



June 2020

part - II

Current Affairs (consolidation)

Introduction

Hello Everyone,

Every year more than 50 percent of the Prelims Paper is based on Current Affairs. It becomes important for us to have very good command on Current Affairs. Hundreds of publications are available in market. Aspirants are always confused how to prepare Current Affairs and most of the times they end up choosing wrong publications. We will not let you fall in this trouble. Three important courses are running simultaneously on our website for Current Affairs from Monday to Friday- **Daily Quiz section**, **Daily Current Affairs section** and **Daily News Section**.

Daily Quiz will help you do the best preparation to handle any question in UPSC Prelims Exam, Daily News section contains best opinion based Articles important for your Mains Exam and Daily Current Affairs section will give you best Current Affairs which is relevant for your Exam from all important sources (PIB+ all government websites, The Hindu+ 10 different newspaper, etc.). Nothing will be missed. This document is related to Current Affairs section.

You might find it bulky but don't worry. It contains lot of images to simplify your understanding.

Hope you enjoy reading.

Thanks,

Abhishek Agarwal

Founder, GoalTide IAS Prelims Academy

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1. A controversial Project in Dibang

Link: <https://science.thewire.in/environment/dibang-etalin-biodiversity-pandemic/>

Understand the issue.

The plan to build two enormous dams in one of only 36 mega biodiversity hotspots in the world- DIBANG VALLEY is causing a stir all over India. **So, the problem is biodiversity under threat.**

A small piece of information below about threat:

✓ In 2008, the massive 3,097 MW EtaLin hydroelectric project became one of three proposed projects in a joint venture between the Hydropower Development Corporation of Arunachal Pradesh Ltd. and Jindal Power Limited. Estimated cost: \$3.3 billion. Jindal Power Limited, which has a 74% stake, is still seeking investors. It is proposed to be developed as a combination of two run-of-the-river schemes, involving construction of dams on the **Talo** (often misspelt as Tangon in official documents) and **Dri** rivers – two tributaries of Dibang river.

The EtaLin project would involve chopping at least 2,80,000 trees of subtropical evergreen broad-leaved forest and subtropical rain forests in an area of more than 1,160 hectares.

We will learn here:

- a. **Biodiversity Hotspots.**
- b. **Dibang Valley**

We won't read any non-sense.

Biodiversity Hotspots:

A biodiversity hotspot is a biogeographic region that is both a significant reservoir of biodiversity and is threatened with destruction.

To qualify as a biodiversity hotspot, a region must meet two strict criteria:

- o It must have at least 1,500 vascular plants as endemics — which is to say, it must have a high percentage of plant life found nowhere else on the planet. A hotspot, in other words, is irreplaceable.
- o It must have 30% or less of its original natural vegetation. In other words, it must be threatened.

Conservation International was a pioneer in defining and promoting the concept of hotspots. The Conservation International Foundation (CI) is a non-profit organization that operates internationally in over 30 countries across six continents with a wide range of partners in order to empower societies to responsibly and sustainably care for nature for the well-being of humanity.

~~BIODIVERSITY HOTSPOTS IN INDIA~~

1. **Himalaya:** Includes the entire Indian Himalayan region (and that falling in Pakistan, Tibet, Nepal, Bhutan, China and Myanmar)
2. **Indo-Burma:** Includes entire North-eastern India, except Assam and Andaman group of Islands (and Myanmar, Thailand, Vietnam, Laos, Cambodia and southern China)
3. **Sundalands:** Includes Nicobar group of Islands (and Indonesia, Malaysia, Singapore, Brunei, Philippines)
4. **Western Ghats and Sri Lanka:** Includes entire Western Ghats (and Sri Lanka)

1. HIMALAYA



2. INDO-BURMA



3. SUNDALAND



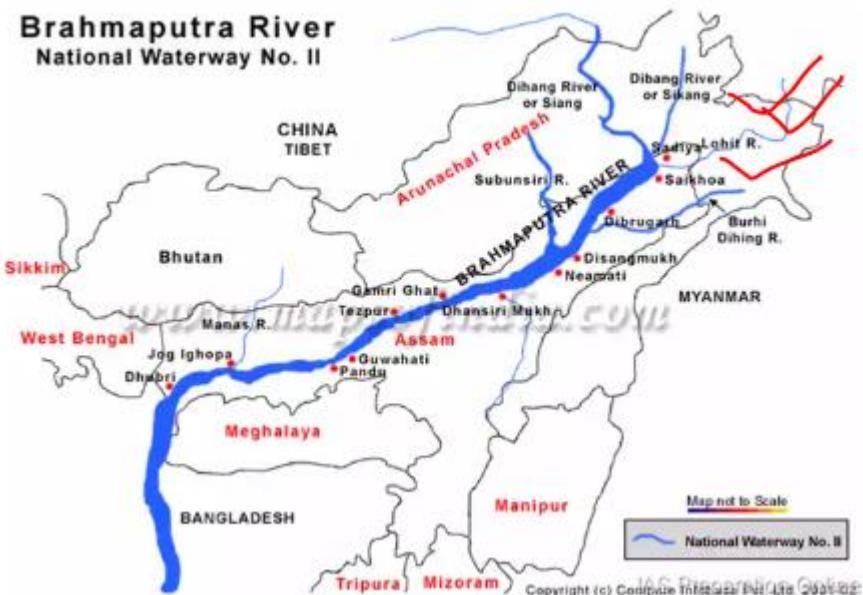
WESTERN GHATS AND SRI LANKA



Dibang Valley:

Dibang Valley district derives its name from the river Dibang (a tributary of the Brahmaputra) which flows through it and finally debouches into the plains where it meets the Lohit River near Sadiya. **The major tributaries of Dibang River are Dri, Mathun, Talon, Eme, Ahi, Emra and Awa.**

Aside from housing a vast variety of flora and fauna including that of six globally threatened mammals and four critically endangered birds, it is also the home of the **indigenous community of Idu Mishmi**.



2. Fire in Assam: Threat to Biodiversity

Link: <https://www.downtoearth.org.in/news/governance/assam-fire-mb-lal-committee-recommendations-not-implemented-for-a-decade-71741>

The death of two Oil India Limited (OIL) employees as a result of a blowout at the **Baghjan gas** well site on June 9 (Tuesday) has sparked outrage across Assam. Most of the anger is aimed at OIL, for its alleged failure to curb a 14-day leak, resulting in the uncontrollable gush of natural gas.

This is sad but our purpose is to learn important things from here:

- Where is this Baghjan gas field (near Maguri Motapung beel): Poor management of wetlands.
- MB Lal Committee recommendations related to this incident (not full recommendations, just few. We will mention below)

The Baghjan field is located less than a kilometer away from the **Dibru-Saikhowa National Park**. Located less than 10 km south of Dibru-Saikhowa National Park is Maguri Motapung beel (**Assam's Critical Wetland Habitat Is Burning because of above incident**). Maguri Motapung beel was declared an important bird and biodiversity area in 1996.

UNCATEGORISED

Near the Baghjan Blowout, Assam's Critical Wetland Habitat Is Burning

11/06/2020

The important here is India has no concern for wetlands.

The situation at Maguri Motapung beel only highlights India's lack of concern for its wetland ecosystems. The fire and oil leak in Tinsukia district, where the Baghjan oil well is located, is happening in the midst of numerous 'development' projects that the Indian government has mooted in an effort to industrialize the northeast. At the same time, wetlands themselves bear much of the brunt of India's industrial tendencies across the country.

Two recent examples include land appropriation for housing development projects, which will damage the **mangroves of Kakinada Bay on the Godavari river, and Tamil Nadu mulling denotifying a part of the Vedanthangal Bird Sanctuary in Chengalpattu district** to benefit a pharmaceutical company, in violation of the Wildlife Protection Act 1972.

Now, if we see MB Lal Committee: It came into news:

GOVERNANCE

~~Assam fire: MB Lal Committee recommendations not implemented for a decade~~

One of the recommendations, of building emergency response centres to handle major oil fires was to be completed in 2014



NEXT NEWS >

By Kiran Pandey

Last Updated: Friday 12 June 2020

The **MB Lal committee** was constituted following a fire incident in **October 2009** at the IOCL terminal at Jaipur. It had nearly 118 recommendations with regard to safety guidelines to be followed by oil companies at their installations.

Emergency Response Centres (ERCs) to handle major oil fires in the fastest way possible are yet to be set up in India, more than a decade **after they were recommended by the MB Lal Committee**. This is according to the last report of the Parliamentary panel on Petroleum and Natural Gas that was tabled in the Lok Sabha in January 2019. We have pasted the report below:

Recommendation No.9**Safety of Oil and Natural Gas Installations**

The Committee note that the recent fire incident on 3rd September, 2019 at oil processing unit of ONGC at Uran, Mumbai with four fatalities is a grave reminder to the inadequate safety measures and the lackadaisical implementation of safety standards at oil and gas installations in the country. The Committee observe that M.B. Lal Committee constituted in the aftermath of a fire incident in October 2009 at IOCL terminal at Jaipur had recommended comprehensive recommendations with regard to safety guidelines to be followed by oil companies at their installations. However, the Committee are constrained to note that in spite of such recommendations in place, fire incidents such as blasts at GAIL pipeline at Nagaram in East Godavari of Andhra Pradesh on 27th June, 2014 and BPCL tank farm at Butcher Island near Mumbai on 06.10.2017 and the recent fire incident at Uran had occurred at oil installations at regular intervals.

Just you remember that this committee belongs to what. It can be important. No need to know all recommendations.

3. Advisories by Union Government to formalize the process of importing live exotic animals

Link: <https://science.thewire.in/environment/covid-19-india-exotic-animals-wildlife-trade-environment-ministry-advisory/>

The Union Ministry of Environment, Forest and Climate Change (MoEF&CC) on June 1, 2020, issued an advisory to streamline and formalize the process of importing live exotic animals.

WILDLIFE & BIODIVERSITY

~~Environment ministry issues advisory to import live exotic animals~~

Document fails to address issues such as invasive species and zoonotic disease, experts say



By Ishan Kukreti

Last Updated: Friday 05 June 2020

Problems with the regulation of exotic species in India:

- a. The terms 'exotic species' or 'exotic pets' are not defined in Indian law. **The Prevention of Cruelty to Animals (Pet Shop) Rules 2016 define 'pet animals'**, but the scope of this term is limited to "dog, cat, rabbit, guinea pig, hamster, rodents of the rat or mice category and captive birds". As such, this definition excludes many exotic species like turtles, snakes, iguanas, monkeys, etc., which are all commonly imported into India.

(i) **"pet animal"** includes dog, cat, rabbit, guinea pig, hamster, rodents of the rat or mice category, pet birds and such other type of animals, the ownership of, and trade in which, is not prohibited by any other law, rules or regulations;

- b. **The Wildlife (Protection) Act 1972 curbs the smuggling and illegal trade** in wildlife and its derivatives as one of its primary objectives. **The major drawback** of this law is that it only extends protection to animals listed under its Schedule, which are mostly animals native to the Indian subcontinent, and **doesn't have exotic species within its purview**. This has allowed unrestricted trade to continue.
- c. The export-import policy of the Government of India together with the Customs Act 1962 and Foreign Trade (Regulation and Development) Act 1992 do restrict the import of live animals in India and empower authorities to search, seize, confiscate and deport such animals.

However, these laws are also weakened by the absence of features like imprisonment. These laws also don't prescribe the need to involve wildlife and forest authorities – typically the experts in this domain.

So, what now?

To address these loopholes, the Union environment ministry recently issued an advisory to streamline and formalize the process of importing live exotic animals.

The advisory has defined them as those that are mentioned under the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), but not under the schedules of the Wildlife (Protection) Act, 1972.

So, we will see in brief what is written in advisory?

According to the advisory, an importer **needs a licence to import live animals** from the Director General of Foreign Trade and a no-objection certificate from the chief wildlife warden of the relevant state. This way, forest and wildlife authorities can stay abreast imports of exotic species. **In addition**, extant owners of exotic species are **required to declare and register their animals within six months of acquiring or importing them**. If they get delayed, they will also have to furnish documents related to the animals' provenance. Finally, the advisory also describes some **rules that an importer has to follow when the animals are in captivity soon after they have been imported**.

After so long government has thought something on this but as an UPSC aspirant, we have to find problems too. So, On the flip side, this advisory fails to address many long-standing issues and loopholes.

- a. First off, many **exotic species are not listed under CITES**. So, deriving the definition of exotic species from CITES itself limits the number of species under the advisory, keeping its purview narrow.
- b. Second, the advisory doesn't at all address the **two primary threats** from exotic species: **turning into invasive species and spreading zoonotic diseases**. It doesn't address the domestic trade in exotic species either.
- c. Third, **the advisory doesn't mention welfare standards for captive facilities**. It specifies some rules and procedures but much of it is ambiguous. For example, it prohibits mixing and breeding with indigenous animal species but doesn't restrict any in-breeding among imported animals, which is a matter of concern.
- d. Finally, as an advisory and not a law, **it fails to plug the absence of heavy penalties**, including imprisonment. Since the trade in such exotic species involves a lot of money, animal smuggling is likely to continue, with smugglers continuing to walk away after paying fines.

Conclusion:

The **advisory is the first step towards recognizing and regulating the import and trade of exotic species in India**, and on this count deserves appreciation. But to fully address the issue, **the need of the hour is proper legislation** or regulation that resolved all of the existing ambiguities – including an all-encompassing definition for exotic species, stringent punishments, higher fines and recognizing the threat of invasive species and zoonotic diseases.

Something important for you to know about invasive species:

India has adopted Aichi Target 9 as its National Biodiversity Target 4 – i.e., to identify invasive alien species and their pathways of introduction, and to develop strategies **to manage prioritized invasive alien species by 2020**.



By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

4. Indian Elephants in danger due to Pandemic

News was very simple. Elephants are not able to get proper food due to lockdown. See below a piece of information:

In early April this year, a video was being circulated amongst animal rights activists in Karnataka. A *mahout* spoke to the camera, stating that since the lockdown, his 55-year-old captive elephant has not had anything to eat.

The elephant belonged to a temple in Mudhol district, and for the last 40 years, had been living off offerings of jaggery, sugarcane, fruits and grains provided by the people visiting the temple. But since the lockdown, the elephant has not been able to step out and the temple was running out of fodder. The video ended with the mahout appealing for help.

Ever since the lockdown, there have been several such stories that have been doing the rounds on social media, seeking donations to provide food for starving captive elephants. Joseph Barretto, owner of the Jungle Book Resort in Goa has five elephants in captivity, which are typically used for rides and “showers” for tourists. He released a video seeking donations for “his starving elephants”.

So, if elephants are not getting food, what we have to do with??

We have to learn something basics about elephants. Just check how much you know about it

The Indian Elephant (*Elephas maximus*) is protected under **Schedule 1 of the Wildlife Protection Act, 1972**, which affords maximal protection. It is listed as “**Endangered**” in the Red List of Threatened Species of the International Union for Conservation of Nature (IUCN).

