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1. Global Climate Risk Index

Introduction

- The international environmental think tank 'German watch' has recently released the Global Climate Risk Index 2020.
- The index analyses quantified impacts of extreme weather events –
- both in terms of fatalities as well as economic losses that occurred –
- Based on data from the Munich Re Nat Cat SERVICE, which is considered worldwide as one of the most reliable and complete databases on this matter
- The Climate Risk Index (CRI) indicates a level of exposure and vulnerability to extreme events, which countries should understand as warnings in order to be prepared for more frequent and/or more severe events in the future.
- The German watch Climate Risk Index 2020 is the 15th edition of this annual analysis.
- Its aim is to contextualise ongoing climate policy debates –
- especially the international climate negotiations –
- Looking at real-world impacts over the last year and the last 20 years (2018 and 1999 to 2018)

Findings

Table 1: The 10 most affected countries in 2018

Ranking 2018 (2017)	Country	CRI score	Death toll	Deaths per 100 000 inhabitants	Absolute losses (in million US\$ PPP)	Losses per unit GDP in %	Human Development Index 2018 Ranking ¹²
1 (36)	Japan	5.50	1 282	1.01	35 839.34	0.64	19
2 (20)	Philippines	11.17	455	0.43	4 547.27	0.48	113
3 (40)	Germany	13.83	1 246	1.50	5 038.62	0.12	5
4 (7)	Madagascar	15.83	72	0.27	568.10	1.32	161
5 (14)	India	18.17	2 081	0.16	37 807.82	0.36	130
6 (2)	Sri Lanka	19.00	38	0.18	3 626.72	1.24	76
7 (45)	Kenya	19.67	113	0.24	708.39	0.40	142
8 (87)	Rwanda	21.17	88	0.73	93.21	0.34	158
9 (42)	Canada	21.83	103	0.28	2 282.17	0.12	12
10 (96)	Fiji	22.50	8	0.90	118.61	1.14	92

PPP = Purchasing Power Parities, GDP = Gross Domestic Product.

Table 2: The Long-Term Climate Risk Index (CRI): The 10 countries most affected from 1999 to 2018 (annual averages)

CRI 1999-2018 (1998-2017)	Country	CRI score	Death toll	Deaths per 100 000 inhabitants	Total losses in million US\$ PPP	Losses per unit GDP in %	Number of events (total 1999-2018)
1 (1)	Puerto Rico	6.67	149.90	4.09	4 567.06	3.76	25
2 (3)	Myanmar	10.33	7 052.40	14.29	1 630.06	0.83	55
3 (4)	Haiti	13.83	274.15	2.81	388.93	2.38	78
4 (5)	Philippines	17.67	869.80	0.96	3 118.68	0.57	317
5 (8)	Pakistan	28.83	499.45	0.30	3 792.52	0.53	152
6 (9)	Vietnam	29.83	285.80	0.33	2 018.77	0.47	226
7 (7)	Bangladesh	30.00	577.45	0.39	1 686.33	0.41	191
8 (13)	Thailand	31.00	140.00	0.21	7 764.06	0.87	147
9 (11)	Nepal	31.50	228.00	0.87	225.86	0.40	180
10 (10)	Dominica	32.33	3.35	4.72	133.02	20.80	8

- Altogether, about 495000 people died as a direct result of more than 12000 extreme weather events globally and losses between 1999 and 2018 amounted to around US\$ 3.54 trillion (in purchasing power parities).
- Heat waves were one major cause of damage in 2018.
- Of the ten most affected countries in 2018, Germany, Japan and India were suffering from extended periods of heat.
- Recent science has found a clear link between climate change and the frequency and severity of extreme heat.
- In Europe, for example, extreme heat spells are now up to 100 times more likely to occur than a century ago.
- Furthermore, due to a lack of data, the impacts of heat waves, for example on the African continent, may be underrepresented.
- Of the ten most affected countries and territories in the period 1999 to 2018, seven were developing countries in the low income or lower-middle income country group, two were classified as upper-middle income countries (Thailand and Dominica) and one was an advanced economy generating high income (Puerto Rico)

Findings – India

- India, which suffered water shortages, crop failures and worst flooding, holds the 5th position.
- It has fallen from its 14th rank of countries hit most by climate change-induced weather phenomena in 2017.
- India has also recorded the highest number of fatalities due to climate change and the second-highest monetary losses from its impact in 2018.

German watch

- German watch, is a non-profit, non-governmental organization based in Bonn, Germany.
- It seeks to influence public policy on trade, the environment, and relations between countries in the industrialized north and underdeveloped south.
- Two Indices
 - ✓ Global Climate Risk index
 - ✓ Climate Change Performance Index

2. Climate Change Performance Index

Introduction

- The Climate Change Performance Index (CCPI) is an instrument designed by the German environmental and development organisation Germanwatch e.v. to enhance transparency in international climate politics.

- On the basis of standardised criteria, the index evaluates and compares the climate protection performance of 57 countries and the European Union (EU), which are together responsible for more than 90% of global greenhouse gas (GHG) emissions.
- The Climate Change Performance Index was first published in 2005 and an updated version is presented at the UN Climate Change Conference annually.
- This year for the first time Chile, as the country holding the COP25 presidency, is added to the CCPI.

Published By

- Germanwatch publishes the index in cooperation with the New Climate Institute and Climate Action Network International and with financial support from Barthel Foundation.

Methodological Approach And Data Sources

- The CCPI assesses countries' performance in four categories
- "GHG Emissions" (40% of overall score)
- "Renewable Energy" (20% of overall score)
- "Energy Use" (20% of overall score)
- "Climate Policy" (20% of overall score)

Findings

Rank	Country	Score***	Categories
1*	-	-	
2	-	-	
3	-	-	
4	Sweden	75.77	
5	Denmark	71.14	
6	Morocco	70.63	
7	United Kingdom	69.80	
8	Lithuania	66.22	
9	India	66.02	
10	Finland	63.25	
11	Chile	62.88	

- India has made it to the top 10 countries in the Climate Change Performance Index released at the Climate Summit in Madrid.
- India ranked 9th in the index released in Madrid. (from 11th)
- The top position was bagged by Sweden while China ranked 30th.
- United States included in the worst-performing countries for the first time.
- However, no country could meet 100% of all standards, so the first three places in this list are vacant.
- The list has been started from the fourth position, where Sweden is on the top of the list.
- Denmark improves ten ranks and moved to the second best-performing country in the 2019 list.

