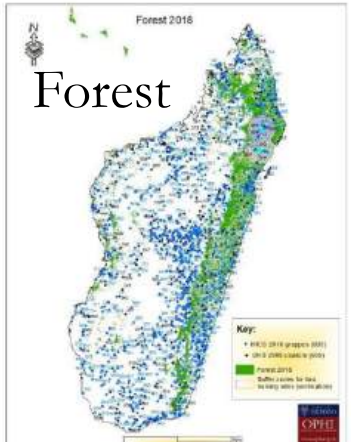
An environmentally augmented Multidimensional Poverty Index:
The Case of Madagascar

S Alkire, H Andrianandsana, A Fortacz, F Vollmer





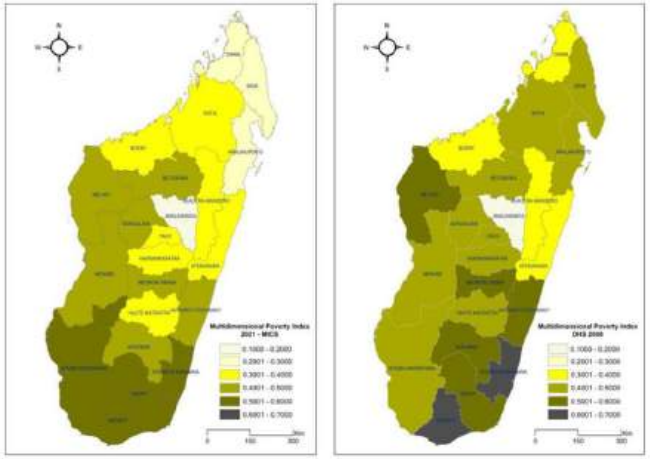




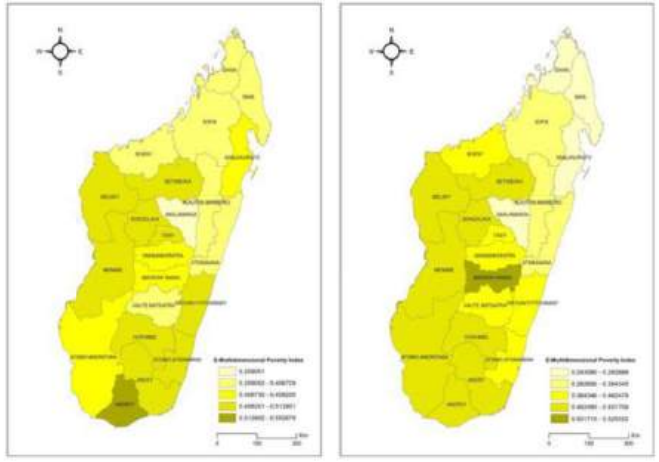
- Merge global MPI data for Madagascar 2008-2018 with satellite data using GPS of the cluster. A person is deprived if they live in a cluster where:
  - the **forest** cover is less than 10% within a 10km radius.
  - the annual concentration of fine **particulate** matter is higher than 5 µg/m3 within a 10km radius.
  - a **cyclone** was recorded within a 50km radius.
  - three or more **fires** were recorded within a 10km radius
  - an **earthquake** (with a magnitude of 4 or more) was recorded within a 10km radius.

Compute an Environmentally-Augmented MPI; also raises methodological challenges for trends over time, and possible ways forward.

Map. 1: global MPI Madagascar



Map. 2: E-MPI Madagascar



1. **The inclusion of environment dimension <u>increases the incidence</u> of poverty:**
   The E-MPI incidence **is 85.5%** in 2008 **vs 75.7%** for the global MPI. In 2018 it is and 81.7% vs 67.8% for the global MPI.
   - The EMPI makes visible the additional environmental deprivations faced by the poor.
2. **The geographic shape of poverty changes only marginally**: Nine of the ten poorest subnational regions of the MPI are among the poorest ten in the E-MPI (with change in some rankings).
   - The E-MPI shows that the poorest in Madagascar are <u>also</u> those affected the most by environmental deprivations.

Why is an MPI used for monitoring?

How is the MPI an accountability tool?

The MPI stacks up all deprivations of all poor people.

If any deprivation of any poor person is resolved, MPI goes down. Every time.

We can see <u>where</u> change happened

And <u>what</u> deprivation(s) changed

What is a Multidimensional Poverty Index?

Intuitive explanation!

(to simplify we assume equal weights in this example)

Who is deprived in what?

$y =$

Health	Education	Housing	Work	
ND	ND	ND	ND	Maria
D	ND	ND	D	Flavio
D	D	D	D	Sonia
ND	D	ND	ND	Joao

Intuitive explanation!

(to simplify we assume equal weights in this example)

Matrix of deprivation scores for 4 persons in 4 dimensions

How much?

$y =$

Health	Education	Housing	Work	c
ND	ND	ND	ND	**0**
D	ND	ND	D	**2**
D	D	D	D	**4**
ND	D	ND	ND	**1**

Who is poor?

Intuitive explanation!

(to simplify we assume equal weights in this example)

Fix poverty cut-off k, identify as poor if ci >= 2

Next, censor the deprivations of the non-poor

$y =$

Health	Education	Housing	Work	c
ND	ND	ND	ND	**0**
D	ND	ND	D	**2**
D	D	D	D	**4**
ND	~~D~~	ND	ND	**1**

→Multidimensional Poverty Headcount (H)= 2/4

[50% of the population are poor]

Intuitive explanation!

(to simplify we assume equal weights in this example)

Who is poor?

Fix poverty cut-off k, identify as poor if ci >= 2

	Health	Education	Housing	Work	c	
	ND	ND	ND	ND	0	
	D	ND	ND	D	2	2/4
$y =$	D	D	D	D	4	4/4
	ND	Ð	ND	ND	1	

→ **Intensity** of deprivation among the poor (A)=**(2/4+4/4)/2=** ¾

on average the poor are deprived in 75% of the weighted indicators

Intuitive explanation!

How are they poor by indicator?

→ Add up deprivations of the poor (vertically) to show:
What proportion of people are poor and deprived in each indicator

g1(k) =

Health	Education	Housing	Work
ND	ND	ND	ND
D	ND	ND	D
D	D	D	D
ND	~~D~~	ND	ND
2/4	**1/4**	**1/4**	**2/4**

Censored Headcount Ratios = Deprivations of the poor

The Multidimensional Poverty Index: Mean of the Matrix

(or: 1) sum weighted deprivations of the poor, or 2) H x A)

ND	ND	ND	ND	0
D	ND	ND	D	2
D	D	D	D	4
ND	D	ND	ND	
2/4	1/4	1/4	2/4	

MPI = H x A

2/4 x 3/4 = 6/16

MPI = sum (w x censored h) for each indicator

= (¼ x 2/4)+ (¼ x 1/4) + (¼ x 1/4) + (¼ x 2/4)

= ¼ x (2/4 + ¼ + ¼ + 2/4)

= 6/16

→Multidimensional Poverty Headcount Ratio

→Intensity of deprivation among the poor

→Censored Headcount Ratios:

H = 2/4

A = (2/4+4/4)/2 = ¾

h_i = (2/4, 1/4, 1/4, 2/4)

weights = ¼ each

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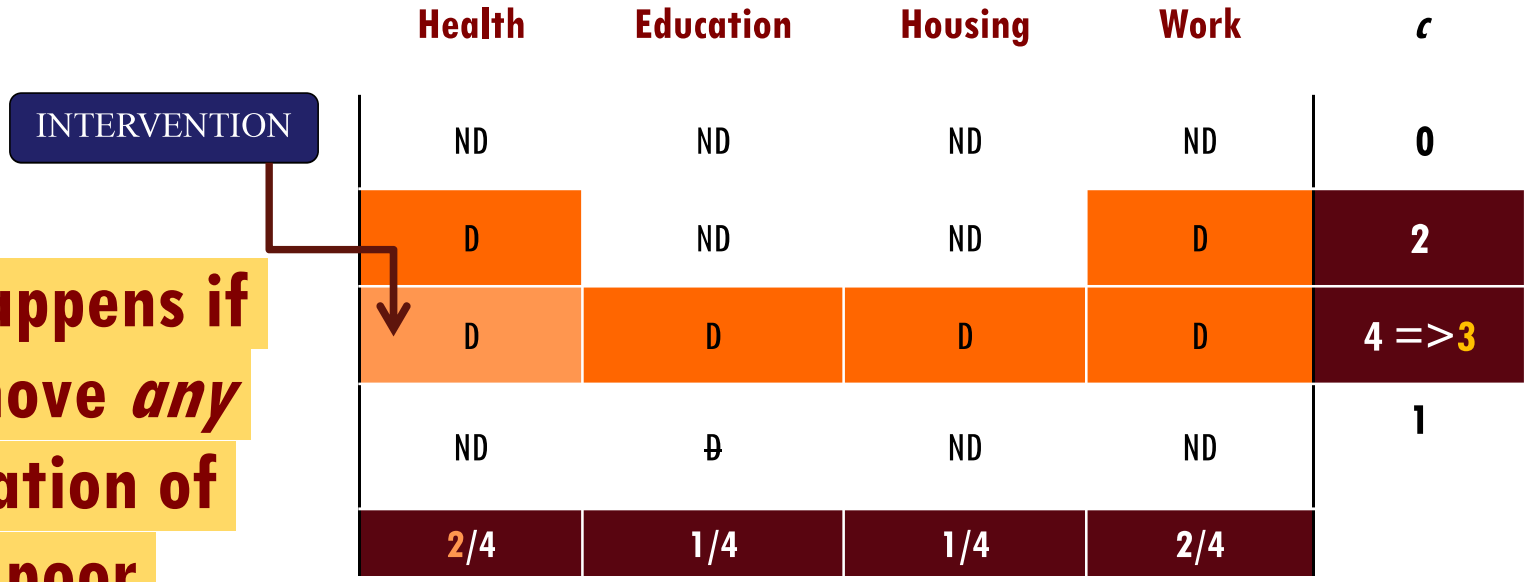
The Multidimensional Poverty Index



What happens if we remove *any* deprivation of *any* poor person?

The Multidimensional Poverty Index

INTERVENTION

MPI always always goes down.

	Health	Education	Housing	Work	*c*	Av. dep
	ND	ND	ND	ND	0	
	D	ND	ND	D	2	2/4
→	ND	D	D	D	3	3/4
	ND	~~D~~	ND	ND	1	
	1/4	1/4	1/4	2/4		

→Censored headcount ratio of that indicator goes down (¼, ¼, ¼, 2/4)

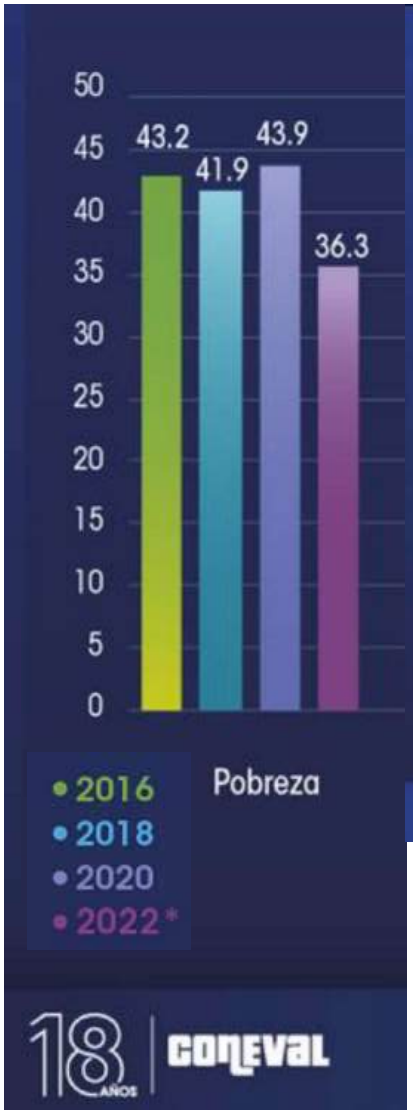
→Multidimensional Poverty Headcount (H)= 2/4 (in this case stays the same)

→Intensity of deprivation among the poor (A)=**(2/4+3/4)/2= 5/8 = 62.5%**

MPI = 5/16 (instead of 6/16)

Some quick examples

Mexico launched their MPI in 2009, updated by CONEVAL



Estados Unidos Mexicanos

Indicadores de carencia social

MEDICIÓN DE POBREZA 2022

	2016	2018	2020	2022*
Rezago educativo	18.5%	19.0%	19.2%	19.4%
Carencia por acceso a los servicios de salud	15.6%	16.2%	28.2%	39.1%
Carencia por acceso a la seguridad social	54.1%	53.5%	52.0%	50.2%
Carencia por calidad y espacios de la vivienda	12.0%	11.0%	9.3%	9.1%
Carencia por acceso a los servicios básicos en la vivienda	19.2%	19.6%	17.9%	17.8%
Carencia por acceso a la alimentación nutritiva y de calidad	21.9%	22.2%	22.5%	18.2%

* Para un mejor análisis de la información 2022, consu

CONEVAL

South Africa's MPI (SAMPI) – from StatsSA

South Africa's StatsSA used their 2001 and 2011 census data to build their first MPI – the SAMPI – and seeks to include MPI questions in the annual General Household Survey as well as update it using the most recent census.

S Africa has been a Steering Committee member of MPPN, and hosted the 2018 Annual MPPN Meeting in South Africa.

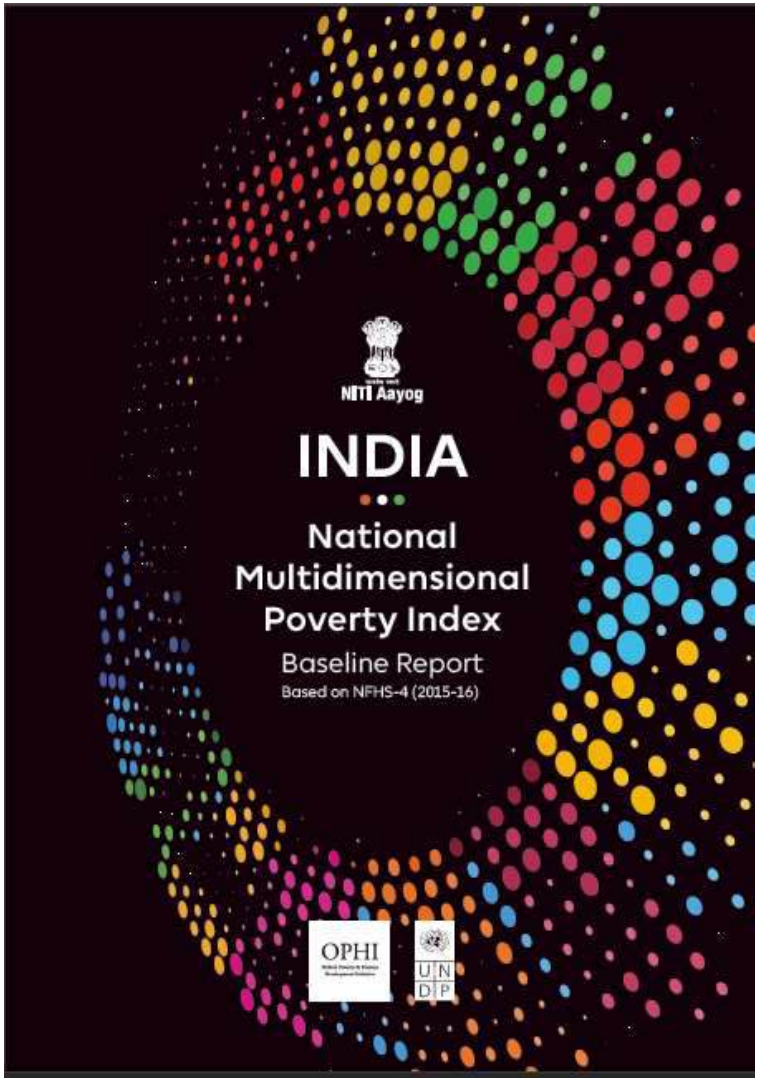
https://www.youtube.com/watch?v=RQ0zh90NqZ8

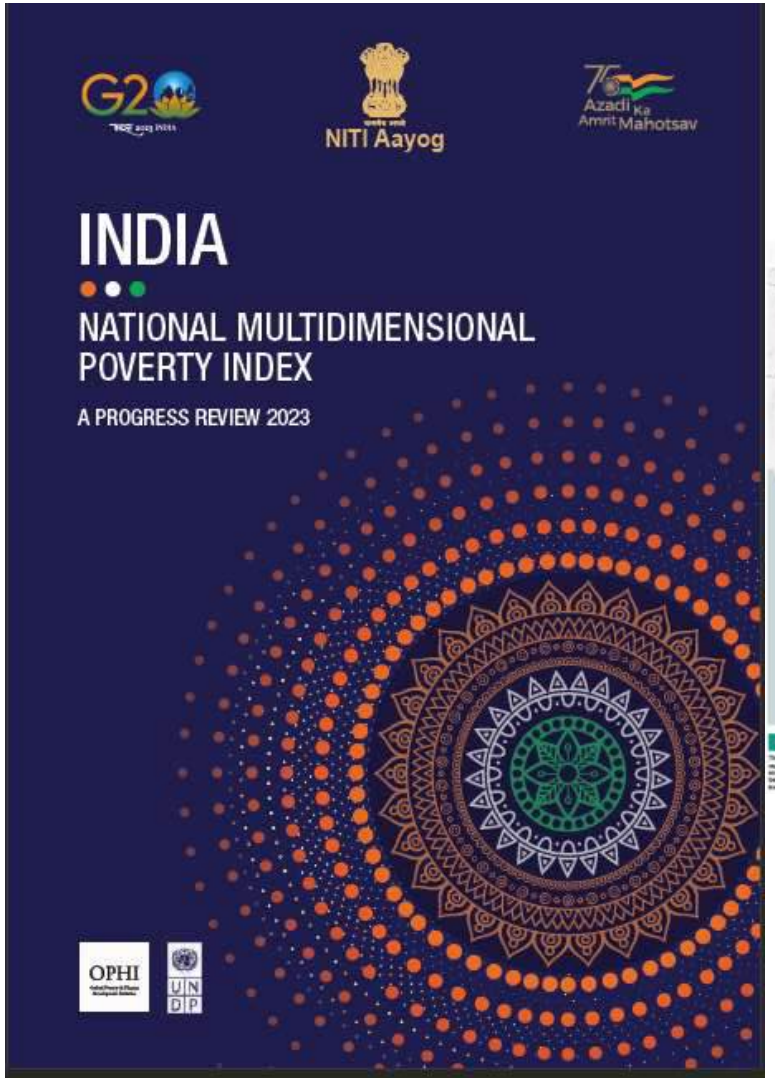
Poverty Cut-Off: A person is considered poor if they are deprived in 33.3% or more of the 11 weighted indicators.