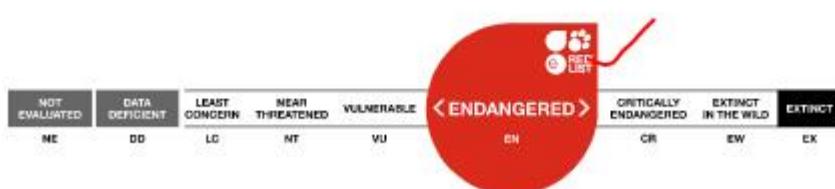


Asian Elephant

Elephas maximus

CITATION

Choudhury, A., Lahiri Choudhury, D.K., Desai, A., Duckworth, J.W., Easa, P.S., Jo Hedges, S., Gunawardena, M., Kurt, F., Karanth, U., Lister, A., Menon, V., Riddle, I., Wikramanayake, E. (IUCN SSC Asian Elephant Specialist Group). 2008. *Elephant* List of Threatened Species 2008: e.T7140A12828813. <https://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T7140A12828813.en>. Downloaded on 10 June 2020.



Latest Elephant Census has been conducted in 2017: *Remember very carefully. So, all numbers related to elephants comes from this census only.*

Synchronized Elephant Population Estimation

India 2017

August 2017

Project Elephant Division

Ministry of Environment, Forest and Climate Change

Government of India

Only three things you have remember from this report now:

- a. Elephant population in the country is estimated at 29,964 as per the census conducted in 2017. **The South Region accounted for 14,612** followed by North East with 10,139 elephants.
- b. According to the report, released by the Ministry of Environment, Forests and Climate Change on August 12, **Karnataka has the highest number of elephants (6,049)**, followed by Assam (5,719) and Kerala (3,054).
- c. The numbers **are lower than from the last census** estimate in 2012 (between 29,391 and 30,711).

Now one more thing:

Monitoring the Illegal Killing of Elephants (MIKE)



The image shows the official website of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). The header features the CITES logo on the left and the text "Convention on International Trade in Endangered Species of Wild Fauna and Flora" in the center. Below the header is a green navigation bar with links for "Home", "Discover CITES", "Documents", and "Implementation".

[Home](#) » [Topics](#) » [Projects & initiatives](#)

Monitoring the Illegal Killing of Elephants (MIKE)

The **CITES Monitoring the Illegal Killing of Elephants (MIKE) Programme** is a site-based system designed to monitor trends in the illegal killing of elephants, build management capacity and provide information to help range States make appropriate management and enforcement decisions.

What is the objective of MIKE?

The overall aim of MIKE is *to provide information needed for elephant range States and the Parties to CITES to make appropriate management and enforcement decisions, and to build institutional capacity within the range States for the long-term management of their elephant populations.* MIKE aims to help range States improve their ability to monitor elephant populations, detect changes in levels of illegal killing, and use this information to provide more effective law enforcement and strengthen any regulatory measures required to support such enforcement.

Now is the definition of Captive Animal:

Under Section 1(5) of the Wildlife Protection Act, a captive animal is ‘captured, or kept or bred in captivity.’

~~2. Definitions.~~—In this Act, unless the context otherwise requires,—

⁵[(1) “animal” includes amphibians, birds, mammals and reptiles and their young, and also includes, in the cases of birds and reptiles, their eggs;]

(2) “animal article” means an article made from any captive animal or wild animal, other than vermin, and includes an article or object in which the whole or any part of such animal ⁶[has been used, and ivory imported into India and an article made therefrom];

* * * *

⁸[(4) “Board” means a State Board for Wild Life constituted under sub-section (1) of section 6;]

~~5~~“captive animal” means any animal, specified in Schedule I, Schedule II, Schedule III or Schedule IV, which is captured or kept or bred in captivity;

Section 40 in the Wildlife Protection Act, 1972, gives special status to elephants regarding possession, inheritance, or acquisition. “This exception was originally created for the elephants that were already in captivity at the time, to regularize their possession. But it is being used to capture more elephants and issue new ownership certificates.

Didn't get? Understand it more clearly:

“It’s like this. If I step into the forest and see a wild elephant and if I get caught trying to capture it, I have committed an offence. But if the next morning, I happen to walk to the Chief Wildlife Warden’s office, telling him that I have an elephant in my backyard and that he/she is listening to all my commands, I will get the ownership certificate. They won’t ask me how I acquired the elephant.”

Moreover, elephants are used for commercial purposes. Under the Performing Animals Registration Rules, 2001 (part of Prevention of Cruelty to Animals Act 1960) using captive elephants for commercial purposes such as tourism is strictly prohibited unless specific **permission is obtained by the Animal Welfare Board of India.** There are several state-specific laws, as well.

5. PM CARES Fund Not A 'Public Authority' Under RTI Act.

The Prime Minister's Office (PMO) has clarified that the PM-CARES Fund, which has so far attracted a huge sum of donations to handle the challenges arising from the COVID-19 crisis, **is not a public authority**. This, even though the PM is the ex-officio chairman of the trust, and three cabinet ministers are its trustees.

What is meaning of Public Authority under RTI?

Definition of "public authority"

"Public authority" is defined in Section 2(h) of the RTI Act. It states:

"public authority" means any authority or body or institution of self-government established or constituted—

- (a) by or under the Constitution;
 - (b) by any other law made by Parliament;
 - (c) by any other law made by state legislature;
 - (d) by notification issued or order made by the appropriate Government,
- and includes any—
- (i) body owned, controlled or substantially financed;
 - (ii) non-Government organization substantially financed, directly or indirectly by funds provided by the appropriate Government;

There are 2 parts that have defined public authority. **The first part** of the definition i.e. clauses 2(h) clause (a) to (d), talks about any authority or body or institution of self-Government created or constituted by or under the Constitution of India, by laws made by Parliament and state legislatures, and by a notification or order issued or made by the appropriate authority.

The second part expands the scope of the definition of a public authority to include anybody owned, controlled or substantially financed, and any nongovernmental body substantially financed directly or indirectly by funds by the appropriate government. **Public authority in layman's term**

- a. Any authority which has a legal mandate to govern, administrate a part or aspect of public life, such as all branches of the executive power of a state, province, municipality etc.
- b. In a wider sense also various chartered organizations holding their authority from the above without being run by public officials

Now done with Public Authority, we will move ahead what actually problem is with PM-CARES Fund.

We need to understand the what is creating problem?

According to news reports, while PM Narendra Modi would be its ex-officio chairman, its trustees were to be Union home minister Amit Shah, defence minister Rajnath Singh and finance minister Nirmala Sitharaman. So, what is problem in that? See below.

~~"By denying PM Cares Fund the status of 'public authority', it is only reasonable to infer that it is not controlled by the Government. If that is the case, who is controlling it? The name, the composition of the trust, control, usage of emblem, government domain name everything signifies that it is a public authority. By simply ruling that it is not a public authority and denying the application on RTI Act, the government has constructed walls of secrecy around it. This is not about lack of transparency and denying the application of the RTI Act to the fund, we should also be worried about how the fund is being operated. We do not know the decision making process of the trust and safeguards available, so that the fund is not misused. For a trust which is created and run by four cabinet ministers in their ex-officio capacities, denying the status of 'public authority' is a big blow to transparency and not to mention our democratic values."~~ Kandukuri told the legal news site.

Other problem is the **Comptroller and Auditor General's office had clarified that it wouldn't audit PM-CARES Fund** as it is "a charitable organisation" and "based on donations from individuals and organizations". The PMNRF too is not audited by CAG but by an independent auditor outside of the government. The opposition had questioned the need for a creation of the Fund as the PM's National Relief Fund (PMNRF) **already exists** to receive donations for such emergencies.

What is the latest court's rulling on such funds?

In 2018, a division bench of the Delhi high court was split on the issue of whether PMNRF is a public authority under the RTI Act and is liable to disclosure of information to applicants. While Justice Ravindra Bhat felt it was a public authority, Justice Sunil Gaur differed. The matter was thereafter forwarded to the acting chief justice of the HC for an opinion. **The issue is still pending.**

We will wait for updates on this topic.

6. UN Security Council Elections to Be Held on June 17

Link: <https://thewire.in/world/un-security-council-elections-to-be-held-on-june-17>

According to the world body's provisional programme, elections for **five non-permanent** members of the UN Security Council (UNSC) will be held on June 17.

India is a candidate for a non-permanent seat from the Asia-Pacific category for the 2021-22 term. Its victory is a given since it is the sole candidate vying for the lone seat from the grouping. New Delhi's candidature was unanimously endorsed by the 55-member Asia-Pacific grouping, including China and Pakistan, in June last year.

How are the non-permanent members elected?

Each year the General Assembly elects five non-permanent members (out of 10 in total) for a **two-year term**. In accordance with the *General Assembly resolution 1991 (XVIII) of 17 December 1963*, the 10 non-permanent seats are distributed on a regional basis as follows: five

for African and **Asian States**; one for Eastern European States; two for the Latin American and Caribbean States; and two for Western European and other States.

3. Further decides that the ten non-permanent members of the Security Council shall be elected according to the following pattern :

- (a) Five from African and Asian States ;
- (b) One from Eastern European States ;
- (c) Two from Latin American States ;
- (d) Two from Western European and other States.

*1285th plenary meeting,
17 December 1963.*

Previously, India has been elected as a non-permanent member of the Council for the years 1950, 1951, 1967, 1968, 1972, 1973, 1977, 1978, 1984, 1985, 1991, 1992 and **most recently in 2011 2012.**

So, the currently the members are as follows:

PERMANENT AND NON-PERMANENT MEMBERS

The Council is composed of 15 Members:

Five permanent members: China, France, Russian Federation, the United Kingdom, and the United States, and ten non-permanent members elected for two-year terms by the General Assembly (with end of term year):

- Belgium (2020)
- Dominican Republic (2020)
- Estonia (2021)
- Germany (2020)
- Indonesia (2020)
- Niger (2021)
- Saint Vincent and the Grenadines (2021)
- South Africa (2020)
- Tunisia (2021)
- Viet Nam (2021)

Non-Council Member States

More than 50 United Nations Member States have never been Members of the Security Council.

A State which is a Member of the United Nations but not of the Security Council may participate, without a vote, in its discussions when the Council considers that country's interests are affected. Both Members and non-members of the United Nations, if they are parties to a dispute being considered by the Council, may be invited to take part, without a vote, in the Council's discussions; the Council sets the conditions for participation by a non-member State.

Ok, we will try to study functions of UN Security Council here only:

MANDATE

The United Nations Charter established six main organs of the United Nations, including the Security Council. It gives primary responsibility for maintaining international peace and security to the Security Council, which may meet whenever peace is threatened.

According to the Charter, the United Nations has four purposes:

- to maintain international peace and security;
- to develop friendly relations among nations;
- to cooperate in solving international problems and in promoting respect for human rights;
- and to be a centre for harmonizing the actions of nations.

All members of the United Nations agree to accept and carry out the decisions of the Security Council. While other organs of the United Nations make recommendations to member states, only the Security Council has the power to make decisions that member states are then obligated to implement under the Charter.

MAINTAINING PEACE AND SECURITY

When a complaint concerning a threat to peace is brought before it, the Council's first action is usually to recommend that the parties try to reach agreement by peaceful means. The Council may:

- set forth principles for such an agreement; ✓
- undertake investigation and mediation, in some cases; ✓
- dispatch a mission; ✓
- appoint special envoys; or ✓
- request the Secretary-General to use his good offices to achieve a pacific settlement of the dispute. ✓

When a dispute leads to hostilities, the Council's primary concern is to bring them to an end as soon as possible. In that case, the Council may:

- issue ceasefire directives that can help prevent an escalation of the conflict; ✓
- dispatch military observers or a peacekeeping force to help reduce tensions, separate opposing forces and establish a calm in which peaceful settlements may be sought.

Beyond this, the Council may opt for enforcement measures, including:

- economic sanctions, arms embargoes, financial penalties and restrictions, and travel bans;
- severance of diplomatic relations; ✓
- blockade; ✓
- or even collective military action. ✓

A chief concern is to focus action on those responsible for the policies or practices condemned by the international community, while minimizing the impact of the measures taken on other parts of the population and economy.

7. Border Adjustment Tax

Link: <https://economictimes.indiatimes.com/news/economy/policy/levy-of-bat-on-imported-goods-to-create-level-playing-field-for-domestic-players-niti-member/articleshow/76306247.cms>

~~Levy of BAT on imported goods to create level-playing field for domestic players: Niti member~~

"US-China trade tensions are currently at historic high levels. In the post COVID world, it is expected to rise further., so first we have to do a border adjustment tax to provide the domestic industry a level-playing field vis-a-vis imports," he said at a virtual event organised by the PHD Chamber of Commerce.

1 | Last Updated: Jun 10, 2020, 08:45 PM IST

Save

The **imposition of Border Adjustment Tax (BAT) on imported goods** has been suggested by NITI Aayog to protect the domestic industry from cheap imports. BAT is a duty that is proposed to be imposed on imported goods in addition to the customs levy that is charged at the port of entry.

It has been suggested by NITI Aayog, not implemented. Still we will give respect to it and learn what it actually means.

Explanation of Tax:

A border-adjustment tax conforms to the "**destination-based" principle** whereby the tax is levied **based on where the good is consumed** (destination), instead of where it was produced (origin). **Put simply**, a BAT taxes imports but not exports, creating incentives for companies to import less and export more.

For example,

As an example, let's say that XYZ Company of China manufactures housecleaning robots. The robots require a certain computer chip that tells them when it's time to mop your floor. XYZ Company purchases these chips from Taiwan. It then assembles its robots and sells them to consumers in India.

Because Indian buyers purchase the robots, the money they bring in for XYZ Company is subject to the BAT and is taxed.

Why we are doing this?

- The BAT would discourage Indian firms from establishing locations in other countries as they have to pay BAT.
- Domestic production will increase as imported goods will be expensive as BAT is applied to them. People will buy domestic goods.
- It will create more Indian jobs as production will start in India as BAT discourages production outside Indian soil.
- It will also help to strengthen currency.

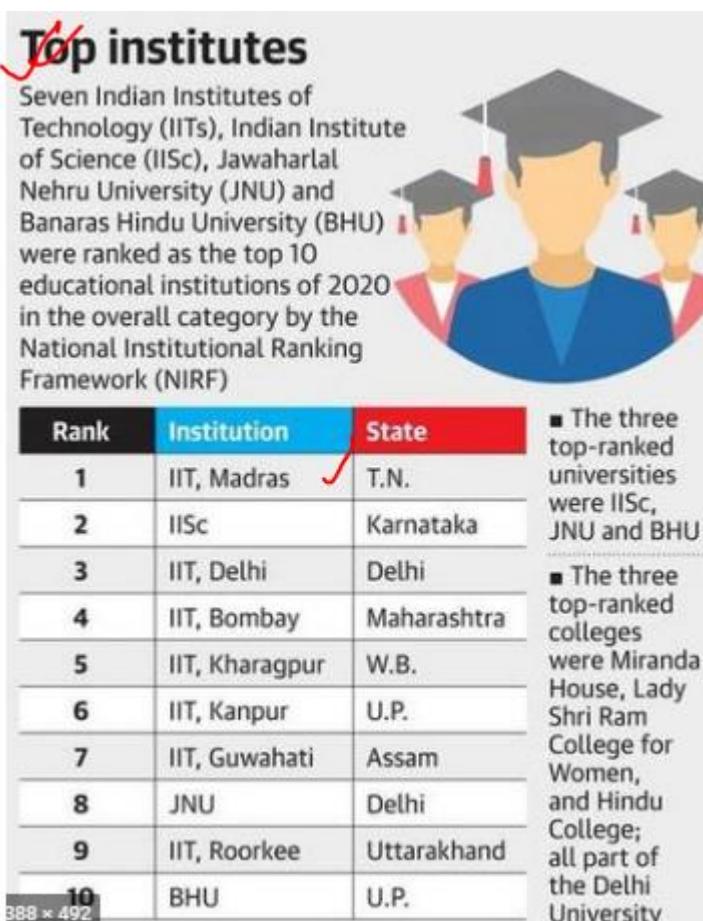
What problem can we face if BAT is applied?