3. Vultures

Introduction

- In the past 15 years, the country's vulture population has declined by a whopping 99%.
- There are currently about 100,000 vultures left in India, compared with 40 million of them in the 1980s.
- The vulture die-off represents the fastest decline of any species in the world.
- The rate of decline has slowed in recent years.

Issue

- India's vultures haven't always needed conservation.
- For many years, their numbers were robust.
- But in 2003, BNHS found that an increasing number of vultures were dying of kidney failure, which they traced back to the presence of diclofenac (Non-Steroid Anti-inflammatory Drug (NSAID)) a drug used to treat pain and inflammation in human and cattle—in animal carcasses.
- In 2006, the Indian government banned veterinary use of the drug.
- (Replaced by Meloxicam)
- Diclofenac is a wonder drug for cattle and humans, but is toxic for vultures.
- Other NSAIDs – aceclofenac, carprofen, flunixin, ketoprofen – toxic to vultures are still in use and must be discontinued.

Conservation Status

- There are nine species of vultures in India out of which three have been on critically endangered list of IUCN and also listed under Schedule I of the Wild Life (Protection) Act, 1972.
- White-rumped Vulture (*Gyps bengalensis*)
- Slender billed Vulture (*Gyps tenuirostris*)
- Indian Vulture/long-billed vulture (*Gyps indicus*)
- Himalayan Griffon - closely related to Indian Gyps - Near Threatened
- Egyptian Vulture - Endangered
- Red-headed vulture is on critically endangered list of IUCN but not listed under Schedule I of the Wild Life (Protection) Act, 1972.

Protection

- First Vulture Care Centre (VCC) was set up at Pinjore, Haryana.
- Starting with just a few vultures, the VCC, until then the sole facility for conservation of vultures in the country, has come a long way in the past two decades.

- Later in 2004, the VCC was upgraded to being the first Vulture Conservation and Breeding Centres (VCBC) in India.
- At present there are nine Vulture Conservation and Breeding Centres (VCBC) in India, of which three are directly administered by Bombay Natural History Society (BNHS).
- The main objective of the VCBCs was to look after the vultures and breed them in captivity and also release them into the wild.
- The Bombay Natural History Society and the RSPB (UK) are working as part of Saving Asia's Vultures from Extinction (SAVE).
- Every four years, they set out on a survey of epic proportions, covering 15,500km of road in 13 states across India, counting individual vultures of each of the three species.

4. Ramsar Sites India

Introduction

- The Ramsar Convention signed on February 2, 1971, is one of the oldest inter-governmental accord signed by members countries to preserve the ecological character of their wetlands of international importance.
- At the time of joining the Ramsar Convention on Wetlands, each Contracting Party undertakes to designate at least one wetland site for inclusion in the List of Wetlands of International Importance.
- The inclusion of a "Ramsar Site" in the List embodies the government's commitment to take the steps necessary to ensure that its ecological character is maintained.
- There are over 2,300 Ramsar Sites on the territories of 170 Ramsar Contracting Parties across the world.
- The countries with the most Sites are the United Kingdom with 170 and Mexico with 142.
- Bolivia has the largest area under Ramsar protection.

Ramsar Sites In India

- There are 37 Ramsar Sites in India.
- Uttar Pradesh has seven wetlands.
- Punjab has six wetlands.
- Jammu and Kashmir, Himachal Pradesh and Kerala have three wetlands each.
- West Bengal, Orissa and Rajasthan have two wetlands each.
- Maharashtra, Gujarat, Uttar Pradesh, Tripura, Andhra Pradesh, Tamil Nadu, Assam, Madhya Pradesh, Manipur Jammu & Kashmir have one wetland each.

Oldest Ramsar Sites in India

- Chilka Lake – Orissa

Newest Ramsar Sites in India

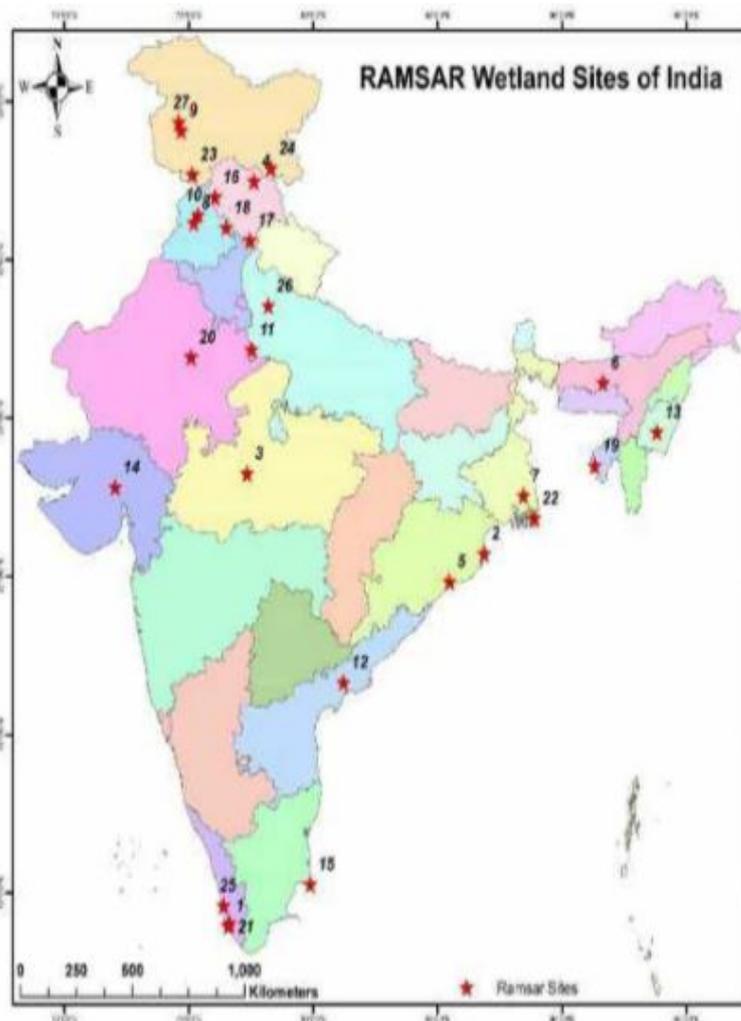
- Nandur Madhameshwar - Maharashtra
- Keshopur-Miani - Punjab
- Beas Conservation Reserve - Punjab
- Nangal - Punjab
- Nawabganj - Uttar Pradesh
- Parvati Agra - Uttar Pradesh
- Saman - Uttar Pradesh
- Samaspur - Uttar Pradesh
- Sandi - Uttar Pradesh
- SarsaiNawar - Uttar Pradesh

