



Measuring poverty indicators (SDG 1)

Experience of the National Bureau of Statistics of the Republic of Moldova

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CONTENT:

Nationalized SDGs indicators

Absolute poverty rate

**National Multidimensional
Poverty Index (MPI)**

Poverty mapping in Moldova



End poverty in all its forms everywhere

NATIONALIZED SDGs indicators



Landing Goal 1 in Moldova context

- All 5 targets are relevant for Moldova
- Only 2 targets (SDG 1.2 and 1.5) are partially aligned global agenda
- SDG target 1.4 significantly changed in nationalized version
- Currently there is no strategy and institution responsible for poverty reduction
- However, SDG 1.1 and SDG 1.2 on extreme and multidimensional poverty are considered to be of high priority and need to be integrated in the National Development Strategy of Moldova



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Nationalized targets

TARGET 1-1

ERADICATE EXTREME
POVERTY

TARGET 1-2

REDUCE POVERTY BY
AT LEAST 50%

TARGET 1-3

IMPLEMENT SOCIAL
PROTECTION SYSTEMS

TARGET 1-4

EQUAL RIGHTS TO
OWNERSHIP, BASIC
SERVICES, TECHNOLOGY
AND ECONOMIC
RESOURCES

TARGET 1-5

BUILD RESILIENCE
TO ENVIRONMENTAL,
ECONOMIC AND
SOCIAL DISASTERS**Differences:**

- is not part of national agenda
- international threshold may require special approach

None Left Behind:
people living on
less than \$1.9 a
day

Differences:

- Partially integrated into sectoral policies (abs.pov. elderly, rural)
- international threshold may require special approach

None Left Behind:
men, women and
children of all ages

Differences:

- target is not expressly stated in any policy
- low coverage of poor households by social assistance, low benefit levels and unsustainability of the pension system

None Left Behind:
poor and the vulnerable

Differences:

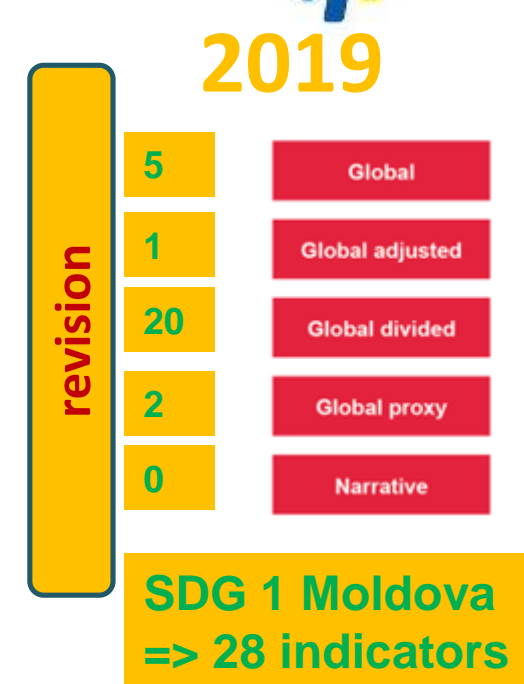
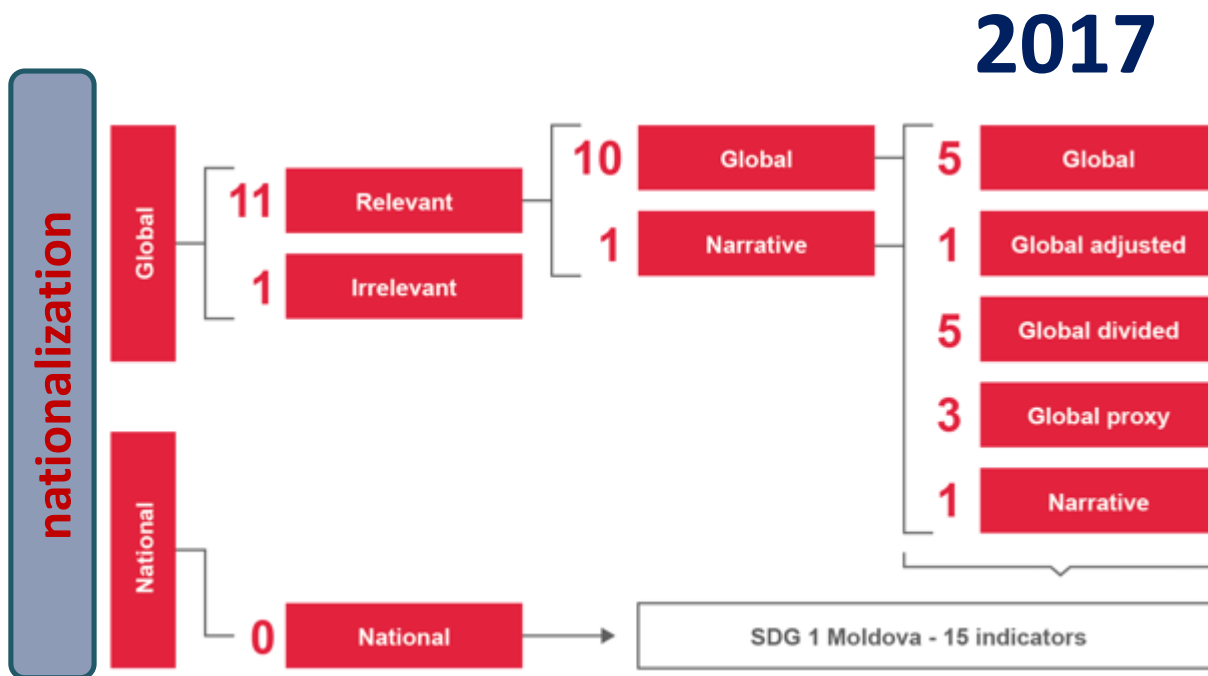
- mostly present in national documents, except Nat.Pr. Real Estate Cadastre

