

# Panchayat Development Index



सशक्त पंचायत सतत विकास

## LIF, PDI Computation and Data Validation Mechanism

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## Millennium Development Goals

- ✓ Adopted by UN in 2000
- ✓ 189 Countries were signatory
- ✓ For the period 2000 - 2015
- ✓ Limited to social and economic development



## Sustainable Development Goals

- ✓ Adopted by UN in September, 2015
- ✓ 193 Countries are signatory
- ✓ For the period 2015 – 2030
- ✓ Addressing three dimensions of development  
*Social, Economic & Environmental*



# Institutional Arrangements for SDGs in India

- **NITI Aayog**

- Nodal institution to coordinate all the SDG related activities
- Alignment/mapping of Govt. Schemes and Programmes with SDGs
- Working with States/UTs on localisation of SDGs

- **MoSPI**

- Facilitating SDG monitoring by National Indicator Framework (NIF)
- Periodically review/refinement of NIF
- Supporting States/UTs on sub-national level indicator framework

- **Line Ministries**

- Implementation of respective SDGs
- Collaborating with MoSPI in development/review of indicators and providing data

# Indicator Frameworks on SDGs

Indicator Framework	Global Indicator Framework (GIF) – by UN	National Indicator Framework (NIF) – by MoSPI	State Indicator Framework (SIF) – by respective States/UTs	Local Indicator Framework (LIF) – by MoPR
Total Number of indicators	248 (231 Unique indicators))	286 (264 Unique indicators)	<ul style="list-style-type: none"><li>• 571 Haryana</li><li>• 84 Arunachal Pradesh</li></ul>	416 (361 Unique indicators)

## Local Indicator Framework...

- ◉ LIF was suggested by Expert Committee for Localization of Sustainable Development Goals (SDGs) through PRI
- ◉ The PDI Committee discussed LIF with Ministries/Departments, States/UTs, Panchayats, UN bodies etc.
  - ◉ to identify/suggest suitable indicators as per the priority and relevancy
  - ◉ to explore availability of data
- ◉ PDI Committee prepared the LIF after several round of detailed discussions with various stakeholders and field testing at Panchayat level in the state of Maharashtra

# Local Indicator Framework...

Sl. No	Themes	Original number of Indicator	Revised number of Indicators	Sub Indicators	Total
			(A)	(B)	(A+B)
1	Poverty Free and enhanced Livelihoods in village	40	37	0	37
2	Healthy Village	26	23	0	23
3	Child friendly village	20	63	22	85
4	Water Sufficient Village	31	30	0	30
5	Clean and Green Village	45	41	0	41
6	Self Sufficient Infrastructure in Village	18	33	128	161
7	Socially Just and Socially Secured Panchayat	79	68	2	70
8	Village with Good Governance	78	75	4	79
9	Women Friendly Village	52	46	5	51
<b>Grand Total</b>		<b>389</b>	<b>416</b>	<b>161</b>	<b>577</b>

# Local Indicator Framework

**Goal 3:** Ensure healthy lives and promote well-being for all at all ages (Good Health and Well Being)

**Target 3.1:** By 2030, reduce the global maternal mortality ratio to less than 70 per 1,00,000 live births

## *Global Indicator:*

Maternal mortality ratio

Proportion of births attended by skilled health personnel

## *National Indicator:*

Maternal mortality ratio

Percentage of births attended by skilled health personnel

Percentage of women aged 15-49 years with a live birth, for last birth, who received antenatal care, four times or more

## *LIF Indicator:*

Percentage of maternal death to live births

Percentage of births attended by skilled health personnel or institutional delivery

Percentage of ANC registration in 1st trimester to total ANC registration

# Stages of PDI Calculation....

## ***Step 1: Compilation of raw values on the indicators***

Compilation of raw data and conversion of Binary Indicators (Yes/No) into numeric value

## ***Step 2: Weightage of indicators***

Ascertaining weight at different level (Equal weights have been considered at GP level)

## ***Step 3: Normalization of raw values***

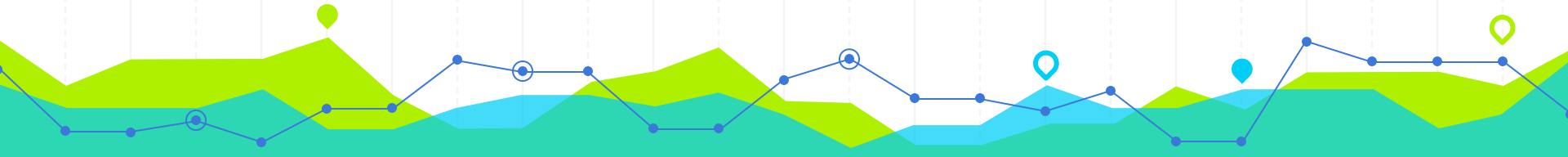
Rescaling the raw values into score between 0 to 100

## ***Step 4: Calculation of theme-wise GP's score***

Arithmetic Mean of the indicator values for arriving at Thematic score of a GP

## ***Step 5: Computation of PDI for GP***

Geometric mean of the nine thematic scores to reach PDI of the GP





# Stages of PDI Calculation...

## Normalization of the raw indicator values

### Positive Indicators:

- Percentage of Households who got benefit from any State Specific Housing Scheme
- Percentage of Functional Household Water Tap connections with 55 LPCD

$$x' = \frac{x - \min(x)}{\max(x) - \min(x)} \times 100$$

### Negative Indicators:

- Percentage of unemployed persons
- Percentage of Children age 6-59 months who are anaemic