Largest Ramsar Sites in India (Area in Sq. km)

- Sunderbans Wetland - West Bengal
- Vembanad Kol Wetland - Kerala
- Chilka Lake - Orissa

Smallest Ramsar Sites in India (Area in Sq. km)

- Renuka Wetland - Himachal Pradesh
- Chandertal Wetland - Himachal Pradesh
- Kanjli Lake - Punjab



RAMSAR Wetland Sites of India (In Alphabetic Order) Since 1981

S.No	Name
1	Ashtamudi Lake, Kerala
2	Bhitarkanika Mangroves, Odisha
3	Bhoj Wetlands, Madhya Pradesh
4	Chandertal Wetland, Himachal Pradesh
5	Chilka Lake, Odisha
6	Deepor Beel, Assam
7	East Calcutta Wetlands, West Bengal
8	Hariko Lake, Punjab
9	Hokersa Wetland, Jammu & Kashmir
10	Kanjli Lake, Punjab
11	Keoladeo Ghana NP, Rajasthan
12	Kolleru Lake, Andhra Pradesh
13	Loitak Lake, Manipur
14	Nabarovar Bird Sanctuary, Gujarat
15	Point Calimere, Tamil Nadu
16	Pong Dam Lake, Himachal Pradesh
17	Renuka Wetland, Himachal Pradesh
18	Ropar Lake, Punjab
19	Rudrasagar Lake, Tripura
20	Sambhar Lake, Rajasthan
21	Seethankotta Lake, Kerala
22	*Sunderbans Wetland, West Bengal
23	Surinsar-Mansar Lakes, Jammu & Kashmir
24	Tsomoriri Lake, Jammu & Kashmir
25	Vembanad Kol Wetland, Kerala
26	Upper Ganga River (Bright to Narora Stretch) Uttar Pradesh
27	Wular Lake, Jammu & Kashmir

* Designated as Ramsar Site on 30th January, 2019

5. Wayanad Wildlife Sanctuary

Introduction

- It is an animal sanctuary in Wayanad, Kerala, India.
- Wayanad Wildlife Sanctuary is the second largest wildlife sanctuary in Kerala.
- Established in 1973, the sanctuary is now an integral part of the Nilgiri Biosphere Reserve.
- It is bounded by protected area network of Nagarhole and Bandipur of Karnataka in the northeast, and on the southeast by Mudumalai of Tamil Nadu.



Vegetation

- It is part of the Deccan Plateau and the vegetation is predominantly of the south Indian moist deciduous teak forests.
- Also, the sanctuary has pastures of the west-coast semi-evergreen trees.

Geography

- It has an extent of 344.44 km² with four ranges namely Sulthan Bathery, Muthanga, Kurichiat and Tholpetty.
- Almost the entire Wayanad district is drained by Kabini and its three tributaries, the Panamaram, Mananthavady, and Kalindy rivers.
- The Kabini River, one of the three east flowing rivers of Kerala, is an important tributary of the Kaveri River.

Biodiversity

- The wildlife sanctuary comes under Project Elephant.
- It is one of the safest havens for different species of vultures like the White-rumped Vultures and the Red-headed Vultures.

Tribes

- Wayanad district has the largest population of Adivasi in Kerala.
- Scheduled tribes here include Paniyas, Kurumas, Adiyans, Kurichiyas, Ooralis and Kattunaikkans

6. Bandipur National Park

Introduction

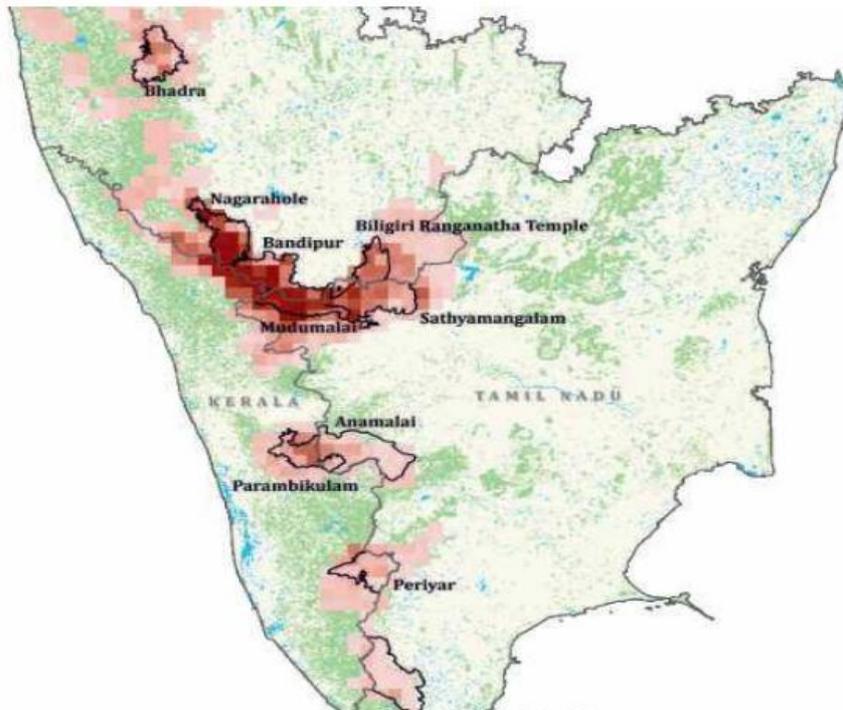
- Bandipur National Park established in 1974 as a tiger reserve under Project Tiger (part of 9 TRs), is a national park located in the Indian state of Karnataka, which is the state with the second highest tiger population in India.