None Left Behind:
men and women

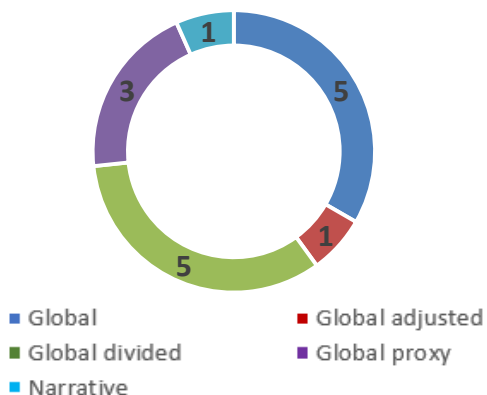
Differences:

- present in national documents
- Limited to climate-related events

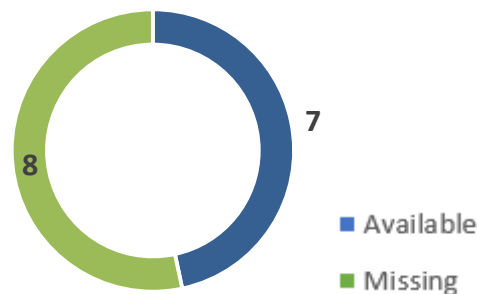
None Left Behind:
poor and those in
vulnerable
situations



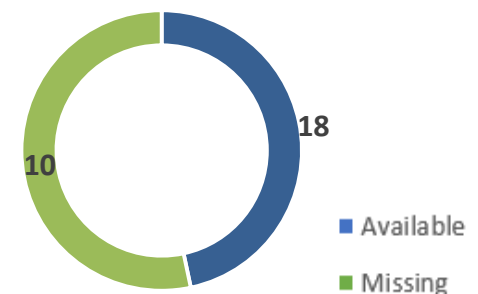
National SDG 1 indicators - 15



Availability of SDG 1 indicators



Availability of **revised** SDG 1 indicators





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United Nations
MOLDOVA

Revised nationalized indicators - 2019



Nationalized SDG Indicator	Availability	Indicator type	Data producer	M&E
1.1.1 Proportion of population below the international poverty line of \$2,15 a day, by sex, age, employment status and geographical location (urban/rural)	yes	Global adjusted	NBS	MoEc
1.1.2 Proportion of population below the international poverty line of \$4,3 a day, by sex, age, employment status and geographical location	yes	Global divided	NBS	MoEc
1.2.1 Absolute poverty rate, by sex and age	yes	Global	NBS	MoEc
1.2.2 Multidimensional poverty index, by sex	no	Global	NBS	MoEc
1.3.1 Proportion of population covered by social protection floors/systems, including quintile I	yes	Global divided => 8	NBS, CNAS	MLSPF
1.4.1 Proportion of population living in households with access to basic services (electricity, safe water sources, sewage), including quintile I	yes	Global divided	NBS	MoEc, MRDC
1.4.2 Proportion of total adult population with secure tenure rights to land, by sex and age	yes	Global divided=>2	Public Service Agency	MLSPF
1.5.1 Number of persons affected by natural disasters per 100 000 per	yes	Global divided => 3	Emergency Service	MoI
1.5.2 Direct economic loss attributed to disasters in relation to GDP	yes	Global	Emergency Service	MoEc
1.5.3 Proportion of actions implemented from the national strategic framework for mitigation of disaster associated threats	no	Global divided=>2	MADRM	MADRM
1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies	no	Global	MADRM	MADRM
1.a.1 Proportion of domestically generated resources allocated by the government directly to poverty reduction programs	no	Global	MoF	MLSPF
1.a.2 Proportion of total government spending on essential services (education, health and social protection)	no	Global divided => 3	MoF	MLSPF
1.a.3 Sum of total grants and non-debt-creating inflows directly allocated to poverty reduction programmes as a proportion of GDP	no	Proxy	MoF	MLSPF
1.b.1 Proportion of government recurrent and capital spending to sectors that disproportionately benefit women, the poor and vuln.	no	Proxy	MoF	MLSPF