Table 3: The dimensions, indicators and their weights

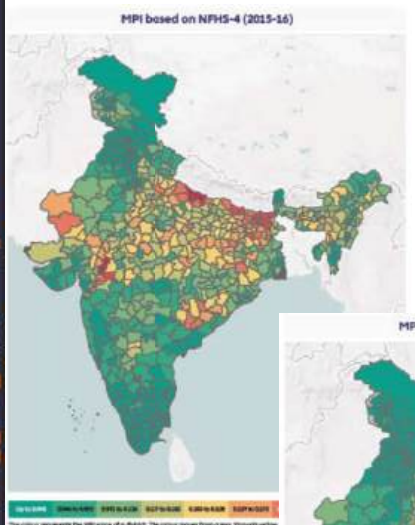
Dimension	Indicator	Weight
Health	Child mortality	1/4
Education	Years of schooling	1/8
	School attendance	1/8
Standard of living	Lighting	1/28
	Heating	1/28
	Cooking	1/28
	Water	1/28
	Sanitation	1/28
	Dwelling	1/28
	Assets	1/28
Economic activity	Unemployment (all adults)	1/4

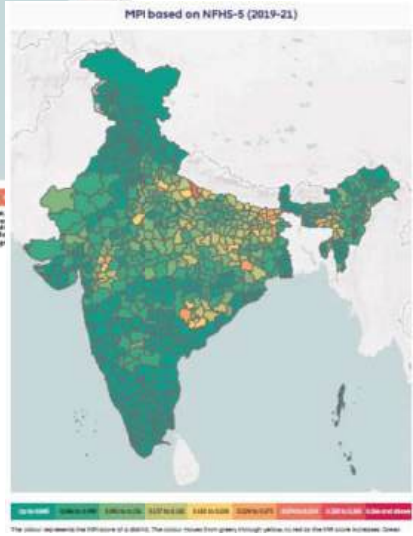
India's national MPI: strong equalizing progress





Multidimensional Poverty fell massively from 24.9% to 15.0% in 2015/16 to 2019/21





Global Multidimensional Poverty in 2023

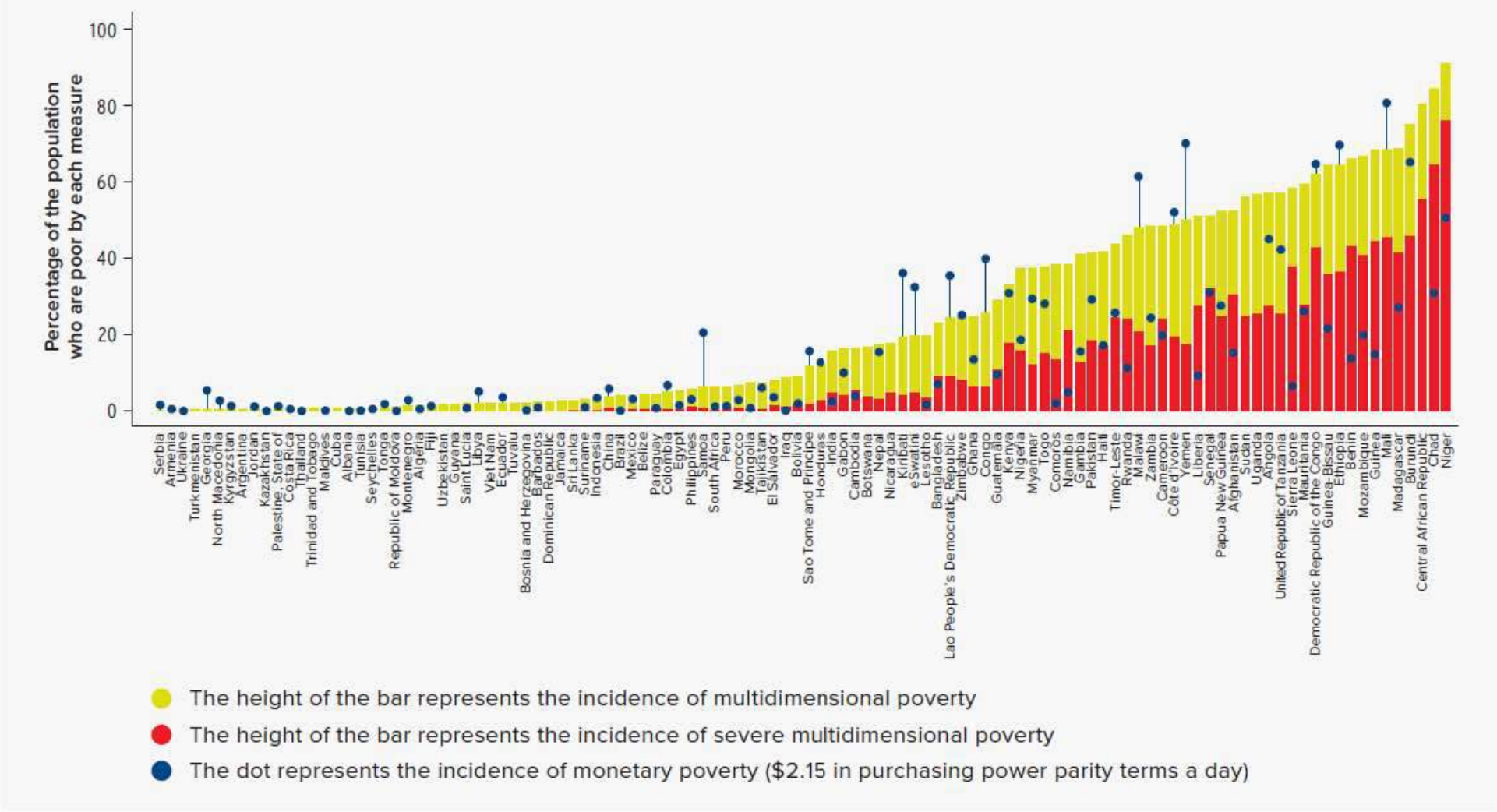
Across 110 countries, **1.1 billion (18%)** out of 6.1 billion people are poor.

Half of the 1.1 billion poor people (566 million) **are children** under 18 years of age.

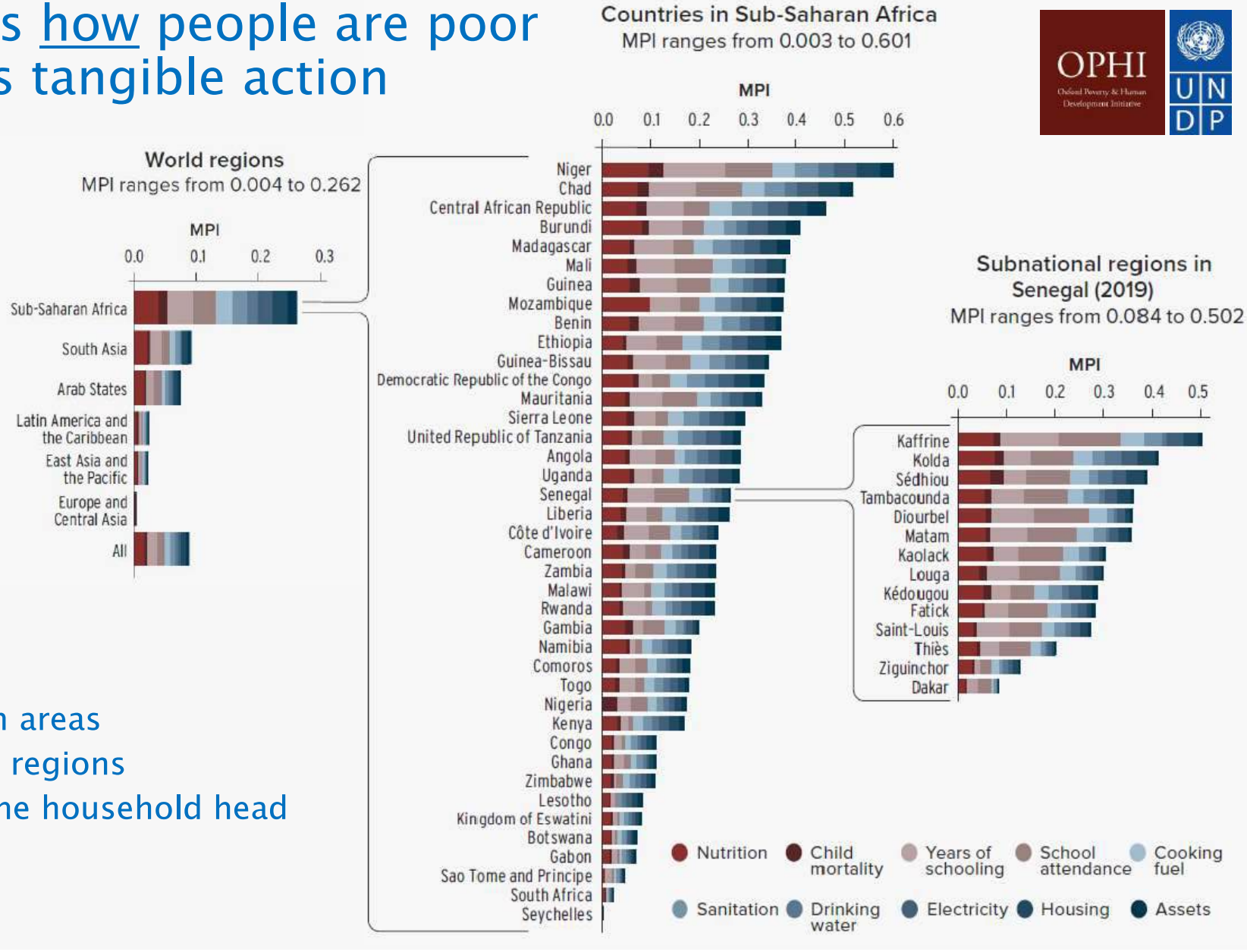
730 million live in Middle Income Countries

Nearly half in Sub-Saharan Africa; over one-third in South Asia.

Multidimensional Poverty complements Monetary poverty – and we need both 'eyes'



MPI: shows <u>how</u> people are poor so informs tangible action



- Age groups
- Rural–Urban areas
- Subnational regions
- Gender of the household head

Change is Possible: In India 415 Million left poverty in 15 years.

From 2005/6 to 2015/16 to 2019/21, **415 million people exited multidimensional poverty in India.**

(In 2023, the <u>total</u> population of the 27 countries of the EU is 445 million people).

	2005/6	2015/16	2019/21
India's MPI decreased	from **0.283**	to 0.122	to **0.069;**
Incidence decreased	from **55.1%**	to 27.7%	to **16.4%**
Intensity decreased	from 51.3%	to 44.0%	to 42.0%

All indicators reduced significantly, led by sanitation & cooking fuel.

The poorest states, children, rural areas, caste groups had the fastest absolute reduction.

Bihar's MPI incidence fell from 77% to 35%.

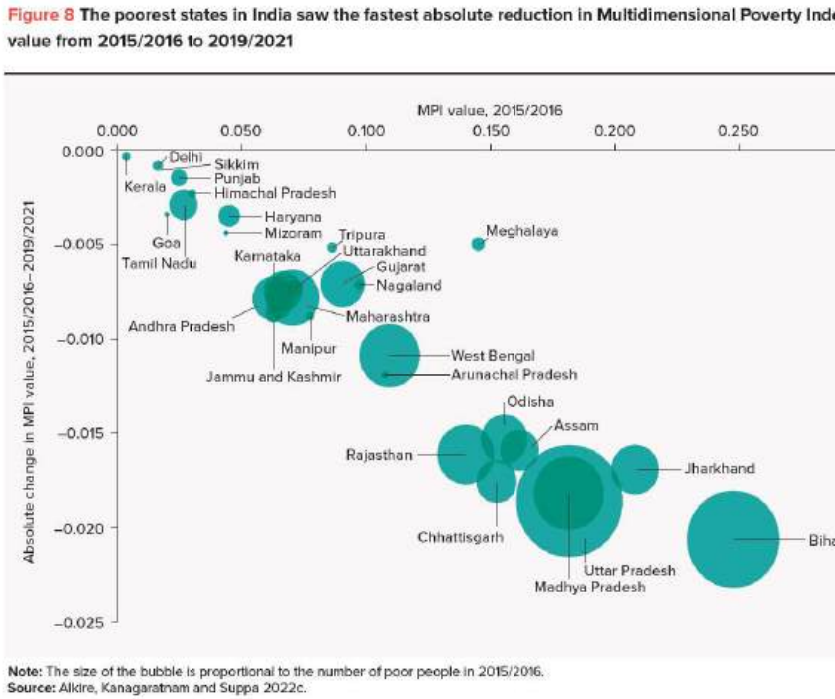


Figure 8 The poorest states in India saw the fastest absolute reduction in Multidimensional Poverty Inde value from 2015/2016 to 2019/2021

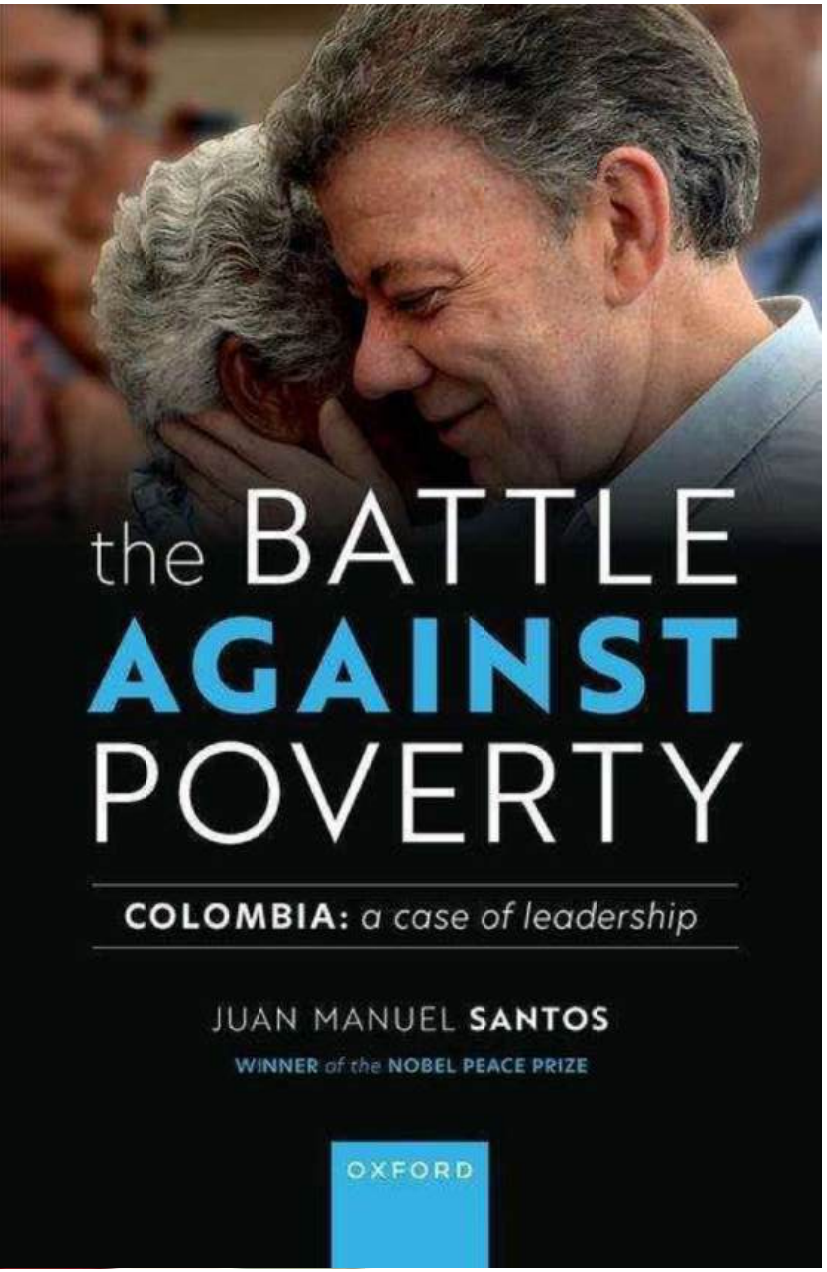
Note: The size of the bubble is proportional to the number of poor people in 2015/2016.
Source: Alkire, Kanagaratnam and Suppa 2022c.

