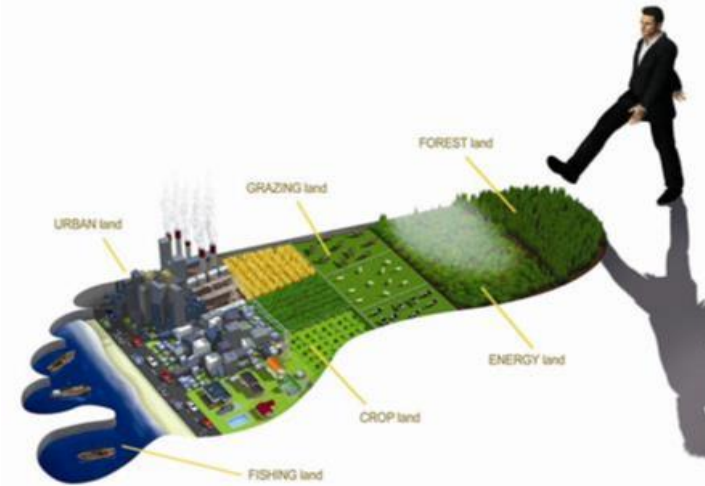
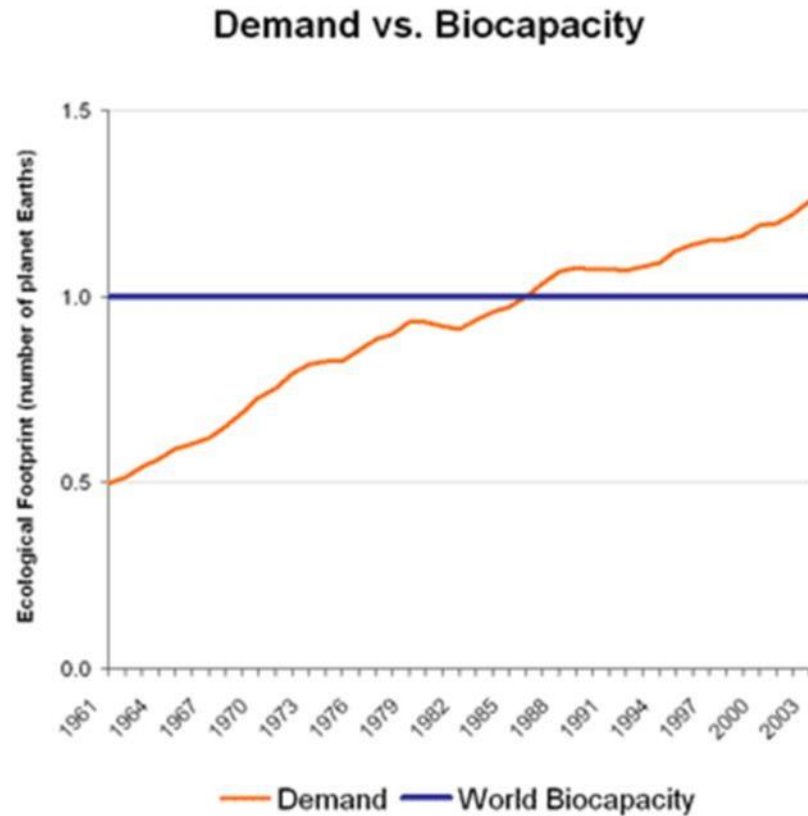


# Sustainable Development Goals

Dr. Shyamli Singh

# Ecological Footprint



- **The amount of ecologically productive land used by individuals, cities, countries, etc.**
- **Production and use of goods services involve land use**  
  
**have ecological footprints**

# Priority Areas: Indian Context



Water



Air



Soil



Agriculture



Forestry



Conservation of  
nature and natural  
resources



# RIVERS OF SORROW

Ganga has India's undivided attention, but its other rivers are also dying a slow death

■ Yamuna, a mass of toxic foam



**8,500km** of 12,363km of rivers monitored found severely polluted, with biological oxygen demand levels higher than 10 (3 or less being safety standard)