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ABSOLUTE poverty rate

New methodology of absolute poverty line

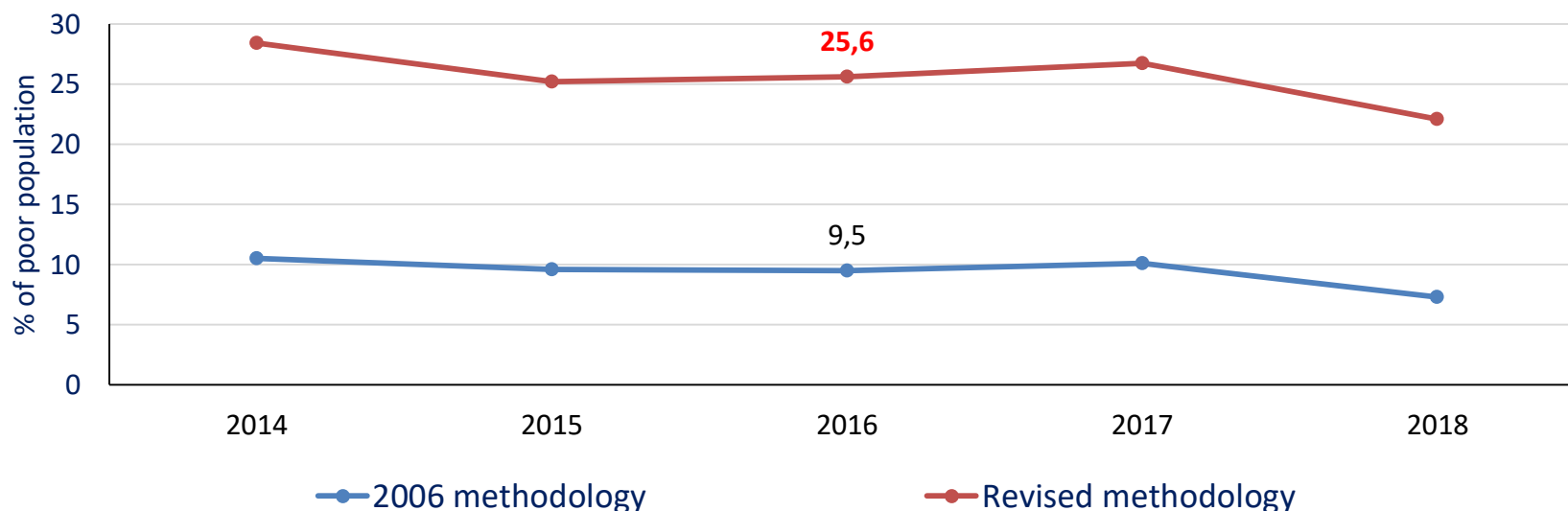
In 2017, with the support of the World Bank has been revised methodology for calculating the absolute poverty line

	2006 methodology	Revised methodology
Average monthly consumption	Consumption is expressed in monthly terms using diary information for certain items and recall expenditure for others	Diary and recall expenditures are combined and expressed in monthly terms
Minimum calories intake	2282 Kcal per day	2400 Kcal per day (in 2013 Academy of Science provided new standards)
Adjustment for price differences computed for each	Primary sampling unit and month of interview	Stratum and month of interview
Non-food poverty line	Non-food poverty line computed based on all those who have a total consumption approximately equal to the food poverty line (WB lower poverty line methodology)	Non-food poverty line computed based on all those who have a food consumption approximately equal to the food poverty line (WB upper poverty line methodology)

A new poverty line for 2016 was approved

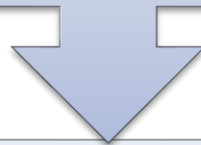
	2006 methodology	Revised methodology
Poverty line, MDL	1467.2	1852.4
% of poor population	9.5	25.6

Poverty rates for 2014-2018 were calculated using a new poverty line

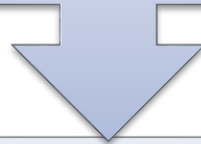


Revised population with usual residence

In 2019, NBS revised the population number for 2014–2018, applying, first ever the international **definition of usual residence**, and using the data on state border crossings by individuals were provided by the Border Police



Weights for the Household Budget Survey have been **recalculated** for the population with usual residence instead of the stable population