25 countries halved their global MPI within 15 years
Progress is possible

Arab States (1)	East Asia & Pacific (6)	Europe and Central Asia (5)	Latin America & Caribbean (7)	South Asia (2)	Sub-Saharan Africa (4)
Morocco	Cambodia China Indonesia Mongolia Thailand Viet Nam	Albania Kyrgyzstan North Macedonia Serbia Turkmenistan	Plurinational State of Bolivia Dominican Republic Guyana Honduras Nicaragua Peru Suriname	India Nepal	Gabon Congo Lesotho Sao Tome & Principe

17 countries started with less than 25% of people in poverty.

India (55.1%) and Congo (53.8%) started with over half of their population in poverty.



2023 OUP book by Nobel Peace Prize Laureate Juan Manuel Santos describes use of the Colombia MPI in Policy

Colombia's MPI reduced	2010: **29.7%**	2018: **19.1%**
Monetary poverty also fell	2009: **40.3%**	2018: **27.0%**

The Book addresses:

What actions were taken in Colombia to reduce poverty?
How was this done in the middle of complex **peace negotiations**?

"The fight against poverty is not just a technical issue but one of **leadership**."

"In the case of Colombia, as president, I personally took on directing and supervising **social policy**, and this undoubtedly made a difference."

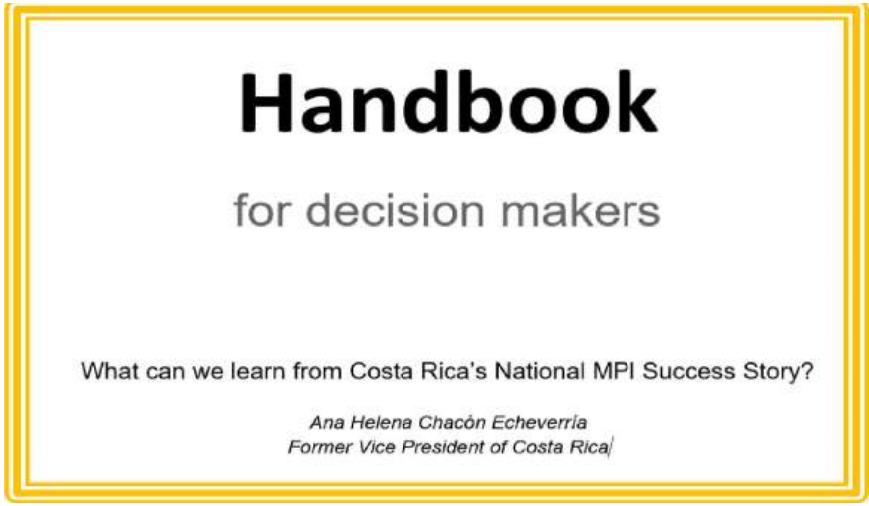
Multidimensional Poverty Peer Network www.mppn.org
63 countries and 19 institutions

Governments (policy actors and statisticians) and institutions that seek to reduce multidimensional poverty participate in the MPPN:

- **Annual meetings** (this year 27-29 August in Tashkent, Uzbekistan)
- **UN General Assembly Side-events** (2024: hosted by Somalia)
- **Quarterly calls, Bilingual Magazine, UN Statistics Commission events**
- **Steering committee: Bangladesh, China, Colombia, South Africa & OPHI.**

- **OPHI: Technical Training (1-12 July, Rabat Morocco) & Executive Ed (policy)**

Policy makers use their MPIs to:



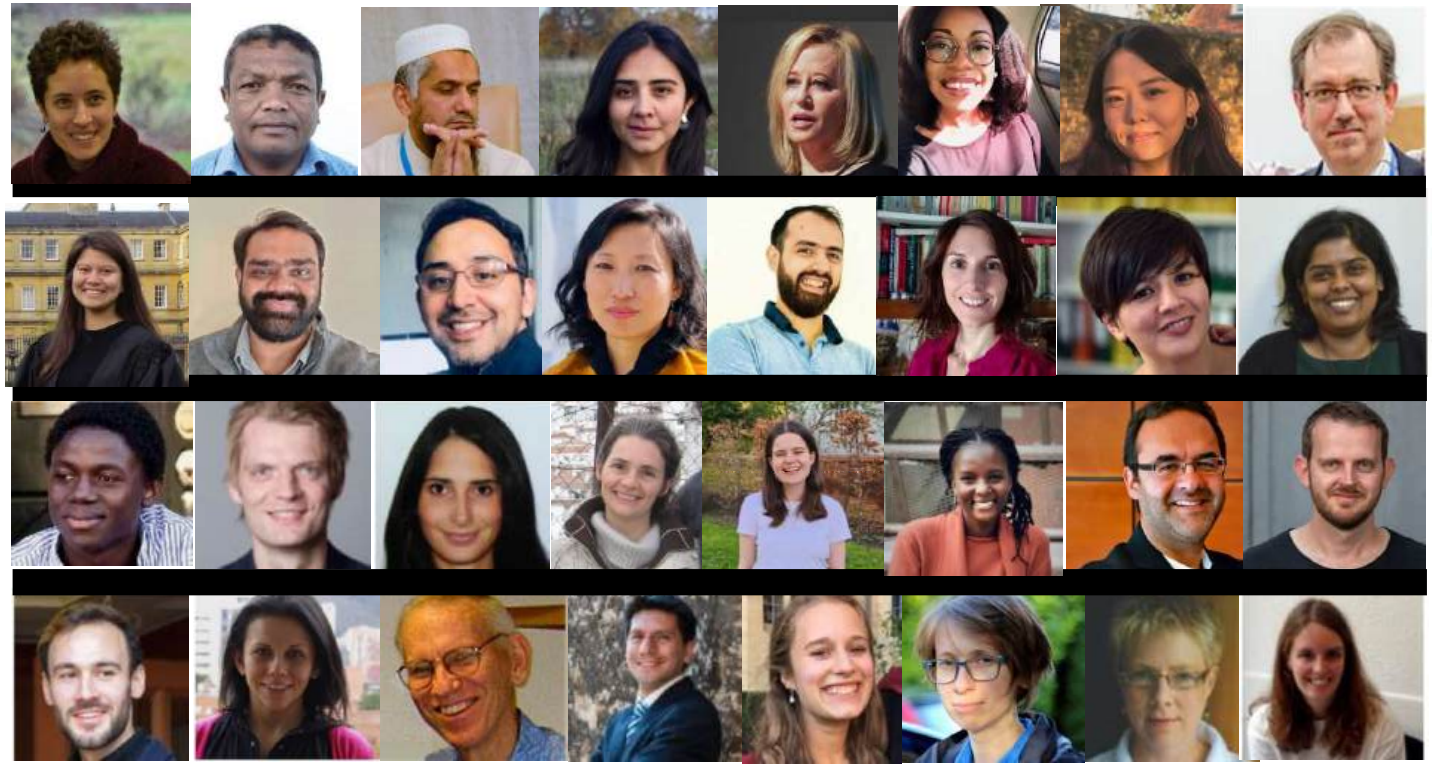
1. **Complement** monetary poverty statistics
2. **Track poverty** over time (official statistics)
3. **Allocate resources** by sector and by region
4. **Target** marginalized regions, groups, or households
5. **Coordinate** policy across sectors and subnational levels
6. **Adjust** policies by what works (measure to manage)
7. **Leave No One Behind** see the poorest & track trends
8. **Be Transparent** so all stakeholders engage – NGOs,
    - Private Sector etc, all parts of government.

What SAI could do

Practical ways SAI might operationalise the statement:

1. **Use MPI or E-MPI to audit poverty across the G-20**
2. **Use MPI or E-MPI to identify 'hotspots'** where poverty and climate crises converge and drive action to them.
3. **Recognise, name and celebrate** where MPI fell the most.
4. That **Brazil** will launch an official MPI; **S Africa** go the last mile in SAMPI and **India**
5. **Animate its own and other countries to support those doubly affected by poverty, hunger and climate crises – it is feasible, we can track progress, and it matters.**

All is thanks to a joint effort by the entire OPHI team plus past and present co-workers



OPHI Oxford Poverty & Human Development Initiative

UNIVERSITY OF OXFORD

MR. XAVIER MANCERO

SAI20
SUPREME AUDIT INSTITUTIONS
BRAZIL 2024

UNITED NATIONS

ECLAC

Mr. Mancero will explore the innovative approaches to measuring multidimensional poverty, focusing on the Multidimensional Poverty Index for Latin America.

MPI-LA incorporates both the Unsatisfied Basic Needs and Poverty Line approaches while integrating recent methodological advancements.

The presentation will discuss the implications addressing multidimensional poverty in the context of climate change, particularly focusing on policy responses and strategies to mitigate poverty's impact exacerbated by environmental challenges.

SAI20
SUPREME AUDIT INSTITUTIONS
BRAZIL 2024

UNITED NATIONS

ECLAC

SAI20 Summit 2024 (Belém, 17-18 June 2024)

Multidimensional poverty in Latin America

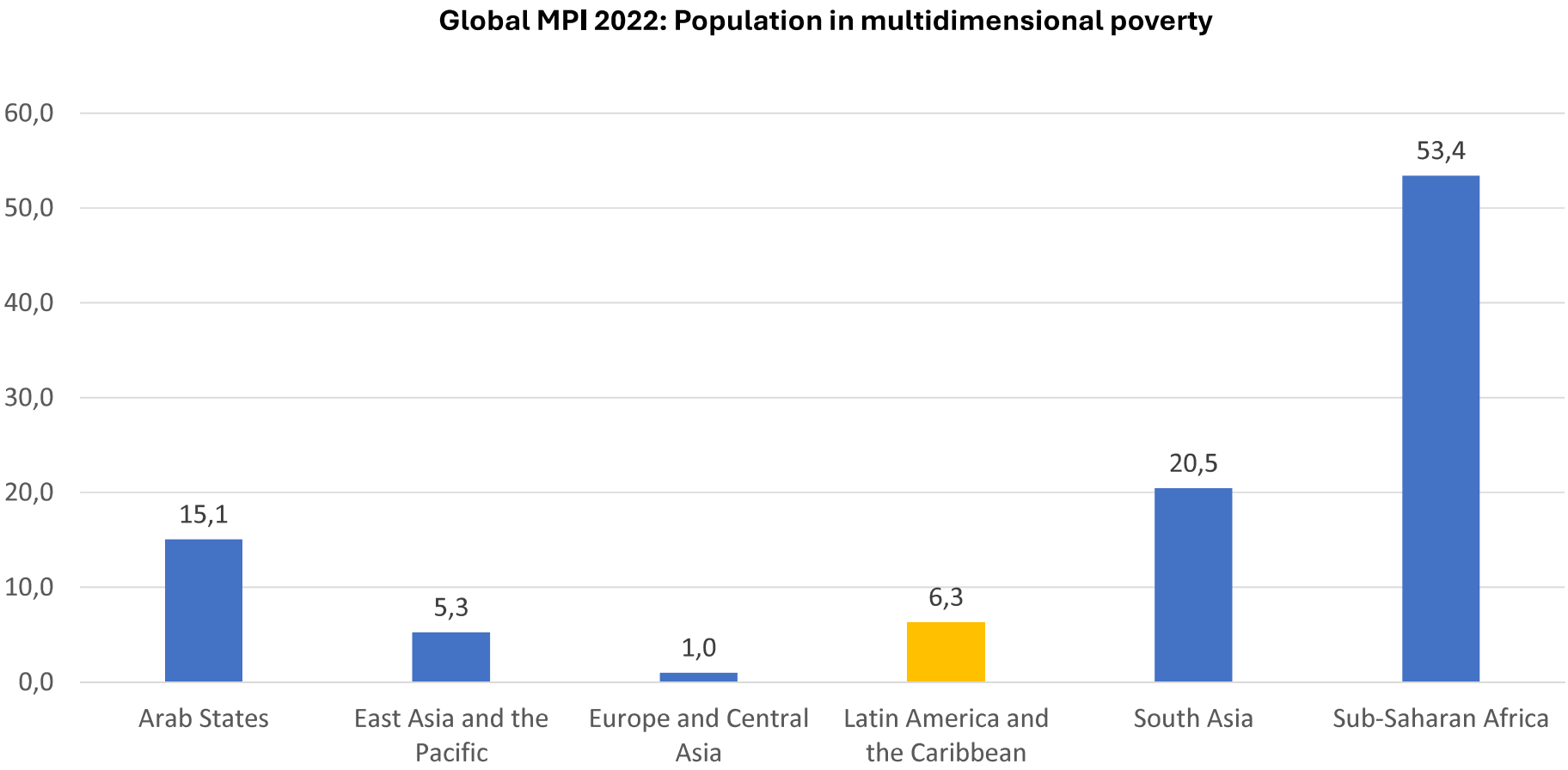
Regional measurement and links to climate change

Xavier Mancero
Statistics Division, UNECLAC

UNITED NATIONS
ECLAC
75 years
Working for a productive, inclusive and sustainable future

Regional Multidimensional Poverty Index for Latin America

- MPIs capture deprivations in different dimensions of well-being, going beyond the concept of poverty as low income.
  - Almost 40 countries have a national MPI worldwide; 10 are in Latin America.
- Relevance of a regional MPI for Latin America.
  - Global MPI standards are low for the Latin American reality.
  - National MPIs, although fundamental for policies, are not comparable across countries.
- ECLAC has developed multidimensional poverty indices for regional comparable analysis.
  - First MPI-LA was published in Social Panorama of Latin America 2014.
  - New regional index to be published later in 2024, in collaboration with UNDP.
  - Developed through multidisciplinary exchange within ECLAC. Consultation process with countries and OPHI.