**445**  
Total number of rivers in India



**275**  
of 290 rivers under watch have highly polluted stretches

## WASTE WATER TO BLAME

Constant flow of untreated waste and industrial water the biggest contributor

370 major towns and cities lie along the course of these rivers

India currently has the capacity to treat only 30% of its urban water waste

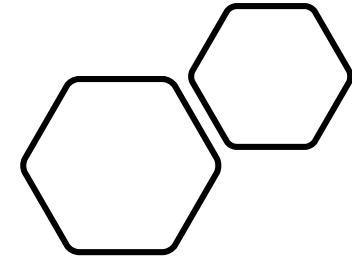
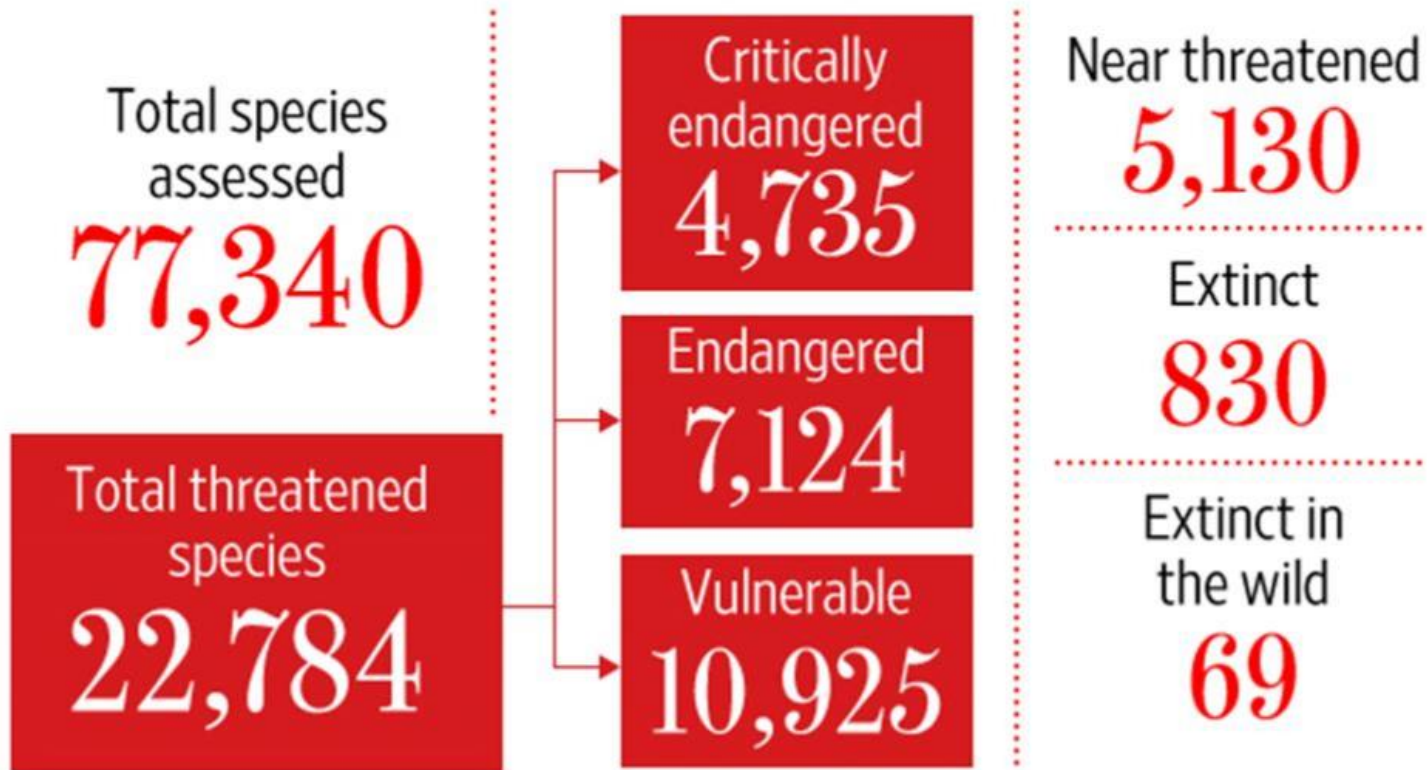
## MOST POLLUTED STRETCHES

- YAMUNA**, Delhi to Agra
- HINDON**, Saharanpur to Ghaziabad

- MITHI**, Mumbai
- GODAVARI**, Maharashtra
- MORNA**, Maharashtra
- SABARMATI**, Ahmedabad
- DAMANGANGA**, Daman and Diu
- UMKHRAH**, Shillong
- GAGGAR**, Punjab
- CAUVERY**, Tamil Nadu

SOURCE: CENTRAL POLLUTION CONTROL BOARD

# THE 2015.2 IUCN RED LIST OF THREATENED SPECIES



(112,432 till Jan'2020)



# Death by Breath

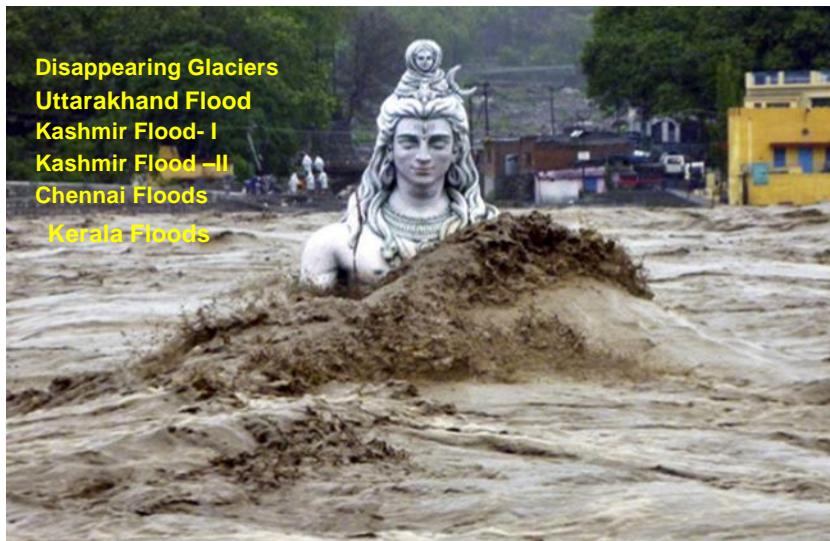
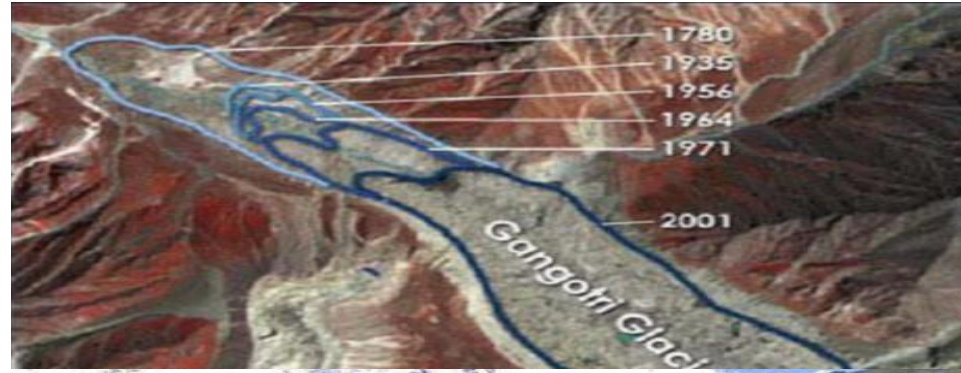
## Air Pollution: A deadly Poison?

**New Delhi** is now ranked as the most polluted city on earth where air pollution may be 60 times higher than what is considered safe.