Inflation can occur. As for many products we depend on imports. If we apply BAT to them, it will increase its cost.

8. National Institutional Ranking Framework

Link: <https://www.thehindu.com/education/iit-madras-best-higher-education-institution-in-the-country-nirf/article31802335.ece>

2020 Ranking has been released. IIT Madras has topped the list under the overall category of the National Institutional Ranking Framework (NIRF).



We will learn all important points for NIRF:

The National Institutional Ranking Framework (NIRF) was approved and launched by Minister of Human Resource Development on **29th September 2015**. So, this ranking was not released during Nehru or Indira ji time.

This framework outlines a methodology to rank institutions across the country. The methodology draws from the overall recommendations broad understanding arrived at by a Core Committee set up by MHRD, to identify the broad parameters for ranking various universities and institutions.

The parameters broadly cover “**Teaching, Learning and Resources**,” “**Research and Professional Practices**,” “**Graduation Outcomes**,” “**Outreach and Inclusivity**,” and “**Perception**”. Just see below. No need to learn. Just have a look.

Parameters



~~Teaching, Learning & Resources (TLR)~~

- › Student Strength including Doctoral Students (SS)
- › Faculty-student ratio with emphasis on permanent faculty (FSR)
- › Combined metric for Faculty with PhD (or equivalent) and Experience (FQE)
- › Financial Resources and their Utilisation (FRU)

Research and Professional Practice (RP)

- › Combined metric for Publications (PU)
- › Combined metric for Quality of Publications (QP)
- › IPR and Patents: Published and Granted (IPR)
- › Footprint of Projects and Professional Practice (FPPP)



Graduation Outcomes (GO)

- › Metric for University Examinations (GUE)
- › Metric for Number of Ph.D. Students Graduated (GPHD)

Outreach and Inclusivity (OI)

- › Percentage of Students from Other States/Countries (Region Diversity RD)
- › Percentage of Women (Women Diversity WD)
- › Economically and Socially Challenged Students (ESCS)
- › Facilities for Physically Challenged Students (PCS)
- › Perception (PR) Ranking



Peer Perception

- › Academic Peers and Employers (PR)

Ok, here we found an article which says a flaw in NIRF Ranking. Its bit technical. You can skip if you want. [Click here](#) to read.

9. Indian Gaur

Link: <https://www.thehindu.com/news/national/tamil-nadu/first-estimation-exercise-of-indian-gaur-in-nilgiris-in-recent-years/article31806928.ece>

The first population estimation exercise of Indian gaur carried out in the Nilgiris forest division in February has revealed that more than an estimated 2,000 Indian gaurs inhabit the 300 sq. km range.

TAMIL NADU

First estimation exercise of Indian gaur in Nilgiris in recent years



Rohan Premkumar

UDHAGAMANDALAM, JUNE 11, 2020 22:42 IST
UPDATED: JUNE 11, 2020 23:17 IST

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Habitat fragmentation major factor in pushing gaurs into proximity with humans

The first population estimation exercise of the Indian gaur carried out in the Nilgiris Forest Division in recent years, which was conducted in February of this year, has revealed that more than an estimated 2,000 Indian gaurs inhabit the entire division.

Worryingly, the exercise has also revealed that the majority of the animals in “conflict-prone” areas in the division live perilously close to human habitations due to habitat loss and fragmentation, exacerbating the probability of having problematic interactions with humans.

It becomes important for you to see the image. Once you see its image, few questions can be answered easily in exam. If in exam, a statement says a gaur is a fish, you can easily eliminate. See the image of Gaur below. Suppose second statement says, it lives only in water, you can see below it is standing in grasslands. So, it helps in exam.



The species is listed as '**vulnerable**' on the International Union for Conservation of Nature's Red List of Threatened Species since 1986. They are heavily built, with body weight varying between 400 and 1,200 kilograms.



Gaur

Bos gaurus

CITATION

Duckworth, J.W., Sankar, K., Williams, A.C., Samba Kumar, N. & Timm
Red List of Threatened Species 2016: e.T2891A46363646. <https://dx.doi.org/10.2305/IUCN.RLTS.T2891A46363646.en>. Downloaded on 13 June 2020.



There was a news in March 2020.

Gaur (*Bos Gaurus*), the largest extant bovine in the world, have not only returned to **Bihar's Valmiki Tiger Reserve (VTR)**, but are also breeding there due to an increase in grassland cover.

WILDLIFE & BIODIVERSITY

Gaur back in Valmiki Reserve thanks to increase in grassland cover

At least 150 gaur in the reserve currently, according to information from camera traps



NEXT NEWS

By Mohd Imran Khan
 Last Updated: Monday 09 March 2020

10. Tamil Nadu to Denotify Part of the Vedanthangal Bird Sanctuary

Link: <https://science.thewire.in/environment/vedanthangal-bird-sanctuary-sun-pharma-expansion-tamil-nadu-government/>

It's a simple statement. But few important things to learn.

- a. News regarding denotifying
- b. What is buffer and core zones?
- c. National Tiger Conservation Authority.

What is the whole issue? Not very important but if you read, you can remember and can put somewhere in Mains.

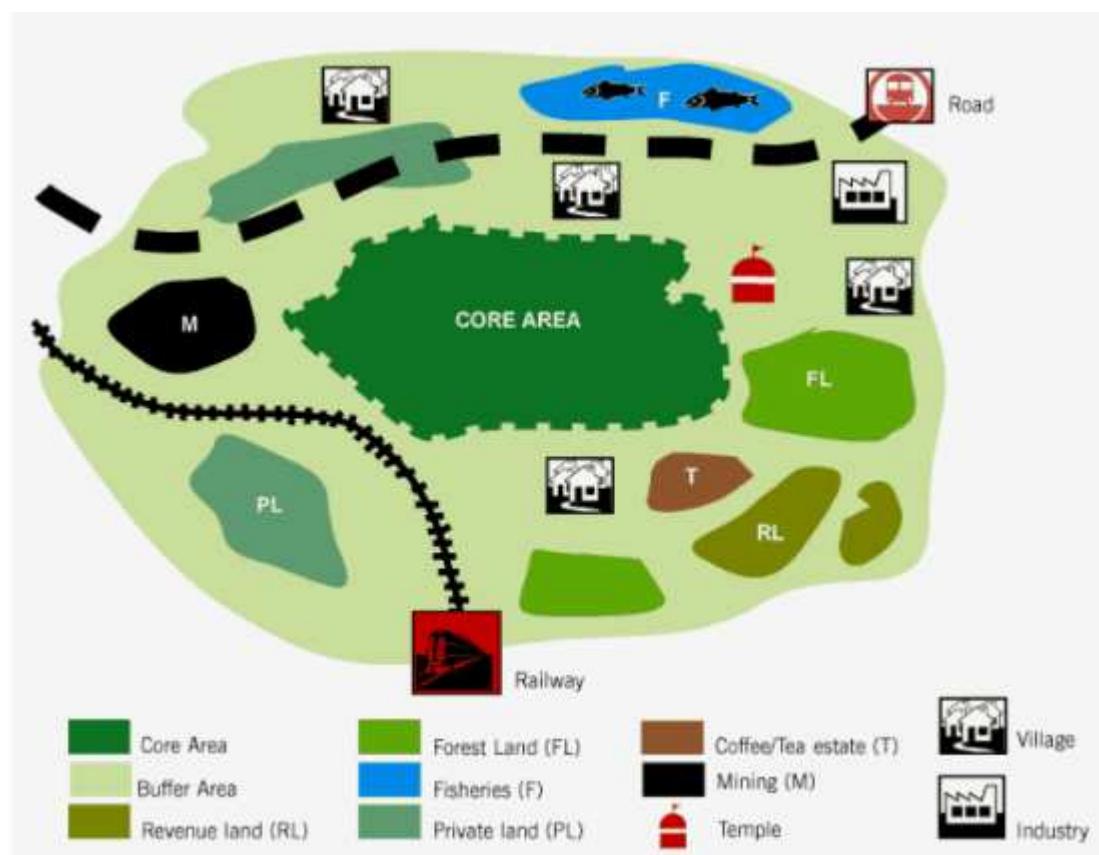
In 1962, Vedanthangal was declared a reserved forest under the Madras Forest Act. In 1996, the Government of Tamil Nadu published an order stating its intent to declare the Vedanthangal and an area within 5 km of its boundary as a sanctuary under the Wildlife Protection Act 1972. On July 3, 1998, a government order declared the area thus identified to be a wildlife sanctuary.

From July 1998 and until today, the Vedanthangal tank and the area within 5 km of its boundary have been a part of the wildlife sanctuary, with the full protection of the Wildlife Protection Act 1972.

On January 23 this year, the Tamil Nadu government tabled a proposal with the State Board for Wildlife ***to denotify an area contained in a circular band within 3 km (before 5 km) from the Vedanthangal.***

Understanding core and Buffer zone is important.

The **Wildlife Protection Act 1972 contains no reference to core and buffer areas** within protected areas. **Only in 2006**, by an amendment of the Act and with specific reference to tiger reserves, were the words '**core**' and '**buffer**' introduced. It makes **buffer zones mandatory for protected areas notified as Critical Tiger Habitats (CTH)**.



The core zone refers solely to critical tiger habitat within sanctuaries and reserves. **The area around the critical habitat is defined as a buffer zone**, where a lower degree of habitat protection is required. **This area also falls within and is in reference solely to tiger reserves in India**. Other sanctuaries and national parks are to be administered according to the provisions of the Act and are not required to be demarcated as core and buffer.

38O. (1) The Tiger Conservation Authority shall have the following powers and perform the following functions, namely:—

(a) to approve the Tiger Conservation Plan prepared by the State Government under sub-section (3) of section 38V of this Act;

(b) evaluate and assess various aspects of sustainable ecology and disallow any ecologically unsustainable land use such as, mining, industry and other projects within the tiger reserves;

~~(c)~~ lay down normative standards for tourism activities and guidelines for project tiger from time to time for tiger conservation in the buffer and core area of tiger reserves and ensure their due compliance; *It is seen first time here only.*

Who notify Tiger Reserve?

✓ 38V. (1) The State Government shall, on the recommendation of the Tiger Conservation Authority, notify an area as a tigerreserve.

Also learn about National Tiger Conservation Authority.

The National Tiger Conservation Authority **is a statutory body under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of the Wildlife (Protection) Act, 1972**, as amended in 2006, for strengthening tiger conservation, as per powers and functions assigned to it under the said Act.

Organizational Structure



You will find the entire function of NTCA given below. Once you read entire functions, it will give you confidence while solving questions related to this.



~~Power and Functions of the NTCA~~

Powers and functions of the National Tiger Conservation Authority as prescribed under section 38O of the Wildlife (Protection) Act, 1972, as amended in 2006 are as under:-

- to approve the tiger conservation plan prepared by the State Government under sub-section (3) of section 38V of this Act;
- ✓ evaluate and assess various aspects of sustainable ecology and disallow any ecologically unsustainable land use such as, mining, industry and other projects within the tiger reserves;
- ✓ lay down normative standards for tourism activities and guidelines for project tiger from time to time for tiger conservation in the buffer and core area of tiger reserves and ensure their due compliance;
- ✓ provide for management focus and measures for addressing conflicts of men and wild animal and to emphasize on co-existence in forest areas outside the National Parks, sanctuaries or tiger reserve, in the working plan code;
- ✓ provide information on protection measures including future conservation plan, estimation of population of tiger and its natural prey species, status of habitats, disease surveillance, mortality survey, patrolling, reports on untoward happenings and such other management aspects as it may deem fit including future plan conservation;
- ✓ approve, co-ordinate research and monitoring on tiger, co-predators, prey habitat, related ecological and socio-economic parameters and their evaluation;
- ✓ ensure that the tiger reserves and areas linking one protected area or tiger reserve with another protected area or tiger reserve are not diverted for ecologically unsustainable uses, except in public interest and with the approval of the National Board for Wild Life and on the advice of the Tiger Conservation Authority;
- ✓ facilitate and support the tiger reserve management in the State for biodiversity conservation initiatives through eco-development and people's participation as per approved management plans and to support similar initiatives in adjoining areas consistent with the Central and State laws;
- ✓ ensure critical support including scientific, information technology and legal support for better implementation of the tiger conservation plan;
- facilitate ongoing capacity building programme for skill development of officers and staff of tiger reserves, and
- perform such other functions as may be necessary to carry out the purposes of this Act with regard to conservation of tigers and their habitat.

11. Modi Government is in the Dock for Contempt of Court in Kashmir 4G Internet Case

Link: <https://thewire.in/law/modi-government-in-the-dock-for-contempt-of-court-in-kashmir-4g-internet-case>

We will understand the issue now. ***Issues here not very important for exam purpose, but it helps to remember things.***

On May 11, the Supreme Court delivered a judgment which upheld the Modi government's refusal to restore 4G internet services in the Union Territory of Jammu and Kashmir on the ground that security situation justifies it. **At the same time**, the court, as if to assuage the concerns of the petitioners, set up a "**special committee**" comprising the Union home secretary, Union communications secretary and the chief secretary of Jammu and Kashmir to "immediately" decide whether the prevalent internet restrictions are necessary and to consider the petitioners' concerns. **This committee has not been set up. Now a contempt petition has been filed.**

The expression '**contempt of court**' has not been defined by the Constitution. Only three articles are mentioned in the Constitution regarding Contempt of Court. See below:

~~Central Government Act~~

~~Article 129 in The Constitution Of India 1949~~

129. Supreme Court to be a court of record The Supreme Court shall be a court of record and shall have all the powers of such a court including the power to punish for contempt of itself

~~Central Government Act~~

~~Article 142(2) in The Constitution Of India 1949~~

(2) Subject to the provisions of any law made in this behalf by Parliament, the Supreme Court shall, as respects the whole of the territory of India, have all and every power to make any order for the purpose of securing the attendance of any person, the discovery or production of any documents, or the investigation ~~or punishment~~ of any contempt of itself

~~Central Government Act~~

~~Article 215 in The Constitution Of India 1949~~

215. High Courts to be courts of record Every High Court shall be a court of record and shall have all the powers of such a court including the power to punish for contempt of itself

It has been defined under Contempt of Courts Act 1971. We will see all important provisions of this Act. See, you have to be very careful while choosing your sources. Read less but very important things, believe me you can clear this exam easily.