Source: https://hdr.undp.org/content/2022-global-multidimensional-poverty-index-mpi#/indices/MPI

Chile

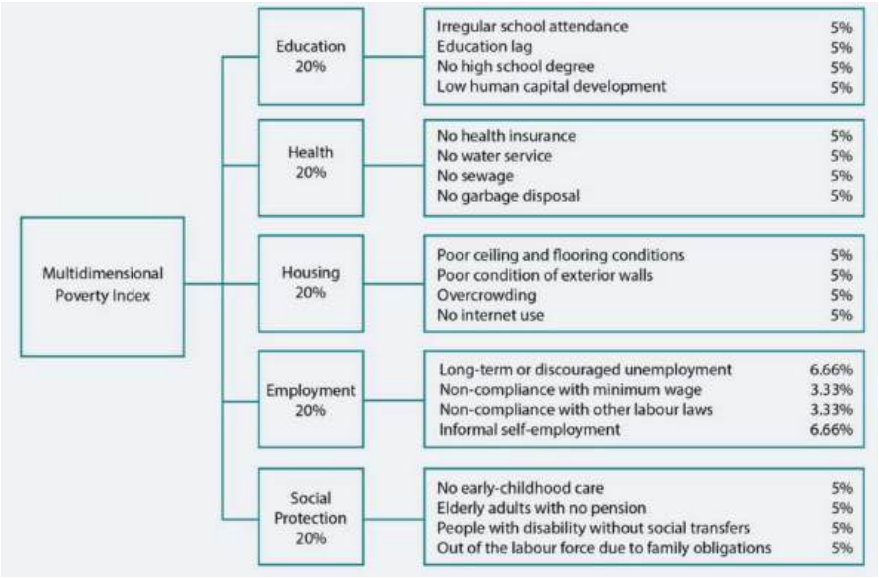
Paraguay

Trabajo y Seguridad Social (25%)		Vivienda y servicios (25%)		Salud y ambiente (25%)		Educación (25%)	
Desocupación	5	Materiales inadecuados de la vivienda	8,3	Personas enfermas o accidentadas sin acceso a atención médica profesional	6,25	Inasistencia escolar de personas de 6 a 17 años de edad	8,3
Subocupación por insuficiencia de tiempo	5	Hacinamiento	8,3	Falta de acceso a agua mejorada	6,25	Escolarización atrasada	8,3
Trabajo de personas de 10 a 17 años de edad	5	Prácticas inadecuadas o falta de servicios para eliminación de basura	8,3	Falta de saneamiento mejorado	6,25	Educación obligatoria incompleta o analfabetismo	8,3
Falta de aporte a una caja jubilatoria	5			Uso de carbón o leña para cocinar	6,25		
Falta de acceso a jubilación o pensión	5						

Instituto NACIONAL de ESTADÍSTICA

TETÃ REKUÁI
GOBIERNO NACIONAL

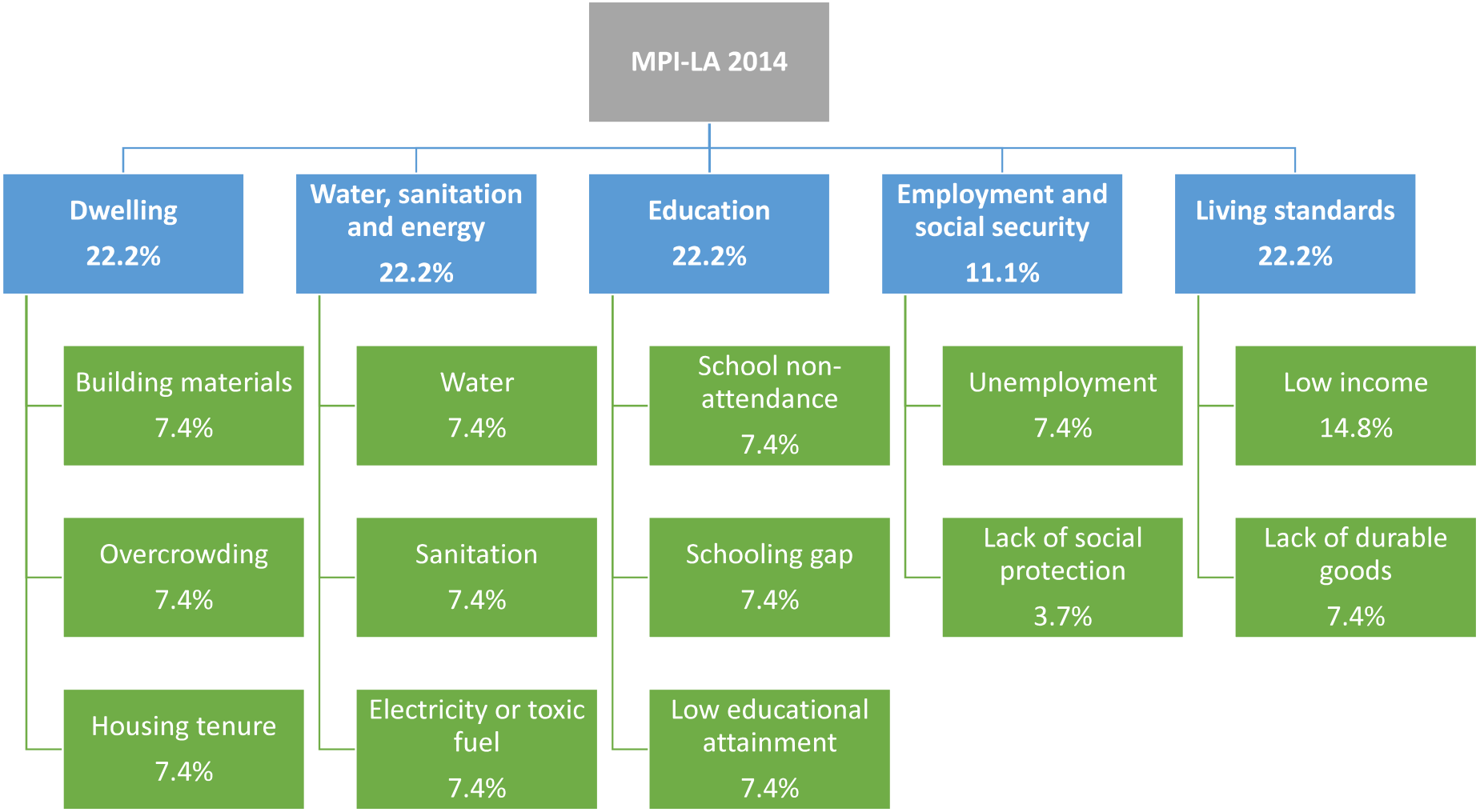
Costa Rica



Ecuador

MPI-LA (2014)

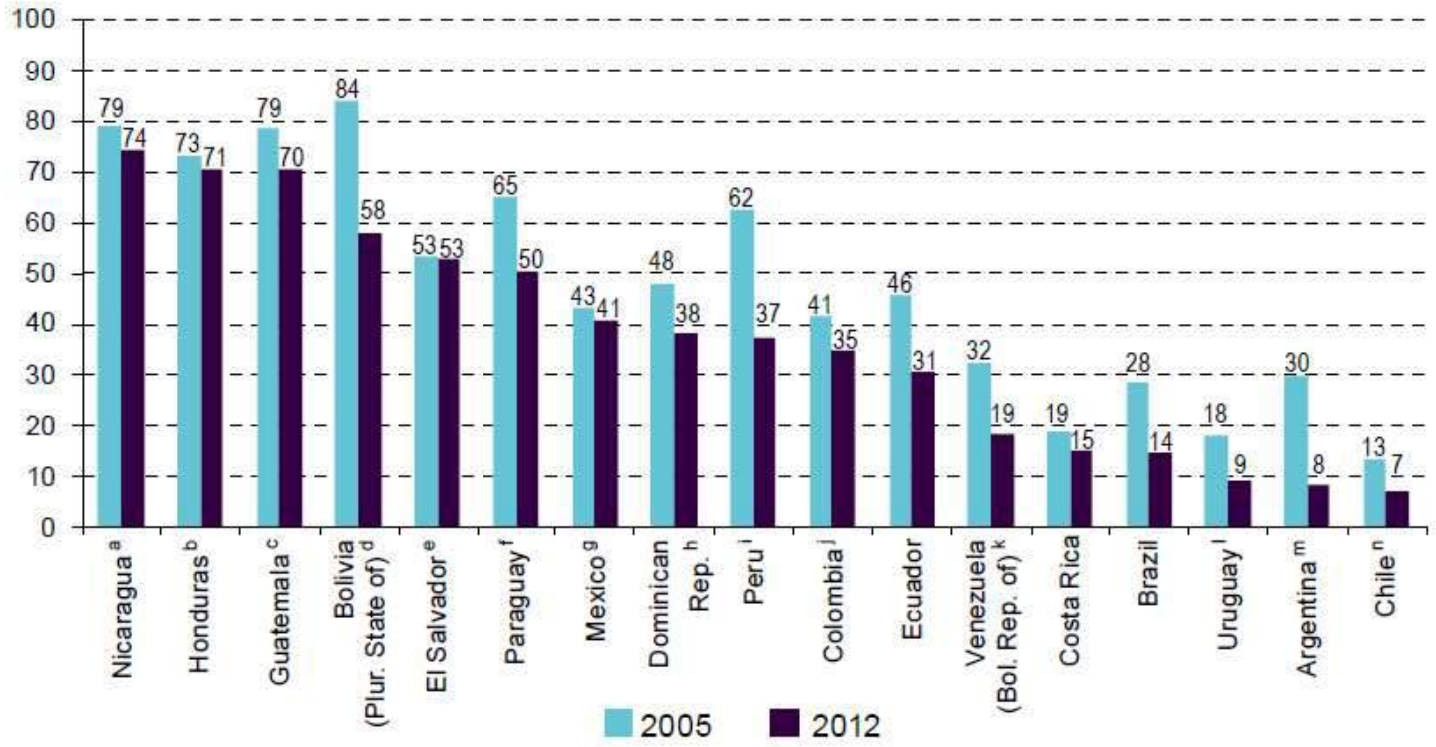
- The 2014 MPI considered deprivations from the traditional Latin American approach of “Unmet Basic Needs” as well as other relevant deprivations.
- UBN usual indicators:
  - Housing: Construction materials (floor, walls, roof) and overcrowding
  - Drinking water availability
  - Sanitation system
  - Education: School attendance
- New indicators:
  - Energy: electricity and toxic fuel
  - Employment and social protection
  - Low household income (monetary poverty)
- Household considered to be poor if weighted sum of deprivations >= 25%.


MPI-LA 2014
Dwelling
22.2%
Water, sanitation and energy
22.2%
Education
22.2%
Employment and social security
11.1%
Living standards
22.2%
Building materials
7.4%
Overcrowding
7.4%
Housing tenure
7.4%
Water
7.4%
Sanitation
7.4%
Electricity or toxic fuel
7.4%
School non-attendance
7.4%
Schooling gap
7.4%
Low educational attainment
7.4%
Unemployment
7.4%
Lack of social protection
3.7%
Low income
14.8%
Lack of durable goods
7.4%

MPI-LA (2014) – Results

Latin America (17 countries): incidence of multidimensional poverty around 2005 and 2012

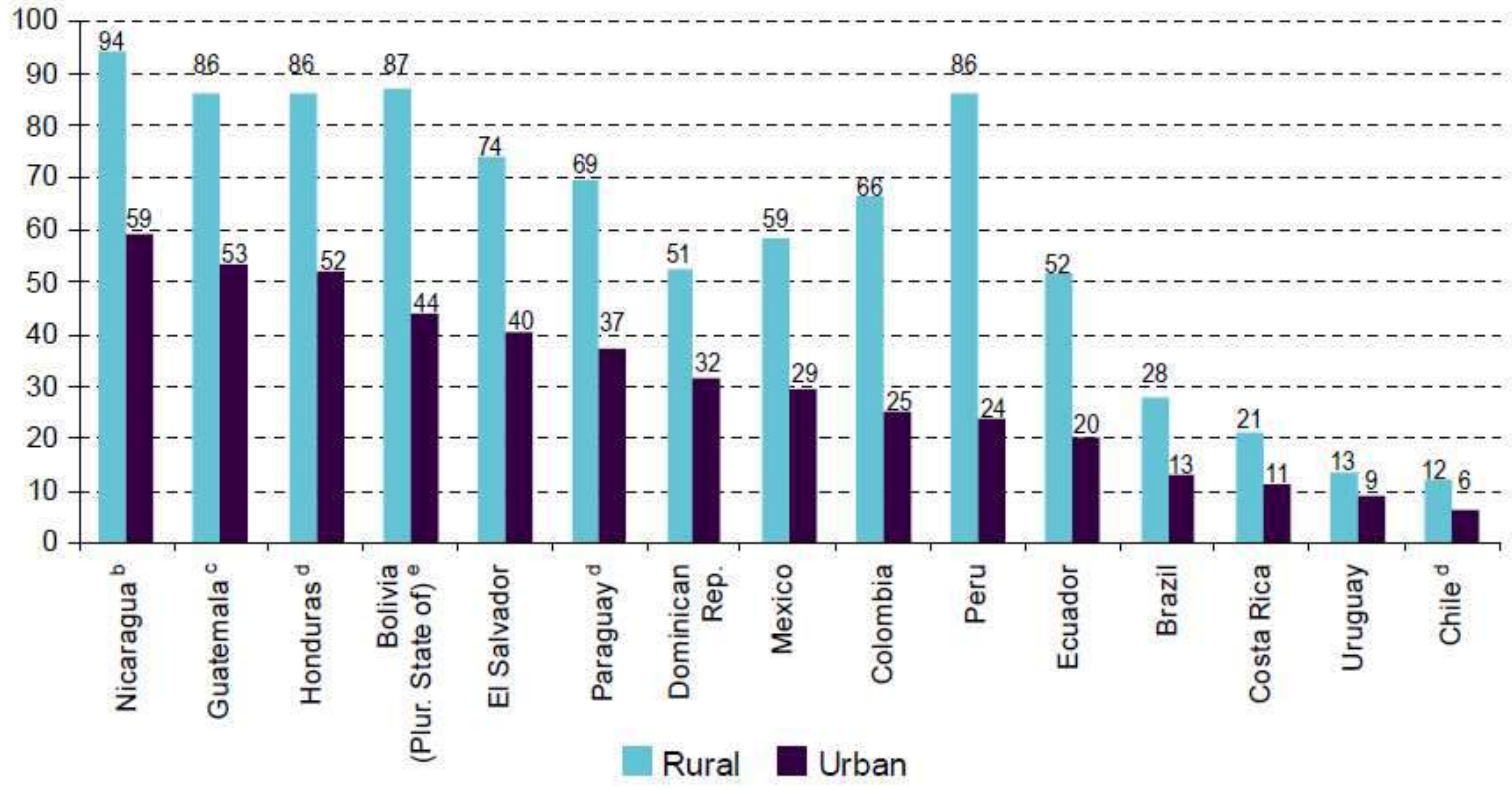
(Percentages of the population)



MPI-LA (2014) – Results

Latin America (15 countries): rate of multidimensional poverty by area of residence, around 2012 [a]

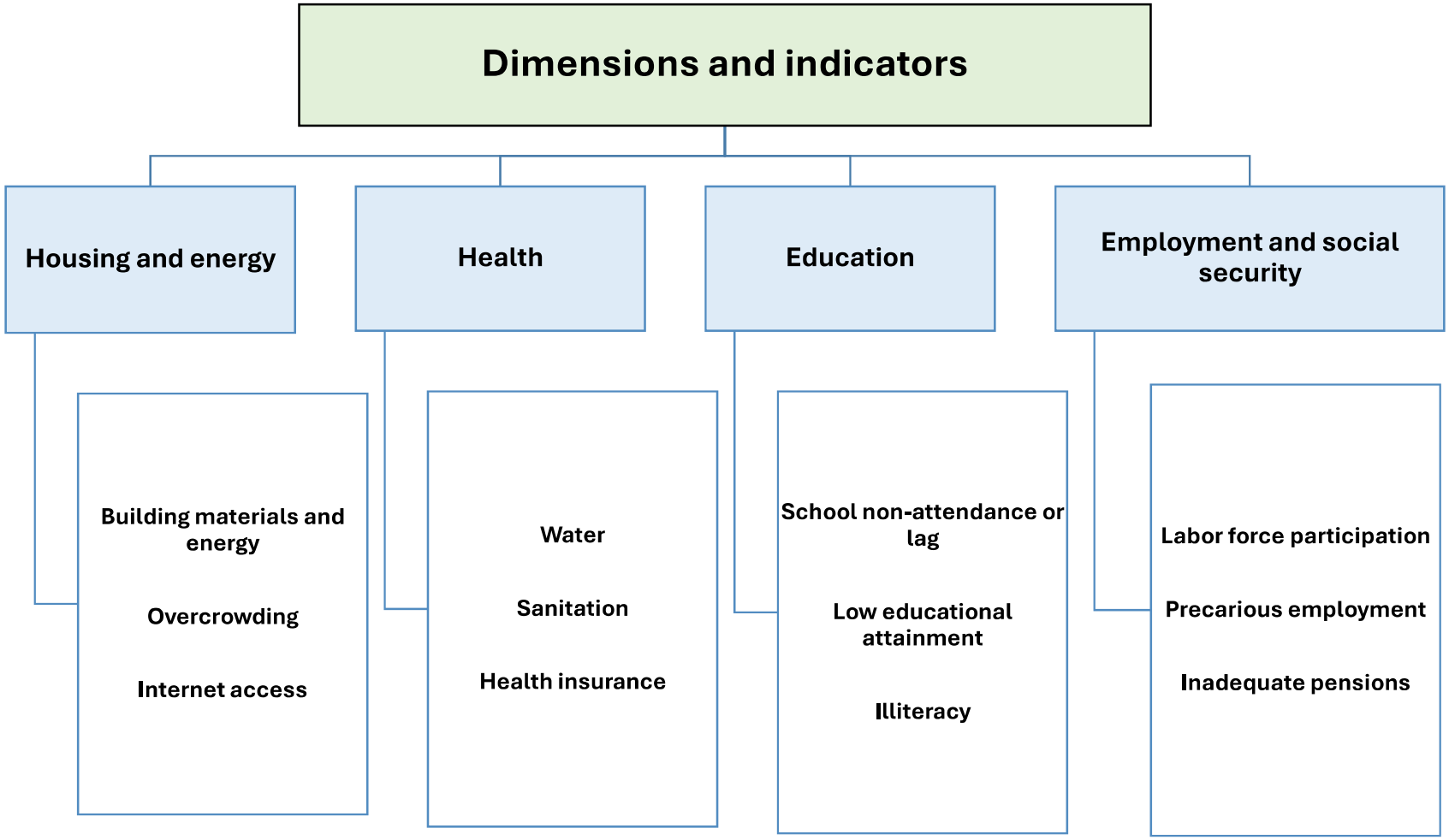
(Percentages)



Main elements for a revised MPI-LA (*)

- New MPI structure considers 4 dimensions and 12 indicators:
  - Housing and services
  - Health
  - Education
  - Employment and social security
- A household is considered to be multidimensionally poor if deprived in more than one dimension (4 indicators).
- It is proposed as a complementary index to monetary poverty.
  - However, income is a relevant indicator to identify deprivations in the quality of employment and old-age pensions.