According to WHO 13 of the world's dirtiest 20 cities are now in India.  
Mar 16, 2015

**14 of world's most polluted 15 cities in India, Kanpur tops WHO list, May 2, 2018**

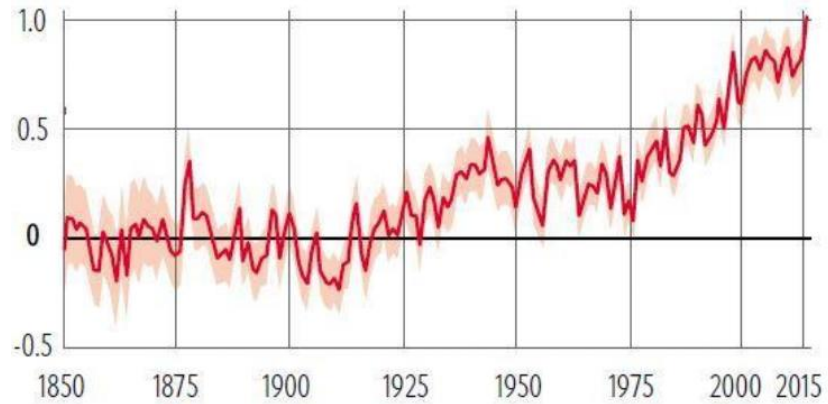
# Himalayan Tragedies



## BREAKING THE 1°C BARRIER

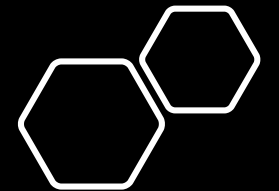
GLOBAL AVERAGE TEMPERATURE (°C CHANGE SINCE 1850-1900)

