

POVERTY MEASUREMENT IN INDONESIA



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Introduction

Commitment on the Poor in Indonesia:

1. International Commitment

MDG's target: Reducing poverty incidence by 50% in 2015 from condition of 1990

2. National Commitment:

Basic Law 1945, development goal: Improving the welfare of Indonesian people and to protect poor people

Target of Medium Term National Development Plan 2010-2014: Reducing poverty incidence from 13,3 % in 2010 to 8-10 % in 2014

Poverty Data for Targeting the Poor in Indonesia

Geographic Targeting (Annually, since 1976)

1. Methodology:
 - Concept: Basic Needs Approach (Monetary Assessment)
 - Based on Poverty Line (PL):

$$PL = \text{Food PL} + \text{Non Food PL (Essential)}$$
2. Source of data: National Socio Economic Survey or SUSENAS (sample):
 - Before 2010: Annually (± 70.000 hhs)
 - 2011-2014: Quarterly (75.000 hhs)
 - 2015-now: twice in one year (March and Sept)
3. Poverty data: Poverty incidence for every region based on **aggregate estimation**
4. Advantages:
 - For Geographic targeting
 - For Performance Indicator
 Limitation:
 Can not use for individual targeting

Household Targeting (Every 3 year since 2005)

1. Methodology:
 - Non-monetary assessment
 - Multidimensional Indece or Proxy Means Test (PMT) from chrarecteristics of household (non-monetary variables) completed through poverty census
2. Source of data:
 Poverty Census: 2005, 2008, 2011 and 2015
3. Poverty data: Poor household and individual **by name and by address**
4. Advantage:
 For individual and household targeting for social protection programs
 Limitation:
 Inclusion and exclusion error

Poverty Data for Geographical Targeting

Measurement of Poverty Practical Concerns

- **Poverty Definition**
- **Identification of Poverty Line**
- **Defining the Unit of Measurement**
- **Selecting the Indicator of Well-being**

Poverty Definition in Indonesia

- Poverty is condition where a person or a group of persons is not able to fulfill his/their basic rights according to socially acceptable life.
- Basic rights is fulfillment of basic need for:
 - Food consumption: Rice, noodle, sugar, etc
 - Non-food consumption: clothing, health, education, housing, clean water, transportation (including fuel), etc
 - **Secure from crime**
 - **Freedom to participate in social and political activities.**

Identification of Poverty Lines

- **The point at which the poor are separated from the non-poor**
 - **Relative Poverty Lines**
 - **Absolute Poverty Lines**

Absolute Poverty Lines

Type	Description	Features
Food Energy Intake	<ul style="list-style-type: none">▪ Based on observed relation between calorie intake and total household expenditure	<ul style="list-style-type: none">▪ PL may vary by sub-groups of population e.g. by region
Cost of Basic Needs	<ul style="list-style-type: none">▪ Identifies bundle of goods necessary to meet basic needs, then estimates cost	<ul style="list-style-type: none">▪ Most common method▪ Identification of basic needs may not be strightfwd
World Bank US\$1 / day	<ul style="list-style-type: none">▪ US\$370 / year	<ul style="list-style-type: none">▪ Eases comparison across countries▪ Zero cost of calculation▪ Conversion to local currency problematic

Cost of Basic Needs

- **PL is equal to the value of a bundle of consumption goods necessary to meet basic needs**
 - **May include just food (extreme poverty)**
 - **But more commonly includes non-food items**

Cost of Basic Needs

- **STEP ONE: Establish the minimum consumption bundle necessary to meet basic needs**