(*) Information shown is preliminary.


Dimensions and indicators
Housing and energy
Health
Education
Employment and social security
Building materials and energy
Overcrowding
Internet access
Water
Sanitation
Health insurance
School non-attendance or lag
Low educational attainment
Illiteracy
Labor force participation
Precarious employment
Inadequate pensions

Some preliminary insights from MPI-LA

- Multidimensional poverty has decreased since 2008, except in 2020.
- There is a significant variation in the levels of multidimensional poverty between different countries.
  - Headcount ratios vary from below 10% to above 50%.
- Deprivations in all dimensions contribute to multidimensional poverty. Precarious employment, lack of internet access and overcrowding have larger impacts.
- People in income poverty and multidimensional poverty are not necessarily the same. The population that is in poverty by one of both methods is larger than the population that is poor by both.

Poverty and climate change (1)

- ECLAC (2023) summarizes recent evidence on the impact of climate change in Latin America and the Caribbean:
  - Temperature has increased by between 0.7°C and 1°C with respect to the 1961–1980 average.
  - The days of exposure to heatwaves have increased.
  - Loss of 30% of glacier surface area since 1980, affecting ecosystems, water availability, and soil quality and erosion rates.
  - Longer and more intense drought episodes
  - Increase in forest fires and the spread of vector-borne diseases
- Estimates for LAC show that, depending on the study, the decline in per capita GDP would be between 0.8% and 6.3% by 2030, and up to 23% in 2050.

Source: ECLAC (2023), The economics of climate change in Latin America and the Caribbean, 2023: financing needs and policy tools for the transition to low-carbon and climate-resilient economies.

Poverty and climate change (2)

- The current structure of the LA-MPI is able to capture some of the effects of climate change on poverty.
- For example:
  - Increase in housing deprivations, due to flooding, fires, etc.
  - Loss in school attendance and education opportunities due to infrastructure damage to schools, access roads.
  - Increase in labor deprivations due to loss of jobs in agriculture, drop in labor income.
- The index can inform strategic policy interventions that are necessary to mitigate the adverse impacts of climate change and promote sustainable development.

Poverty and climate change (3)

- There are also some challenges to better capture the impact of climate change on poverty.
- Additional indicators
  - Climate change poses risks related to food insecurity, increasing vector-borne diseases, etc. that are not currently measured by the index.
  - Improvements to household surveys are needed to have more complete information on additional well-being dimensions.
- Geographical focus
  - The impact of climate change is often geographically focused, and is not noticeable at an aggregate level.
  - Need for more disaggregated information. Georeferenced survey data could be linked to geospatial information to analyze risks.
- Risk vs impact
  - Different indicators are needed to differentiate between risk of falling into poverty and observed impact of the occurrence of an event.

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Thank you for your attention!

UNITED NATIONS

ECLAC

75 years

Working for a productive, inclusive and sustainable future

NINA RENTEL

SAI20
SUPREME AUDIT INSTITUTIONS
BRAZIL 2024

GERANDO FALCÕES

Ms. Rentel will discuss the work of Gerando Falcões, an NGO focused on creating an ecosystem of social development in Brazilian favelas.

Their goal is to eradicate poverty through transformative initiatives, providing education, economic development, and citizenship services. They also play a crucial role in training corporate officers on integrating ESG principles.

Ms. Rentel will also introduce the Favela 3D program, a pioneering initiative to install solar panels in favelas, making them self-sustaining in terms of electrical energy.

SAI20
SUPREME AUDIT INSTITUTIONS
BRAZIL 2024

GERANDO FALCÕES

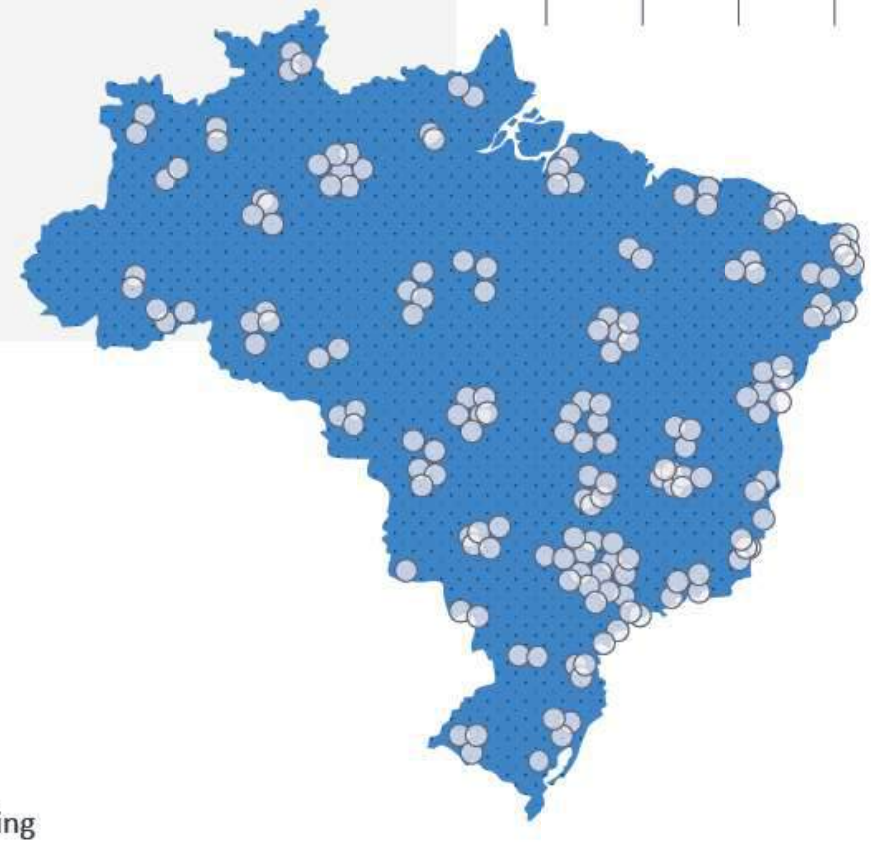

GERANDO FALCÕES

OUR MISSION IS
TO END
POVERTY
IN BRAZIL'S FAVELAS
BEFORE MARS IS
COLONIZES

VALUE OFFER

We have established the platform model as the foundation of our growth strategy. Our platform empowers individuals and, as it evolves into a role of orchestrating impact, it can achieve scale and have a greater depth to transform poverty in the slums into a museum piece.

- Investment in last-mile talents
- Network coordination
- Ecosystem orchestration
- Social impact platform
- Poverty in the museum



IMPACT IN NUMBERS

2024

2.200
NGOs in the ecosystem

100%
States covered

+700.000
People Impacted

5.500
Favelas

10
F3D

+1,5 MM
People impacted during emergencies

* F3D: DIGITAL, WORTHY AND DEVELOPED

WE CREATED A NEW GENERATION OF

SOCIAL TECHNOLOGIES

SOCIAL LEADERS NETWORK

FAVELA 3D

TAKEOFF PROGRAM

MICRO FRANCHISE


FAVELA3D
DIGITAL_DIGNIFIED_DEVELOPED

What is Favela 3D?

It is a project that connects the best solutions, from public policies to social businesses, with the needs and potential of the favela, conducting systematic data collection, comprehensive territory and family diagnostics, management plans for local, family, and personal development with solutions co-created with the community, integration of public policies, and impact evaluation.

Social Transformation + Infrastructure Transformation

Takeoff Program

Social Impact Mandala

Housing and urbanism
- Materials of the walls, roof, and floor of the dwelling
- Windows
- Water access and frequency
- Electricity
- Sewage disposal
- Type of access and bathroom quality
- Urban planning problems, public and community infrastructure and equipment

Income generation
- Per capita income
- Occupation
- Bank account
- Income-food relationship

Health
- Poverty-related diseases
- Food insecurity

Culture, Sports, and Leisure
- Access to events and how often they happen
- Satisfaction with public and community facilities

Citizenship and Culture of Peace
- Access and use of the internet
- Basic civil documentation
- ZIP code (CEP)

Women's Empowerment
- If unable to work due to lack of childcare
- Bank account in own name
- Menstrual dignity

Education
- How well can they read, write, and do math
- Educational level (if currently studying)
- Children and adolescents in school

Early Childhood
- Child labor
- If children are left alone when the caregiver needs to be absent
- Birth certificate
- Children in daycare or school
- Up-to-date prenatal care

Environment
- Waste disposal, impact on productive activities, living in risky conditions, material and life damages due to climatic events

Gerando Falcões Index

The measuring Mandala, together with the diagnosis and take-off evaluation, generates the Index!

Each petal has a set of measuring variables, which are the questions of the questionnaire. Each measuring question has possible answers with different values, considering situations that range from extreme poverty to dignity. The average of all families generates the territory Index, which we identify as the level of poverty/prosperity of that favela

EXTREME POVERTY
Families in situations of diverse and chronic risk

DIGNITY
Families with the minimum conditions to have a life withou iminente risk.

POVERTY CYCLE INTERRUPTION
The entire Family with greater probability to prosper for generations.

POVERTY
Poverty situation with loss risk but still with some vulnerabilities.

DEVELOPING PROSPERITY
Families with conditions to prosper and the next generation with greater probability to not live in poverty.

Santos Andrade - Dezembro 2022

Haiti – Dezembro 2022

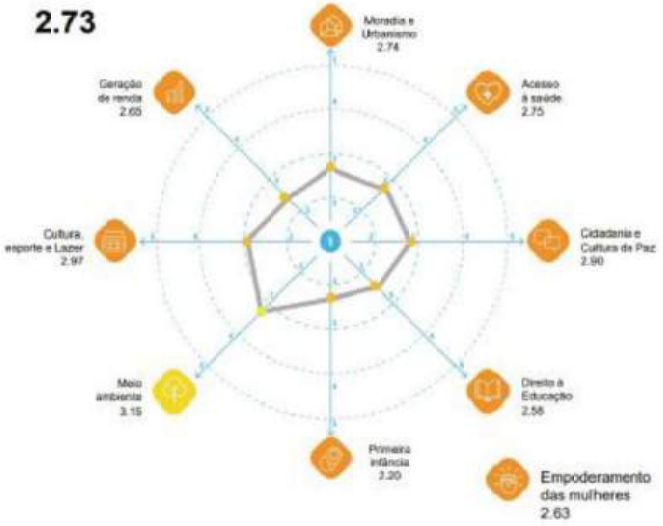
2.65

Ilha das Cobras

2.59

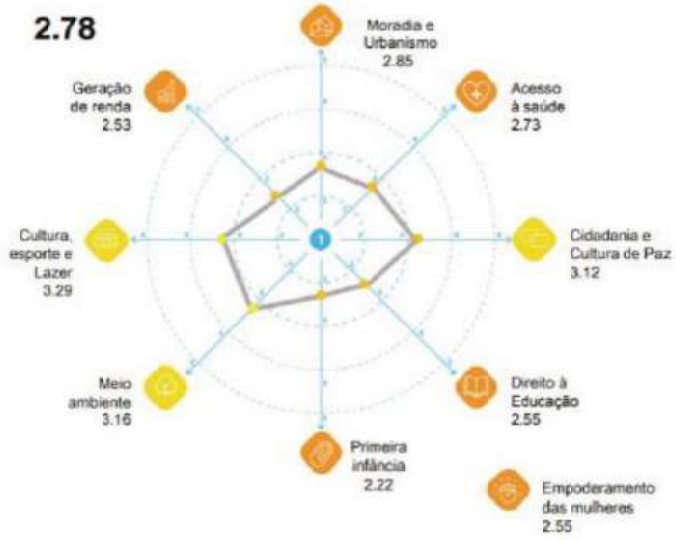
Inferninho

2.73



Zaki Narchi

2.78



FAVELA
GERANDO FALCÕES

FAVELAS INDEX

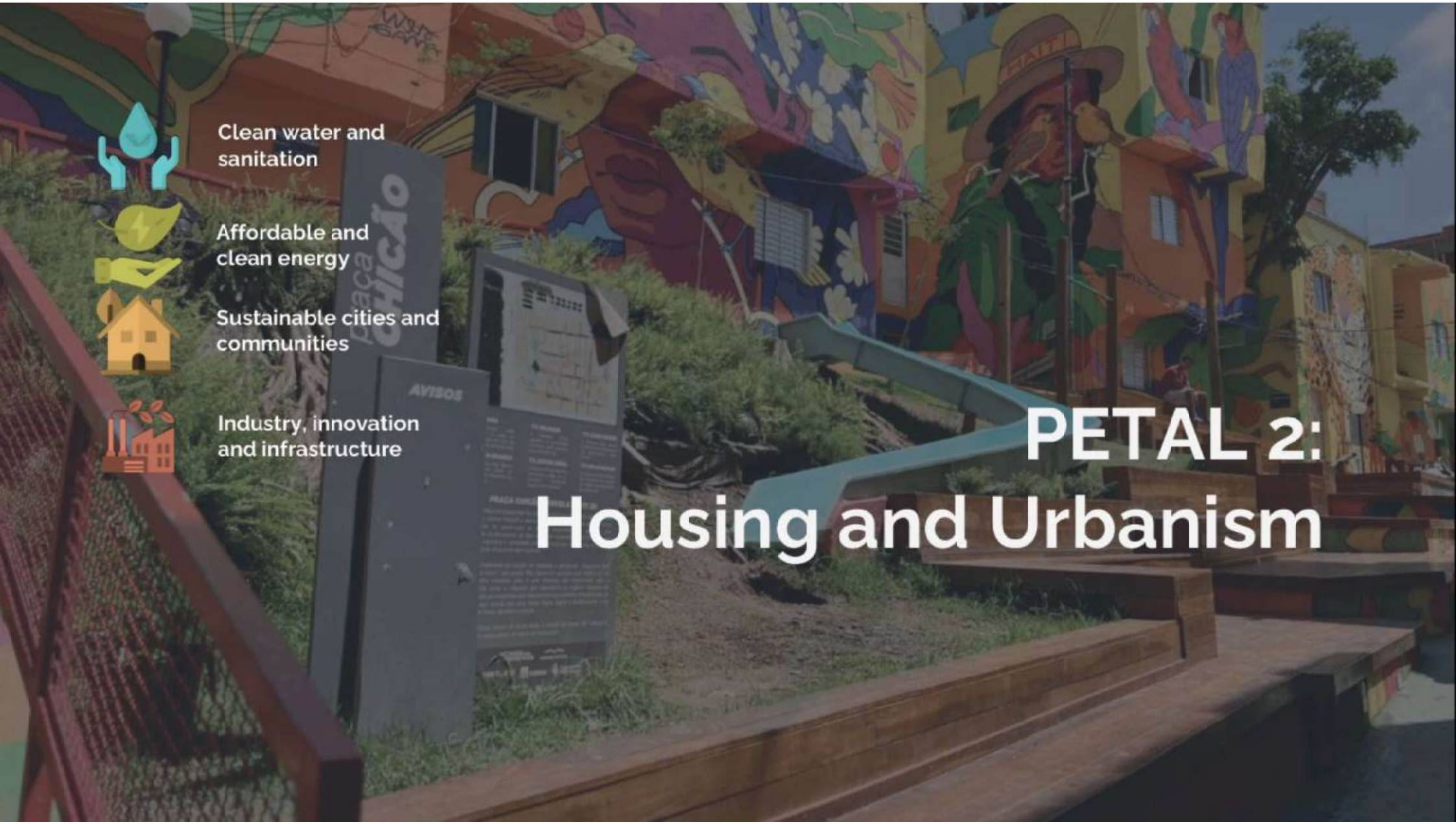
_Monitoring the progress of each favela.