~~2. Definitions.—In this Act, unless the context otherwise requires,—~~

~~(a) "contempt of court" means civil contempt or criminal contempt;~~

~~(b) "civil contempt" means wilful disobedience to any judgment, decree, direction, order, writ or other process of a court or wilful breach of an undertaking given to a court;~~

~~(c) "criminal contempt" means the publication (whether by words, spoken or written, or by signs, or by visible representations, or otherwise) of any matter or the doing of any other act whatsoever which—~~

~~(i) scandalises or tends to scandalise, or lowers or tends to lower the authority of, any court; or~~

~~(ii) prejudices, or interferes or tends to interfere with, the due course of any judicial proceeding; or~~

~~(iii) interferes or tends to interfere with, or obstructs or tends to obstruct, the administration of justice in any other manner;~~

The Constitution has not given power to High Court to punish contempt of subordinate courts. It has been mentioned in the Act:

~~✓ 10. Power of High Court to punish contempts of subordinate courts.~~—Every High Court shall have and exercise the same jurisdiction, powers and authority, in accordance with the same procedure and practice, in respect of contempts of courts subordinate to it as it has and exercises in respect of contempts of itself:

~~✓ 11. Punishment for contempt of court.~~—(1) Save as otherwise expressly provided in this Act or in any other law, a contempt of court may be punished with simple imprisonment for a term which may extend to six months, or with fine which may extend to two thousand rupees, or with both:

~~✓ 12. Procedure where contempt is in the face of the Supreme Court or a High Court.~~—(1) When it is alleged, or appears to the Supreme Court or the High Court upon its own view, that a person has been guilty of contempt committed in its presence or hearing, the Court may cause such person to be detained in custody, and, at any time before the rising of the Court, on the same day, or as early as possible thereafter, shall—

- (a) cause him to be informed in writing of the contempt with which he is charged;
- (b) afford him an opportunity to make his defence to the charge;
- (c) after taking such evidence as may be necessary or as may be offered by such person and after hearing him, proceed, either forthwith or after adjournment, to determine the matter of the charge; and
- (d) make such order for the punishment or discharge of such person as may be just.

~~✓ 20. Limitation for actions for contempt.~~—No court shall initiate any proceedings of contempt, either on its own motion or otherwise, after the expiry of a period of one year from the date on which the contempt is alleged to have been committed.

~~✓ 21. Act not to apply to Nyaya Panchayats or other village courts.~~—Nothing contained in this Act shall apply in relation to contempt of Nyaya Panchayats or other village courts, by whatever name known, for the administration of justice, established under any law.

~~✓ 23. Power of Supreme Court and High Courts to make rules.~~—The Supreme Court or, as the case may be, any High Court, may make rules, not inconsistent with the provisions of this Act, providing for any matter relating to its procedure.

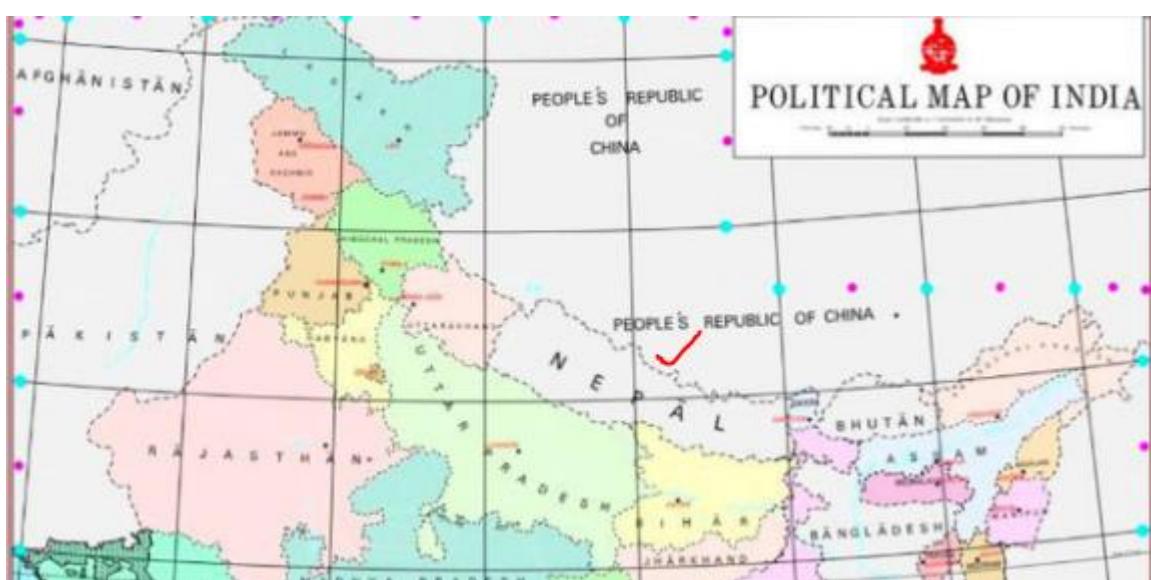
12. Nepal Takes First Parliamentary Step to Ratify New Map

After the lower house of Nepal's parliament unanimously agreed to change the map of the country to include territory claimed by its southern neighbour, India described the move as "untenable" (*not able to be maintained or defended against attack or objection*) and said it violated the understanding that boundary disputes would be solved through dialogue.

India's new political map (left) includes the territory of Kalapani. Nepal's official map (right) also shows Kalapani inside its border. Photo: India's home ministry and Nepal's survey department



First see once map, so that you remember which states forms borders.



Some description about India-Nepal border dispute:

India surrounds Nepal from the east, west and south. The two share a 1,808 km long border. The history of the demarcation of the modern India-Nepal border began on March 4, 1816, after the signing of the **Sagauli Treaty between British India and the state of Nepal**. The Treaty declared the **Mahakali River of Nepal** as the borderline between both countries. The treaty was expected to resolve the border issues, but it did not. Over 200 years later, the dispute regarding the border and the surrounding no-man's land area flares up now and then in different areas of the Indo-Nepali border.

Why dispute still persists today?

- The reason the dispute persists today is that the rivers, which were counted on as a border, have diverged from their courses several times. Around 600 kilometers of the border is defined by rivers: **the Mechi in the east, Mahakali in the west, and Naryani in the Susta area** (remember this also). The unavailability of old maps and documents to revise demarcations has made the situation even harder to resolve.

- b. The major areas of dispute include **Kalapani, Limpiyahura, Susta, Mechi, and Tanakpur**.
- c. The current boundary issue has flared up since last November after India issued a **political map to reflect the fact that the erstwhile state of Jammu and Kashmir** had been split into two newly created Union Territories – Jammu and Kashmir and Ladakh. Nepal had then objected to the inclusion of Kalapani in the map of India.

We have to wait for the updates now but till then we will see Kalapani in bit detail.

Kalapani is a **35 square kilometer area**, which is **claimed by both India and Nepal**. River **Mahakali**, earlier known as River Kali, flows through **Kalapani**, which is situated on the eastern bank of the river.



Mahakali is a tributary of **Ghaghra**, which is further a tributary of **Ganges**.

Also remember that **Mahakali Treaty was signed in 1996 by India and Nepal for integrated development of Mahakali River**.

~~MAHAKALI TREATY 1996~~

TREATY BETWEEN HIS MAJESTY'S GOVERNMENT OF NEPAL AND THE GOVERNMENT OF INDIA CONCERNING THE INTEGRATED DEVELOPMENT OF THE MAHAKALI RIVER INCLUDING SARADA BARRAGE, TANAKPUR BARRAGE AND PANCHESHWAR PROJECT.

13. Maharashtra's Lonar Lake Changes Colour to Pink

Link: <https://www.tribuneindia.com/news/nation/team-of-scientists-to-examine-why-maharashtras-lonar-lake-has-turned-pink-98988>

The 56,000-year-old Lonar Crater Sanctuary Lake in the state of Maharashtra transformed from its usual blue green to a reddish pink.



The lake was formed around 56,000 years ago when a meteor struck the basalt rock of the Deccan Plateau. It is the world's largest basaltic impact crater and the third largest crater of any kind formed less than a million years ago, according to [The Weather Channel India](#).

The lake was formed around 56,000 years ago when a meteor struck the basalt rock of the Deccan Plateau. It is the world's largest basaltic impact crater and the third largest crater of any kind formed less than a million years ago, according to [The Weather Channel India](#).

The lake also has unique salt and alkaline properties that could be behind the color change, Times of India explained. These factors encourage the growth of a kind of bacteria called Halobacteriaceae, which produce a red pigment that converts sunlight into energy.

While the lake has turned reddish before, this year's transformation is especially dramatic.

If you remember in 2018, **Lonar Lake in Maharashtra** and St. Mary's Island and Malpe beach in coastal Karnataka are the Geological Survey of India (**GSI**)'s candidates for UNESCO Global Geopark Network status.

Geological Survey chooses heritage locations in Maharashtra and Karnataka for UNESCO site status

In a first, an ancient circular lake created by a meteorite strike in Maharashtra and a hexagonal mosaic of basaltic rocks in an island off Udupi are poised to become global geoparks, under a [Geological Survey of India \(GSI\) plan](#).

Lonar ~~Lake~~ in Maharashtra and St. Mary's Island and Malpe beach in coastal Karnataka are the GSI's candidates for UNESCO Global Geopark Network status.

The road to recognition, however, is long. An aspiring Global Geopark must have a dedicated website, a corporate identity, comprehensive management plan, protection plans, finance, and partnerships for it to be accepted. In mid-August, GSI moved ahead with the plan, setting a follow-up time frame of 100 days.

Now, wait for the updates for actual reason of this change in colour of lake.

14. IIT Madras study reveals metabolism of key gut microbiota

Link: <https://www.thehindu.com/sci-tech/science/iit-madras-study-reveals-metabolism-of-key-gut-microbiota/article31821977.ece#:~:text=A%20study%20by%20IIT%20Madras,prescribed%20to%20alleviate%20digestive%20imbalances.>

SCIENCE

IIT Madras study reveals metabolism of key gut microbiota



Shubashree Desikan

JUNE 13, 2020 20:12 IST
UPDATED: JUNE 13, 2020 20:26 IST

Little is known about differences between different strains of *Bifidobacterium* genus and their individual commercial uses

A study by IIT Madras researchers of 36 strains of gut bacteria commonly found in the gut reveals their metabolism and could bring added rigour into the development of probiotics. Probiotics are cocktails of helpful bacteria which, among other uses, are prescribed to alleviate digestive imbalances.

Bacteria in the Gut

- A study by IIT Madras researchers of 36 strains of gut bacteria commonly found in the gut reveals their metabolism and could bring added rigour into the development of probiotics.
- Probiotics are cocktails of helpful bacteria which, among other uses, are prescribed to alleviate digestive imbalances.
- The human gut microbiome has a huge number of beneficial bacteria, **collectively called commensals**, living in it. Key among these are the bacteria of the *Bifidobacterium* genus. *Bifidobacterium adolescentis* and *B. longum* are found in adult human gut whereas *B. bifidum* are found in infant gut.
- More than 80 species of *Bifidobacterium* are found in the human gut of which 36 strains comprising 20 species have been studied by the researchers through metabolic network modelling.
- Bifidobacterium* is one of the largest genera among gut bacteria and its species are known to be early colonizers of the breastfed infant gut.

Interactions	Species A	Species B	Examples
Mutualism/ Symbiotic	+	+	<ul style="list-style-type: none"> Leguminous plants and nitrogen fixing bacteria Process of pollination in plants.
Commensalism	+	0	<ul style="list-style-type: none"> Remoras eating leftover food of the shark without depleting shark's resources.
Amensalism	-	0	<ul style="list-style-type: none"> Shading out of one plant by a taller and wider one. Allelopathy - inhibition of one plant by the secretions of another.
Parasitism	+	-	<ul style="list-style-type: none"> Mosquitoes, ticks, and the protozoan that causes malaria.
Competition	-	-	<ul style="list-style-type: none"> Lion and tiger in the same niche.
Predation	+	-	<ul style="list-style-type: none"> Lion and zebra, bear and fish, and fox and rabbit.

15. Discovery of oldest bow and arrow technology in Eurasia

Link: <https://www.sciencedaily.com/releases/2020/06/200612172238.htm>

✓ Discovery of oldest bow and arrow technology in Eurasia

New archaeological research demonstrates earliest projectile technology in the tropical rainforests of Sri Lanka

Date: June 12, 2020

Source: Max Planck Institute for the Science of Human History

Summary: The origins of human innovation have traditionally been sought in the grasslands and coasts of Africa or the temperate environments of Europe. More extreme environments, such as the tropical rainforests of Asia, have been largely overlooked, despite their deep history of human occupation. A new study provides the earliest evidence for bow-and-arrow use, and perhaps the making of clothes, outside of Africa ~48-45,000 years ago - in the tropics of Sri Lanka.

The origins of human innovation have traditionally been sought in the grasslands and coasts of Africa or the temperate environments of Europe. More extreme environments, such as the tropical rainforests of Asia, have been largely overlooked, despite their deep history of human occupation. A new study provides the earliest evidence for bow-and-arrow use, and perhaps the making of clothes, outside of Africa ~48-45,000 years ago - **in the tropics of Sri Lanka.**

Nothing more than this is required.

16. Tamil Nadu must sustainably manage its rattans

Link: <https://www.downtoearth.org.in/blog/wildlife-biodiversity/tamil-nadu-must-sustainably-manage-its-rattans-71764>

We will cover here few but important things:

- See its image first (very important)**
- Its importance**
- Where it is found?**



Rattans are an integral part of the tropical forest ecosystem. The numerous pinnate leaves (leaves growing on both sides of a common axis), with a length of about two metres, intercept the splash effect of rains and improve the water-holding capacity of the soil. They play a key role in enriching the soil through their leaf litter.

Importance to humans

- a. Besides their ecological role, rattans have a wide variety of use in human societies. In certain parts of the world, the fruits and rootstalks are eaten by people. Some of the Rattan species have medicinal properties.
- b. Their most important use is in the handicraft industry. They have been believed to have been used by humanity since the fifth century BC to make household articles, furniture, tool handles and bridge construction as well as sports goods like javelins, cricket bats and hockey sticks in modern times.
- c. Rattans are important in handicraft and furniture-making because of their unique characteristics such as strength, durability, looks and bending ability. As they possess high value and social and economic importance, they are regarded as 'Green Gold'.

Where it is most commonly found?

Using location records from field studies and literature, scientists at Bengaluru's Asoka Trust for Ecology and Environment (ATREE) and Pune's Indian Institute for Science Education and Research (IISER) first mapped the distribution of all 21 endemic rattan species across the Western Ghats. At 19, the **Western Ghats in Kerala and Tamil Nadu have the highest number of species**.

Rattans in Tamil Nadu

Tamil Nadu is home to a number of rattan species of which ***Calamus rotang*** is found in all districts of the state. Other species grow only in the Western Ghats spread over the districts of Coimbatore, Dindigul, Kanyakumari, Nilgiri and Tirunelveli.

Due to the availability of superior quality rattans that grow along the Kollidam river, rattan furniture-making industries have been functioning successfully in Nagapattinam district of Tamil Nadu since antiquity.

But the Problem is:

But in Tamil Nadu, no sincere and serious effort has been made so far **to conserve rattans sustainably**. It is high time that the Tamil Nadu forest department rise up to the occasion to manage the economically, ecologically and commercially important rattan species sustainably for the betterment of the globe as a whole.

Nothing more from Rattans.

17. Environment performance index

Link: <https://www.downtoearth.org.in/news/wildlife-biodiversity/india-must-redouble-sustainability-efforts-environment-performance-index-71603>

We will learn point to point for such topics, nothing extra and wastage of time.

India secured 168 rank in the 12th edition of the biennial Environment Performance Index (EPI Index 2020) — that measured the environmental performance of 180 countries — and was released by the Yale University on June 4, 2020. **India's rank was 177 (with a score of 30.57 out of 100) in 2018.**

The global index considered 32 indicators of environmental performance, giving a snapshot of the 10-year trends in environmental performance at the national and global levels. Here since indicators are more than 10, they will never ask name all 32. So, relax.

~~All~~ South Asian countries, except Afghanistan, were ahead of India in the ranking.