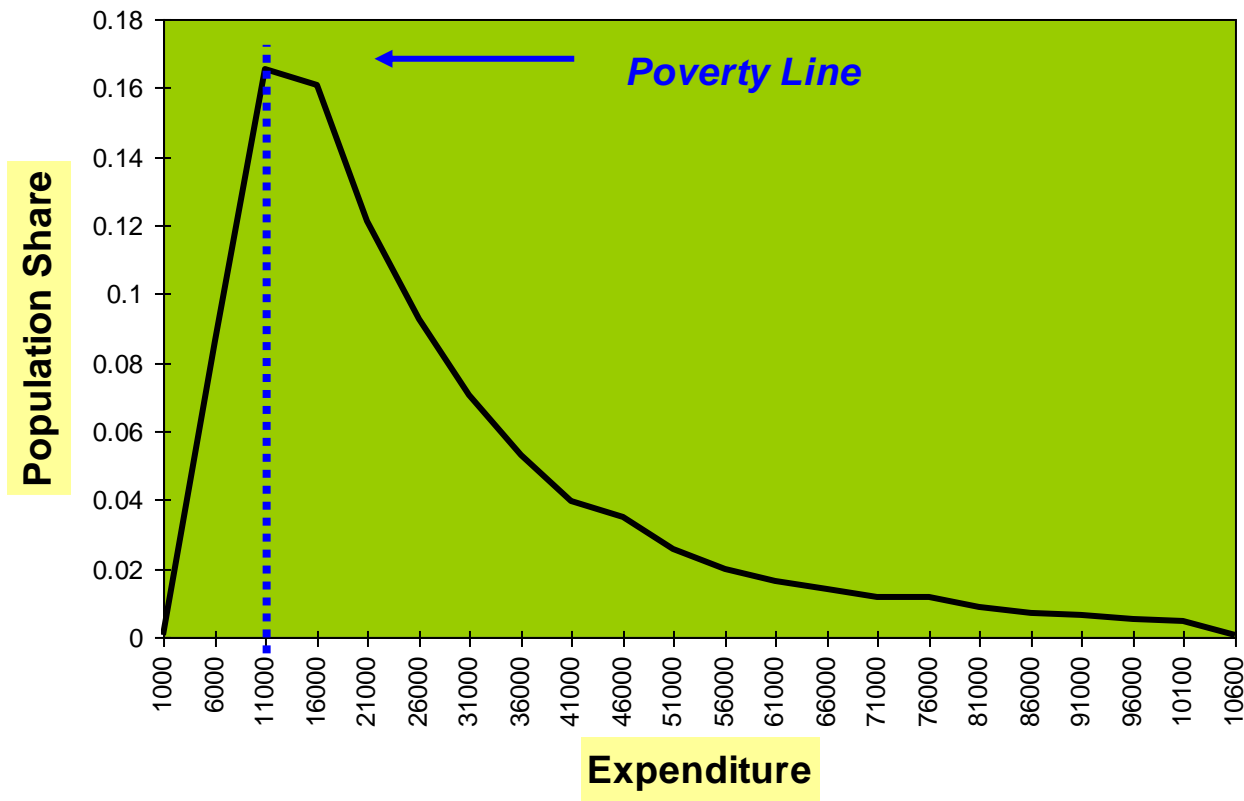
Cost of Basic Needs

- **STEP TWO: Establish the cost for the items in the basic consumption bundle**

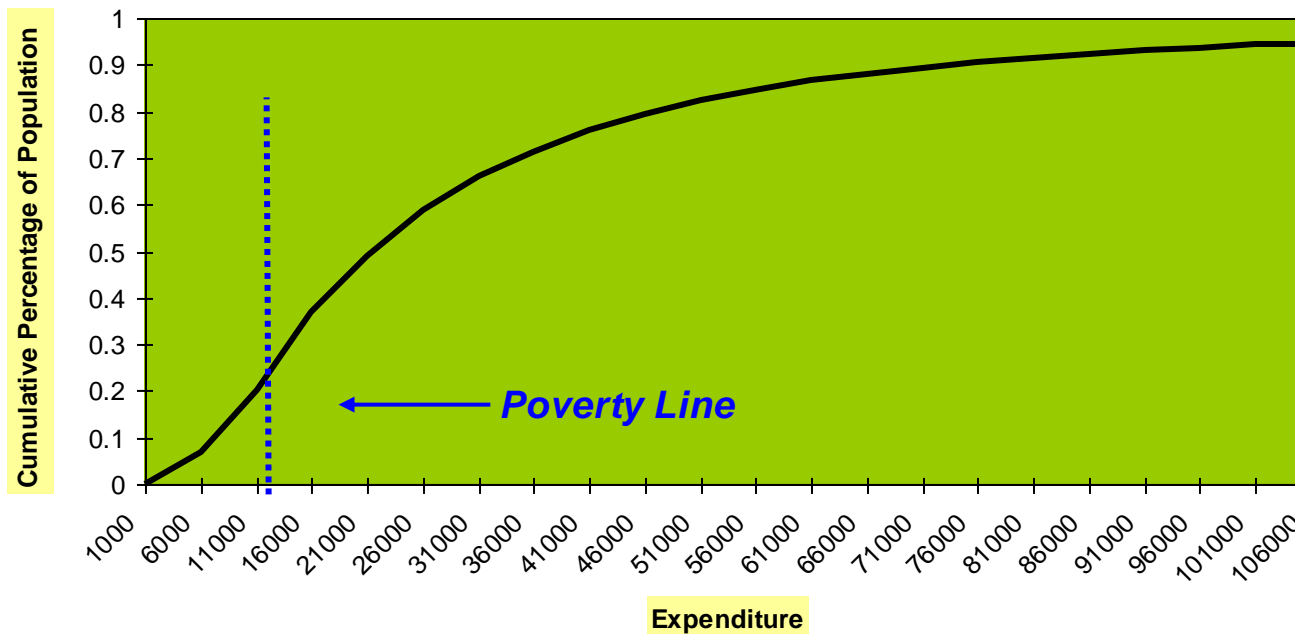
Additional Considerations in Setting Poverty Lines