_Comparison with other territories.


No Poverty
Zero Hunger
Decent Work
and economic growth
Reduce Inequalities
PETAL 1:
Income

Income

The income generation petal seeks to understand the economic situation of families and its impact on poverty alleviation and improving living conditions. This petal assesses the families' ability to generate income and their situation regarding work and financial stability. Studies have shown that families with lower incomes allocate a larger proportion of their income to food expenses, which can affect social mobility and the well-being of future generations.


Clean water and sanitation
Affordable and clean energy
Sustainable cities and communities
Industry, innovation and infrastructure
PETAL 2:
Housing and Urbanism

HOUSING AND URBANISM

The housing and urbanism petal measures the housing conditions and urban environment for families. It assesses access to adequate housing and basic infrastructure like water and electricity. Proximity to essential services, such as schools and hospitals, is considered, as well as safety and security indicators. The evaluation also includes urban planning, including well-maintained public spaces and infrastructure. The petal aims to understand how these factors affect families' quality of life and contribute to poverty alleviation.


Good Health and well-being
Zero Hunger
PETAL 3:
Helth
ÓTICAS
IMPÉRIO

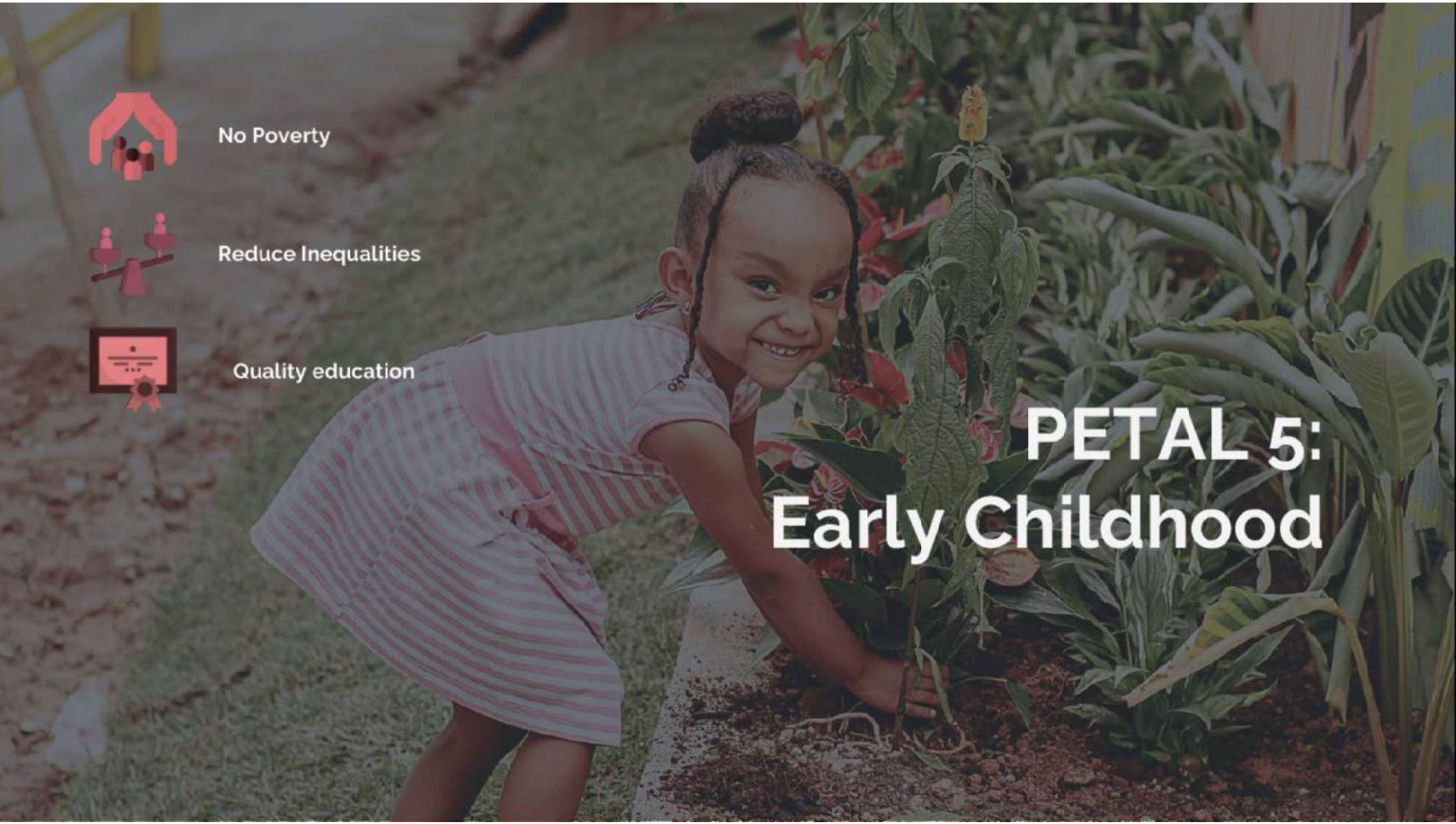
HEALTH

The health petal in the Gerando Falcões Index assesses the health condition of families and the quality of healthcare services. It evaluates access to healthcare services, preventive healthcare programs, and mental health services. The petal considers disease indicators, infant mortality, and life expectancy, and aims to improve quality of life and overcome poverty.


Quality education
PETAL 4:
Education

Education

In the context of the Gerando Falcões Index, the education dimension evaluates the access to quality education and the educational outcomes of families and communities. This includes assessing factors such as school enrollment rates, attendance, literacy levels, school infrastructure, teacher qualifications, and the availability of educational resources. It recognizes education as a fundamental human right and a key driver for social and economic development.


No Poverty
Reduce Inequalities
Quality education
PETAL 5:
Early Childhood

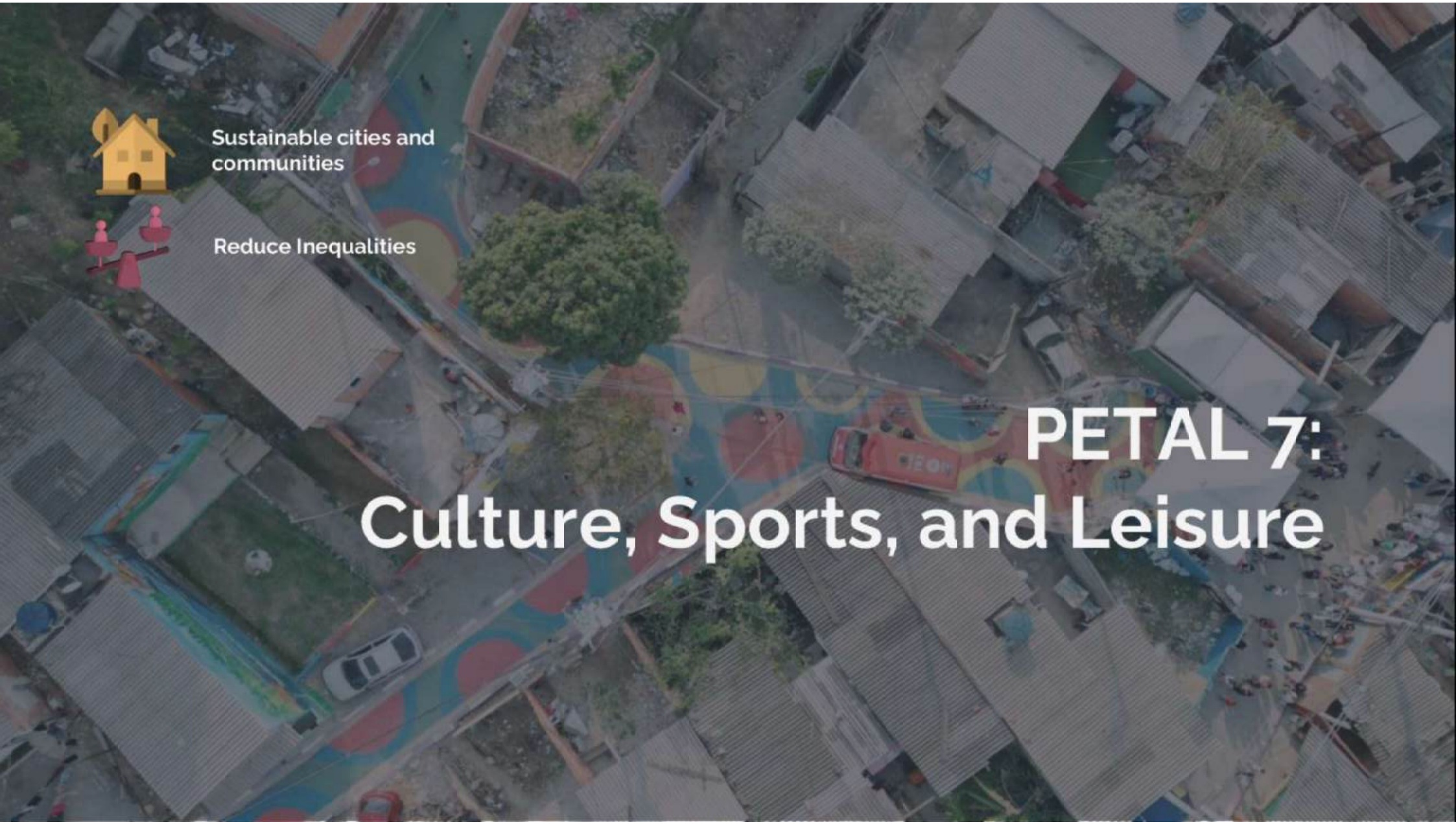
Early Childhood

Early childhood is a crucial stage of development from birth to around eight years old. It sets the foundation for a child's future growth and success. Quality early childhood experiences, including access to nurturing environments and early education, have long-term benefits such as improved educational outcomes and better overall well-being. Investing in early childhood development is essential for breaking the cycle of poverty and promoting a more equitable future.


Gender Equality
PETAL 6:
Women's Empowerment

Women's Empowerment

The Gerando Falcões Index recognizes the importance of women's empowerment as a key factor in combating poverty and promoting gender equality. This involves empowering women through access to education, healthcare, political leadership, and employment and income opportunities. The index acknowledges that women's empowerment is essential for achieving a more just and inclusive future.


Sustainable cities and communities
Reduce Inequalities
PETAL 7:
Culture, Sports, and Leisure

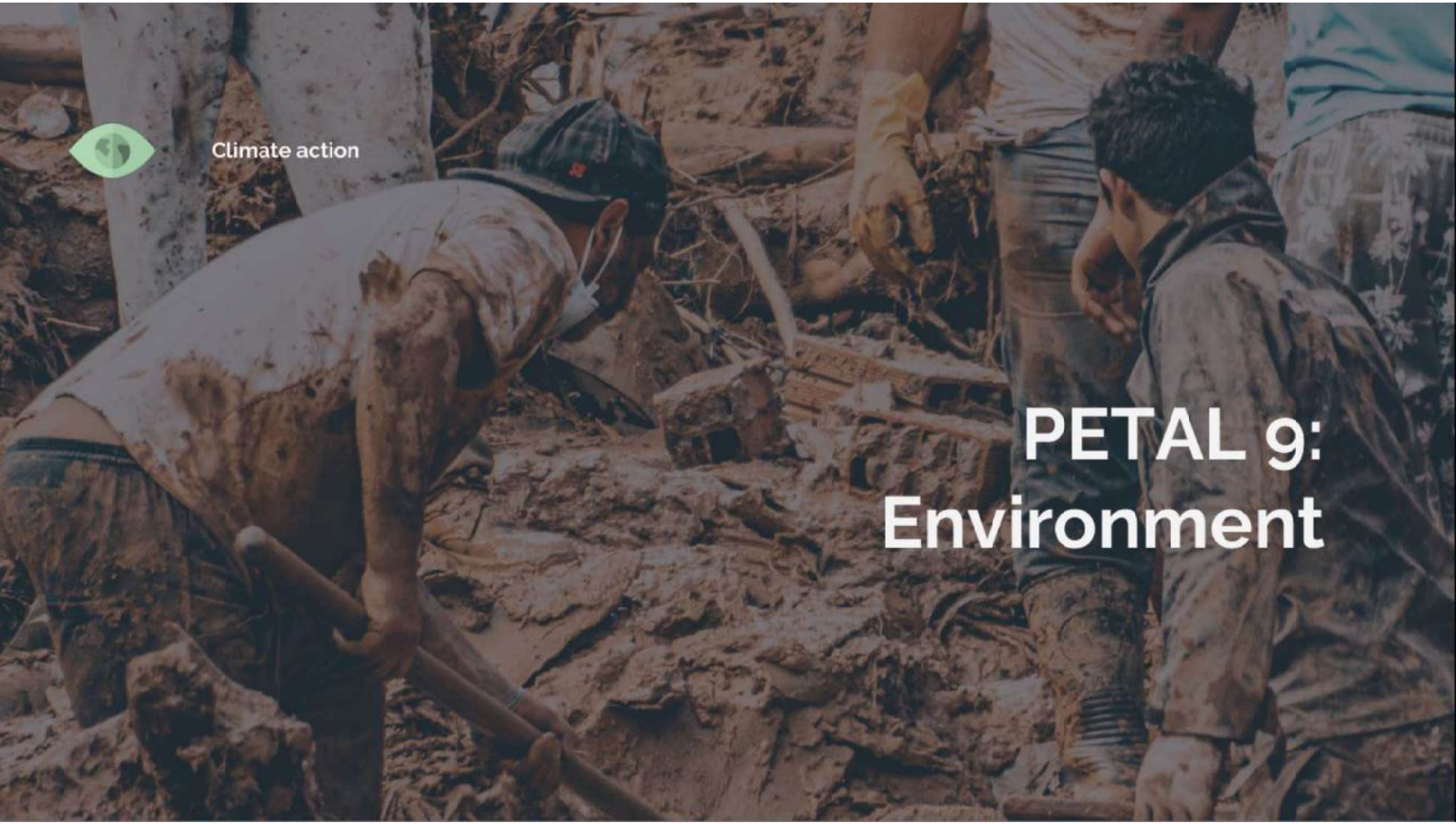
Culture, Sports, and Leisure

The Gerando Falcões Index recognizes the significance of culture, sports, and leisure in promoting social development and improving quality of life. It evaluates the availability and accessibility of cultural activities, sports facilities, and leisure opportunities within communities. The index acknowledges the importance of cultural expression, physical activity, and recreational activities in fostering social cohesion and personal well-being. By assessing and promoting access to these areas, the index aims to enhance the overall quality of life and well-being of individuals and communities.