- Along with adjacent Nagarhole National Park it is one of the premier Tiger Reserves in the country
- Together with the adjoining Nagarhole National Park, Mudumalai National Park and Wayanad Wildlife Sanctuary, it is part of the Nilgiri Biosphere Reserve totaling 2,183 km² making it the largest protected area in southern India and largest habitat of wild elephants in south Asia.

Surrounded By

Bandipur Tiger Reserve is surrounded by –

- Nagarhole Tiger Reserve (Karnataka) in the North West (Kabini Reservoir separates the two)
- Mudumalai Tiger Reserve (Tamil Nadu) in the South and
- Wayanad Wildlife Sanctuary (Kerala) in the South West.





Geography

- Bandipur National Park located between where the Deccan Plateau meets the Western Ghats and the altitude of the park ranges from 680 meters to 1,454 meters.
- The park is flanked by the Kabini River in the north and the Moyar River in the south.
- The Nugu river runs through the park.
- Bandipur has typical tropical climate with distinct wet and dry seasons.
- The highest point in the park is on a hill called Himavad Gopalswamy Betta.

Vegetation

- The park has a variety of biomes including dry deciduous forests, moist deciduous forests and shrublands.
- The wide range of habitats help support a diverse range of organisms.

Biodiversity

- Bandipur supports a good population of endangered and vulnerable species like Indian elephants, gaurs, tigers, sloth bears, muggers, Indian rock pythons, four-horned antelopes, jackals and dholes.
- It has the second-highest tiger population in India after Pench Tiger Reserve (Madhya Pradesh).

Important

- NH-766 connects Karnataka and Kerala that passes through the Bandipur Tiger Reserve in Karnataka.
- It was declared a national highway in 1989, then named NH 212, and later renamed NH 766.
- The night travel on the forest stretch of NH-766, passing through the Bandipur National Park is banned since 2009 to protect wildlife in the area.

- However, Kerala condemns the 'Night Ban' and has asked for the ban to be lifted to save a reroute that increases the distance by 45 km.



7. Indian Sunderbans

Introduction

- The Sundarban ecoregion –located in the tidally active lower deltaic plain of the Ganges-Brahmaputra-Meghna basin hosts the largest contiguous mangrove forest and the only mangrove tiger habitat in the world.
- It is named after Sundari trees (*Heritiera fomes*) which were once found throughout the area. Spread over parts of Bangladesh and India, 40% of the Sundarbans is in India, the remaining 60% is in Bangladesh.
- The mangrove forest acts as a vital protective barrier protecting the mainland from flooding, tidal waves and cyclones.





- Located on the southwestern part of the delta, the Indian Sundarban constitutes over 60% of the country's total mangrove forest area.

Geography

- The Indian part of the forest is estimated to be about 40 percent, while the Bangladeshi part is 60 percent.
- To the south the forest meets the Bay of Bengal; to the east it is bordered by the Baleswar River and to the north there is a sharp interface with intensively cultivated land.

Biodiversity

- It is one of the largest reserves for the Bengal tiger.
- It is home to many rare and globally threatened wildlife species such as the estuarine crocodile, Royal Bengal Tiger, Water monitor lizard, Gangetic dolphin and olive ridley turtles.
- Sundarbans has achieved its name from the Sundari Trees.
- It is the most exquisite variety of tree that are found in this area, a special kind of Mangrove tree.

Important

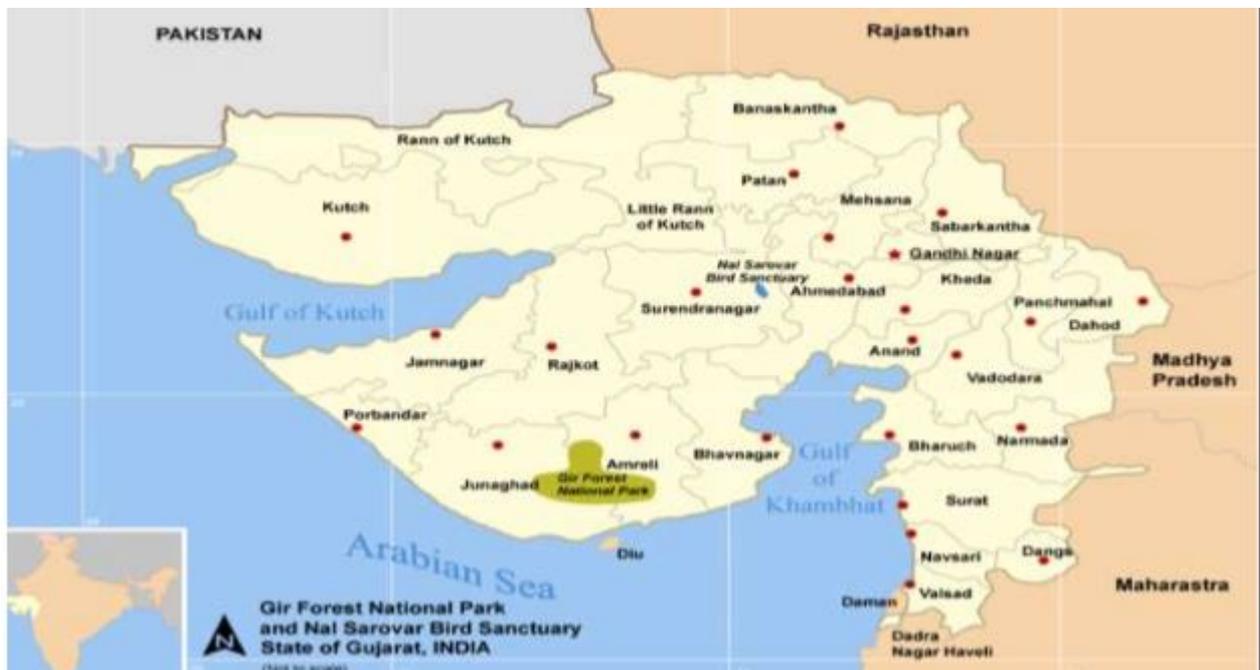
- Four protected areas in the Sundarbans are enlisted as UNESCO World Heritage Sites, viz
- Sundarbans National Park, Sundarbans West, Sundarbans South and Sundarbans East Wildlife Sanctuaries.
- The present Sundarban National Park was declared as the core area of Sundarban Tiger Reserve in 1973 and a wildlife sanctuary in 1977.
- On 4 May 1984 it was declared a National Park.
- It is a UNESCO world heritage site inscribed in 1987, and it has been designated as a Ramsar site since 2019 (27th Ramsar Site in India – largest in India).
- It is considered as a World Network of Biosphere Reserve (Man and Biosphere Reserve) from 2001.