- **Regional Poverty Lines**
 - Significant regional price differences may exist
 - Urban / Rural poverty lines common
- **Sensitivity Analysis**
 - Typically near mode of distribution
 - Multiple poverty lines often tried

Distribution of Expenditure



Cumulative Distribution of Expenditure



Poverty Measurement Indonesia

1. Concept:

- Basic Needs Approach: based on per capita consumption
- Poor is a condition of living when someone is not having or not being able to afford certain minimum necessities
- Poverty line is based on minimum nutritional requirement of 2100 kcal per capita per day (National Congress of nutritionists, 1978) and consumption of essential non-food. Person who has expenditure less than poverty line is considered poor.

2. Dissemination:

- Level of estimation: national, province and district/municipality
- Period of dissemination: Annually

Selected Commodities for Calculating Food Poverty Line

Domestic rice	Beef	Onion	Brown sugar
Glutinous rice	Broiler chicken meat	Chilies	Tea
Dry-shelled corn	Local chicken meat	Cayenne pepper	Powder coffee
Wheat flour	Trimming	Peanut without shell	Salt
Cassava	Broiler egg	Tofu, Soybean card	Candle nut
Sweet potato	Duck egg	Fermented soybean cake	Fish paste
Dried cassava	Sweet canned liquid milk	Rambutan (fruit)	Crisps
Tuna	Canned powder milk	Zalacca (fruit)	Instant noodle
Indian Mackerel	Spinach	Ambon Banana	Other bread
Dried small fish	Swamp cabbage	Papaya	Cookies
Milk fish	String beans	Coconut/Cooking oil	Boil or steam cake
Anchovies	Tomato	Coconut	Cigarettes
Pork	Cassava leaf	Cane sugar	Prime rice

Selected Commodities for Calculating Non-Food Poverty Line

Housing	Photo	Kitchen utensils
Electricity	Ready men clothes	Bag, luggage
Kerosene	Transportation	Taxes
Firewood	Ready women clothes	Religious festivals & others
Water	Ready child clothes	Watch/Clock
Mosquito revelent, matches, etc	Footwear for men	
Bathing soaps	Footwear for women	
Cosmetic articles	Footwear for children	
Care of skin/face	Headgear	
Health	Towel, belt, etc	
School fee	Landry soap	
Post, telegram, etc	Household utensils	

Poverty Indicators

- **Poverty headcount index (or poverty rate)**
 - the headcount index estimates the percentage of the population living in households with per capita consumption expenditure (*or per equivalent adult*) below the poverty line.
 - it measures the incidence of poverty
- **Poverty gap**
 - The Poverty Gap Index expresses the total amount of money which would be needed to raise the poor from their present incomes (c) to the poverty line (z), as a proportion of the poverty line, and averaged over the total population, which measures the **depth of poverty**
 - The **aggregate poverty gap** shows the cost of eliminating poverty by making perfectly targeted transfers to the poor. This total cost can be related to GDP.
 - The **squared poverty gap** measures the severity of poverty as the poorest households are given a greater weight in the equation.