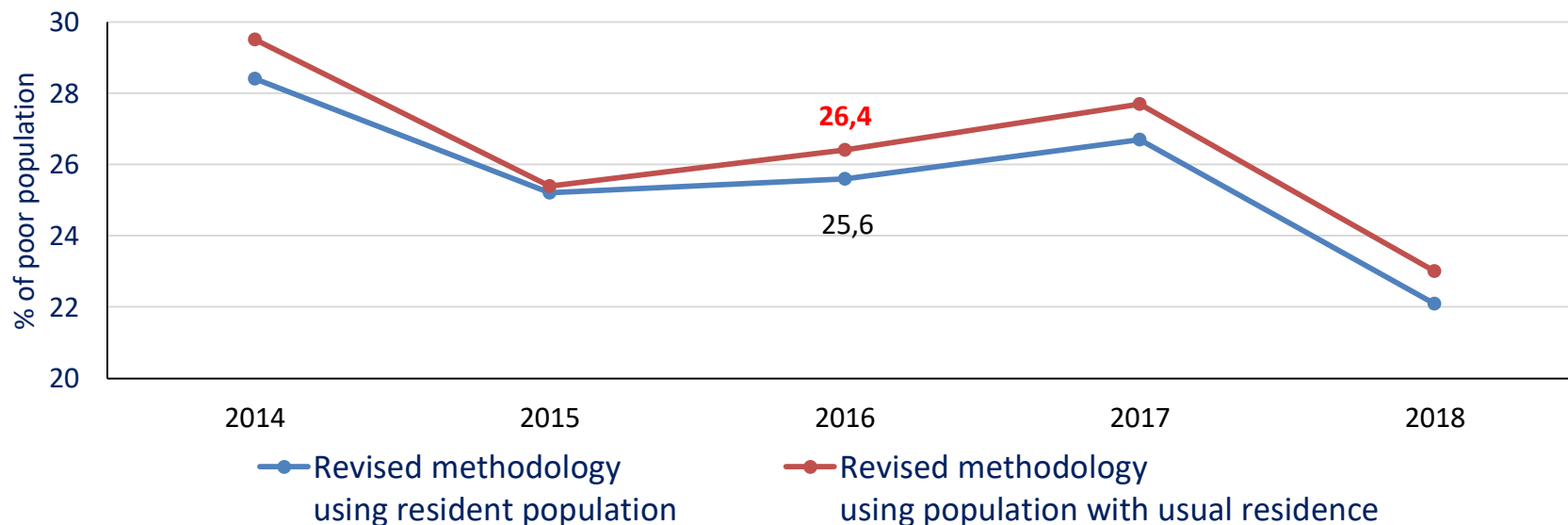
All poverty indicators, including the **poverty line**, were recalculated using new weights

Poverty line and poverty measures

For 2016, poverty lines estimates using *population with usual residence* are the following:

	Revised methodology using resident population	Revised methodology using population with usual residence
Poverty line, lei	1852.4	1819.2
% of poor population	25.6	26.4

Poverty rates for 2014-2018 were calculated using population with usual residence



Follow-up actions and challenges



Next

- Dissemination of poverty indicators/statistics – **StatBank**
- Dissemination of time-series for poverty related SDGs indicators, as part of **Statistical Annex to the first VNR**
- Estimation of poverty indicators for the time-series prior 2014 (**back-cast old time-series**) as soon as the retro-projections of usual residence population completed

CHALLENGES:

- Explanation to **data users** for occurrence of multiple methodological changes
- Time-series **interruptions**
- Political **instability** – **sensitivity** of poverty statistics
- Insufficient **staff** resources
- Staff **capacity** building required

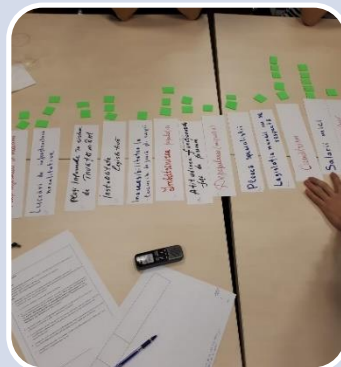


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NATIONAL Multidimensional Poverty Index (MPI)



Defining the National MPI (by users & “poor”)



Purpose of the index

Inter-institutional Workshop

Goal: experimental estimations of AROPE index & MPI / Alkire-Foster methodology

Output: poverty dimensions versus national policies

Dimensions of the “poor”

Qualitative research & collective intelligence

Goal: poverty by “poor”
** 15 focus-groups by “opinion leaders”, 124 participants - migrants, elderly, unemployed, young unemployed, HIV-SIDA, Roma, women with children, people with chronic diseases

Output: 68 issues/concerns of the “poor”

Measurements for dimensions

Consultation with the decision-makers

Goal: identify measurements for poverty dimensions of the “poor”