Country	Global Score in the EPI Index	Ranking in South Asia	Global ranking
Bhutan	39.3	1	107
Sri Lanka	39.0	2	109
Maldives	35.6	3	127
Pakistan	33.1	4	142
Nepal	32.7	5	145
Bangladesh	29.0	6	162
India	27.6	7	169
Afghanistan	25.5	8	178

India needs to **re-double national sustainability efforts on all fronts**, according to the index. The country needs to focus on a wide spectrum of sustainability issues, with a high priority to critical issues such as air and water quality, biodiversity and climate change. The 11 countries

lagging behind India were — Burundi, Haiti, Chad, Solomon Islands, Madagascar, Guinea, Côte d'Ivoir, Sierra Leone, Afghanistan, Myanmar and Liberia.

They won't ask here in detail anything, but still want to see India's rank and position, [click here](#).

Ok, you still remember of Sustainable Development Index?? No. Please see below. Just for revision we are adding.

SDG India Index Report 2019: Just a quick revision.

NITI Aayog released the second edition (*remember this also, not first*) of the Sustainable Development Goals (SDG) India Index, which comprehensively documents the progress made by India's States and Union Territories towards achieving the 2030 SDG targets.

The SDG India Index—which has been developed in collaboration with the Ministry of Statistics and Programme Implementation, United Nations in India, and Global Green Growth Institute.

The SDG India Index 2019 is more robust than the first edition on account of wider coverage of goals, targets, and indicators with greater alignment with the NIF. **The Index spans 16 out of 17 SDGs, marks an improvement over the 2018 Index, which covered only 13 goals.**

Kerala achieved the first rank in the composite SDG Index with a score of 70, **followed by Himachal Pradesh at 69.**

18. 92 lions already dead in Gir this year, according to report

Link: <https://www.downtoearth.org.in/news/wildlife-biodiversity/92-lions-already-dead-in-gir-this-year-report-flags-71721>

Ninety-two Asiatic lions have died in Gujarat's Asiatic Lion Landscape (ALL) since January 2020, according to a Union Ministry of Environment, Forest and Climate Change (MoEF&CC) committee report. This is in the contrast with:



Narendra Modi @narendramodi



Two very good news:

Population of the majestic Asiatic Lion, living in Gujarat's Gir Forest, is up by almost 29%.

Geographically, distribution area is up by 36%.

Kudos to the people of Gujarat and all those whose efforts have led to this excellent feat.[fed.gujarat.gov.in/writereaddata/...](http://fed.gujarat.gov.in/writereaddata/)



67.7K · 5:32 PM - Jun 10, 2020



As per the report, some lions have died of in-fighting and many have died of the canine distemper virus (CDV).

Main problem is: *Why is the Supreme Court order of 2013 not being implemented? Why are we endangering the world's only population of wild Asiatic lions?"*

What was SC judgement of 2013??

Judgement of the Supreme Court of India regarding the necessity of a second home for Asiatic Lion, India, 15/04/2013

ShareThis Facebook Tweet Email Like 0

15/04/2013

Judgement of the Supreme Court of India in the matter of Centre for Environment Law Vs Union of India & Others dated 15/04/2013 regarding the necessity of a second home for Asiatic Lion (*Panthera leo persica*), an endangered species, for its long term survival and to protect the species from extinction.

Supreme Court finds MoEF's decision for re-introduction of Asiatic lion from Gir to Kuno is of "utmost importance so as to preserve the Asiatic lion, an endangered species which cannot be delayed". MoEF is directed to take urgent steps for re-introduction of Asiatic lion from Gir forests to Kuno.



DOWNLOAD
FULL REPORT

A quick look at: Just to have clear idea.

Countdown to extinction

Despite orders by the Supreme Court, Gujarat is reluctant to translocate lions outside the state



- 1991-94** | Canine distemper virus (CDV) kills 1,000 lions in Serengeti National Park, Tanzania
- July 1996** | MP seeks Centre's permission to relocate 1,545 families
- 1998-99** | WII detects CDV in captive lions in western India
- 2004** | The Centre forms a monitoring committee to translocate lions
- 2006** | The Centre sends Gujarat a letter to translocate lions. Biodiversity Conservation Trust of India petitions the Supreme Court (SC) seeking lion translocation
- 2007** | Gujarat rejects translocation project. SC sends the matter to National Board for Wildlife (NBWL)
- 1993** | The Centre asks Wildlife Institute of India (WII) to find habitat to relocate lions outside Gir
- Jan 1995** | WII recommends Kuno Wildlife Sanctuary in Madhya Pradesh (MP)

Feb 2008 | NBWL recommends translocation of lions



Sept 2009 | NBWL in-house technical committee decides to translocate lions

Nov 2010 | Gujarat tells SC that Kuno lacks prey base and that the issue has not been placed before the Gujarat State Board for Wildlife (GSBWL)

Apr 2013 | SC orders the Centre to undertake the translocation in six months, form a committee to oversee the process



Sep-Oct 2018 | 23 lions die in Gir's Dalkhania range

Apr 2009 | Gujarat challenges NBWL recommendation in SC. The court asks NBWL to reconsider

July 2009 | NBWL forms in-house technical committee to take a relook

Jan 2010 | The Centre files an affidavit with the NBWL's decision in the court

2012 | SC asks GSBWL to consider the issue. GSBWL rejects translocation

June 2014 | Wildlife activist Ajay Dubey files petition against Gujarat and the Centre for not following the SC order



March 2018 | SC discharges the petition after the Centre assures the court that the expert committee will meet and send the minutes to the court within four weeks

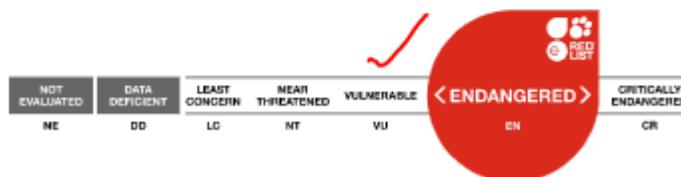
Oct 2018 | Indian Council of Medical Research confirms CDV in 21 lions

Asiatic Lion ✓

Panthera leo ssp. persica

CITATION

Breitenmoser, U., Mallon, D.P., Ahmad Khan, J. & Driscoll, C. 2008. *Panthera leo ssp. persica*. In: IUCN. 2008. *IUCN Red List of Threatened Species*. Version 2008. e.T15952A5327221. <https://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T15952A5327221.en>. Downloaded on 16.



Asiatic Lion Conservation Project: what is required we have pasted below. Nothing more than this for this project.

Press Information Bureau
Government of India
Ministry of Environment, Forest and Climate Change

08 FEB 2019 5:25PM by PIB Delhi

A dedicated project for conservation of Asiatic Lion with a contribution of Rs 97.85 Cr from Centre to be spent over 3 years launched

A dedicated "Asiatic Lion Conservation Project" with a budgetary contribution of Rs 97.85 Cr from Central Government was launched. With a view to strengthen the conservation initiatives, the Union Ministry of Environment, Forests and Climate Change (MoEFCC) approved the project for three financial years FY 2018-19, FY 2019-20 and FY 2020-21. The Asiatic Lion, endemic to Gir landscape of Gujarat, is one of the 21 critically endangered species identified by the Ministry for taking up recovery programmes. Asiatic Lion, being listed in Schedule-I of Wildlife (Protection) Act, 1972, to be accorded the highest degree of protection.

This project has "Species Conservation over a large landscape" approach. Besides this approach, the Greater Gir Region (GGR) is being divided into various zones and management approach of "Zone Plans and Theme Plans" for the conservation of the Asiatic Lion.

19. Microplastics.



Microplastics, as the name implies, are tiny plastic particles. **Officially, they are defined as plastics less than five millimeters (0.2 inches) in diameter**—smaller in diameter than the standard pearl used in jewelry. **There are two categories of microplastics: primary and secondary.**

Primary microplastics are tiny particles designed for commercial use, such as cosmetics, as well as microfibers shed from clothing and other textiles, such as fishing nets. **Secondary microplastics** are particles that result from the breakdown of larger plastic items, such as water bottles. This breakdown is caused by exposure to environmental factors, mainly the sun's radiation and ocean waves.

Problems with Microplastics:

The problem with microplastics is that—like plastic items of any size—**they do not readily break down into harmless molecules**. Plastics can take hundreds or thousands of years to decompose—and in the meantime, wreak havoc on the environment. On beaches, **microplastics are visible as tiny multicolored plastic bits in sand**. In the oceans, microplastic pollution is **often consumed by marine animals**.

Microplastics have been **detected in marine organisms from plankton to whales, in commercial seafood**, and even in drinking water. Alarmingly, standard water treatment facilities cannot remove all traces of microplastics. To further complicate matters, microplastics in the ocean can bind with other harmful chemicals before being ingested by marine organisms.

But why do cosmetic manufacturers include microplastics as one of the ingredients?

Most of them act as bulking agent for the products, helping in increasing volume of the product. Other such chemicals help in formation of film (thick layer), controlling viscosity (thickness or

fluidity of product), hair fixation, adding aesthetics (glitters in bubble bath) and lending adhesive quality, among other such effects.

Something about India regarding Microplastics:

- a. Bureau of Indian Standards in 2017 classified a list of raw materials generally not recognised safe for use in cosmetics and proposed a ban on them from **2020 onwards**. The status of the ban is currently known.

~~Govt classifies microbeads as "unsafe" for cosmetic products~~

Press Trust of India | New Delhi
Last Updated at May 28, 2017 09:22 IST



ALSO READ

Pollution in Yamuna: NGT notices to MoEF, Delhi government

The Bureau of Indian Standards (BIS) has classified microbeads as "unsafe" for use in cosmetic products, the government has informed the National Green Tribunal.

- b. In February 2020, **Union Environment Minister Prakash Javadekar and Norwegian Minister of Climate** issued a joint statement about their decision **to work on minimizing discharge of marine plastic litter and microplastics**. The strategy adopted by the government needs to be seen.
- c. The **2019 Central Pollution Control Board (CPCB) document on Gap Analysis of the Compliance Report** Submitted by States and Union Territories remarked that states/UTs were not furnishing information regarding **Plastic Waste Management Rules, 2016** in their jurisdiction and **were not taking concrete steps** to take preventive and regulatory measures envisaged under the rules.

We will learn here Plastic Waste Management Rules, 2016.

G.S.R. 320(E).— Whereas the Plastic Waste (Management and Handling) Rules, 2011 published vide notification number S.O 249 (E), dated 4th February, 2011 by the Government of India in the erstwhile Ministry of Environment and Forests, as amended from time to time, provided a regulatory frame work for management of plastic waste generated in the country;

What's new in Plastic Waste Management Rules, 2016? There are many points, but we will cover all relevant points here.

- a. Rural areas have been brought in ambit of these Rules since plastic has reached to rural areas also. Responsibility for implementation of the rules is **given to Gram Panchayat**.

7. Responsibility of Gram Panchayat. - (1) Every gram panchayat either on its own or by engaging an agency shall set up, operationalise and co-ordinate for waste management in the rural area under their control and for performing the associated functions, namely,-

- (a) ensuring segregation, collection, storage, transportation, plastic waste and channelization of recyclable plastic waste fraction to recyclers having valid registration; ensuring that no damage is caused to the environment during this process;
 - (b) creating awareness among all stakeholders about their responsibilities; and
 - (c) ensuring that open burning of plastic waste does not take place
- b. First time, **responsibility of waste generators** is being introduced. Individual and bulk generators like offices, commercial establishments, industries are to segregate the plastic waste at source, handover segregated waste, pay user fee as per bye-laws of the local bodies.

8. Responsibility of waste generator. - (1) The waste generator shall-

- (a) take steps to minimize generation of plastic waste and segregate plastic waste at source in accordance with the Solid Waste Management Rules, 2000 or as amended from time to time.
 - (b) not litter the plastic waste and ensure segregated storage of waste at source and handover segregated waste to urban local body or gram panchayat or agencies appointed by them or registered waste pickers', registered recyclers or waste collection agencies;
- c. **Extended Producer Responsibility:** Earlier, EPR was left to the discretion of the local bodies. First time, the producers (i.e. persons engaged in manufacture, or import of carry bags, multi-layered packaging and sheets or like and the persons using these for packaging or wrapping their products) and brand owners have been made responsible for collecting waste generated from their products.

"extended producer's responsibility " means the responsibility of a producer for the environmentally sound management of the product until the end of its life;

9. Responsibility of producers, Importers and Brand Owners. - (1) The producers, within a period of six months from the date of publication of these rules, shall work out modalities for waste collection system based on **Extended Producers Responsibility** and involving State Urban Development Departments, either individually or collectively, through their own distribution channel or through the local body concerned.

- d. State Pollution Control Board (SPCBs) will not grant/renew registration of plastic bags, or multi-layered packaging unless the producer proposes the action plan endorsed by the concerned State Development Department.

(6) **The State Pollution Control Board or the Pollution Control Committee shall not renew registration of producer unless the producer possesses and action plan endorsed by the Secretary in charge of Urban Development of the concerned State or Union Territory for setting of plastic waste management system.**

- e. Central Pollution Control Board (CPCB) has been mandated to formulate the guidelines for thermoset plastic (plastic difficult to recycle). In the earlier Rules, there was no specific provision for such type of plastic.

~~Thermo set plastic waste shall be processed and disposed off as per the guidelines issued from time to time by the Central Pollution Control Board.~~

- f. Plastic carry bag will be available only with shopkeepers/street vendors pre-registered with local bodies on payment of certain registration fee. The amount collected as registration fee by local bodies is to be used for waste management.

~~(2) Only the registered shopkeepers or street vendors shall be eligible to provide plastic carry bags for dispensing the commodities.~~

~~(3) The local body shall utilize the amount paid by the customers for the carry bags exclusively for the sustainability of the waste management system within their jurisdictions.~~

- g. The State government or the union Territory shall, for the purpose of effective monitoring of implementation of these rules.

~~16. State Level Monitoring Committee.- (1) The State government or the union Territory shall, for the purpose of effective monitoring of implementation of these rules, constitute a State Level Advisory Committee consisting of the following persons, namely;~~

(a) the Secretary, Department of Urban Development

~~Chairman~~

The Plastic Waste Management Rules, which were notified by the Ministry of Environment and Forest & Climate Change (MoEF&CC) in March 2016, was amended and shall be called Plastic Waste Management (Amendment) Rules 2018.

Three basic amendments introduced:

- Rule 15 (**Explicit pricing of carrying bags**) **has been omitted** in the amendment. It earlier required every vendor, who sold commodities in a carry bag, to register with their respective urban local body and pay a minimum fee of Rs 48,000 annum (4000/month).
- Under section 9 (3), the term '**non-recyclable multilayered plastic if any' has been substituted by 'multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use**'. This gives plastic producers a scope to argue that their products can be put to some other use, if not recycled.
- The section 13(2) now requires all brand owners and producers **to register** or renew registration **with the concerned State Pollution Control Board (SPCB) or Pollution Control Committee if operational only in one or two states** or union territories. Earlier, only the producers had to register to CPCB or SPCB regardless of their extent of the area of operation.

It's a big lengthy but after that no need for learning any such rules from any other source. We will give you all required for exam. No time wastage here.