Peace, justice and
Strong institutions
PETAL 8:
Citizenship and
Culture of Peace

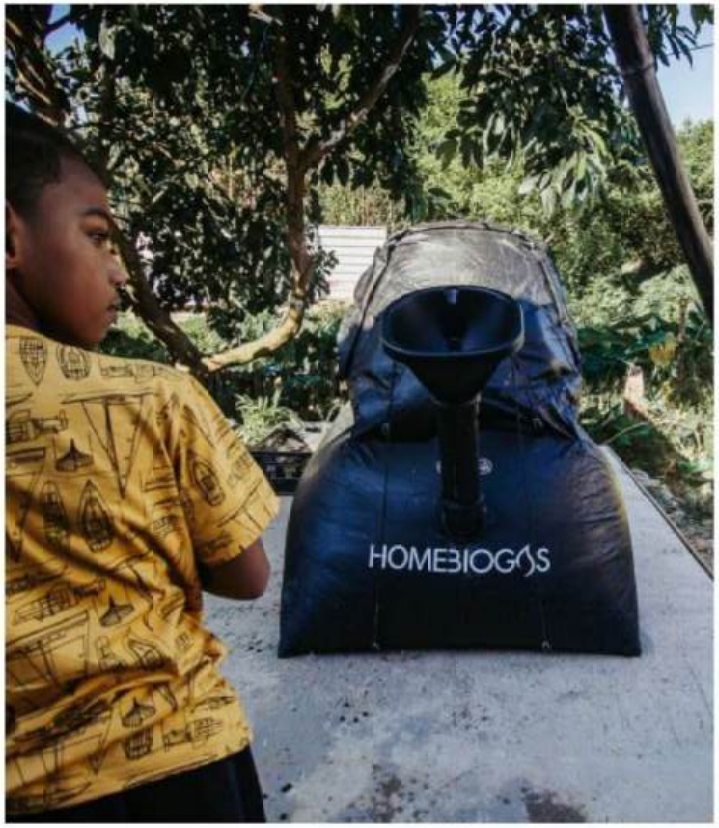
Citizenship and Culture of Peace

The Gerando Falcões Index recognizes the importance of citizenship and a culture of peace. It assesses the level of citizen participation and engagement in democratic processes, as well as access to basic rights and services. The index also evaluates the presence of a peaceful culture that promotes values such as mutual respect, non-violence, conflict resolution, and social inclusion. By promoting active citizenship and a culture of peace, the index aims to contribute to sustainable development and create a more just, inclusive, and peaceful society.


Climate action
PETAL 9:
Environment

Environment and Resilient Favelas

The Gerando Falcões Index recognizes the critical importance of environmental sustainability. It assesses the level of community engagement in environmental conservation efforts, as well as access to green spaces and sustainable resources. The index also evaluates the impact of climate change in local livelihood and economic activities. By calculating environmental riscs the index aims to understand what practices and solutions are able to create more resilient favelas.



TRANSFORMING FAVELAS THROUGH COLABORATION

FAVELA 3D
GERANDO FALCÕES

Before

After

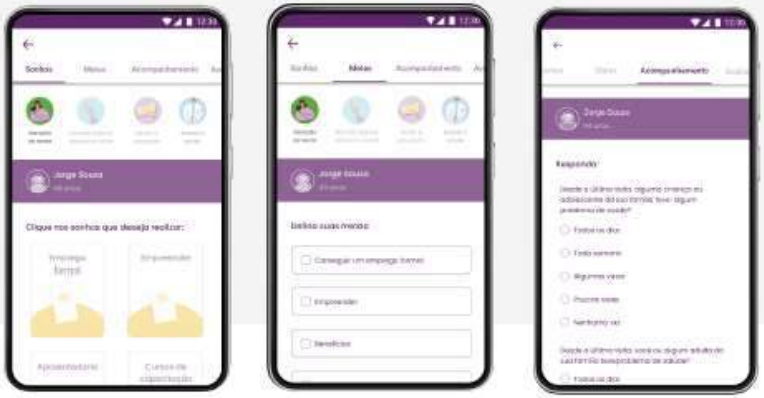

DECOLAGEM
GERANDO FALCÕES

DECOLAGEM PROGRAM

Within the scope of Favela 3D, we have implemented **the first urban poverty graduation program**. The program design **includes individualized support for each member of the assisted families.**

TECNOLOGY

We have implemented a real-time monitoring system through an AI-powered application, which allows for the visualization and tracking of the indicators, dreams, and goals of each family. This system enhances decision-making accuracy and influences public policies aimed at combating poverty.



FAMILY TAKEOFF JOURNEY

COMUNITY SURVEY

GERANDO FALCÕES INDEX

Social vulnerability index that indicates the poverty level of each family and directs the program's actions

INDIVIDUALSURVEY

BOARDING AT TAKEOFF

It is the starting point of the family, where we get to know each member in depth

FLIGHT DESTINATION

Where the family wants to go and the step-by-step guide to getting there

FLIGHT PLAN

Instrument for family monitoring and measuring dreams and goals

ROUTE EVALUATION

Application of the community census to assess the evolution of families

TO RENEW OR NOT TO DECOLAGEN

INDIVIDUAL JOURNEY AND MENTORING

Housing and urbanism
- Materials of the walls, roof, and floor of the dwelling
- Windows
- Water access and frequency
- Electricity
- Sewage disposal
- Type of access and bathroom quality
- Urban planning problems, public and community infrastructure and equipment

Income generation
- Per capita income
- Occupation
- Bank account
- Income-food relationship

Health
- Poverty-related diseases
- Food insecurity

Culture, Sports, and Leisure
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Environment
- Waste disposal, impact on productive activities, living in risky conditions, material and life damages due to climatic events

FAMILIES AT THE CENTER

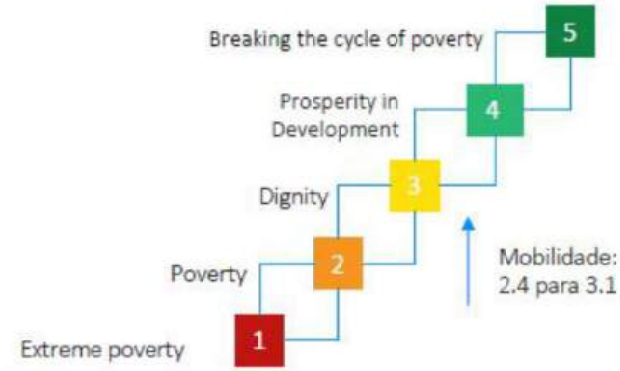
Income generation
That's great to hear that Anaelson was recently promoted and now works in a formal job.

Education
Anaelson and his wife Pauliana are enrolled in the Adult and Youth Education (EJA) program.

Women's Empowerment
Pauliana gives a lecture focused on female empowerment.

Early Childhood
The four school-aged children are enrolled in both daycare and school.

Citizenship and Culture of Peace
Teenage children are involved in the communication field as part of their experience.



OUR RESULTS

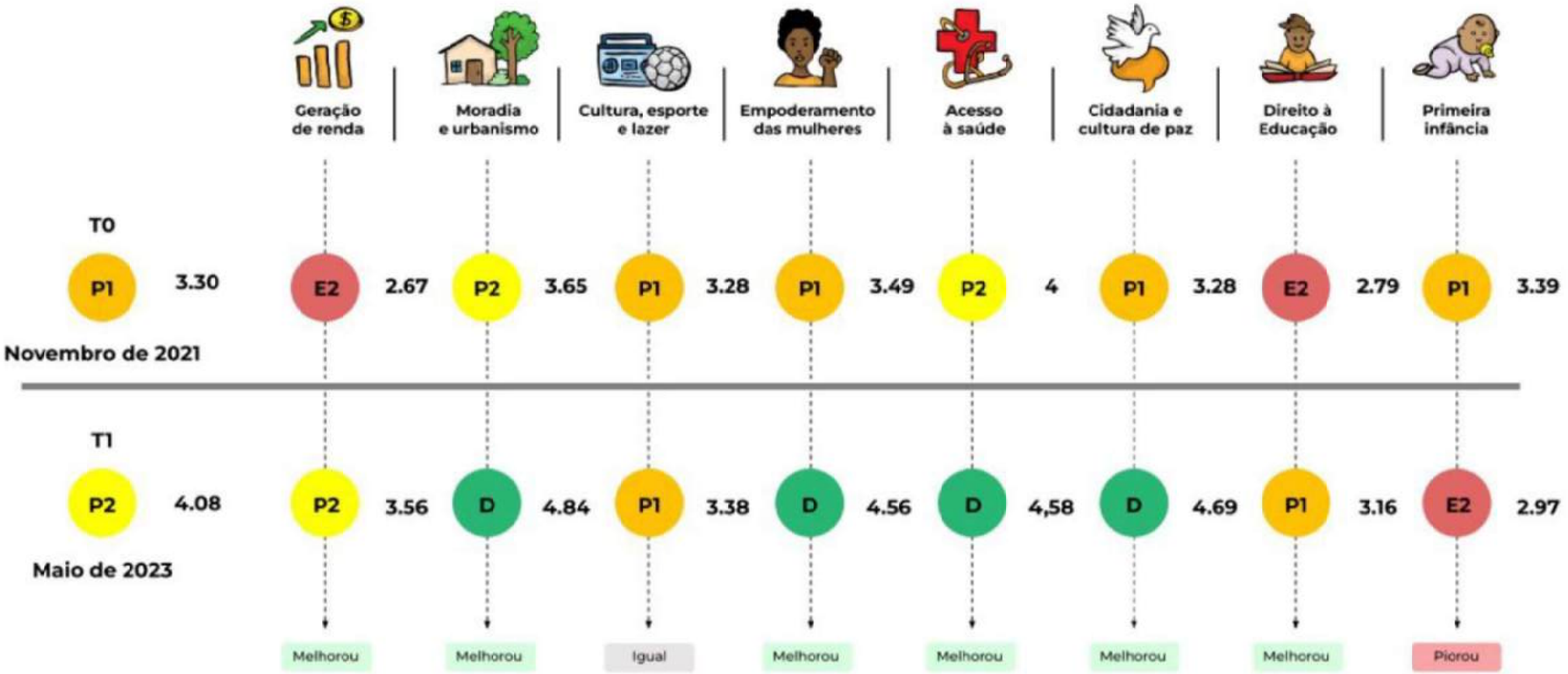
MONITORING OF SOLUTIONS AND DATA ANALYSIS

MONITORING

1. Data collection analysis
2. FAVELA 3D Impact perception
3. Participatory assessment of residents
4. Decision making on the solutions in place and possible new demands

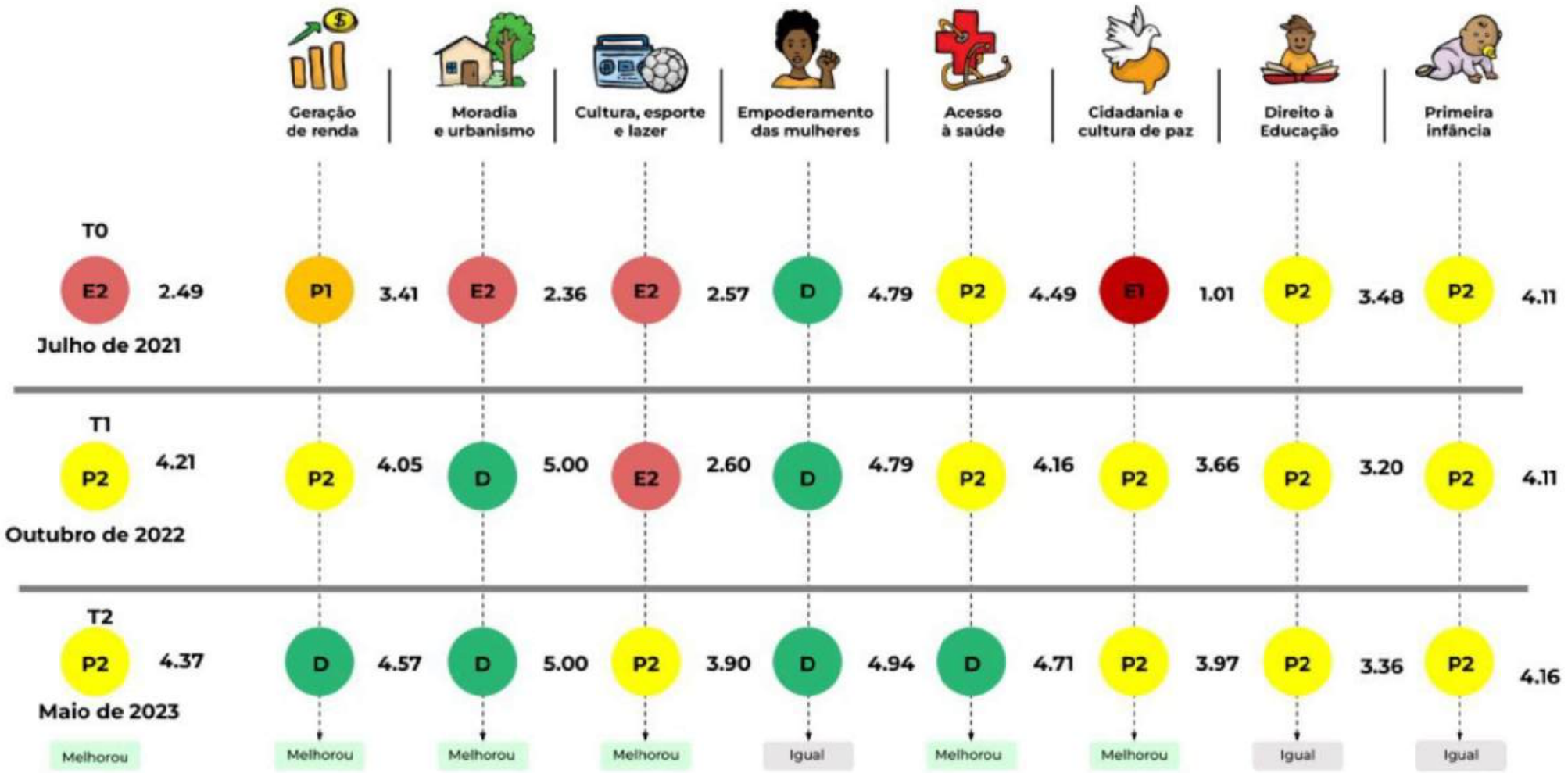
Results – Vergel do Lago

Of the 112 families in the program, **108** improved their index and only **4** did not have an iprovement.



Results – Favela Marte

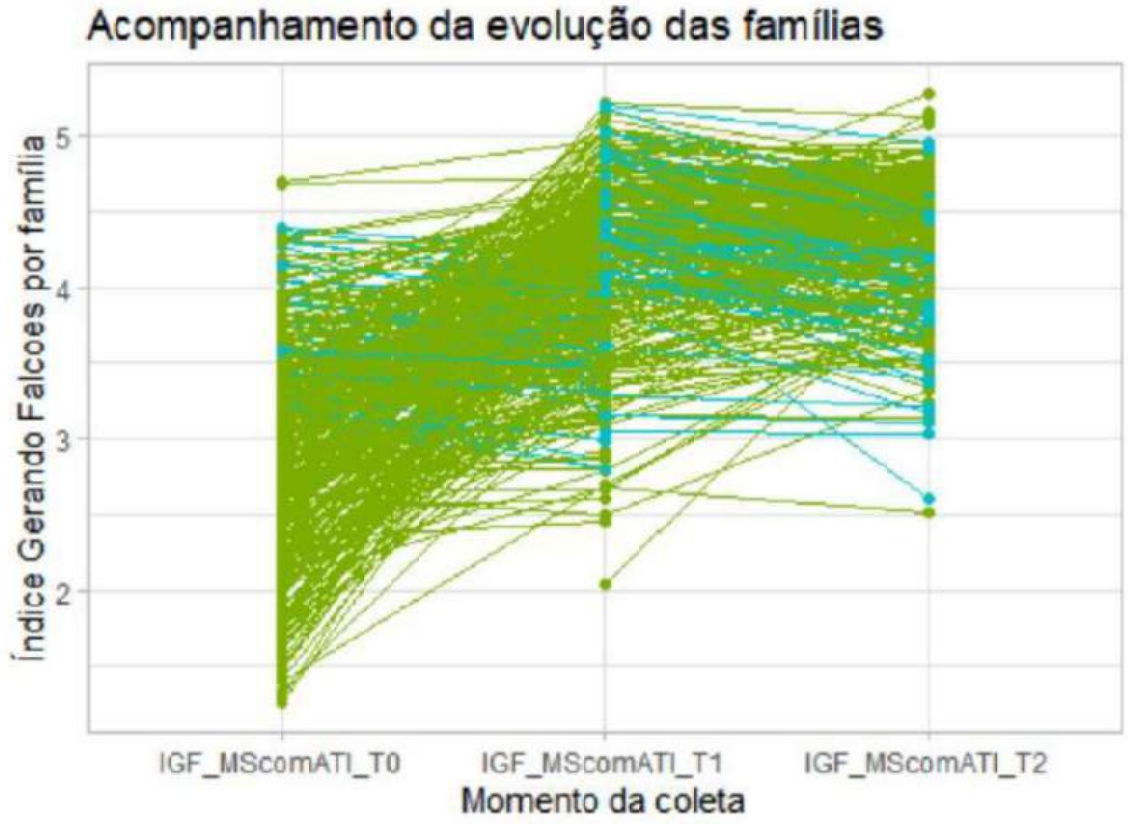
Of the 221 families in the program, **210** increased their index and **11** did not have an improvement.



