

## Environment and Biodiversity

### Govt Announces Asiatic Lion Conservation Project

#### In News

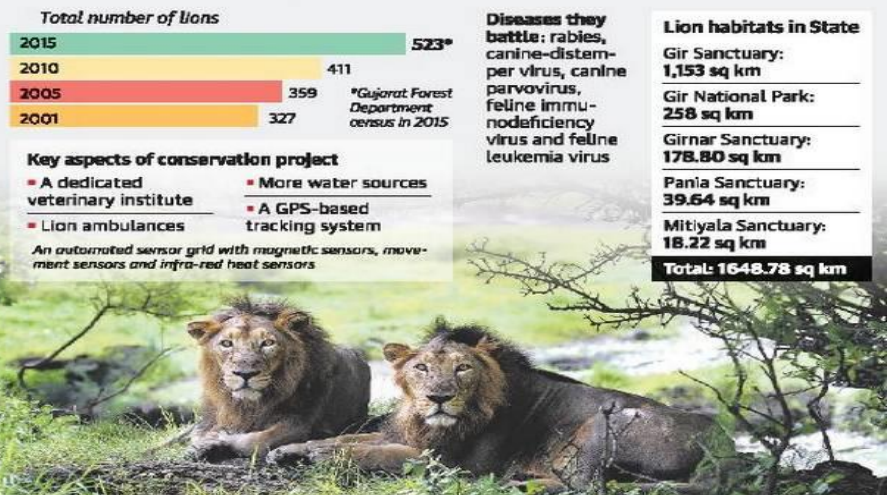
- The Ministry of Environment, Forest and Climate Change (MoEFCC) has launched the “Asiatic Lion Conservation Project”.
- The project is aimed to protect and conserve the **world’s last ranging free population of Asiatic Lion** and its associated ecosystem.

#### Asiatic lion

- At one time, **Asiatic lions (Panthera leo persica)** ranged from Persia (Iran) to Palamau in Eastern India.
- They were almost driven to extinction by indiscriminate hunting and habitat loss.
- It is one of the 21 **critically endangered** species identified by the MoEFCC for taking up recovery programmes.
- At present, Gir National Park and Wildlife Sanctuary is the only abode of the Asiatic lion (*Panthera leo persica*).

### Saving the roar

The Centre and the Gujarat government have joined hands for the conservation of the Asiatic Lion. A look at the the present situation of lions in the State



- A single population of less than 50 lions persisted in the Gir forests of Gujarat by late 1890s.
- With timely and stringent protection offered by the State Government and the Center Government, Asiatic lions have increased to the current population of over 500 numbers.
- The last census in the year 2015 showed the population of 523 Asiatic Lions in Gir Protected Area Network.

#### Asiatic Lion Conservation Project

- The project would be beneficial in strengthening the conservation and protection of Asiatic Lion in the country.
- **Funding:** The project will be funded from the Centrally Sponsored Scheme- Development of Wildlife Habitat (CSS-DWH) with the contributing ratio being 60:40 of Central and State share.
- **Healthcare:** Stepping up veterinary care by construction of veterinary hospitals, backing up stocks of vaccines, increasing the number of lion ambulances, and ringing together multi-sectoral agencies for disease control.
- **Use of ICT:** GPS Based Tracking (for Surveillance Tracking, Animal Tracking and Vehicle Tracking), Automated Sensor Grid (with Magnetic Sensors, Movement Sensors and Infra-red heat sensors), Night vision capability enhancement and GIS based real time monitoring, analysis and report generation.

- **Zone Plans and Theme Plans:** Management approach of “Zone Plans and Theme Plans” will be taken up for the conservation of the Asiatic Lion.
- Under Zone Plans, the Greater Gir Region (GGR) will be divided into various zones for the conservation of the Asiatic Lion. “Zone Plans” include **the Core Zone, the Sanctuary Zone, the buffer Zone** and the Greater Gir Region outside the Gir PA system for people’s participation and eco-development.
- Theme Plans include Habitat improvement, protection, wildlife health service, addressing to man-wild animal conflict issues, eco-development and voluntary relocation of PA resident people, research and monitoring, awareness generation, and ecotourism.

#### Other Initiatives Taken Up For The Conservation Of Asiatic Lions

- **Larger habitat and protected area:** The concept of Greater Gir has been adopted through which additional suitable habitat for lion is being developed for the habitation of lion.
- Besides Gir National Park & Sanctuary, Girnar, Pania and Mitiyala have been notified as sanctuaries to widen the protected area network and home of lion.
- **Habitat improvement:** Habitat improvement measures have been undertaken.
- **Wildlife Crime Cell and Task Force:** Protection mechanism has been strengthened with creation of Wildlife Crime Cell at state level and Task Force for the GGR (Greater Gir region).
- **Others:** Additional water points, parapet walls on open wells, intelligence gathering system etc.