Output: 68 issues of poverty & deprivation prioritized and grouped by 10 socio-economic dimensions; proposals of indicators to measure them

Priority Dimensions

Quantitative survey

Goal: prioritize poverty dimensions by general population

Output: distribution of poverty & deprivation issues by dimensions at community/ individual levels

● Dec. 2016

● May-July 2017

● Nov. 2017

● June-July 2018

Defining the National MPI (**by population**)

Prioritization of dimensions

	Dimensions	Votes	Weights	Redistribution of votes
1	Education	61	5%	6%
2	Health	127	10%	13%
3	Labor force	170	14%	17%
4	Living conditions	175	14%	17%
5	Migration	38	3%	4%
6	Incomes, expenditures	301	25%	9%
7	Social protection	74	6%	7%
8	Fairness and respect	199	16%	20%
9	Behavior	24	2%	2%
10	Infrastructure	52	4%	5%
		1221	100%	100%

Defining the National MPI (**by statisticians**)

Final list of **AREAS (6)**
to be subject of poverty
measurement
in all its dimensions relevant
for the context of the Republic of
Moldova

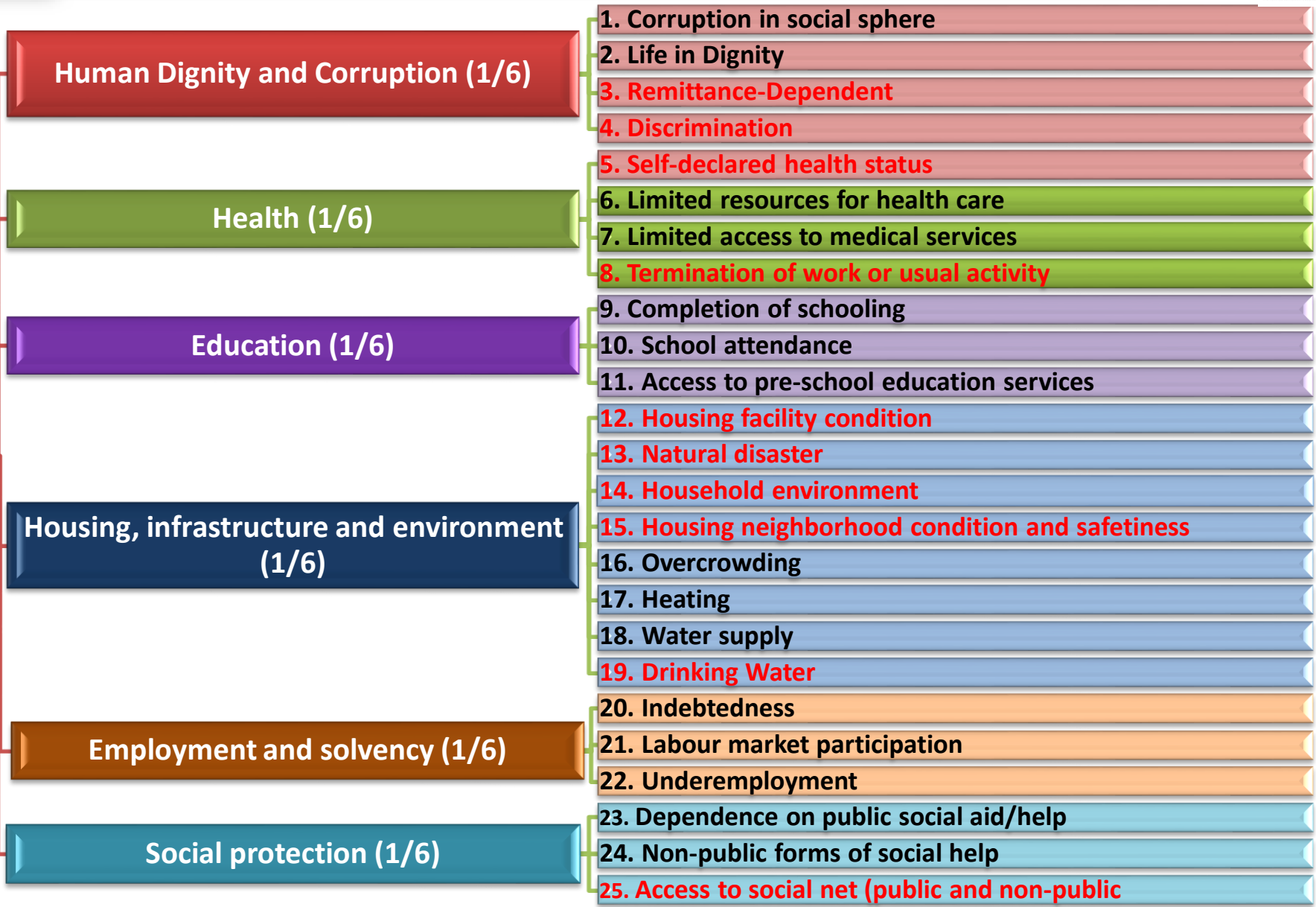
List of statistical **INDICATORS (25)**
to capture the non-monetary
deprivation and poverty dimensions