THE FIRST NINE MONTHS OF 2015 SHOW AVERAGE GLOBAL TEMPERATURE HAS HIT 1.02°C, HALF WAY TO THE DANGEROUS THRESHOLD OF 2°C



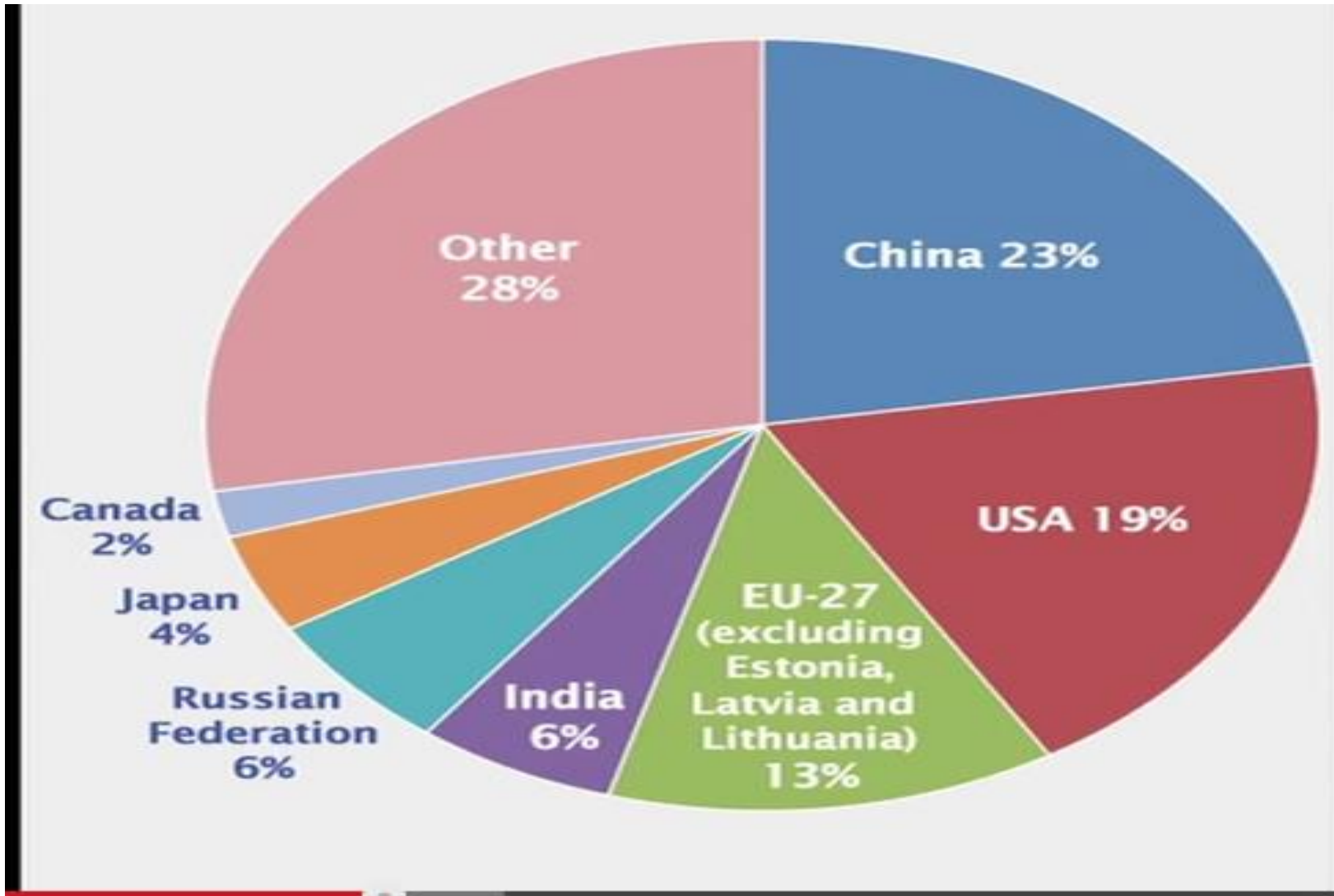
SOURCE: MET OFFICE

# CLIMATE CHANGE (Global Warming)

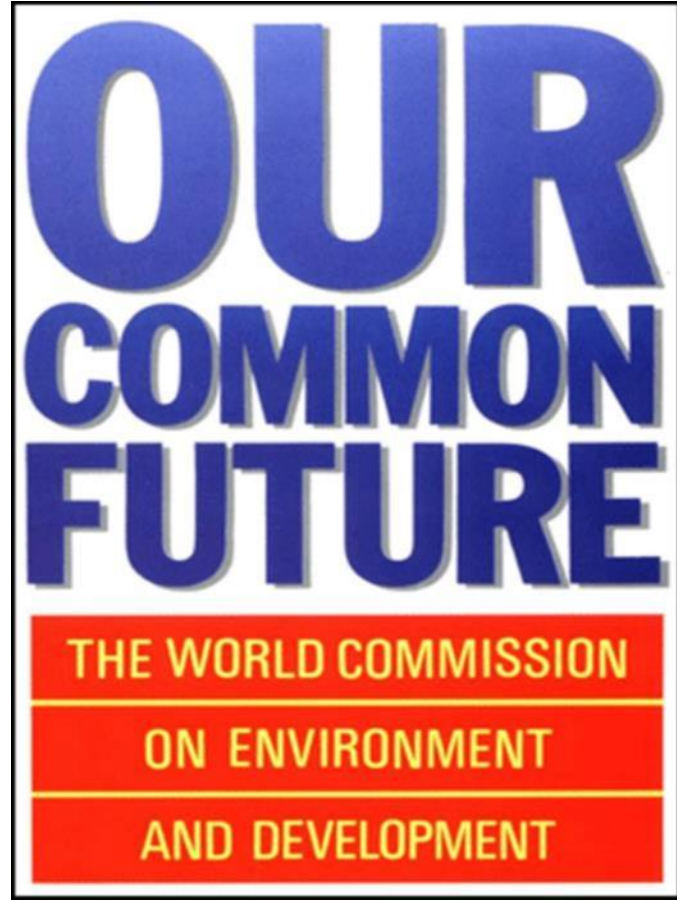




# GHG emissions



Gro Harlem Brundtland, Former Prime Minister of Norway and  
Chairman of the World Commission on Environment and Development





UNITED NATIONS  
SUSTAINABLE  
DEVELOPMENT  
SUMMIT 2015  
25-27 SEPTEMBER

**THE 17 SUSTAINABLE DEVELOPMENT GOALS**  
**169 Sub-Goals**



مؤتمر قمة  
الأمم المتحدة  
للتنمية ٢٠١٥  
٢٥ - ٢٧ أيلول/سبتمبر

<b>1</b> NO POVERTY 	<b>2</b> ZERO HUNGER 	<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>4</b> QUALITY EDUCATION 	<b>5</b> GENDER EQUALITY 	<b>6</b> CLEAN WATER AND SANITATION 
<b>7</b> AFFORDABLE AND CLEAN ENERGY 	<b>8</b> DECENT WORK AND ECONOMIC GROWTH 	<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 	<b>10</b> REDUCED INEQUALITIES 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION 
<b>13</b> CLIMATE ACTION 	<b>14</b> LIFE BELOW WATER 	<b>15</b> LIFE ON LAND 	<b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS 	<b>17</b> PARTNERSHIPS FOR THE GOALS 	 <b>SUSTAINABLE DEVELOPMENT GOALS</b>

# WHAT ARE THE ELEMENTS UNDERPINNING THE SUSTAINABLE DEVELOPMENT GOALS (SDGs)?

The Goals will stimulate action over the next 15 years in 5 areas of critical importance:

People, Planet, Prosperity, Peace & Partnership.

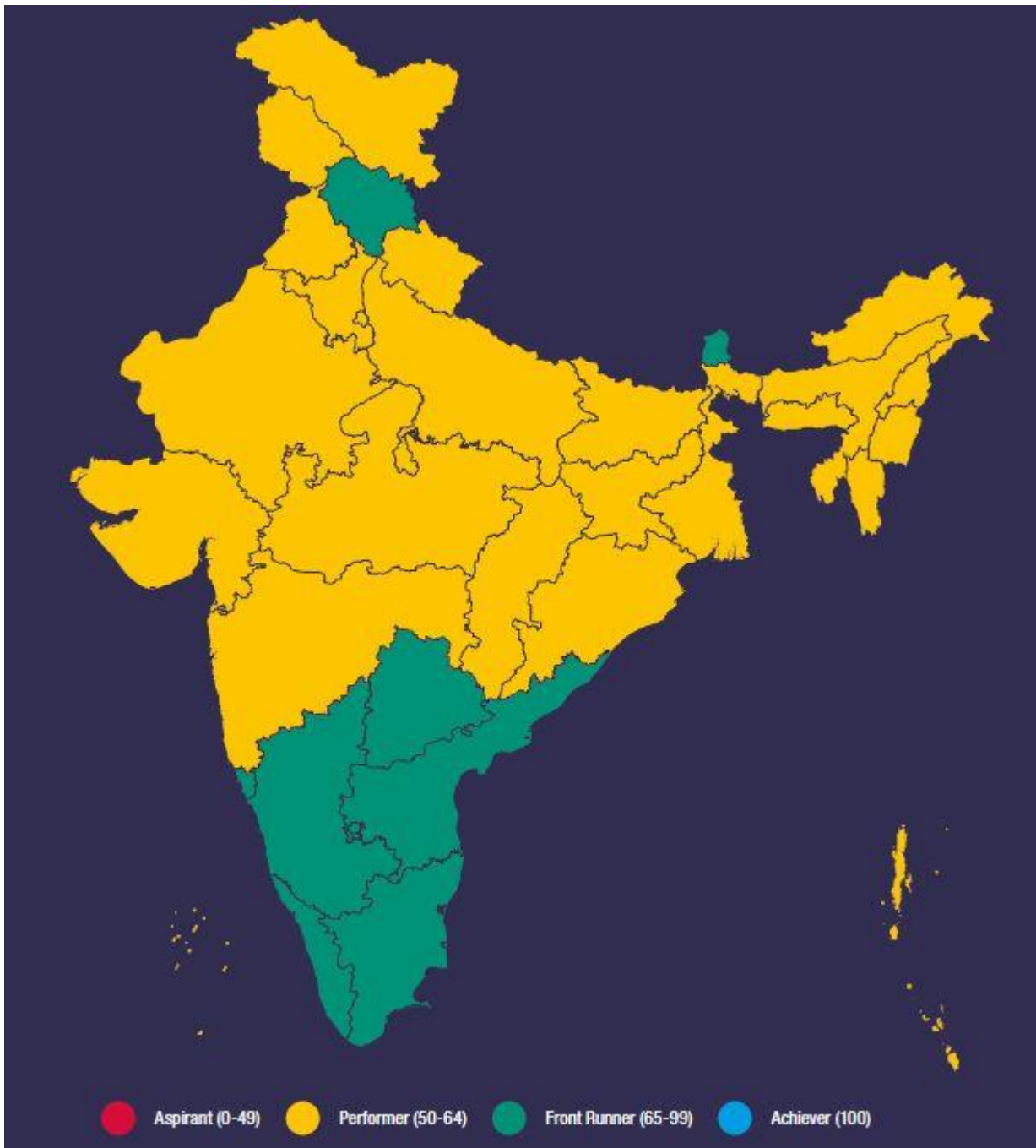


# India's -SDGs

India had played an important role in shaping the SDGs.