#### Securing The Elephant Corridors

##### In News

- An elephant conservation initiative by few NGOs are raising £20 million to secure 96 of the corridors used by elephants in India.
- They joined together under the Asian Elephant Alliance to raise money as money was the main constraint in securing the land.
- One of the approaches for securing and protecting elephant corridors in India is the Private Purchase Model.
- Under this model, conservationists directly purchase the land, rehabilitate affected local people, and transfer the land to the relevant state forest department for legal protection.

##### The Asian Elephant

- India has by far the largest number of wild **Asian elephants (Elephas maximus)** in the world, estimated at 27,312 according to the 2017 census, about 55% of the species’ global population.
- They range in 29 Elephant Reserves spread over 10 elephant landscapes in 14 states in northeast, central, north-west and south India.

##### Importance of Elephants

Elephants are a **keystone species**. Their nomadic behaviour – the daily and seasonal migrations they make through their home ranges – is immensely important to the environment. They play various roles, including **Landscape architects; Seed dispersal; Nutrition through elephant dung; Food chain etc.**

## Importance Of Elephant Corridors

- Elephant corridors are relatively narrow, linear patches of vegetation that form vital natural linkages between larger forest patches which elephants inhabit.
- To secure a future for wild elephants, designated corridors must be legally secured and protected. They are important for: **Elephant conservation, Avoiding human-animal conflict, Preserving Ecosystem.**

## Project REPLAN

### In News

- The Khadi and Village Industries Commission (KVIC) has launched a project called **REPLAN (REducing PLastic in Nature)** to **make carry bags** by mixing processed and treated plastic waste with cotton fibre rags in the ratio 20:80.
- This paper was found to have good strength and durability, and can be used to make paper bags, fine tissues and other paper-based items.

### Benefits

- **Reducing HDP/LDP plastic waste:** About 2/3rd of the plastic waste generated in India is High Density Polyethylene (HDP) (used in Tupperware, shampoo bottles etc.) and Low Density Polyethylene (LDP) (used in plastic bags for computer components, juice cartons, plastic wraps etc.). The **recycling of HDP/LDP plastic waste is very low** in India and REPLAN project can go a long way in recycling this plastic waste.
- **Cheaper carry bags:** The carry bags made out of REPLAN were found to be more durable, and cheaper.
- **No wastage:** KVIC says the remaining debris can be utilised with soil for gardening purposes, thus eliminating any waste.



## Forest Rights Act

### In News

- The Supreme Court has **ordered the eviction** of nearly lakhs of tribals and other forest dwellers from forestland whose claims over forestland under the Forest Rights Act (FRA) had been **rejected by the states.**
- The judgement came in response to a PIL which challenged the constitutional validity of the FRA and argued that it encourages encroachment of forestland.

## Forest Rights Act, 2006

- **The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006** (in short, called as Forest Rights Act or FRA) came into force in 2007.
- **Eligibility:** The Act recognizes two classes of persons:
  1. Forest Dwelling Scheduled Tribe - members of scheduled tribe living in forests
  2. Other Traditional Forest Dweller (OTFD) - persons traditionally residing in forest, or dependent on forest produce for 75 years
- **Rights:** It seeks to recognize the forest rights of these persons, such as their rights to hold and live in the forest land, including right of ownership, access to collect, use and dispose of minor forest produce etc.
- **Procedure:** Section 6 of the Act lays down the procedure for establishing claims. Once established, the forest dwellers will get land rights, use rights and rights to conserve and protect forestland.

### Reasons For Eviction

- Encroachment: Those not eligible under the Act are occupying a huge area of forest land, including within national parks and sanctuaries.
- Claimants do not satisfy the requirements of law:

### Implications To Those Whose Claims Have Been Rejected

- **No rights under the Act:** Those whose claims are rejected are not entitled for the grant of any Patta (ownership document) or any other right under the Act.
- **Eviction from the forests:** They are also either required to be evicted from that parcel of land or some other action is to be taken in accordance with law.

### Criticism Of The Judgement

- **Hurts already vulnerable people:** The order negates the claims of STs and vulnerable communities who are in precarious situation due to gross governmental neglect.
- **No recourse for those whose claims have been rejected:** Studies found that the right to appeal is not being explained to those who claims have been rejected and their appeal is also not being facilitated.
- **Procedural lapses in assessing the claims:** The Virginius Xaxa committee found lapses in assessing the claims under the FRA, including lack of communication of reasons, rejections based on wrong interpretation of the 'OTFD' (Other Traditional Forest Dwellers) definition, wrongly considering some land as 'not forest land' etc.
- **Against the earlier SC judgements:** The order goes against the **Samata judgment** (the landmark case of **Samata vs. State of Andhra Pradesh in 1997**) where the apex court delivered a verdict in favour of the right to livelihood of the tribals inhabiting the scheduled areas of the country.
- **Violative of fundamental rights:** The judgement is in complete disregard of the fundamental right under Art 19(5) which requires the state to make laws "for the protection of the interests of any Scheduled Tribe".
- **Judicial overreach:** Some activists say it is not clear if the Supreme Court has the authority to order evictions of Scheduled Tribes from areas designated under Schedule V and Schedule VI of the Constitution.