- Discovery India and World Wide Fund (WWF) India have partnered with the Government of West Bengal and local communities in the Sundarban to help save the world's only mangrove tiger habitat.
- They are working with a vision to create climate-smart villages in the Sundarbans. The project at Sundarbans is part of a global movement, Project CAT (Conserving Acres for Tigers), aimed at building healthy habitats for Tigers by conserving six million acres of protected land.

8. Gir National Park

Introduction

- Gir National Park and Wildlife Sanctuary, also known as Sasan Gir, is a forest and wildlife sanctuary in Gujarat, India.
- It was established in 1965, with a total area of 1,412 km² of which 258 km² is fully protected as national park and 1,153 km² as wildlife sanctuary.
- It is the only natural habitat of Asiatic lions.



Geography

- The seven major perennial rivers of the Gir region are Hiran, Shetrunji, Datardi, Shingoda, Machhundri, Godavari and Raval.
- The four reservoirs of the area are at four dams, one each on Hiran, Machhundri, Raval and Shingoda rivers, including the biggest reservoir in the area, the Kamleshwar Dam, dubbed 'the lifeline of Gir'.
- The Gir Forests is the largest compact tract of dry deciduous forests in the semi-arid western part of India.

Biodiversity

- The Gir Forests forms a unique habitat for many mammals, reptiles, birds and insect species along with a rich variety of flora.

Asiatic Lion

- The last census (14th census) in the year 2015 (last in 2010) showed the population of 523 Asiatic Lions (27% increase, from 411) in Gir Protected Area Network of 1648.79 sq. km. that includes Gir National Park, Gir Sanctuary, Pania Sanctuary, Mitiyala Sanctuary adjoining reserved forests, Protected Forests, and Unclassed Forests.
- IUCN Status - Endangered
- Schedule I of Wildlife (Protection) Act 1972
- Appendix I of CITES



Important

- People mostly link Gir with "Maldharis" who have survived through the ages by having symbiotic relationship with the lion.
- They are religious pastoral communities living in Gir.
- Their settlements are called "nesses".

9. Manas National Park

Introduction

- Manas National Park or Manas Wildlife Sanctuary is a
 - ✓ National park
 - ✓ UNESCO Natural World Heritage site
 - ✓ Project Tiger reserve
 - ✓ An elephant reserve

- ✓ Biosphere reserve (Not under MAB of UNESCO) in Assam, India.
- Located in the Himalayan foothills, it is contiguous with the Royal Manas National Park in Bhutan.
- The name of the park is originated from the Manas River, which is named after the serpent goddess Manasa.
- The Manas river is a major tributary of Brahmaputra River, which passes through the heart of the national park.
- It splits into two separate rivers, the Beki and Bholkaduba as it reaches the plains.
- The Manas river also serves as an international border dividing India and Bhutan.



Geography

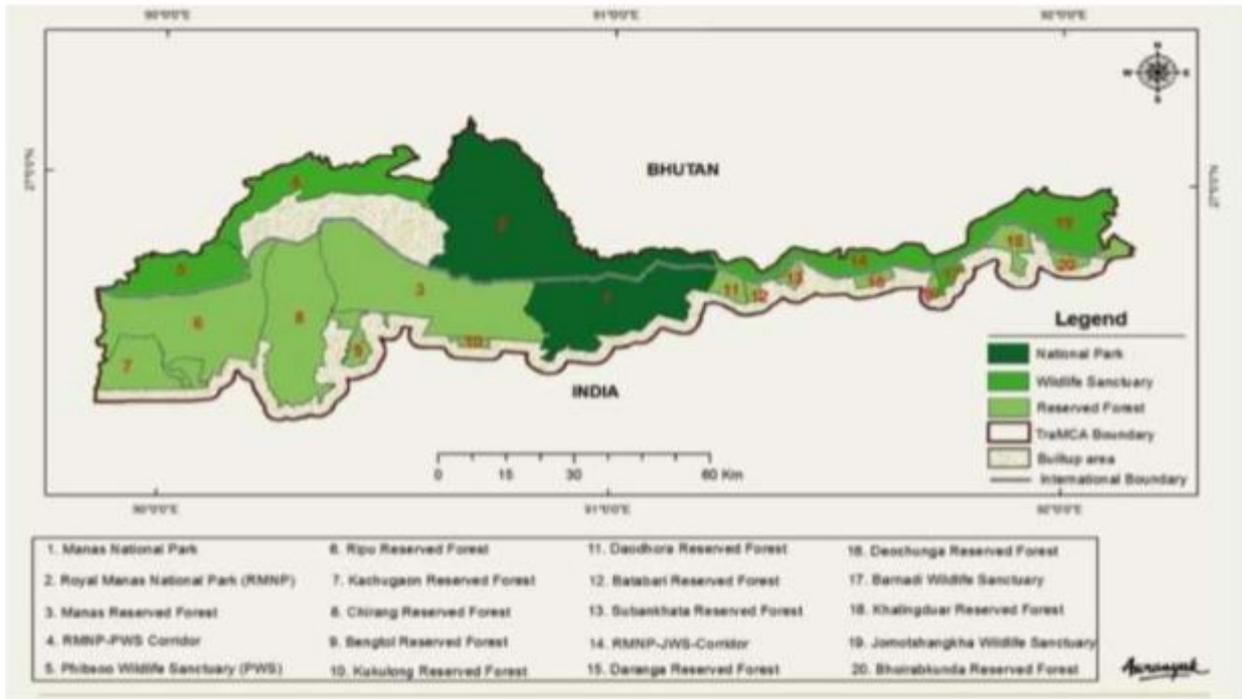
- Manas is located in the foothills of the Eastern Himalaya and is densely forested.
- The bedrock of the savanna area in the north of the park is made up of limestone and sandstone, whereas the grasslands in the south of the park stand on deep deposits of fine alluvium.
- The combination of Sub-Himalayan Bhabar Terai formation along with the riverine succession continuing up to Sub-Himalayan mountain forest makes it one of the richest areas of biodiversity in the world.