OPHI & UNDP **approach** applied &
good international practices and
experience

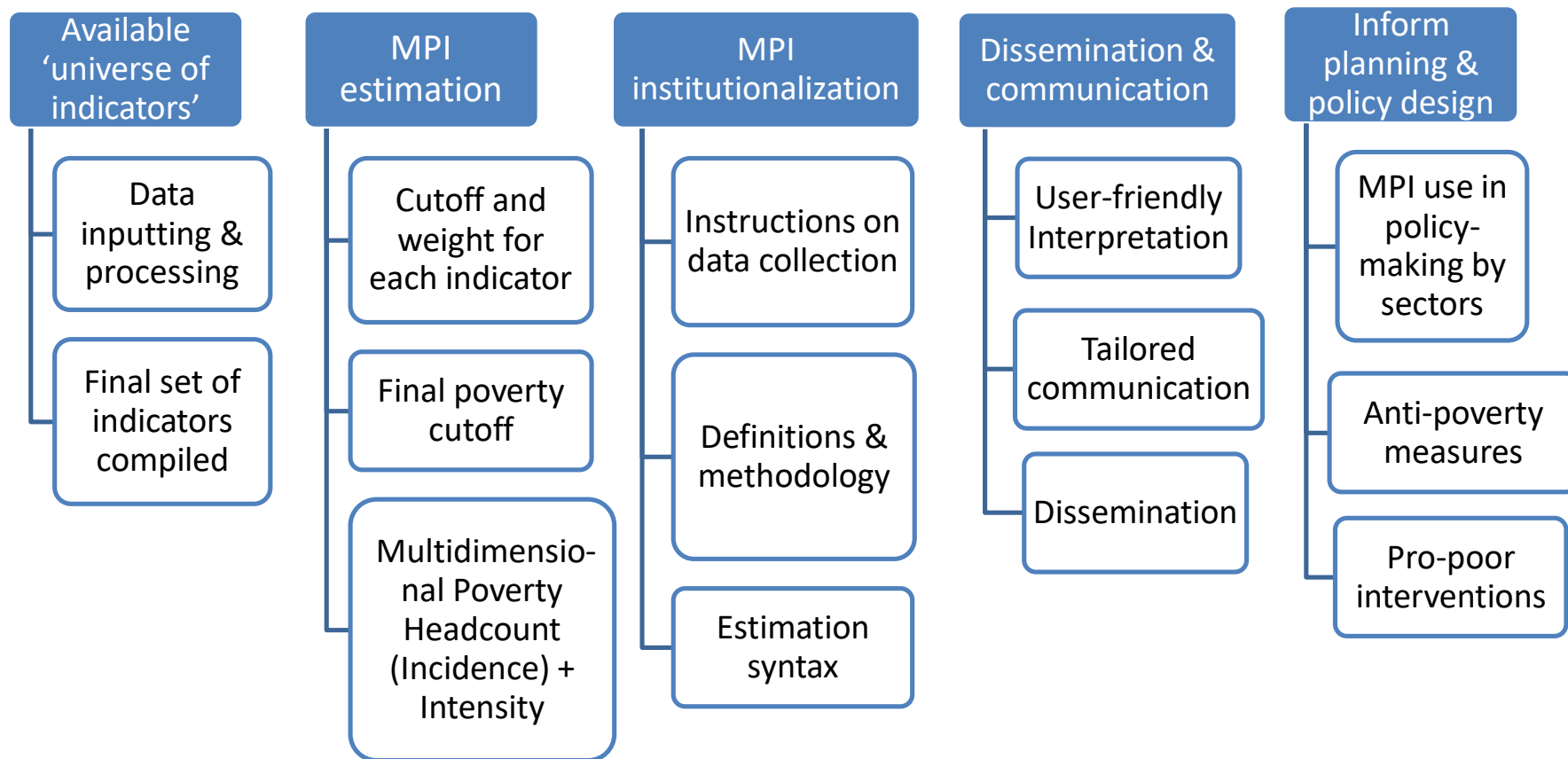
Field **data COLLECTION** of the
missing indicators for the MPI
4th quarter of 2019
(ongoing)

Out of 25 questions:
- **15** are already **collected** in HBS
- **10 indicators** are **missing**
=>
additional **Module** (toolkit Q + I)
I. deprivation faced by respondent
II. deprivations faced by household

6 dimensions of poverty



National MPI = who are poor * how much



January-March 2020

April 2020



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Poverty MAPPING in Moldova



Mapping poverty – methodology

WHAT are Small Area Methods:

- traditional “PovMap” methodology is a model-based unit level method where the indicator of interest for the Census population is simulated multiple times
- methodology we use comes from Elbers, Lanjouw, and Lanjouw (ELL 2002, and 2003)

HOW to produce:

- use official data sources (population censuses and household surveys) to estimate risk of poverty at lowest possible sub-national level.