Poverty Indicators

➔ Poverty rates, poverty gap and squared poverty gap formulae can be represented as follows:

$$FGT = 1/n * \sum_{c < z}^q \left[\frac{z - c}{z} \right]^\alpha$$

where

- **n** represents the total population,
- **q** the poor
- **z** the poverty line and
- **c** consumption expenditure

Poverty rate = Q/N

With Q = total number of poor

Poverty gap index =

$$1/n * \sum_{c < z}^q [(z-c)/z]$$

Squared Poverty gap =

$$1/n * \sum_{c < z}^q [(z-c)/z]^2$$

- If the parameter $\alpha = 0$, then the equation is simply the headcount index.
- With $\alpha = 1$, the equation measures the poverty gap, which is the average income / expenditure shortfall of the poor with respect to the poverty line.
- When $\alpha = 2$, the equation represents a measure for the **severity of poverty**



Thank You

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Poverty Data for Household Targeting

**Individual and Household Targeting (1):
The 2011 Data Collection for Social Protection
Programs
(PPLS11)**

Objective

To produce a unified database of target households and/or families for various social protection program (Cluster 1):

- By name and by address,
- Covering the lowest 40 % of the population nationally (poor and vulnerable people)
- Include additional information based on the proposed social protection programs from line ministries/other government institutions as well as local governments.

Information Collected in PPLS11

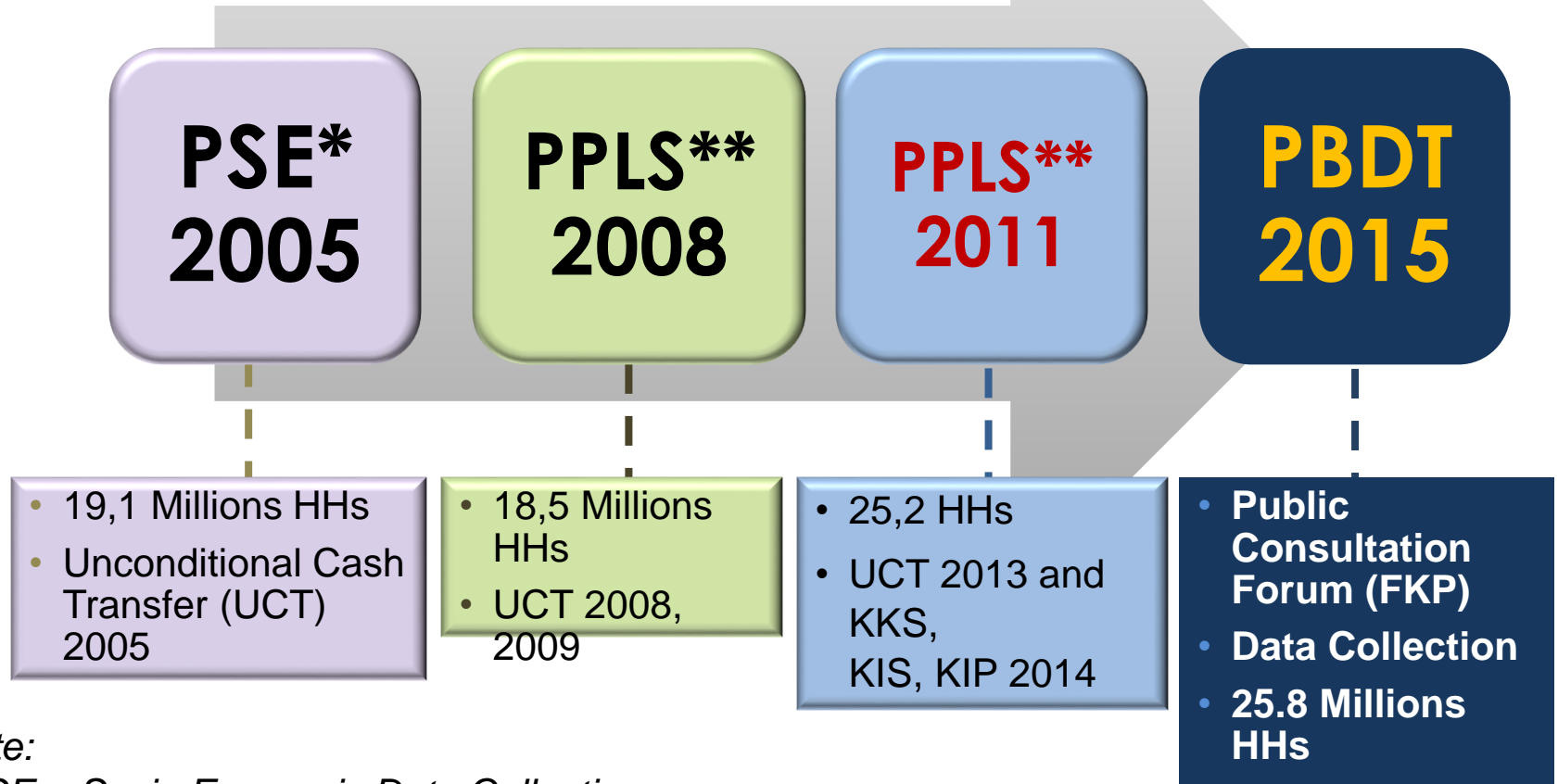
Individual	Hosusehold
Name	Ownership of house
Ake	Size of floor
Sex	Type of floor
Status of marriage	Type of housing wall
Relation to head of household and family	Type of roof
Ownership of identity card	Source of drinking water
Disabilities	Ways to get drinking water
Chronic illness	Main source of light
Pregnancy	Main energy for cooking
School partisipation	Ownership of toilet
Highest level of education	Ownership of asset
Length of education in year	Inclusion in family planning program and social program
Main job	
Economic sector of main job	
Status of job	