Biodiversity

- The park is well known for species of rare and endangered wildlife that are not found anywhere else in the world like the Assam roofed turtle, hispid hare, golden langur and pygmy hog.
- It also include Indian elephants, Indian rhinoceros, gaurs, Asian water buffaloes, barasingha, Indian tigers, Indian leopards, clouded leopards, Asian golden cats, dholes, capped langurs, golden langurs, Assamese macaques, slow loris, hoolock gibbons, smooth-coated otters, sloth bears, barking deers, hog deers, black panthers, sambar deers and chital.

Important

- Trans-boundary Manas Conservation Area (TraMCA) covers Manas National Park (MNP) on the Indian side and the Royal Manas National Park (RMNP) in Bhutan. TraMCA, floated in 2008, is a joint initiative of India and Bhutan for trans-boundary biodiversity conservation.

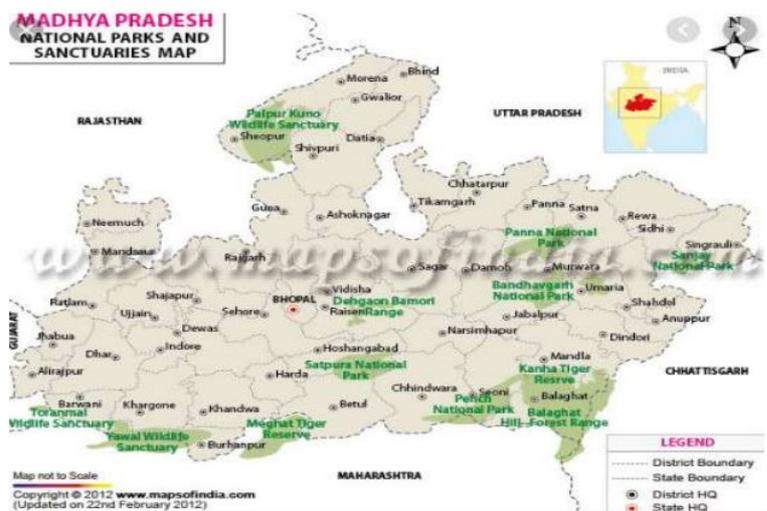


Map of the Transboundary Manas Conservation Area (TRaMCA). Photo by Aaranyak.

10. Panna Tiger Reserve

Introduction

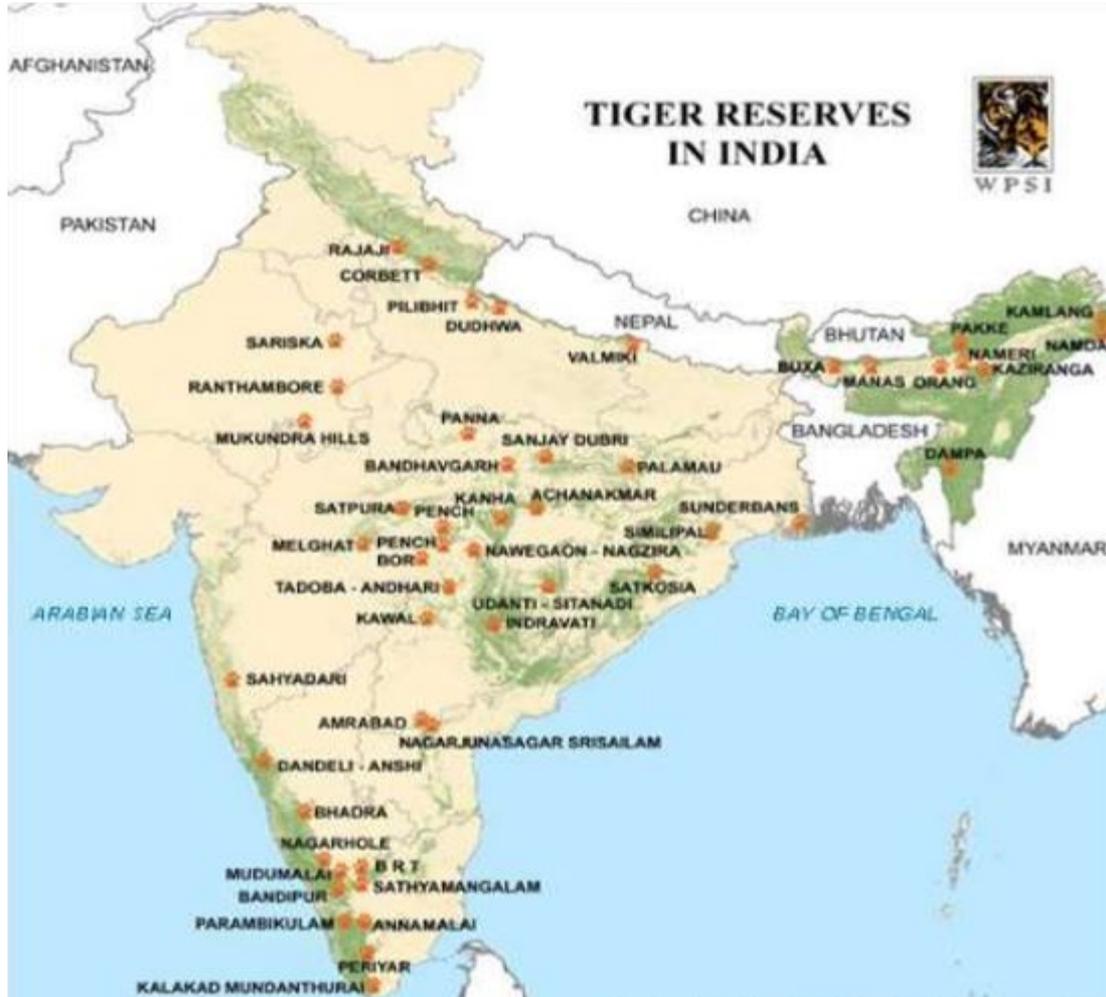
- Panna National Park is a national park located in Panna and Chhatarpur districts of Madhya Pradesh in India.
- It was declared in 1993 as the twenty second Tiger reserve of India and the fifth in Madhya Pradesh.
- Madhya Pradesh has the highest number of tigers in the country.
- It was designated as Biosphere Reserve on 25 August 2011.