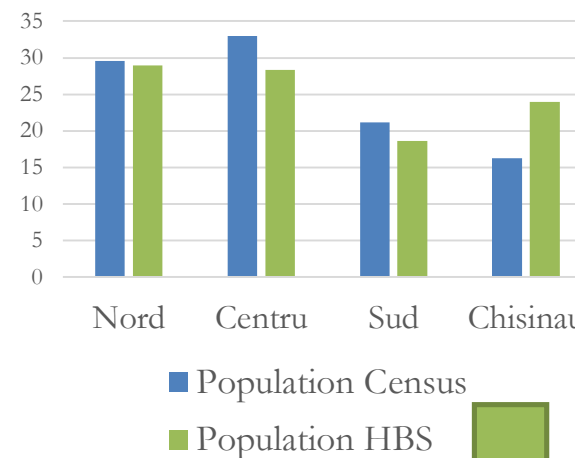
WHAT is required:

- Household survey and Census must have variables in common between them
- location (cluster) variable in order to link the census and survey at that level
- using a random subsample of observations from the larger data (this subsample would be the HBS) to simulate poverty onto the Census

ISSUE faced:

- Population shares by region do not match between the Census and the HBS

Share of total population
by region



national poverty rate will differ:
29.5 (HBS official) vs
31.5 (Census proportions)



SOLUTION:

- re-weighting the HBS with the purpose of making demographic characteristics more aligned across data sources

Mapping poverty – main steps

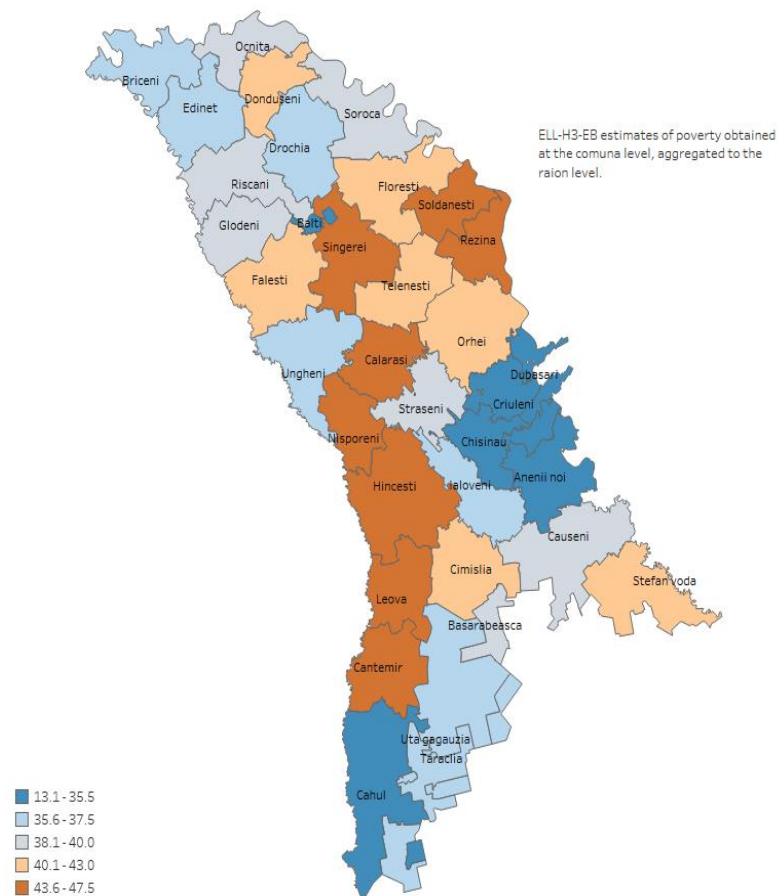
1. Prepare the data in the household survey and the census
 - » Check definitions, harmonize variables, Reweight if needed
 - » Ensure that data is comparable (compare distributions, remove outliers)