The country's national development goals are mirrored in the SDGs

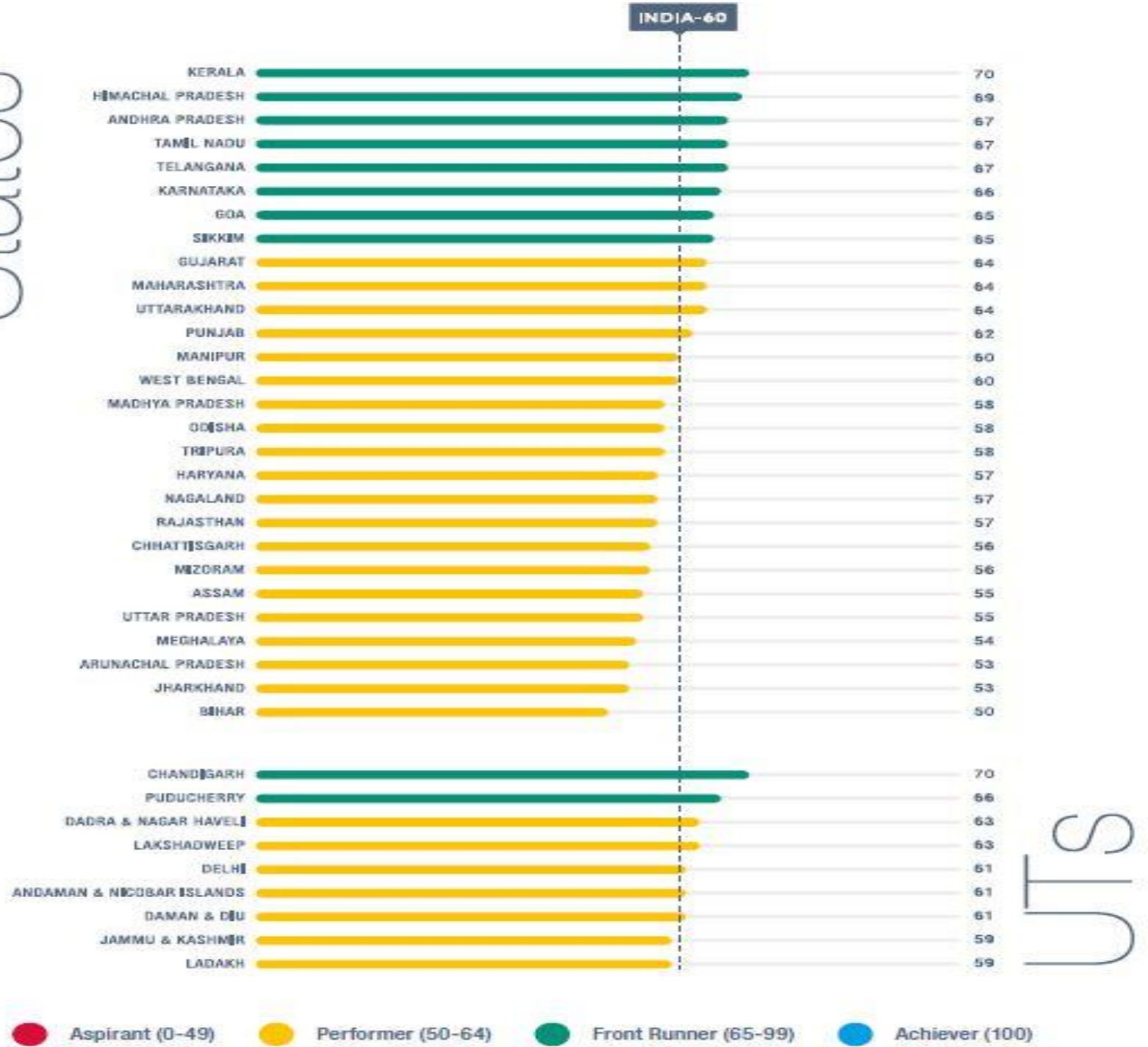
As such, India has been effectively committed to achieving the SDGs even before they were formally crystallized.



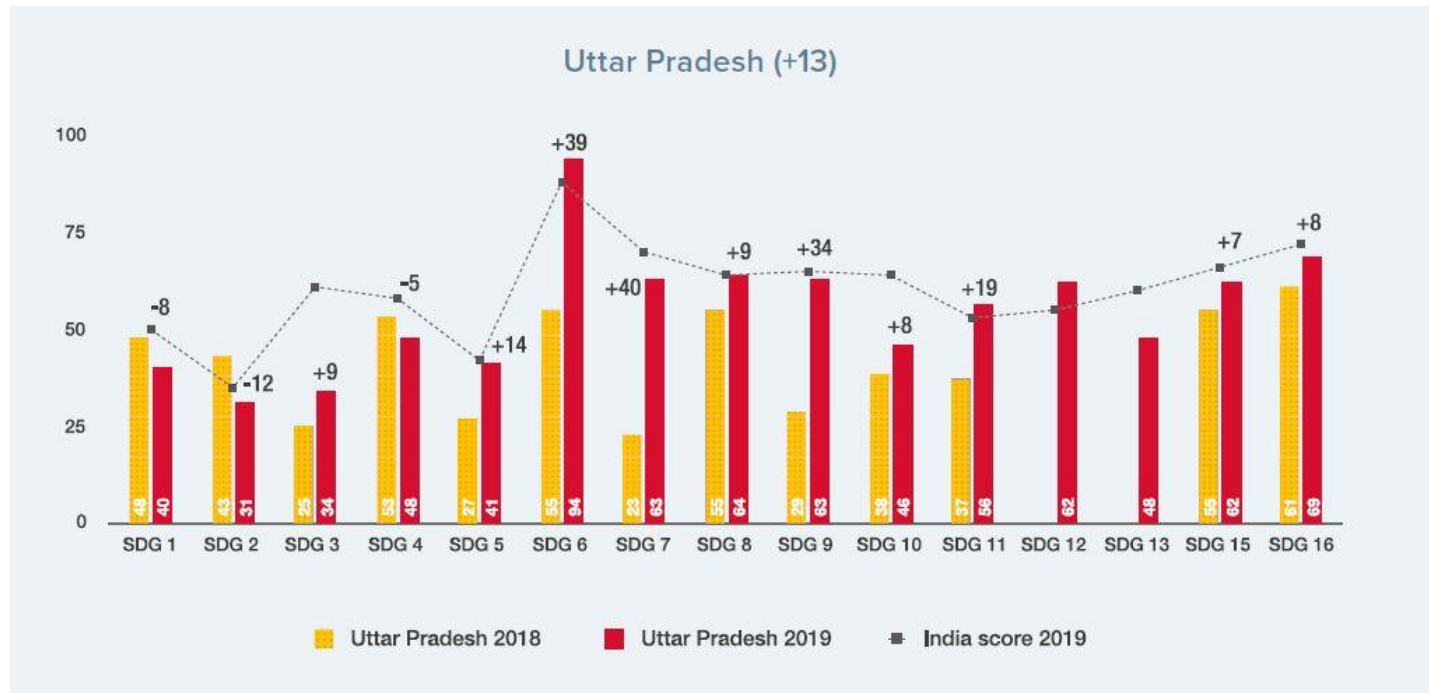
Performance of States and UTs on SDG India Index