Geography

- The Panna tiger reserve is situated in the Vindhya mountain range in the northern part of Madhya Pradesh. It is situated at a point where the continuity of the Tropical and subtropical dry broadleaf forests belt, which starts from Cape Comorin in South India, is broken and beyond this the Upper Gangetic Plains moist deciduous forests of the great Indo-Gangetic Plain begins.

- Ken River, a tributary of the Yamuna River, flows through the reserve.

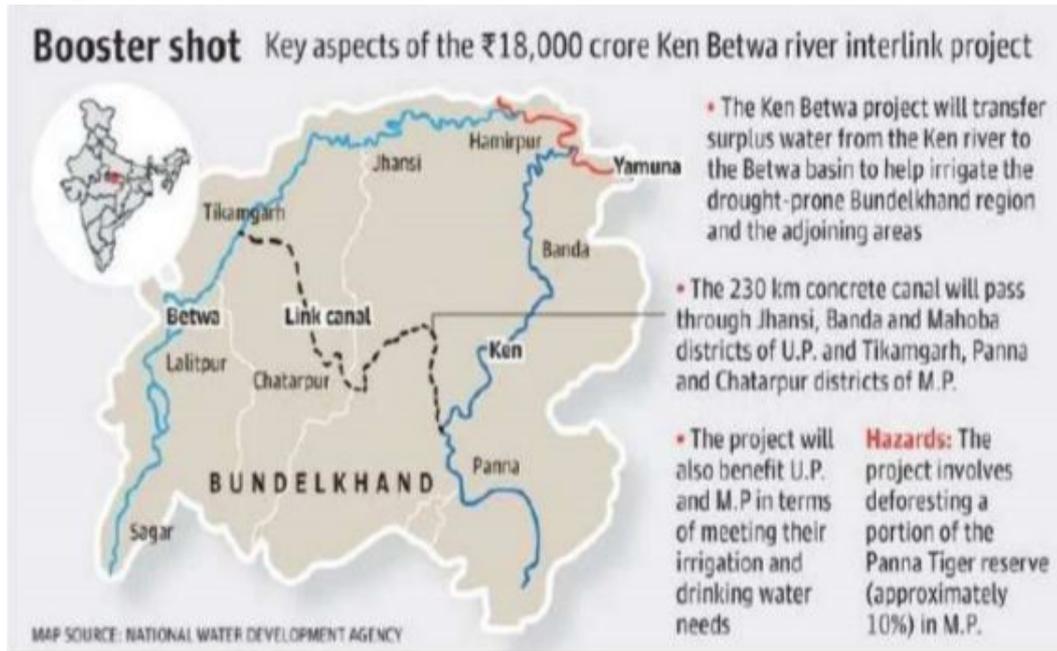


Biodiversity

- This area is the northernmost tip of the natural teak forests and the easternmost tip of the natural 'Kardhai' *Anogeissus pendula* forest.
- Among the animals found here are the tiger, leopard, chital, chinkara, nilgai, sambhar and sloth bear.
- The park is home to more than 200 species of birds.

Important

- The tiger reintroduction project in Panna tiger reserve has completed a decade (in 2019) making it one of the best models of conservation in the world.
- Two female tigers were relocated there from Bandhavgarh National Park and Kanha National Park in March 2009.
- Ken-Betwa river interlinking project will be located within the tiger reserve.
- It aims to transfer surplus water from the Ken river in MP to Betwa in UP to irrigate the drought-prone Bundelkhand region spread across the districts of two states mainly Jhansi, Banda, Lalitpur and Mahoba districts of UP and Tikamgarh, Panna and Chhatarpur districts of MP.



11.State of India's Birds 2020 Report

Introduction

- Recently, the State of India's Birds 2020 (SoIB) report was released at the global conference, CMS COP13 held at Gandhinagar, Gujarat.
- It raises the alarm that several spectacular birds, many of them endemic to the subcontinent, face a growing threat from loss of habitat.
- It was produced using a base of 867 species, and analysed with the help of data uploaded by birdwatchers to the online platform, eBird.
- It is the first such assessment of long-term trend, current trend, distribution range size and overall conservation status of 867 birds.
- Adequate data on how birds fared over a period of over 25 years (long-term trend) are available only for 261 species.
- Current annual trends are calculated over a five-year period.
- This report jointly released by 10 organisations.

Findings

- More recent annual trends point to a drastic 80% loss among several common birds.
- Over a fifth of India's bird diversity, ranging from the Short-toed Snake Eagle to the Sirkeer Malkoha, has suffered strong long-term declines over a 25-year period.
- The populations of raptors (eagles, hawks, kites, etc.), migratory seabirds and birds that live in specialised habitats were the most affected in the past decades.
- The number of birds in the Western Ghats, which is considered one of the world's foremost biodiversity hotspots, also declined by almost 75 per cent since 2000.