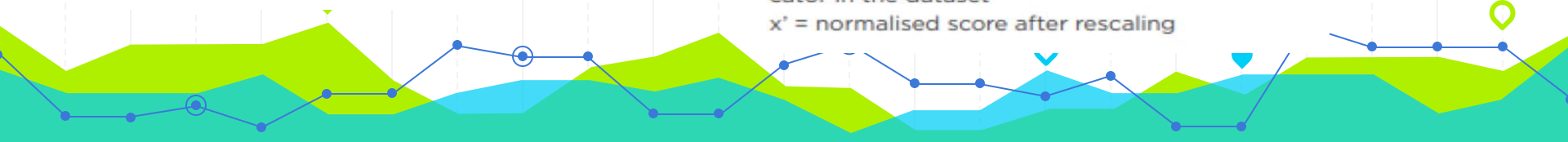
$$x' = \frac{\max(x) - x}{\max(x) - \min(x)} \times 100$$

Where, x = raw data value

min(x) = minimum observed value of the indicator in the dataset

max(x) = maximum observed value of the indicator in the dataset

x' = normalised score after rescaling



# Proof of Concept

- ❖ By YASHADA, Pune Team along with various Gram Sevaks
- ❖ Covered 30 Gram Panchayats in Pune, Sangali, Satara and Solapur districts of Maharashtra.
- ❖ 14 Data sources were identified
- ❖ Common indicators were taken for PDI calculation
- ❖ Data was compiled and PDI was calculated for the GPs

Sl.No.	Area	Number of Data Points
1.	Forest	2
2.	Animal Husbandry	26
3.	Agriculture	23
4.	Banking	4
5.	Education	46
6.	Gram Panchayat	361
7.	Mahatma Gandhi NREGS	4
8.	Health	68
9.	Home Affairs	29
10.	Public Distribution System	9
11.	Revenue	28
12.	Self Help Groups	8
13.	Water Supply	10
14.	Women and Child Development	68
	<b>Total</b>	<b>686</b>

## Data Validation Mechanism for PDI

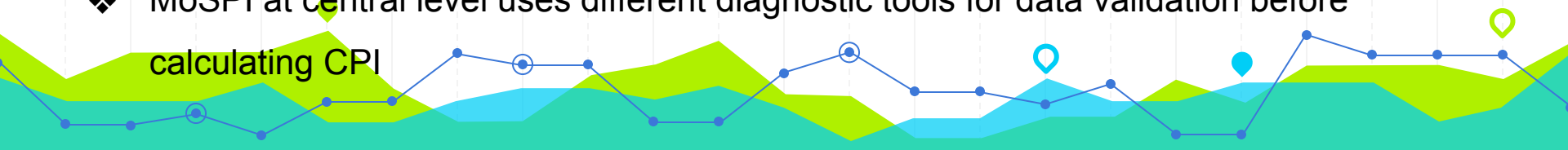
- ◉ Data validation i.e. ensuring accuracy and quality of data before processing it for PDI calculation
- ◉ 2.69 lakh Gram Panchayats
- ◉ 416 LIF Indicators and 161 sub-indicators
- ◉ 688 data points
- ◉ A large data set would be required for PDI compilation
- ◉ Data validation will play a pivotal role in establishing the quality and usability of PDI

# Data Validation for CPI by MoSPI

- ❖ MoSPI releases All India Consumer Price Index and corresponding inflation rate for Rural, Urban and Combined, every month
  - Monthly data is collected from around 2,300 villages/urban markets
  - Around 5.5 lakh data points are validated every month for Index calculation

## Data Validation

- ❖ Data is entered by primary workers (JSO) from field offices across the country
- ❖ The data is entered into the CPI Portal developed by NIC
  - NIC Portal has several data entry alerts
- ❖ Supervisory officers (SSO) have to compulsorily validate the data
- ❖ MoSPI at central level uses different diagnostic tools for data validation before calculating CPI



# Data Validation for PDI

- ❖ Data validation for PDI compilation would require at various level
- ❖ **Panchayat level**

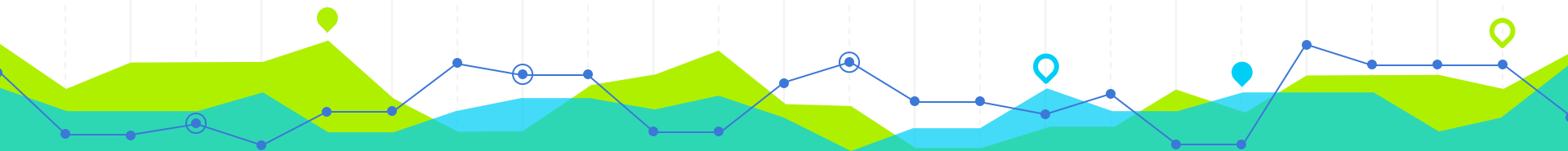
Panchayat level data need to be carefully transmitted into the NIC portal
- ❖ **Block level**

Block level officer need to validate data of all the Panchayats under his/her jurisdiction before sending it to District level
- ❖ **District level**

District level officer need to validate data of all the blocks
- ❖ **State level**

State level officer would have to validate data of all the District
- ❖ **Centre level**

Finally, the PDI compilation team would also use analytical tools to ensure the data quality



**THANKS!**