# India SDG Index Score of States and UTs

States

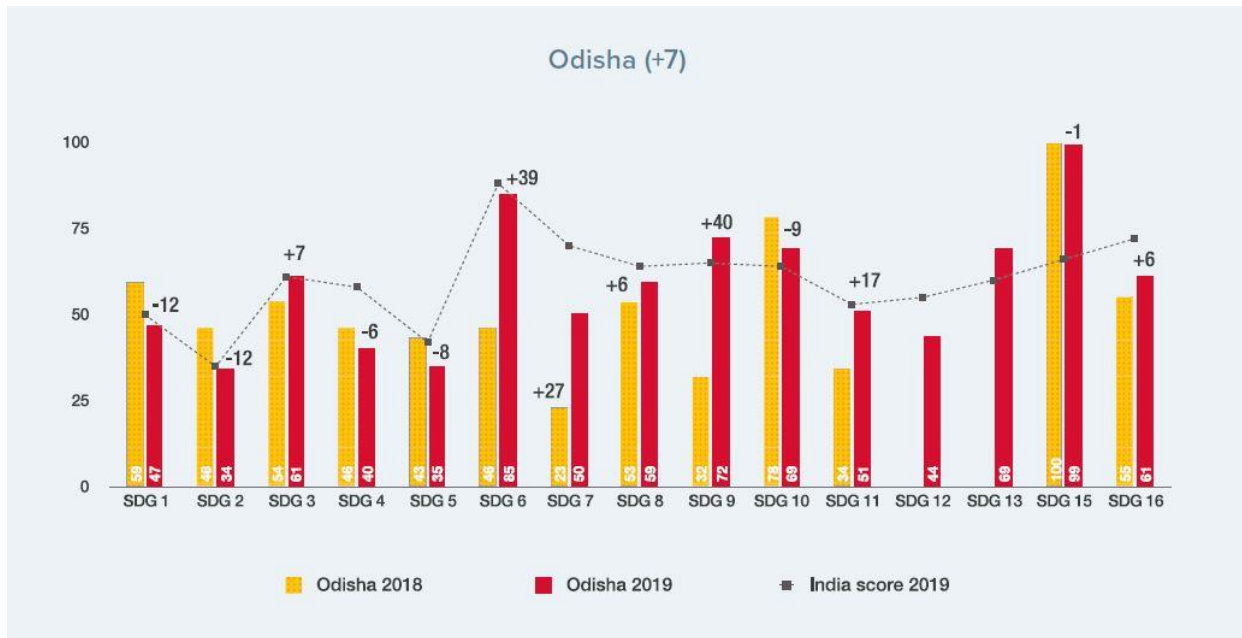


# Top three states improved or retained their overall composite score from 2018 to 2019 (Uttar Pradesh, Odisha and Sikkim)