20. Global Partnership on Artificial Intelligence (GPAI)

Underlying Principle:

Realizing the full potential of artificial intelligence (AI) that benefits all citizens requires international collaboration. Canada and France are launching with Australia, Germany, India, Italy, Japan, Mexico, New Zealand, the Republic of Korea, Singapore, Slovenia, the United Kingdom, the United States of America, and the European Union the Global Partnership on Artificial (GPAI) *to support and guide the responsible development of artificial intelligence that is grounded in human rights, inclusion, diversity, innovation, and economic growth.*

SO, why we used Canada and France with.....? **Because of its origin. See below.**

Quick facts

- The creation of an International Panel on Artificial Intelligence announced by the Right Honourable Justin Trudeau, Prime Minister of Canada, and Emmanuel Macron, President of the French Republic, prior to the 2018 G7 Summit, is a key outcome of the Canada-France Statement on AI.
- As a first step toward establishing IPA, Prime Minister Trudeau, Minister Bains and France's Secretary of State for Digital Affairs announced the mandate for the International Panel on Artificial Intelligence at the G7 Multistakeholder Conference on AI in December 2018.
- In August 2019, during the G7 Summit in Biarritz, Heads of States and Governments acknowledge the Global Partnership on Artificial Intelligence (GPAI) proposed by Canada and France in the Biarritz Strategy for an Open, Free and Secure Digital Transformation.
- On October 2019, during the Global Forum on AI for Humanity in Paris, President of the French Republic Emmanuel Macron announced that the Global Partnership on Artificial Intelligence will be supported by two Centre of Expertise in Paris, piloted by Inria, and in Montréal, and by a secretariat hosted at the OECD. At this occasion, experts and stakeholders from around the world, drawn from the public and private sectors, academic and scientific communities, as well as civil society more broadly discussed about possible priority topics for GPAI.
- In May 2020, during the G7 ministerial meeting on Science & Technology, G7 countries agreed on launching the Global Partnership on AI to enhance multi-stakeholder cooperation in the advancement of AI that reflects our shared democratic values and addresses shared global challenges, with an initial focus that includes responding to and recovering from COVID-19, and committing to the responsible and human-centric development and use of AI in a manner consistent with human rights, fundamental freedoms, and our shared democratic values.

GPAI will be supported by a Secretariat, to be hosted by Organization for Economic Cooperation and Development (OECD) in Paris, as well as by two Centers of Expertise- one each in Montreal and Paris.

How this helps for India?

By joining GPAI as a founding member, India will actively participate in the global development of Artificial Intelligence, leveraging upon its experience around use of digital technologies for inclusive growth.

Few important initiatives started by India related to AI: we have only mentioned initiatives from 2019.

Central Government

Ministry of Home Affairs**Initiatives****Border Electronically Dominated QRT Interception Technique (BOLD-QIT)****Surveillance National Security**

In March 2019, the Union Home Minister Rajnath Singh inaugurated an electronic surveillance system called BOLD-QIT under Comprehensive Integrated Border Management System (CIBMS) on India-Bangladesh border in Dhubri District of Assam. The system includes various technologies such as microwave communication, optical fiber cables, day-and-night surveillance cameras, and an intrusion detection system. These technologies provide feeds to BSF control rooms on the border and enable BSF Quick Reaction Teams to prevent any possibility of illegal cross border trespassing or crimes.

Central Government

Department of Space / ISRO**Initiatives****Chandrayaan 2: AI-powered 'Pragyan' Rover****Space Robotics**

On 22 July 2019, ISRO launched Chandrayaan 2 spacecraft into an earth orbit as part of the second lunar mission. Geosynchronous Satellite Launch Vehicle Mark-III (GSLV Mk -III) is a three-stage launch vehicle, which carried the spacecraft, comprised of the Orbiter, the Lander Vikram and the Rover Pragyan. The Pragyan Rover was placed strategically among the imperative areas of GSLV Mk-III and carried some key responsibilities/functionalities. The rover is a six-wheeled robotic vehicle and is capable of conduct in-situ payload experiments. It is powered by AI tools and frameworks, uses solar energy for its functioning and can communicate only with the Lander. The Pragyan Rover payloads consist of Alpha Particle X-ray Spectrometer (APXS) and Laser Induced Breakdown Spectroscope (LIBS).

Central Government

Ministry of Electronics and Information Technology

Initiatives

Technology Incubation and Development of Entrepreneurs (TIDE 2.0)

Entrepreneurship Incubator

In May 2019, Ministry of Electronics and Information Technology (MeitY) approved a Technology Incubation and Development of Entrepreneurs (TIDE 2.0) scheme to be implemented by Innovation and IPR division of MeitY with a budget of ₹264.62 crore for a period of five years.

TIDE 2.0 will promote tech entrepreneurship through financial and technical support to incubators engaged in supporting ICT startups primarily engaged in using emerging technologies such as IoT, AI, blockchain, Robotics, etc., in pre-identified areas of societal relevance. The scheme will be implemented through 51 incubators at institutes of higher learning and premier research and development organizations, eventually leading to guide approximately 2,000 tech startups. MeitY is inviting

Under Ministry of Defence:

✓ A project has been sanctioned to Centre for Artificial Intelligence (AI) and Robotics (CAIR), a DRDO based laboratory, to develop AI based solutions for signal intelligence to enhance intelligence collation and analysis capabilities to the armed forces. The total cost of the project is Rs. 73.9 crore.

✓ A project named, Energy Harvesting Based Infrared Sensor Network for Automated Human Intrusion Detection (EYESIRa), which is partially based on the principles of IoT, has been sanctioned for Rs. 1.8 crore.

Energy Harvesting-Based Infrared Sensor Network for Automated Human Intrusion Detection

National Security Surveillance Border Security

Energy Harvesting-based Infrared Sensor Network for Automated Human Intrusion Detection (EYESIRa) is a project powered by AI and IoT for detecting human intrusion on borders by armed forces. The project is undisclosed and confidential. In January 2019, the project was sanctioned a budget of ₹1.8 crore.

Microsoft and NITI Aayog partner to use AI across industries**AI Education AI for social good NLP**

In October 2018, NITI Aayog and Microsoft India announced an agreement to leverage AI and cloud computing for new initiatives and solutions across industries including agriculture, healthcare, and environment. Microsoft will accelerate the use of AI for the development and adoption of local language computing and building capacity for AI among the workforce through education. The company will also promote STEM education in the areas of AI studies and Data Sciences for young women in institutes identified by the authority.

Affordable and Accessible Healthcare – Big Data and Genomics**Healthcare Medical Diagnosis**

In March 2019, the Department of Biotechnology (DBT) announced call for **AI** applications for the 'Affordable and Accessible Healthcare – Big Data and Genomics' initiative. The department aims to seek pre-proposals from team of researchers who plans to develop AI-based solutions to solve clinically relevant problems. These solutions can assist clinical decision-making on disease prediction and prognosis evaluation, early detection and diagnosis, therapy choice, patient monitoring and care, etc.

21. National Centre of Polar and Ocean Research (NCPOR) report on Arctic and Antarctica.

Link: <https://www.downtoearth.org.in/news/climate-change/arctic-sea-ice-saw-largest-decline-in-41-years-in-july-2019-ncpor-71801>

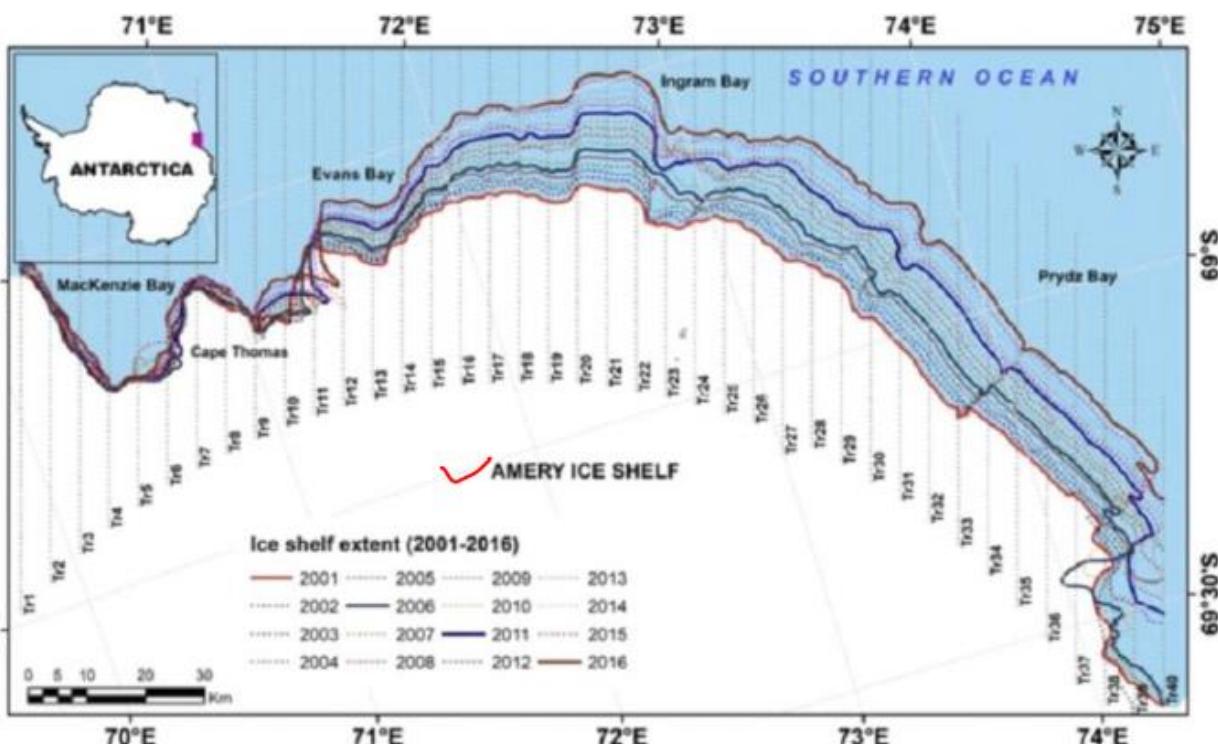
Arctic:

- The National Centre of Polar and Ocean Research (NCPOR) found the largest **decline in the Arctic Sea ice in the last 41 years due to global warming, leading to localized increase in evaporation, air humidity, cloud cover and rainfall.**
- The NCPOR noted that this decline in Arctic Sea ice happened in July 2019. In the last 40 years (1979-2018), the sea ice has been declining at -4.7 per cent per decade, while its rate was found to be -13 per cent in July 2019.
- If this trend continues, there would be no ice left in the Arctic Sea by 2050**, it noted.
- Being a sensitive indicator of climate change, **the loss of ice cover in the Arctic Sea** has had **strong feedback effects** on other components of the climate system such as *prevention or reduction of heat and momentum, water vapour, and other material exchange between the atmosphere and the sea.*
- The worrying element to note is that the **volume of ice formation during winters is unable to keep pace with the volume of ice loss during summers.**

Antarctica:

- There would be a **24 per cent increase in the expansion of the Ameri Ice Shelf (AIS) boundaries in Antarctica by 2021** and another 24 per cent by 2026 from its 2016 positions, the National Centre for Polar and Ocean Research (NCPOR) in Goa has

predicted. The prediction made by NCPOR is based on a 16-year-long satellite-based observation that covered an area of 60,000 sq. km across the AIS. This study would help understand the ongoing changes in the ocean and atmospheric forcing better



Welcome to NCPOR



National Centre for Polar and Ocean Research (NCPOR) is India's premier R&D institution responsible for the country's research activities in the Polar and Southern Ocean realms.

The mandate of NCPOR is multi-dimensional:

- > Leadership role in niche areas of scientific research in the domain of polar and ocean sciences.

- > Lead role in the geoscientific surveys of the country's EEZ and its extended continental shelf beyond 200M, deep-sea drilling in the Arabian Sea basin through the IODP, exploration for ocean non-living resources such as the gas hydrates and multi-metal sulphides in mid-ocean ridges.



NCPOR

राष्ट्रीय ध्रुवीय एवं समुद्री अनुसंधान केन्द्र
पृथ्वी विज्ञान मंत्रालय, भारत सरकार

NATIONAL CENTRE FOR POLAR AND OCEAN RESEARCH
Ministry of Earth Sciences, Government of India

22. Leak of diesel in Ambarnaya river in Russia's Norilsk

Link: <https://indianexpress.com/article/explained/explained-oil-spill-russias-arctic-region-6442828/>



Melting permafrost may have resulted in the leak of approximately 20,000 tonne diesel over 350 square metres of the 60-kilometre-long **Ambarnaya river in Russia's Norilsk** — known as the **country's nickel capital** — on May 29, 2020. The leak has put the local ecology at risk, forcing the Russian government to impose an emergency in the area.

The exact reason for the spill has not been ascertained yet, but the Norilsk Nickel Group — the company that owns the factory — claimed the leak occurred because of collapsing permafrost.

Norilsk is constructed on permafrost and there is a threat to its existence because of melting ice due to climate change, said local media reports.

23. Species in news.

The spotted-thighed frog (*Litoria cyclorhyncha*):



A new study has highlighted the possible impact on the environment of South Australia state in the wake of an alien carnivorous species of frog making its way to the area. **The spotted-thighed frog (Litoria cyclorhyncha)** has been found to have established a 1,000-plus population in Streaky Bay in South Australia. The authors of the study warned that the frog can kill and eat almost any creature belonging to local species and cause enormous damage to local food webs in the process.

Muskrats



The muskrat is a species of **semiaquatic rodent native to North America** and has also been introduced to other continents. Many factors may have caused the decline of muskrats across North America, a new study by Pennsylvania State University has said. They found that the rodents had died due to a number of factors including pathogens, parasites, environmental contaminants as well as disease.

24. Draft Unmanned Aircraft System (UAS) Rules of 2020

We will try to create a connection first before starting explanations, so that you can enjoy reading with understanding.

The regulatory framework for drones was issued by the Directorate General of Civil Aviation ("DGCA") on **August 27, 2018 (1.0)** for legalizing and regulating the operation of drones for civil use in India. To liberalize the regime further and tap the potential uses of drones especially for commercial purposes, the Ministry of Civil Aviation constituted a drone taskforce. Accordingly, on the basis of the recommendations of the task force, The Minister of Civil Aviation, released the draft **Drone Policy 2.0** on 15th January 2019. *No need for going through all recommendations regarding 2.0 policy. Just read few points from below given image.*

6. Drone Ecosystem Policy Roadmap

After the launch of the Digital Sky Platform under Civil Aviation Regulations ("CAR") 1.0 with effect from December 1, 2018, a basic framework for regulations has been established. The focus now has been on addressing challenging frontier issues such as Beyond Visual Line of Sight ("BVLOS") & Autonomous Operations. Ministry of Civil Aviation constituted a task-force on the recommendation for CAR 2.0 under the chairmanship of Hon'ble Minister of State for Civil Aviation. Pursuant to responsibilities handed over to the sub-committee on Regulations and Policy, a draft policy note on CAR 2.0 along with recommendations was presented in the drone ecosystem roadmap. Key principles were recommended that should guide the drafting of the CAR 2.0. The basic tenet being that no operation should be allowed over civilian airspace unless manufacturers meet certain standards, and operators prove safety of all stakeholders in designated test zones. Further, even after such demonstrations, operations are only allowed in well-defined Drone Corridors. The regime of No Permission, No Take-off ("NPNT") will continue in CAR 2.0, to provide security from unauthorized flights. For privacy, manufacturers will be required to adhere to a privacy by design standard, eliminating risks of future privacy harms by operators. Overall, the CAR 2.0 enables innovation without significantly compromising safety, security or privacy.

Several new initiatives were launched by the authorities focused towards capacity building of the drone ecosystem in 2019 and **this trend continues in 2020**.

Now we will focus on what happened in 2020.

We want to give few lines introduction, so that it can help you with Mains too. So, read below.