- Indian Peafowl, the national bird, has shown a dramatic increase in both abundance and distribution across the country.
- The number of house sparrows has also stabilised nationwide, although there is still a marked decline in their population in cities.
- 126 species, including the peafowl, house sparrow, Asian Koel, rose-ringed parakeet and the common tailorbird, are expected to increase in numbers, primarily due to their ability to survive in human habitats.
- It categorises 101 species as ‘High Conservation Concern for India’.
- Earlier IUCN classification listing contained 67 globally threatened Indian bird species.
- The report has added 34 more species to that.
- 319 species are classified under the ‘Moderate Conservation Concern’
- These species must be carefully monitored to rapidly detect and act upon signs of continuing decline.



Long-term decrease | The table lists the top five species whose populations have declined the most in the last 25 years. For instance, for every 100 **White-rumped Vultures** spotted 25 years ago, only three could be spotted in 2020



Common name	Currently spotted
White-rumped Vulture	3 for every 100
Richard's Pipit	7
Indian Vulture	10
Large-billed Leaf Warbler	11
Pacific Golden Plover	12

Long-term increase | The table lists the five species whose populations have increased the most in the last 25 years. For instance, for every 100 **Rosy Starlings** that could be spotted 25 years ago, 271 could be spotted in 2020



Common Name	Currently spotted
Rosy Starling	271 for every 100
Rock Pigeon	244
Glossy Ibis	240
Plain Prinia	221
Ashy Prinia	205

Short-term decrease | The table lists the five species whose populations have declined the most in the last five years. For instance, for every 100 **Singing Bushlarks** that could be spotted five years ago, only 76 could be spotted in 2020



Common Name	Current	IUCN status
Singing Bushlark	76	Least concern
Nilgiri Pipit	77	Vulnerable
White-tailed Robin	80	Least concern
Lesser Cuckoo	82	Least concern
Red-headed Vulture	82	Critically endangered

Short-term increase | The table lists the five species that have seen the maximum increase in their populations in the last five years. For instance, for every 100 **Rain Quails** that could be spotted five years ago, 133 could be spotted in 2020



Common Name	Currently spotted
Rain Quail	133 for every 100
Ferruginous Duck	133
Greater Crested Tern	124
Hume's Leaf Warbler	117
White-spotted Fantail	116

Pictures: Wikimedia commons

12.WMO Statement on the State of the Global Climate In 2019

Introduction

- The report, the WMO Statement on the State of the Global Climate in 2019, which is led by the UN weather agency - World Meteorological Organization, contains data from an extensive network of partners.

Since 2016, the following United Nations agencies have significantly contributed to the WMO Statement on the State of the Global Climate in support of climate policy and action:

Food and Agriculture Organization of the United Nations (FAO),

Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC/UNESCO),

International Monetary Fund (IMF),

International Organization for Migration (IOM),

United Nations Conference on Trade and Development (UNCTAD),

United Nations Environment Programme (UNEP),

Office of the United Nations High Commissioner for Refugees (UNHCR),

United Nations Office for Disaster Risk Reduction (UNDRR),

World Health Organisation (WHO).

- It documents physical signs of climate change – such as increasing land and ocean heat, accelerating sea level rise and melting ice – and the knock-on effects on socio-economic development, human health, migration and displacement, food security, and land and marine ecosystems.

Findings

- It warned that the world is currently way off track meeting either the 1.5°C or 2°C targets that the Paris Agreement calls for, referring to the commitment made by the international community in 2015, to keep global average temperatures well below 2°C above pre-industrial levels.
- Several heat records have been broken in recent years and decades.
- The global mean temperature for 2019 was 1.1 ± 0.1 °C above pre-industrial levels.
- The report confirms that 2019 was the second warmest year on record, and 2010-2019 was the warmest decade on record.
- Since the 1980s, each successive decade has been warmer than any preceding decade since 1850.
- Global atmospheric mole fractions of greenhouse gases reached record levels in 2018 with carbon dioxide (CO₂) at 407.8 ± 0.1 parts per million (ppm), methane (CH₄) at 1869 ± 2 parts per billion (ppb) and nitrous oxide (N₂O) at 331.1 ± 0.1 ppb.
- These values constitute, respectively, 147%, 259% and 123% of pre-industrial levels.
- Early indications show that the rise in all three – CO₂, CH₄ and N₂O – continued in 2019.
- Greenhouse gas emissions continued to grow in 2019, leading to increased ocean heat, and such phenomena as rising sea levels, the altering of ocean currents, melting floating ice shelves, and dramatic changes in marine ecosystems.
- The ocean has seen increased acidification and deoxygenation, with negative impacts on marine life, and the wellbeing of people who depend on ocean ecosystems.
- At the poles, sea ice continues to decline, and glaciers shrunk yet again, for the 32nd consecutive year.
- The ocean absorbs around 90% of the heat that is trapped in the Earth system by rising concentrations of greenhouse gases.

- Ocean heat content, which is a measure of this heat accumulation, reached record high levels again in 2019.
- Over the decade 2009–2018, the ocean absorbed around 23% of the annual CO₂ emissions, lessening the increase in atmospheric concentrations.
- However, CO₂ absorbed in sea water decreases its pH, a process called ocean acidification.
- Observations from open ocean sources over the last 20 to 30 years show a clear decrease in average pH at a rate of 0.017–0.027 pH units per decade since the late 1980s.
- The year 2019 saw low sea-ice extent in both the Arctic and the Antarctic.
- The daily Arctic sea-ice extent minimum in September 2019 was the second lowest in the satellite record.
- In Antarctica, variability in recent years has been high with the long-term increase offset by a large drop in extent in late 2016.
- Extents have since remained low, and 2019 saw record-low extents in some months.
- As the ocean warms it expands and sea levels rise.
- This rise is further increased by the melting of ice on land, which then flows into the sea.
- Sea level has increased throughout the altimeter record, but recently sea level has risen at a higher rate due partly to increased melting of ice sheets in Greenland and Antarctica.
- In 2019, the global mean sea level reached its highest value since the beginning of the high-precision altimetry record (January 1993).
- Furthermore, in 2019, heatwaves, combined with long periods of drought, were linked to wildfires of unprecedented size.
- This was the case in Australia, where millions of hectares were set ablaze, and in Siberia and other Arctic regions hit by wildfires of record intensity.
- Carbon dioxide emissions spiked following the devastating Australian bushfires, which spread smoke and pollutants around the world.