### Conclusion

- The judgement is in the right spirit to protect the sanctity of the law and the forests.

- However, in light of the allegations that there were procedural lapses, and the centre and activists' appeal to not order eviction, the Supreme Court **stayed the eviction and permitted the states to temporarily withhold the eviction from forests.**
- The court said there is a need to check if gram sabhas and state authorities under FRA followed due process while dealing with the forest right claims.
- If a claim is rejected, the claimant has to be informed about the reasons for rejection and should be informed of avenues to appeal.
- Considering the large number of people who face eviction, government should take a compassionate view and do everything to safeguard their interests, especially of the tribals, and explore options for their betterment.

## **The State Of The World's Biodiversity For Food And Agriculture**

### **In News**

- The State of the World's **Biodiversity for Food and Agriculture report 2019** has been published by UN's Food and Agriculture Organization (FAO).
- The report noted that the **global biodiversity** — the variety of life at the genetic, species and ecosystem levels — is **under severe threat.**

### **Biodiversity For Food And Agriculture (BFA)**

- BFA is essentially the diversity of plants, animals, and other organisms, both wild and domesticated, that provide us with food, fuel and fibre.
- It includes those organisms that provide essential services, such as bees and other pollinators, worms, mangroves etc. which work to keep soils fertile and purify the air and water.
- Biodiversity is critical for safeguarding global food security, improving rural livelihoods, and enhancing the resilience of people and communities.

### **The Report Highlights Two Key Messages**

#### **1. Decline in food crop diversity:**

The world is relying on an ever-smaller number of foodstuffs to feed a growing population. Of the 6,000 plant species cultivated for food, just nine account for 66% of total crop production. World's livestock production is also based on only a few species.

#### **2. Decline in support system for food and agriculture:**

- Many of these species that support food and agriculture are under threat or declining.
- Forests, mangroves, coral reefs, wetlands etc. are key ecosystems that deliver many essential services to food and agriculture, including freshwater, habitat, protection against floods and other hazards, carbon sequestration; they are declining rapidly.

### **Significant Causes Of Biodiversity Loss**

- Changes in land and water use and management
- Pollution and external inputs
- Overexploitation and overharvesting
- Climate change
- Population growth and urbanization

- Pests, diseases and invasive alien species
- Natural disasters
- Markets, trade and the private sector

### Way Ahead

- The plants, animals, and micro-organisms that are fundamental to our food production are in decline. If these critical species are lost, it can leave food production much more vulnerable to shocks, such as outbreaks of disease and pests.
- **All stakeholders to coordinate:** There is a need both to enhance the multiple contributions that BFA makes to sustainable development and to tackle the multiple threats currently causing its loss. Urgent action and long-term commitment are needed from stakeholders at all levels, nationally and internationally.
- **Implementation global action plans:** Implementation of global plans of action for genetic resources in the plant, animal and forest sectors (developed under the aegis of the Commission on Genetic Resources for Food and Agriculture) needs to be stepped up.
- **Sustainable use of biodiversity** so that we can better respond to rising climate change challenges and produce food in a way that doesn't harm our environment.

### About FAO

- The Food and Agriculture Organization (FAO) is a **specialized agency** of the United Nations that leads international efforts to defeat hunger.
- Serving both developed and developing countries, FAO acts as a neutral forum where all nations meet as equals to negotiate arguments and debate policy.
- Founded in 1945, it is headquartered at Rome, Italy.

### Ganga River Basin Planning Assessment Report

#### In News

- to protect the ecological health of the Ganga river, its river basin could see rising crop failures and drinking water shortages in some States by 2040, according to an assessment commissioned by the World Bank.
- The government has committed to reduce pollution in the Ganga by 70% by March 2019.
- The key objective of the assessment, submitted to Central Water Commission, is to significantly strengthen the capability of relevant central and state agencies to undertake evidence-based strategic basin planning for the Ganga river basin.

#### Significance of Ganga River Basin

- The Ganga River basin, draining through 11 states, is the most populated river basin in the world and is home to half the population of India including two-thirds of the nation's poor people.
- The basin provides over one third of the available surface water in India and contributes to more than half the national water use of which 90 percent is diverted to irrigation.

#### Deteriorating Ecological Health Of The River

The ecological health of the Ganga river and some of its tributaries has deteriorated significantly as a result of

- High pollution loads from point (specific source like a factory) and non-point sources (like flowing water from a large polluted area)
- High levels of water abstraction for consumptive use, mostly for irrigation, but also for municipal and industrial uses;
- Flow regime and river modifications caused by water resources infrastructure, dams and barrages for diverting and regulating the river and generating hydropower.