42 to 55:Score






51 to 58

58 to 65



States/UTs	SDG 1	SDG 2	SDG 3	SDG 4	SDG 5	SDG 6	SDG 7	SDG 8	SDG 9	SDG 10	SDG 11	SDG 12	SDG 13	SDG 15	SDG 16	Composite SDG
	Index Score															
Andhra Pradesh	69	35	76	52	37	96	86	78	66	68	36	57	70	86	86	67
Arunachal Pradesh	34	66	50	58	33	88	74	52	31	38	43	67	31	71	62	53
Assam	48	39	44	44	33	78	70	62	46	67	40	68	47	90	52	55
Bihar	33	26	44	19	40	81	62	64	47	74	50	47	43	54	64	50
Chhattisgarh	49	27	52	52	43	92	56	67	38	80	49	58	29	97	71	58
Goa	53	76	60	71	46	77	95	71	45	19	79	63	41	99	79	65
Gujarat	47	39	67	47	36	92	75	75	88	59	77	33	63	77	86	64
Haryana	47	43	65	68	36	81	77	71	73	54	49	39	34	40	76	57
Himachal Pradesh	60	44	67	81	52	82	64	76	70	78	79	52	61	92	84	69
Jharkhand	28	22	55	42	34	78	50	70	70	64	57	36	27	99	67	53
Karnataka	49	37	72	67	42	88	86	78	40	70	48	72	71	89	75	66
Kerala	64	74	82	74	51	77	70	61	88	75	51	57	56	98	77	70
Madhya Pradesh	40	24	50	54	45	92	62	67	44	68	55	58	47	94	63	58
Maharashtra	47	34	76	65	41	93	82	70	59	70	45	71	50	85	72	64
Manipur	42	69	62	70	34	87	72	27	43	81	28	85	37	100	70	60
Meghalaya	68	35	53	55	34	70	52	65	22	76	22	60	36	99	58	54
Mizoram	67	75	52	61	37	81	81	42	8	66	33	50	45	75	63	58
Nagaland	56	70	29	47	42	75	70	28	23	61	23	100	51	94	84	57
Odisha	47	34	61	40	35	85	50	59	72	69	51	44	69	99	61	58
Punjab	48	61	71	67	46	74	89	65	69	50	61	35	57	59	83	62
Rajasthan	56	35	58	51	39	76	61	65	38	70	61	30	60	75	76	57
Sikkim	65	66	59	56	49	79	97	68	27	64	74	60	38	100	69	65
Tamil Nadu	72	48	76	70	40	90	90	74	53	65	51	63	45	91	78	67
Telangana	52	36	66	64	26	84	93	82	61	94	62	56	66	88	77	67
Tripura	70	49	61	55	32	69	56	63	48	45	31	92	37	88	73	58
Uttar Pradesh	40	31	34	48	41	84	63	64	63	46	56	62	48	62	69	55
Uttarakhand	64	45	58	66	38	90	78	73	55	59	51	50	59	95	85	64
West Bengal	52	40	70	50	38	83	58	72	68	73	34	57	37	88	73	60
A and N Islands	48	38	65	61	48	85	73	55	13	94	47	69	72	85	65	61
Chandigarh	48	73	54	80	47	100	84	64	74	33	83	77	54	93	89	70
D and N Haveli	33	45	57	53	44	91	80	63	100	57	41	65	41	100	80	63
Daman & Diu	58	12	50	43	39	96	81	54	100	80	54	41	46	89	76	61
Delhi	54	56	54	64	27	61	96	60	100	69	63	39	30	82	64	61
Jammu & Kashmir	58	55	62	54	53	85	78	46	49	47	33	61	58	74	69	59
Lakshadweep	50	57	58	62	37	69	43	43	0	93	Null	75	100	100	82	63
Puducherry	56	71	71	67	35	86	97	58	86	92	53	43	39	37	94	66
India	50	35	61	58	42	88	70	64	65	64	53	55	60	66	72	60
Target	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100









 Aspirant (0-49)
  Performer (50-64)
  Front Runner (65-99)
  Achiever (100)

## PERFORMANCE OF STATES AND UTs ON SDGs

# Cumulative Report Card

- The **composite score** for India improved, from **57** in 2018 to **60** in 2019
- Five goals drive the positive push – 6 (clean water and sanitation), 7 (affordable and clean energy), 9 (industry, innovation, and infrastructure), 15 (life on land), and 16 (peace, justice, and strong institutions), where India has scored between **65 and 99**
- Two goals – 2 (zero hunger) and 5 (gender equality) demand special attention, as the overall country score is **below 50**
- In the other eight goals (excluding 14 – life below water, which applies only to 9 coastal States, and 17 – partnerships for the goals, which is qualitatively analysed), the overall score lies between 50 and 64

## GOAL-WISE TOP STATE/UTs

<b>Goal 1: No Poverty</b> Tamil Nadu, Jammu & Kashmir, and Ladakh			<b>Goal 2: Zero Hunger</b> Goa and Chandigarh
<b>Goal 3: Good Health and Well-being</b> Kerala and Puducherry			<b>Goal 4: Quality Education</b> Himachal Pradesh and Chandigarh
<b>Goal 5: Gender Equality</b> Himachal Pradesh, Jammu & Kashmir, and Ladakh			<b>Goal 6: Clean Water and Sanitation</b> Andhra Pradesh and Chandigarh
<b>Goal 7: Affordable and Clean Energy</b> Sikkim and Puducherry			<b>Goal 8: Decent Work and Economic Growth</b> Telangana and Chandigarh
<b>Goal 9: Industry, Innovation and Infrastructure</b> Kerala, Gujarat, Daman and Diu, Delhi and Dadra and Nagar Haveli			<b>Goal 10: Reduced Inequality</b> Telangana and Andaman and Nicobar Islands
<b>Goal 11: Sustainable Cities and Communities</b> Himachal Pradesh, Goa and Chandigarh			<b>Goal 12: Sustainable Consumption and Production</b> Nagaland and Chandigarh
<b>Goal 13: Climate Action</b> Karnataka and Lakshadweep			<b>Goal 14: Life Below Water</b> Karnataka
<b>Goal 15: Life on Land</b> Sikkim, Manipur, Dadra and Nagar Haveli and Lakshadweep			<b>Goal 16: Peace, Justice and Strong Institutions</b> Gujarat, Andhra Pradesh and Puducherry



# India

East and South Asia

[Back to country list](#)

## Current Assessment – SDG Dashboard



### Rating

- Green: SDG achieved
- Yellow: Challenges remain
- Orange: Significant challenges remain
- Red: Major challenges remain
- Grey: [information unavailable]

### Trend

- Green Up Arrow: On track to achieve goal by 2030
- Yellow Up Arrow: Score moderately increasing, insufficient to attain goal
- Orange Right Arrow: Score stagnating or increasing at less than 50% of required rate
- Red Down Arrow: Score decreasing
- Grey Dots: Trend information unavailable

# India ranks 115 out of 162 nations on 2019 SDG index



» India has been ranked **115** out of 162 nations on the 2019 Sustainable Development Goal (SDG) Index and Dashboard report released by Sustainable Development Index

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# Human Development Index 2019

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India was ranked 129 a rank better than 2018 in the 2019 Human Development Index (HDI) among the 189 countries. India scored 0.624 and was placed in medium human development .( Report released on 9<sup>th</sup> December,2019)

India's Human Development Index lags due to regional disparities in education, health parameters and living standards within the country.

Russian Fed	50
Brazil	75
China	91
South Africa	116
India	129

# Environmental Performance Index: 2020

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India ranks  
168  
Out of 180  
Countries

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*India's score on environment performance index was  
27.6 out of 100*





# Global Risks Report

## The 5 risks that will have the biggest impact in the next 10 years

	rank
Weapons of mass destruction	1
Extreme weather events	2
Natural disasters	3
Failure of climate change mitigation & adaptation	4
Water crises	5

Source: Global Risks Perception Survey 2017-2018, World Economic Forum

Examples.....