Overall pilot impact

476 families improved their IGF (87% of families with follow-up), 164 families reached dignity in the overall IGF (considering all petals).

The changes in the favelas are evident, and the project is already considered a reference for many others. Residents feel increasingly proud to belong to the favela, have grand dreams and plans for the future, feel more integrated into society, women are more empowered, families are more harmonious, and there is more hope for the future of the children.



*476 (87%) tiveram melhoria no índice - **linhas verdes***
*72 (13%) famílias tiveram piora no índice - **linhas azuis***


TAMOJUNTO

H.E. TSAKANI MALULEKE

SAI20
SUPREME AUDIT INSTITUTIONS
BRAZIL 2024

H.E. Tsakani Maluleke, Auditor General of South Africa, will share AGSA's expertise in auditing multidimensional poverty within the context of climate change.

Her presentation will delve into how comprehensive audits can reveal the intricate links between poverty and environmental factors, providing critical insights for policymakers.

By highlighting South Africa's approach and challenges, Ms. Maluleke will demonstrate the essential role of rigorous auditing in driving compelling, inclusive climate policies.

SAI20
SUPREME AUDIT INSTITUTIONS
BRAZIL 2024

AUDITOR-GENERAL
SOUTH AFRICA

Multidimensional poverty in the context of climate change

Exploring the complex interplay between multidimensional poverty and climate change

SAI20 Summit

June 2024

MISSION AND VISION

VISION

To be recognised by all our stakeholders as a relevant supreme audit institution that enhances public sector accountability

MISSION

The Auditor-General of South Africa has a constitutional mandate and, as the supreme audit institution of South Africa, exists to strengthen our country's democracy by enabling oversight, accountability and governance in the public sector through auditing, thereby building public confidence

Lived experiences

IOL
SOEs ran up R68 billion in irregular expenditure
Auditor-General Tsakani Maluleke has found state-owned entities (SOEs) ran up R68 billion in ... Eskom (R11.2bn) and Airports Company South Africa (R0.6bn).

Biznews
R186 billion vanished from SA municipalities in just 10 years
Over just ten years, R186bn has seemingly disappeared from South African ... Auditor-General Tsakani Maluleke recently revealed that there was R26bn in...

BusinessTech
South African municipalities' R28.4 billion irregular spend in 4 charts
4 billion ($2.2 billion) in the 2017 fiscal year as accountability "continues to fail in local government," the Auditor-General said. The bulk of the increase...

TimesLIVE
Auditor-general report: Tracking billions blown by towns
The auditor-general's report on local government finances is a ... wasted R3.47bn on avoidable costs such as South African Revenue Service...

News24
SA's municipalities racked up R26 billion in irregular expenditure - AG
On Tuesday, Auditor-General Tsakani Maluleke briefed Parliament on the 2019-'20 municipal audit outcomes. The case of a Eastern Cape municipality which spent...

CONTINUED MISUSE of state resources and persistent weaknesses in systems of transparency, accountability and performance is of significant concern for citizens of South Africa broadly

Having reflected on the South African context and the root causes of persistent undesirable audit outcomes, the AGSA resolved that as long as there is **no focus on improving the public sector culture, audit outcomes and the lived realities of citizens will not change materially.**

#Cultureshift2030 – strategic aspiration

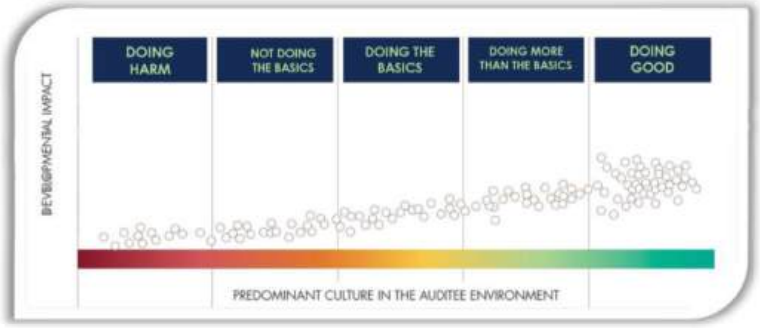
What we aspire to:

To have a stronger, more direct and consistent impact on improving the lived reality of South Africans

How we aim to achieve it:

By sustainably and efficiently shifting public sector culture through insight, influence and enforcement

1. We plot our auditees along the continuum from **doing harm** to **doing good**

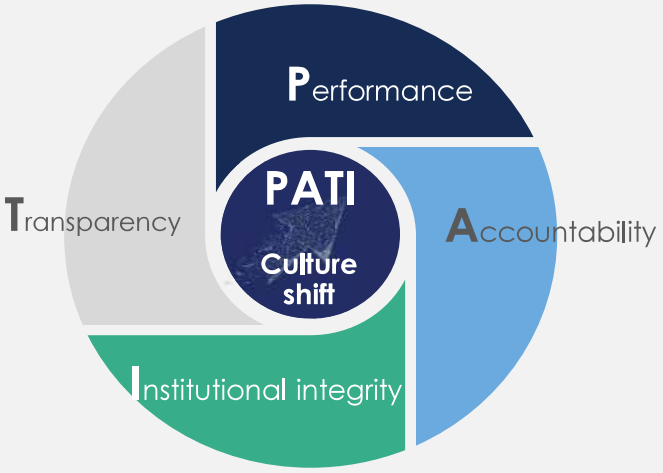


2. and provide **Insights**

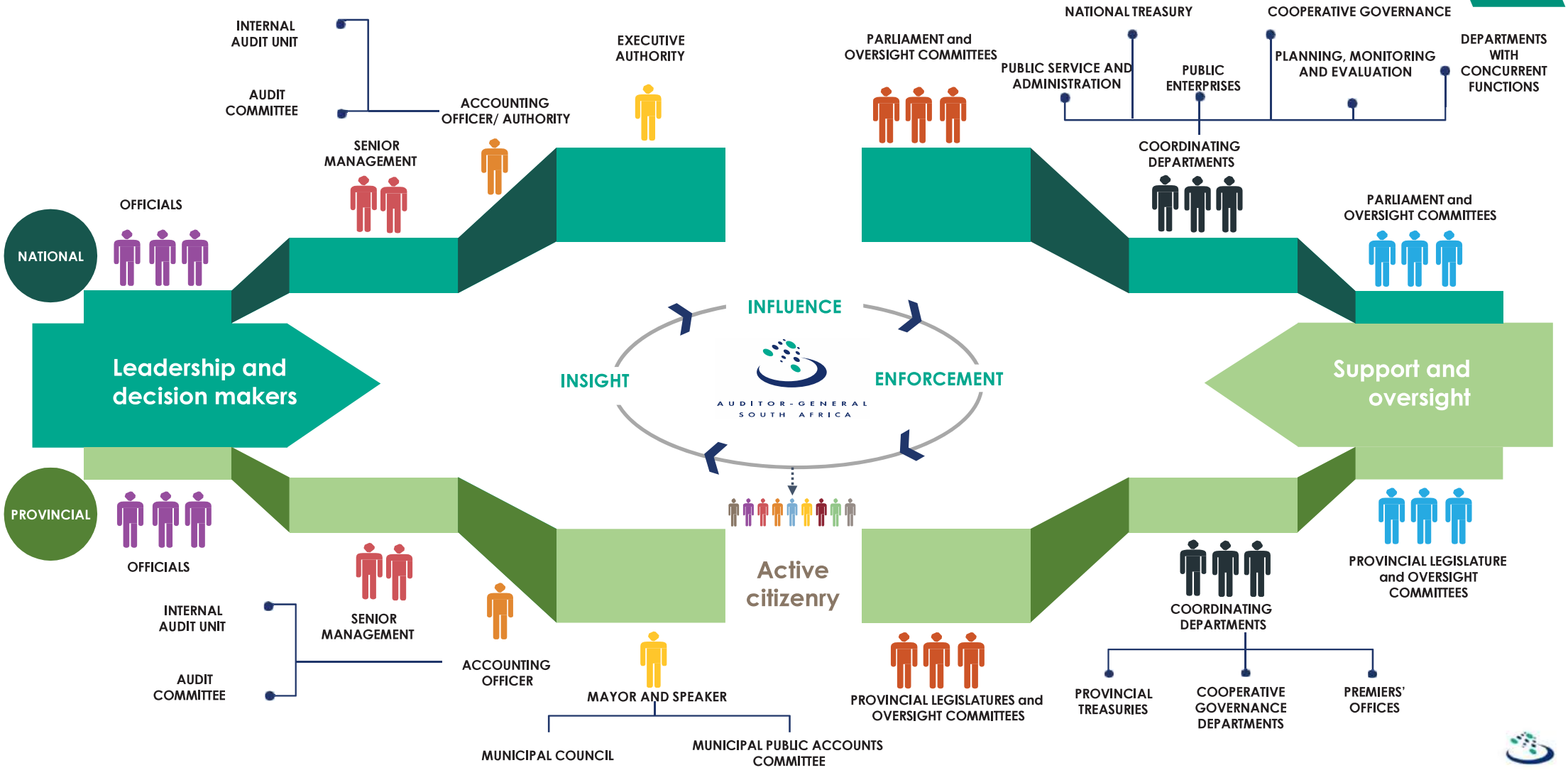
3. that can be used to **Influence** a **shift** across the continuum towards

4. If auditees do not respond appropriately, we **Enforce** to **shift** the culture towards

Public sector culture characterised by



All have a role to play in the accountability ecosystem



Critical role of SAIs in ensuring good governance through effective public oversight

South Africa is a country rich in resources, with a strong heritage in agriculture and biodiversity. However, climate change and socioeconomic risks pose significant threats to the **citizens.** The country's ability to cope with these **changes requires collective response, particularly from policymakers and planners**.

Global

Global goals such as the sustainable development goals (SDGs) and research done by multilateral institutions, e.g. UN, IMF, WEF, World Bank

Regional

- Goals and strategies from the African Development Bank, e.g. Agenda 2063.
- Developments from the African Union
- Comparisons with other, similar African countries

National

Government strategic documents to identify objectives, outcomes and priorities and other research institutions

The **whole-of-government** auditing model has enabled us to identify critical issues so that we begin to view the entire government as a single ecosystem – **one auditee and one auditor** – while bringing in insights on an international and African region level.

Themes are critical areas of audit focus that will drive impact on lived experiences of citizens and ensure relevance. These areas are at macro level, impact South Africa and drive key audit insights.

- Infrastructure failures
- Safety and Security
- Environmental sustainability
- Education, skills & unemployment
- Fiscal pressure
- Coordinating institutions

Value chains are the end-to-end processes used by government to enable key service delivery.

- Water and sanitation
- Human settlements
- Roads and transport
- Health
- Energy

Macro risks and key audit observations examples

Macro risks	Infrastructure failures	Lack of education and skills, and high unemployment	Health
			
Key observation based on the work we have done	• Project completion delays • Cost overruns • Poor-quality construction • Completed infrastructure not put into use within reasonable time • Ageing and dilapidated infrastructure in key service delivery areas	• Lack of correlation between top-funded courses, government, and critical skills list and occupations that are in high demand in the market and are key to stimulating economic growth • Structural unemployment • Suboptimal economic performance	• Unhygienic and unsafe medical facilities • Capacity and skills shortages • Supply chain management weaknesses affect availability of lifesaving medical equipment and medicine • Manual systems lead to patient files being lost
Immediate Impact	• Delays in service delivery (i.e. healthcare, education, water, housing) • Increased cost and financial losses • Poor return on investments • Increased health and safety risks	• Mismatch between market demand and graduates produced by institutions of higher learning • High unemployment rate • Duplication of effort as learners received skills development funding from more than one source • Decease in leaners enrolled for higher education due to lack of funding	• Cause diseases, putting further pressure on the public health system • Communities and patients confronted with long queues at medical facilities or having to travel far for medical services • Significant medico-legal claims against poor health services, placing pressure on government finances
Multidimensional poverty impact	Citizens who depend on public health, education and other basic services are prevented from participating in the country's economy or from realising their best potential	*"Education is the most powerful weapon which you can use to change the world"* *Nelson Mandela.*	Health-related matters cause significant strain on the economy due to absenteeism from work and school, which severely affects productivity and progression in school

2022 flood-relief audit

In April 2022, the province of KwaZulu-Natal in South Africa experienced disastrous floods.

Impact:

- The floods resulted in infrastructure and business losses of an estimated US$2 billion. A study by the University of the Witwatersrand and the University of Brighton found that these floods were the most devastating natural disaster in the province since 1840.
- The disaster led to loss of lives, infrastructure damage and a negative economic impact.
- This resulted in people experiencing various deprivations, such as loss of shelter, disruptions in education, limited access to healthcare, loss of income.

SAI response:

In **May 2022** we conducted a real-time audit of the funds that government made available to provide much-needed relief to communities in flood-ravaged areas. We audited the processes as they unfolded and communicated risks and findings identified without delay so that prompt action could be taken to implement corrective measures. We considered the risks of non-delivery and continued harm to flood victims as well as the possible fraud and mismanagement of funds.

Key findings on flood-relief funding

- **Significant delays** in assessing damage and determining needs
- Multiple delivery failures due to **lack of capacity**, **inadequate project management**, and **ineffective monitoring**
- **Implementation of critical legislation** was slow, contributing to the severe impact of the floods
- Issues in **procurement processes**, including disparities in pricing for similar services and the presence of red flags

Key recommendations to government

- For **government leadership** to take urgent action where delivery was slow or compromised
- **Intergovernmental processes and coordination** needed to be strengthened to avoid failure in the infrastructure rebuilding phase
- There was a need to enhance **disaster management capacity and capabilities**, as such disasters are becoming more frequent due to climate change
- **Preventative controls** needed to be embedded to prevent accountability failures in future disaster relief funding

Good practices by government

- The **social relief system** responded well to the disaster, providing necessary aid to affected communities
- The activation of **national and provincial committees** demonstrated government's commitment to coordinate and monitor relief efforts and the use of funds
- Government implemented **pre-audit processes** to reduce the risk of procurement irregularities, and payments were withheld in instances of poor-quality delivery or procurement risks to avoid losses

Role of government auditors

As with the flood-relief audit in South Africa, auditors play a crucial role in tackling the complexities of climate change that result in multidimensional poverty. We ensure **efficient resource use, promote transparency, evaluate policy effectiveness and support evidence-based decisions**. Our efforts help governments to protect vulnerable citizens and build resilience, fostering a sustainable and equitable future.

Assessing climate risk and resilience

In response to climate risks, we examine the implementation of **infrastructure projects, environmental sustainability initiatives, social services, and economic development plans.**

Data analytics: enhancing auditing efficiency and coverage

We employ **data analytics** for effective and efficient auditing allowing for broader coverage, improved accuracy, real-time auditing and robust risk management.

Ensuring efficient use of resources

We assess whether government **funds allocated** to poverty-relief and climate-adaptation programmes are used efficiently and effectively.

Supporting evidence-based planning

Our findings inform the **design and implementation** of more effective programmes by providing a clear picture of what works and what does not.

Identifying gaps and overlaps

We highlight areas where additional investment or coordination is needed, as well as identify **duplicative efforts** that could be streamlined.

Promoting accountability and transparency

We highlight successes and deficiencies in government programmes, **fostering a culture of accountability** among public officials.

Enhancing capacity building

We recommend and support **capacity-building initiatives** within government agencies to improve delivery and monitoring of poverty reduction and climate programmes.

Monitoring international commitments

Monitor compliance with international commitments related to poverty reduction and climate change, such as the SDGs.

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MR PHILIPP D. HAUSER

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Mr. Hauser will enrich the discussion by delivering the final address for the panel, offering a forward-looking perspective and directions.

He will put in the picture the primary takeaways, providing a clear understanding of the meeting´s outcomes and future path for Poverty in the context of climate change.

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