- Drones or automation, in general, is the most significant development, which the aviation industry will undergo in the coming decades.
- Reports suggest that by the year 2024, the drone industry will reach \$ 43.2 billion, in-fact it is predicted that many of our daily life activities will be replaced by drones.
- Various food delivery companies are already contemplating food delivery using drones. Earlier this year, three food delivery start-ups were given the nod by the Government to test drones for deliveries.

- d. Similarly, various e-commerce companies are also looking at the possibility of using drones for delivery.
- e. Apart from transportation, drones also have massive potential for emergency services. Last year, the Maharashtra Government announced a partnership with a leading medical drone company for delivering critical care medicines/equipment.
- f. Similarly, the insurance industry is already deploying drones for better risk management and collection of data.
- g. In this regard, it becomes imperative for a country to have rules, which can sustain this boom that will change the very definition of aviation.

Keeping up with this trend, in June 2020, the Ministry of Civil Aviation has published a draft version of the "Unmanned Aircraft System (UAS) Rules, 2020" (the "Draft Rules") for public consultation. The Draft Rules are in continuation of the regulations, which were issued in 2018.

Now we will focus on few important points under rules. You will not find such clear and important points of rules anywhere, please read and remember this only.

- a. The first and foremost aspect of the Draft Rules are that **they seeks to establish an Indian drone registry similar to the Indian aircraft registry**, which the Directorate General of Civil Aviation (the "DGCA") is required to maintain in relation to aircraft under Aircraft Rules, 1937. This is a welcome step, which will **help in maintaining a database of drones in the country**, which will further the cause of policy development.
- b. Moreover, the **Draft Rules seem to incorporate the doctrine of "extraterritorial application of laws"**, since as per Draft Rule 1(2)(a), the Draft Rules are applicable on "**UAS registered in India, wherever they may be**" clearly extending the ambit of the Draft Rules to Indian registered drones irrespective of their location.
- c. Thus, an Indian drone being operated overseas **would technically continue to be subject to these Draft Rules**
- d. Another interesting aspect of the Draft Rules is that **they are independent of the Aircraft Rules, 1937**. It is important to mention that the 2018 Regulations were subservient to the Aircraft Rules, 1937.
- e. Government has recognised the **concept of drone leasing** in the Draft Rules.
- f. Rule number 36 and 38 in the Ministry's draft state that **no unmanned aircraft shall carry any payload, unless specified by the Director General of DGCA**. Neither shall a person "drop or project or cause or permit to be dropped or projected from a UAS (unmanned aircraft system) in motion anything," except when specified.
- g. Lastly, the rules have incorporated the doctrine of **substantial ownership and effective control ("SOEC")**. We know, you didn't understand SOEC. Don't worry.

Substantial ownership and effective control ("SOEC")

SOEC is a doctrine very commonly used in aviation, SOEC mandated that substantial ownership and control of an airline must vest with nationals **belonging to the same country as the airline**. This is a prerequisite for the grant of traffic rights to or starting of an airline in most jurisdictions. For example, the CAR for grant of Non-Scheduled Operator's Permit and also the one for grant of Permit for Scheduled Air Transport Services have compliance provisions for SOEC. The history of SOEC predates to the era when the Convention of International Civil Aviation, 1944 (the "Chicago Convention") was drafted.

Coming back to the Draft Rules, SOEC compliance has been incorporated as a strict requirement for the grant of authorisation for import or manufacture or trade or owning or operation of drones in India. **Draft Rule 7 of the Draft Rules states that a company which wants to import/manufacture/trade/own/operate drones in India should have a) its principal place of business in India b) the Chairman and at least 2/3rd of its directors must be citizens of India.**

Key-terms related to Rules-

Drone is a layman terminology for **Unmanned Aircraft (UA)**. Drones have been categorised in five different categories based on weight-

- Nano: Less than or equal to 250 grams.
- Micro: From 250 grams to 2kg.
- Small: From 2 kg to 25kg.
- Medium: From 25kg to 150kg
- Large: Greater than 150kg

Barring the smallest (nano category of drones), all other categories of drones — micro, small, medium and large — need to be registered.

About Directorate General of Civil Aviation

 [Home](#) / [About DGCA](#) / [About US](#)

Directorate General of Civil Aviation is an attached office of the Ministry
of Civil Aviation.

The Directorate General of Civil Aviation is the regulatory body in the field of Civil Aviation primarily dealing with safety issues. It is responsible for regulation of air transport services to/from/within India and for enforcement of civil air regulations, air safety and airworthiness standards. It also co-ordinates all regulatory functions with International Civil Aviation Organisation.

The headquarters are located in New Delhi with regional offices in the various parts of India.

Drone Innovative Network-
[Agenda](#) [Platforms](#) [Reports](#) [Events](#) [About](#)

Drone Innovators Network

Drones Innovators Network is an initiative of **World Economic Forum** to hasten and contribute to healthy drone policies in need of legislation. It aims to help overcome common challenges regulators are facing in enabling drones and unmanned aviation, such as how to enable beyond visual line of sight (BVLOS) flights at scale, autonomous operations and flights over densely populated areas.

Why this Drones Innovator Network is important:

Drone Innovators Network Summit-2019 was held in New Delhi. Organised by the World Economic Forum under the aegis of the Ministry of Civil Aviation.

Drone Innovators Network

New Delhi, India, 1 October 2019



25. World Crocodile Day: Experts flag dip in gharial count in Odisha

News:

The number of gharial (*Gavialis gangeticus*) is alarmingly decreasing in Odisha. Before proceeding on Gharials, we will all species of gharials in India.

India is home to three crocodilian species:

1. The mugger or marsh crocodile (*Crocodylus palustris*)
2. The estuarine or saltwater crocodile (*Crocodylus porosus*)
3. The gharial (*Gavialis gangeticus*)

The mugger is the most widespread, found in other South Asian countries too. The gharial is found mostly in Himalayan rivers. The estuarine crocodile is found in Odisha's Bhitarkanika National Park, the Sundarbans in West Bengal and the Andamans and Nicobar Islands. It is also found across Southeast Asia and northern Australia.

The estuarine crocodile is infamous globally as a known maneater. The mugger is also known to be dangerous. The gharial is known to be a relatively harmless, fish-eating species.



Mugger

Crocodylus palustris

CITATION

Choudhury, B.C. & de Silva, A. 2013. *Crocodylus palustris*. The IUCN Red List of Threatened Species 2013: e.T5667A3046723. <https://dx.doi.org/10.2305/IUCN.UK.2013-18> June 2020.



Saltwater Crocodile

Crocodylus porosus

CITATION

Crocodile Specialist Group. 1996. *Crocodylus porosus*. The IUCN Red List of Threatened Species 1996: e.T5668A11503588. <https://dx.doi.org/10.2305/IUCN.UK.1996.RLTS.T5668A11503588.en>. Downloaded on 18 June 2020.



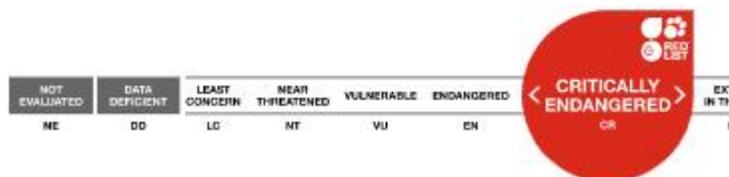


Gharial

Gavialis gangeticus

CITATION

Lang, J., Chowfin, S. & Ross, J.P. 2019. *Gavialis ga*. In: IUCN Red List of Threatened Species 2019: e.T8966A149227430.en. Downloaded on 18



Now back to news:

WILDLIFE & BIODIVERSITY

World Crocodile Day: Experts flag dip in gharial count in Odisha

Only 14 gharials were spotted at Satkosia gorge in Tikarpada in state's Angul district in 2019, claimed a former forest official



NEXT NEWS >

By Ashis Senapati

Last Updated: Wednesday 17 June 2020

Only 14 gharials were spotted at Satkosia gorge (Odisha) in 2019, according to Sudhakar Kar, herpetologist and former wildlife researcher in Odisha forest department.

The Indian Crocodile Conservation Project was started in Odisha's Satkosia Gorge Sanctuary in 1975. The project was provided with the financial aid of the United Nations Development Fund and the Food and Agriculture Organization.

Gharial is considered to be one of the most critically threatened crocodiles: Their habitat is threatened because of human encroachment and disruption of population through fishing activities. They are also genetically weak as compared to salt-water crocodiles and muggers.

26. Supplying washed coal

✓Coal washing not mandatory for supply to thermal plants: Environment min

In a gazette notification on Thursday, the ministry amended the Environment Protection Act to drop mandatorily washing coal for supply to thermal power plants.

Topics

[Coal ministry](#) | [environment minister](#) | [Lockdown](#)

[Shreya Jai](#) | New Delhi
Last Updated at May 23, 2020 01:54 IST

News:

The government had recently amended the Environment Protection Act to drop the mandatory washing of coal supplied to thermal power plants.

First understand why we need coal wash.

Indian coal is known to contain 30-50% ash, meaning that for every two units of coal burned, one unit of ash could be produced. So, a manufacturing or power producing unit **has to burn more coal** and in turn generate not only ash but also noxious gases, particulate matter and carbon emissions.

Coal washeries are units **that reduce the ash content in coal** through a mix of segregation, blending and washing techniques. These technologies are meant to allow the **conservation and optimal use of coal reserves** by improving the quality and efficiency of low grade, high ash Indian coal. Washery units set up in different locations were also meant to make improved coal available across manufacturing and industrial areas and thus reduce the reliance on long distance transportation of different grades of coal to units that needed them. Most importantly, washed coal would also provide high grade “coking” coal that is essential for the steel sector.

Why coal washing already was a failure?

Despite the known importance of coal washing to our coal dependent economy, **this sector** made up of medium and small-scale units (MSMEs) has **mostly been a governance failure**. After the nationalisation of coal in 1972-73, India's **washing capacity fell out of step with the massive increase in coal mining** and the consequent exhaustion of our better coal reserves.

In the 1993 amendments to the **Coal Mines (Nationalisation) Act, 1973**, which first **legalised the privatisation of coal blocks in India**, private players showing “coal washing” as end use were also given captive coal blocks. **Although the legal amendments invited private actors to invest in coal washeries, it generated much less interest than expected.**

According to the 2017 statistics, India has a total of 60 washeries with a capacity of only 185 MT. Of these, 15 are operated by Coal India Limited, India's largest coal mining PSU, 19 are private coking coal washeries for use by steel industries and 38 are non-coking coal washeries run by private players like Aryan, Adani and Jindal.

Recent government decision?

As recently as January 2020, the NITI Aayog stated in a report that **all new coal plants need to use** super critical technology and **washed coal**. But after all this acknowledgement of the importance of coal washeries, **the government surprisingly issued new notification** in May 2020 without seeking any public inputs. On May 21, the environment ministry “**undid**” **the January 2014 notification** (In 2014, as part of its climate change commitments, the government had *made coal washing mandatory* for supply to all thermal units beyond 500 kms from the coal mine) **that required thermal power plants (TPPs) to use of coal that has less than 34% ash content**.

The ministry's new regulation allows TPPs to now use low-grade Indian coal that produces more fly ash. The regulation, however, states that TPPs will have to comply with emission norms, fly ash utilisation norms and use transportation with safeguards or means that are less polluting. *This sudden, unplanned environmental policy on coal threatens all the planned and in-process investments in washeries like Coal India Limited (CIL's) plans for expansion.*

What is Ministry's justification?

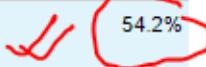
The ministry's justification for allowing the use of high-ash coal are **two-fold**.

- a. The economic **debacle caused by the COVID lockdown** is its first pretext. In its interest **to generate new private investments in coal, the government would like to liberate the coal mining and thermal power sectors from the costs of washing** and transporting washed coal. But experts state that the cost of washed coal does not add even 10% to the cost of electricity.
- b. **The ministry also states that coal washeries cause pollution.** However, this problem is not unique to washeries alone and applies to the entire supply chain that supports India's economy. In the latest notification, the government makes coal washeries the only culprit of the problems that plague coal use and shifts the burden of managing pollution from the use of coal to TPPs.

The **new notification states** “*(i) The extent of ash content in mined coal remains the same. With washeries, the ash content gets divided at two places (washerries and the power plant), whereas if unwashed coal is used in power plant, the ash content is handled at only one place viz. the power plant*”.

Understand few trends regarding coal important for Prelims.

Total Installed capacity up to May 2020: **Coal still constitutes more than 50 percent. See below.**

Fuel	MW	% of Total
Total Thermal	2,30,600	62.8%
Coal ✓	1,98,525	54.2% 
Lignite	6,610	1.7%
Gas	24,955	6.7%
Diesel	510	0.1%
Hydro (Renewable) 	45,699	12.4% 
Nuclear	6,780	1.9%
RES* (MNRE) 	87,269	23.6% 
Total	370,348	

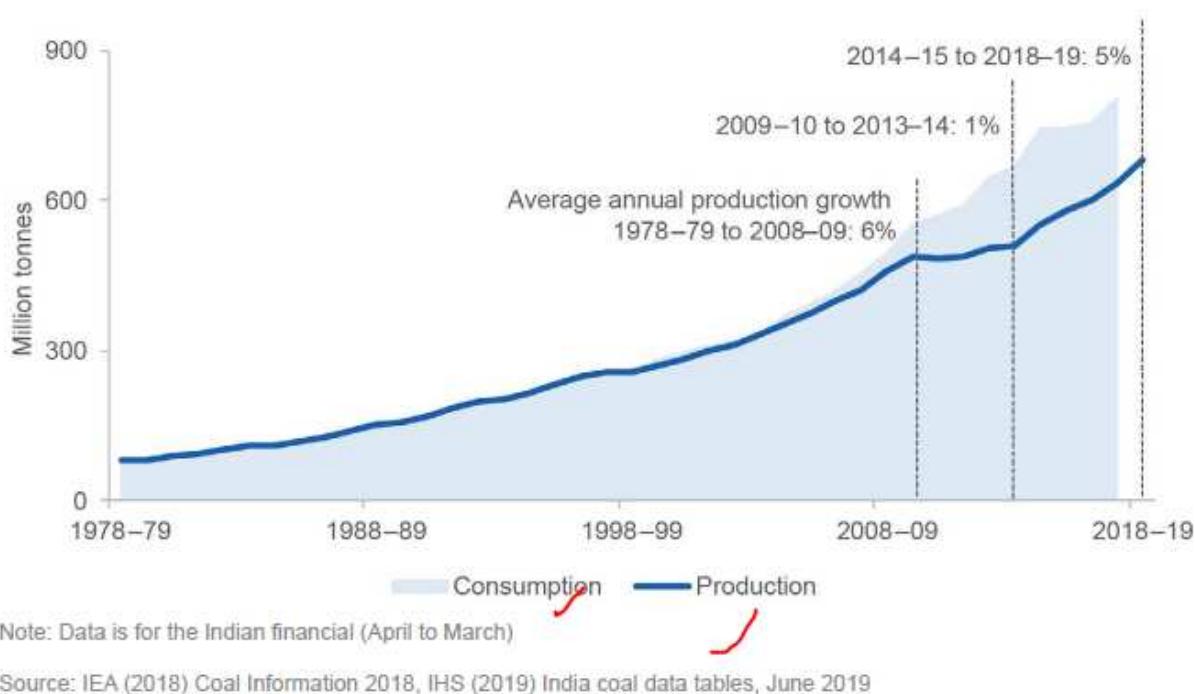
* Installed capacity in respect of RES (MNRE) as on 30.04.2020.