**Individual and Household Targetingn (2):
THE UNIFIED DATABASE UPDATING
(PBDT) 2015**

What is the Unified Database?

- The Unified Database (BDT) for social protection programmes is an electronic data system that contains social, economic and demographic information on around 24.5 million households, or 96 million individuals in the lowest welfare bracket in Indonesia
- It is can be used for programme planning and identifying the names and addresses of prospective social assistance recipients, whether they target households, families or individuals.
- The Unified Database contains social, economic and demographic information on the roughly 40 percent of Indonesians in the lowest welfare bracket

Chronologist of BDT



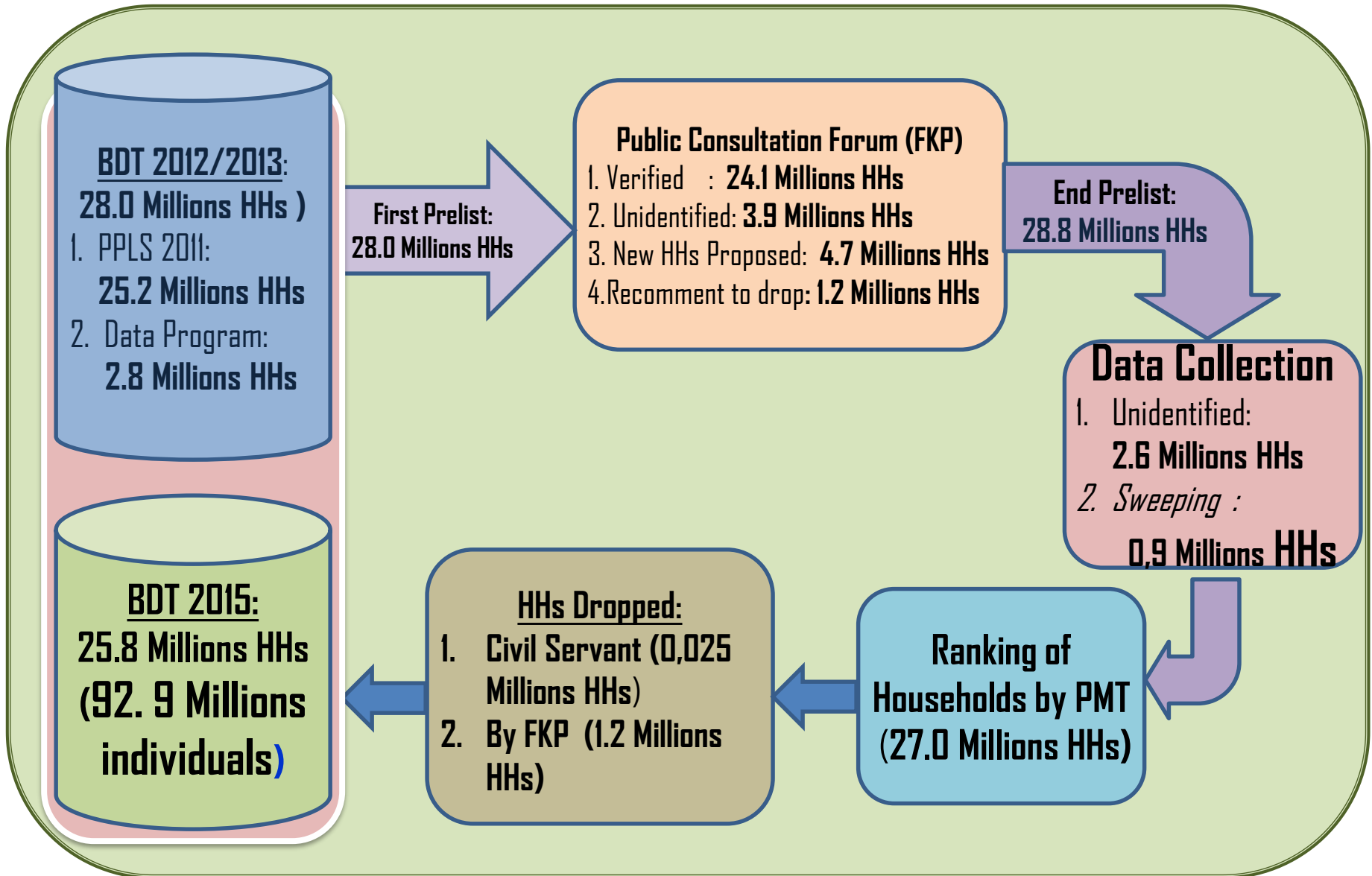
Note:

**PSE = Socio Economic Data Collection*

***PPLS = Data Collection on Social Protection Programme*

Programme

PROCESS OF PBDT 2015



SOME INFORMATIONS IN PBDT 2015

Identity of HHs

- ✓ Name of HH Head
- ✓ Address
- ✓ Village
- ✓ Sub-District
- ✓ District
- ✓ Province
- ✓ HH size

Demographic

- ✓ Name of HH members
- ✓ Relationship to HH Head
- ✓ Sex
- ✓ Age
- ✓ Marriage status
- ✓ Identity card
- ✓ No. Induk Kependudukan (NIK)
- ✓ *Akte/Buku Nikah*
- ✓ *Akte Cerai*
- ✓ *Akte Kelahiran*

Labor Force

- ✓ Activity
- ✓ Sector
- ✓ Status
- ✓ Micro and Small Enterprise (UMK):

Housing

- ✓ Dwelling ownership status
- ✓ Electricity
- ✓ Drinking water
- ✓ Energy
- ✓ Floor area
- ✓ Toilet Facility
- ✓ Cooking fool
- ✓ Floor main material
- ✓ etc

Social Protection Programme

- ✓ Hope Family Programme (PKH)
- ✓ Rice for poor
- ✓ Healteh Insurance
- ✓ Jamsostek
- ✓ KKS
- ✓ KIP
- ✓ BPJS/KIS

Asset

- ✓ Car
- ✓ Bicycle
- ✓ Motor bike
- ✓ Television
- ✓ Sailboat
- ✓ Computer
- ✓ Refrigerator
- ✓ etc

Education

- ✓ Schooll attendnce
- ✓ Scholl participatin
- ✓ etc

Health

- ✓ Disable
- ✓ *Penyakit kronis menahun*
- ✓ *Status kehamilan wanita*
- ✓ Family Planning

Proxy Mean Testing (PMT)

- Proxy Means Test (PMT) is the methodology for estimating the per capita income of households based on a set of verifiable indicators .
- Proxy means tests generate a score for applicant households based on fairly easy to observe characteristics of the household such as the location and quality of its dwelling, its ownership of durable goods, demographic structure of the household, and the education and, possibly, the occupations of adult members.
- The indicators used in calculating this score and their weights are derived from statistical analysis (usually regression analysis or principal components) of data from detailed household surveys. We have Socio Economic Survey (Susenas) as resource data.

Summary

- Data for targeting the poor people in Indonesia consist of two kinds:
 - 1) for geographic targeting
 - 2) for individual and household targeting
- Data collection is conducted by BPS-Statistics Indonesia .
- Geographic targeting is disseminated annually for:
 - 1) poverty policy planning at regional level
 - 2) performance evaluation of region on poverty
- Individual and household targeting is disseminated every 3 year for:
 - 1) social protection programs
 - 2) other anti poverty programs



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