# COCHIN INTERNATIONAL AIRPORT



There are more than 46,000 solar panels at Cochin airport

# In a first in India, Spice Jet operates biofuel flight



- A aircraft, partially using biojet fuel, from Dehradun to Delhi
- Powered with a blend of **75%** air turbine fuel (ATF) and **25%** bio jet fuel
- Reduction in carbon emissions and enhances fuel efficiency
- Made from Jatropha crop, the fuel has been developed by the CSIR-Indian Institute of Petroleum (IIP), Dehradun

# Spice Jet operates biofuel flight

- bio jet fuel is low cost and helps in significantly **reducing carbon emissions**
- Potential to **reduce** our dependence on traditional **aviation fuel** by up to 50% on every flight and bring down fares
- The bio jet fuel has been recognised by **American Standard Testing Method (ASTM)**
- According to global airlines' body IATA, aviation industry contributes to **2%** of the total global **GHG** emissions.
- IATA has also set out a target for one billion passengers to fly on aircraft using a mix of **clean energy** and fossil fuels by **2025**.

- Ambitious target for renewable & electricity to all:
  - **175 GW** Renewable energy target by 2022
  - 100 GW of Solar, 60 GW of Wind, 10 GW of biomass and 5 GW of small hydel
- *Swachh Bharat Mission, Cleaning of rivers, Zero Effect Zero Defect, Make in India, Smart Cities Mission, Housing for all*
- Emphasis on:
  - Sustainable Development**
  - Climate Justice**
  - Lifestyles**

# Exchange of MoU :IIPA and ISA



Exchange of Memorandum of Understanding between IIPA and ISA

# Case Study: Kendrapada

Integrated Fish FARMING for Sustainable  
Livelihood



Pond with  
banana trees  
on bund

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Fish catch for the day!



# Ducks FEEDING on AZOLLA



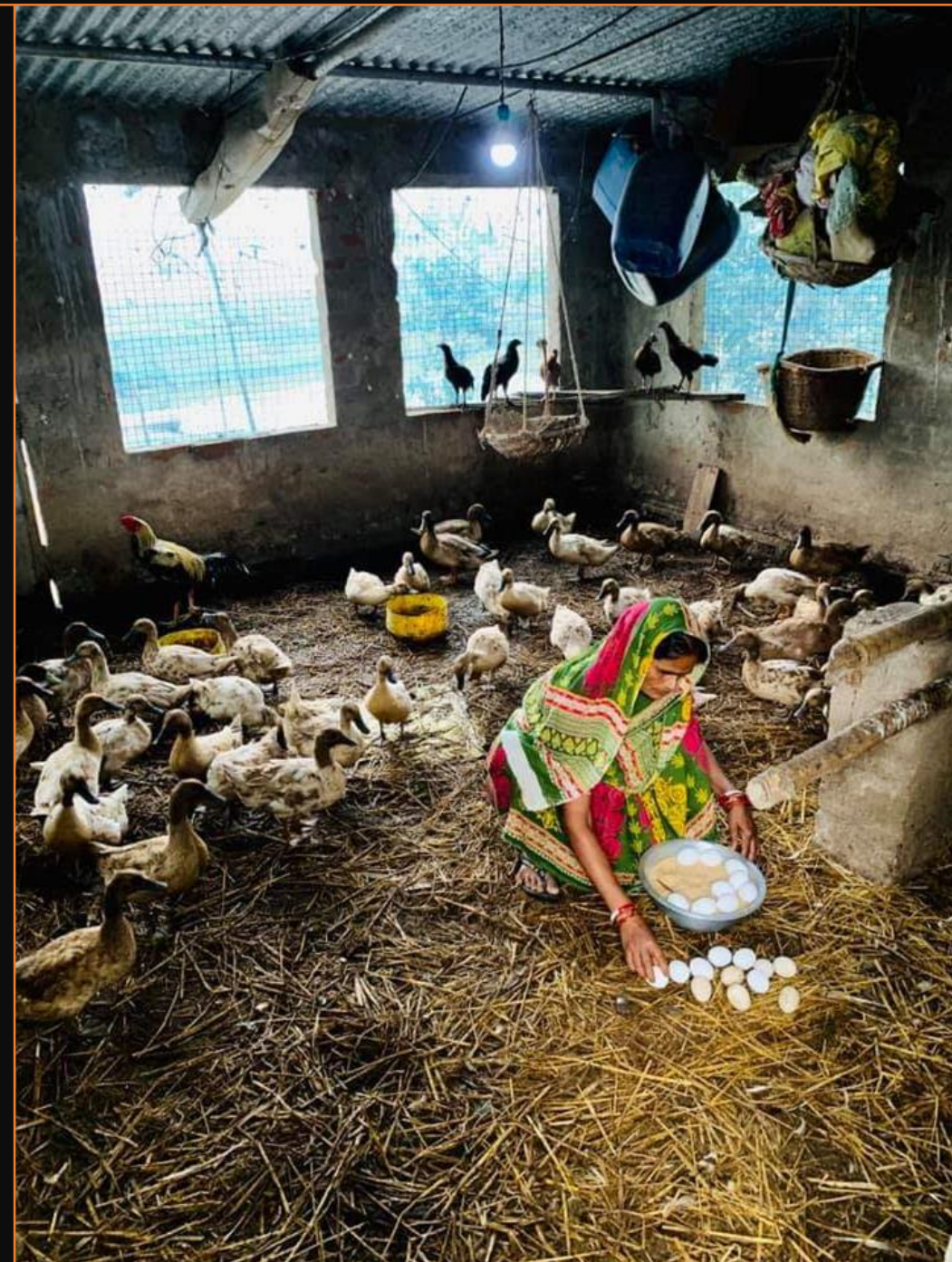
# Poultry for meat and egg



# Vegetable Cultivation



# Egg collection at DUCKERY shed



# Milk Generation From Cows

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Happy and  
Prosperous Integrated  
Fish FARMER





Thank you!



# Global Environmental Issues



POPULATION AND  
NATURAL  
RESOURCES/URBANIZATION



GLOBAL  
WARMING/CLIMATE  
CHANGE



OZONE DEPLETION



LAND SALINATION



AGRICULTURE AND  
WATER



DEFORESTATION



BIODIVERSITY



POLLUTION/POVERTY