HBS questionnaire	Population census questionnaire
Level of education: <ol style="list-style-type: none"> 1. Preschool or no primary 2. Primary 3. Incomplete secondary / gymnasium 4. General secondary / lycee 5. Secondary professional 6. Secondary specialized / college 7. Higher education (university) 	Highest level of education completed: <ol style="list-style-type: none"> 1. No studies 2. Primary 3. Incomplete secondary / gymnasium 4. General secondary / lycee 5. Secondary professional 6. Secondary specialized 7. Higher education, 1st cycle 8. Master's, including 2nd cycle and integral higher education 9. Doctorate, postdoc
During the last week, did you work for income in cash or in kind for at least 1 hour? <ol style="list-style-type: none"> 1. Yes 2. No → 	Did the person work for at least 1 hour during the week of May 5-11, 2014 for pay / salary, profit or financial gain (in cash or in kind)? <ol style="list-style-type: none"> 1. Yes, worked for pay / salary, in cash or in kind 2. Yes, self-employed or family business, free professional or other self-employed activities 3. Yes, worked in the auxiliary agricultural activities for sale or self-consumption 4. No, but has a place of work from which was absent because of leave (including maternity), or because of short-term production stoppages (lack of inputs, clients etc.) 5. No, did not work

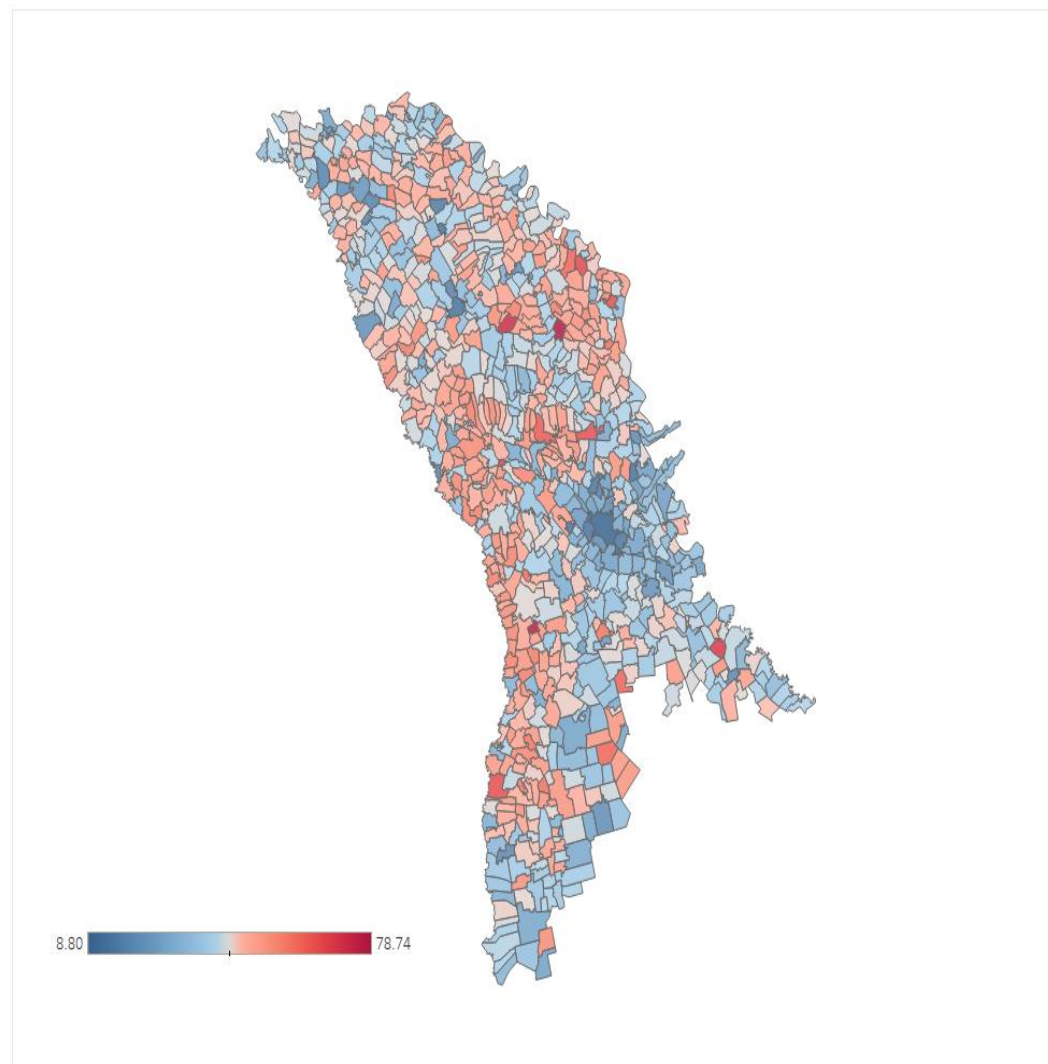
2. Prepare our welfare model using the household survey

3. Monte Carlo Simulation using the Census data $y^* = X_{census}\beta^* + \eta^* + e^*$

Raion level poverty



Comuna level poverty



MULTUMESC!
СПАСИБО ЗА ВНИМАНИЕ!
THANK YOU!