RES (Renewable Energy Sources) include Small Hydro Project, Biomass Gasifier, Biomass Power, Urban & Industrial Waste Power, Solar and Wind Energy.

Imports:

(Million tonnes)

✓ Coal	2014-15	2015-16	2016-17	2017-18	2018-19(Prov.)	2019-20*(Prov.)
Coking Coal	43.72	44.56	41.64	47.00	51.84	43.39
Non-Coking Coal	174.07	159.39	149.31	161.27	183.40	163.84
Total Coal Import	217.78	203.95	190.95	208.27	235.24	207.23
Coke	3.29	3.07	4.35	4.58	4.93	2.45

Figure 1.8: India's thermal coal production and consumption

Top 5 coal reserves: All data has been taken from Ministry of Coal site. No need to cross check.

Coal Reserves

As a result of exploration carried out up to the maximum depth of 1200m by the GSI, CMPDI, SCCL and MECL etc, a cumulative total of 319.02 Billion tonnes of Geological Resources of Coal have so far been estimated in the country as on 1.4.2018. The details of state-wise geological resources of Coal are given as under:

State	Proved	Indicated	Inferred	Total	(Million tonnes)
JHARKHAND ✓	45563	31439	6150	83152	
ODISHA ✓✓	37391	34165	7739	79295	
CHHATTISGARH ✓	20428	34576	2202	57206	
WEST BENGAL ✓✓	14156	12869	4643	31667	
MADHYA PRADESH ✓✓	11958	12154	3875	27987	

CATEGORIZATION OF RESOURCES

The Coal resources of India are available in older Gondwana Formations of peninsular India and younger Tertiary formations of north-eastern region. Based on the results of Regional/Promotional Exploration, where the boreholes are normally placed 1-2 Km apart, the resources are classified into 'Indicated' or 'Inferred' category. Subsequent Detailed Exploration in selected blocks, where boreholes are less than 400 meter apart, upgrades the resources into more reliable 'Proved/Measured' category. The Formation-wise and Category-wise Coal resources of India as on 1.4.2018 are given in table below:

(Million tonnes)

Formation	Proved/Measured	Indicated	Inferred	Total
Gondwana Coals	148194	139065	30174	317433
Tertiary Coals	594	99	895	1588
Grand Total	148787	139164	31069	319020

TYPE AND CATEGORY-WISE COAL RESOURCES OF INDIA

The Type and Category-wise Coal resources of India as on 1.4.2018 are given in table below:

(Million tonn)

Type of Coal	Proved/Measured	Indicated	Inferred	Total
(A) Coking :-				
-Prime Coking	4649	664	0	5313
-Medium Coking	13914	11709	1879	27502
-Semi-Coking	519	995	193	1708
Sub-Total Coking	19082	13368	2073	34522
(B) Non-Coking :-	129112	125697	28102	282910
(C) Tertiary Coal :-	594	99	895	1588
Grand Total	148787	139164	31069	319020

27. What is AXONE.

<https://indianexpress.com/article/explained/what-is-axone-fermented-soya-bean-nagaland-6463008/>

In news- The 2019 Hindi cinema titled 'Axone1' directed by Nicholas Kharkongor deals with a day in the life of a group of friends **cooking a dish with Axone**. Various issues ranging from racial bias in subtle as well as threatening forms that the migrants have to encounter daily, intertwined with food, to the social aspirations of migrants, as well as agency of the migrants to exercise their right, are raised through the movie.

As movies has been linked to racism and **has reference to North East food culture**, it is bit important.

Now the name and subject of a much-talked about feature film, **axone — or fermented soya bean — is cooked, eaten and loved in Nagaland**, and many tribal communities in different parts of Northeast India and beyond. An introduction to the ingredient — its popularity, its distinctive smell, and its role in tribal identity and culture.

This Tribal folklore has references to the ingredient.

For example, as per a Sumi folktale, axone was an “accidental discovery.” “Legend says that a young girl, who worked as a domestic help, would be sent to the fields to work only with boiled soya bean and rice to eat,” “It was inedible, so the girl kept the soya bean aside, wrapped in a banana leaf. A few days later, she found the soya had fermented, with a unique smell. She decided to use it in a dish and **that is how axone was discovered.**”

28. China's quantum satellite enables first totally secure long-range messages

Link: <https://www.downtoearth.org.in/news/science-technology/china-s-quantum-satellite-enables-first-totally-secure-long-range-messages-71831>

In the middle of the night, invisible to anyone but special telescopes in two Chinese observatories, **satellite Micius** sends **particles of light to Earth to establish the world's most secure communication link.**



Named after the ancient Chinese philosopher also known as Mozi, **Micius is the world's first quantum communications satellite and has, for several years, been at the forefront of quantum encryption.**

Scientists have now reported using this technology to reach a major milestone: **Long-range secure communication you could trust even without trusting the satellite it runs through.**

The satellite serves as the source of pairs of entangled photons, twinned light particles whose properties remain intertwined no matter how far apart they are. *If you manipulate one of the photons, the other will be similarly affected at the very same moment.*

It is this property that lies in the heart of the most secure forms of quantum cryptography, the entanglement-based quantum key distribution. If you use one of the entangled particles to create a key for encoding messages, only the person with the other particle can decode them.

29. Raja Parba festival of Odisha

The Raja Parba of Odisha is one of most popular festivals of the state. Dedicated to Bhuma Devi, the consort of Lord Vishnu, Raja Parba celebrates womanhood.



This is enough but it becomes very short, so we will add here few more festivals of Odisha and Odissi dance.

Odissi Dance form:

Odisha, on the eastern sea-coast, is the home of Odissi, one of the many forms of Indian classical dance. **The Natya Shastra** mentions many regional varieties, such as the south-eastern style known as the **Odhra Magadha** which can be identified as the earliest precursor of present day Odissi.

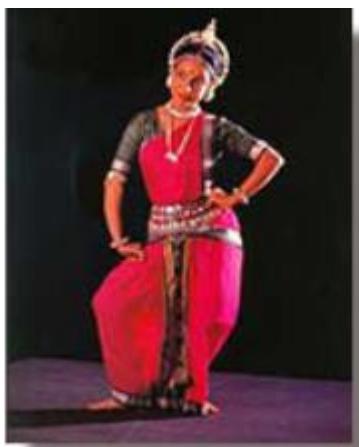
Remember Gotipuas and Maharis who were chief repositories of this dance

As in other parts of India, creative literature inspired the Odissi dancer also and provided the themes for dance. This is especially true of the 12th century **Gita Govinda by Jayadeva**.

The techniques of movement are built around the two basic postures of the **Chowk and the Tribhang**. The chowk is a position imitating a square - a very masculine stance with the weight of the body equally balanced. **The Tribhang** is a very feminine stance where the body is deflected at the neck, torso and the knees.



Chowk-Basic Standing position



Tribhangi position

Other important festivals of Odisha:

1. **Jagannath Rath Yatra:** Jagannath Rath Yatra is one of the most anticipated annual festivals, that happens during the months of June or July in Puri. Like the name suggests, it is dedicated to Lord Jagannath, that is Lord Krishna, along with his siblings Lord Balaram and Goddess Subhadra.
2. **Chhau Festival:**
Chhau Festival is celebrated every year during the month of April. This 3-day-long festival is mostly celebrated by the Bhuiyan tribes in Odisha. The main attraction of the festival is the performance of Chhau dance by the people of Odisha.
3. **Konark Dance Festival:**
Started in the year 1986, the Konark Dance Festival is celebrated to bring together artists of all forms of classical dance forms and perform at a single stage. Thereby, getting international recognition to these classical dance forms.

Painting: Pattachitra is a traditional painting of Odisha, India. These paintings are based on Hindu mythology and specially inspired by Jagannath and Vaishnava sect.

30. Nearly 80 Mn displaced globally by 2019-end, half of them children: **UNHCR**

Link: <https://www.downtoearth.org.in/news/governance/nearly-80-mln-displaced-globally-by-2019-end-half-of-them-children-unhcr-71844>

The facts and figures mentioned in the report will never be asked in UPSC Prelims exam. You can mention such facts and figures in Mains. But something here is also important for Prelims. First of all, Name the report. See below.



Important points in the report:

- a. Nearly 80 million people were displaced by the end of 2019 — that's nearly 1 per cent of the global population. Half of those displaced were children.
- b. Of the 79.5 million, 26 million were cross-border refugees, 45.7 million were internally displaced people, 4.2 million were asylum seekers and 3.6 million were Venezuelans displaced abroad.
- c. Persecution, conflict, violence, human rights violations or events seriously disturbing public order were the main reasons behind the forced displacements, according to the report released June 18, 2020.
- d. The number of refugees doubled from about 10 million in 2010 to 20.4 million at the end of 2019. Close to 53 per cent were newly displaced.
- e. An estimated one per cent of humanity — 1 in every 97 people were affected by forced displacement in 2019, compared to 1 in every 159 people in 2010 and 1 in every 174 in 2005.
- f. Eight out of 10 people displaced across borders in 2019-end originated from just 10 countries (83 per cent) and four of these were in Africa. Afghanistan, Somalia, the Democratic Republic of the Congo, Sudan and Eritrea remained in the top 10 list of source countries for cross-border displacement throughout the decade.
- g. Syria has been the main country of origin for refugees since 2014. At the end of 2019, there were 6.6 million Syrian refugees hosted by 126 countries worldwide.

Now, we will learn United Nations High Commissioner for Refugees (UNHCR)

The office of the United Nations High Commissioner for Refugees (UNHCR) **was created in 1950, during the aftermath of the Second World War**, to help millions of Europeans who had fled or lost their homes. We had three years to complete our work and then disband.

UNHCR is mandated by the United Nations General Assembly to seek international protection and permanent solutions for refugees. It also has the responsibility to **supervise the implementation of the 1951 Convention by States Parties.** States Parties are required to cooperate with UNHCR and provide relevant information and statistical data.

UNHCR's role complements that of States, contributing to the protection of refugees by:

- a. Promoting accession to, and implementation of, refugee conventions and laws.

- b. Ensuring that refugees are treated in accordance with internationally recognized legal standards
- c. Ensuring that refugees are granted asylum and are not forcibly returned to the countries from which they have fled.
- d. Promoting appropriate procedures to determine whether or not a person is a refugee according to the 1951 Convention definition and/or to other definitions found in regional conventions; and
- e. Seeking durable solutions for refugees.

Who administers UNHCR?

~~UNHCR is governed by the UN General Assembly and the Economic and Social Council (ECOSOC).~~

The UNHCR Executive Committee approves the agency's biennial programmes and the corresponding budget. These are presented by the High Commissioner, who is appointed by the UN General Assembly.

Our mandate is defined by the 1950 UNHCR Statute. In 2003, the General Assembly extended the organization's mandate "until the refugee problem is solved." The High Commissioner reports annually to ECOSOC and the General Assembly on the work of UNHCR.

Note: Not very important, Nansen Refugee Award is associated with UNHRC. Azizbek Ashurov, a lawyer, whose work has supported the efforts of the Kyrgyz Republic in becoming the first country in the world to end statelessness, is the 2019 UN Refugee Agency's Nansen Refugee Award winner.

Now, we will also see 1951 United Nations Refugee Convention.

~~The 1951 Refugee Convention is the key legal document that forms the basis of our work.~~
Ratified by 145 State parties, it defines the term 'refugee' and outlines the rights of the displaced, as well as the legal obligations of States to protect them.

~~The core principle is non-refoulement, which asserts that a refugee should not be returned to a country where they face serious threats to their life or freedom. This is now considered a rule of customary international law.~~

UNHCR serves as the 'guardian' of the ~~1951~~ Convention and its ~~1967~~ Protocol. According to the legislation, States are expected to cooperate with us in ensuring that the rights of refugees are respected and protected.

Something more about 1951 UN Refugee Convention.

✓ WHAT RIGHTS DO REFUGEES HAVE UNDER THE 1951 CONVENTION?

The 1951 Convention contains a number of rights and also highlights the obligations of refugees towards their host country. The cornerstone of the 1951 Convention is the principle of *non-refoulement* contained in Article 33. According to this principle, a refugee should not be returned to a country where he or she faces serious threats to his or her life or freedom. This protection may not be claimed by refugees who are reasonably regarded as a danger to the security of the country, or having been convicted of a particularly serious crime, are considered a danger to the community.

Other rights contained in the 1951 Convention include:

- The right not to be expelled, except under certain, strictly defined conditions (Article 32);
- The right not to be punished for illegal entry into the territory of a contracting State (Article 31);
- The right to work (Articles 17 to 19);
- The right to housing (Article 21);
- The right to education (Article 22);
- The right to public relief and assistance (Article 23);
- The right to freedom of religion (Article 4);
- The right to access the courts (Article 16);
- The right to freedom of movement within the territory (Article 16); and
- The right to be issued identity and travel documents (Articles 27 and 28).

✓ When a State accedes to the 1951 Convention:

- it demonstrates its commitment to treating refugees in accordance with internationally recognized legal and humanitarian standards;
- it gives refugees a possibility to find safety;
- it helps to avoid friction between States over refugee questions. Granting asylum is a peaceful, humanitarian and legal act rather than a hostile gesture, and should be understood by the refugee's country of origin as such;
- it demonstrates its willingness to share the responsibility for protecting refugees; and
- it helps UNHCR to mobilize international support for the protection of refugees.

India has signed neither the 1951 United Nations Refugee Convention nor its 1967 Protocol.

31. National Green Tribunal

Link: <https://thewire.in/environment/supreme-court-aarey-colony-ngt-metro-rail-shed>

News is:

Observing that the "metro is important" in congested Mumbai, the Supreme Court dismissed an appeal against **the National Green Tribunal** order to exclude 407 acres in the green Aarey colony in suburban Mumbai as an **Ecologically Sensitive Zone** around the **Sanjay Gandhi National Park**.

So, we will study here:

- a. **National Green Tribunal**
- b. **Ecologically Sensitive Zone.**
- c. **Location of Sanjay Gandhi National Park**

These bodies are almost daily in news. Daily they hear environment complaints. So, at this stage of preparation only be clear about all the facts regarding this body. **So, we will study here The National Green Tribunal Act, 2010. Never forget now. Any question regarding NGT, you will solve from now. Read**

First of all why this body?

The National Green Tribunal has been established on under the National Green Tribunal Act 2010 for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property.

THE NATIONAL GREEN TRIBUNAL ACT, 2010

ACT NO. 19 OF 2010

[2nd June, 2010.]

 An Act to provide for the establishment of a National Green Tribunal for the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.

Composition:

 Under section 4, the Tribunal shall consist of :-

- Full time chairperson
- Not less than 10 member but subject to maximum of 20 full time judicial members & expert members
- The chairperson will also invite any one person or more persons having specialized knowledge to assist the tribunal.

QUALIFICATION

A person shall not be qualified for appointment as the chairperson or judicial member of the Tribunal – unless he is or has been

- a judge of the supreme court or
- chief justice of a high court

but if a person who is has been a judge of the high court shall also be qualified to be appointed as a judicial member.

The chairperson shall be appointed by the central government in consultation with the chief justice of India. Judicial member & expert member shall be appointed on the recommendations of select committee as provided by the central government.

✓ 6 Appointment of Chairperson, Judicial Member and Expert Member.—(1) Subject to the provisions of section 5, the Chairperson, Judicial Members and Expert Members of the Tribunal shall be appointed by the Central Government.

(2) The Chairperson shall be appointed by the Central Government in consultation with the Chief Justice of India

Chairperson, judicial member & expert member shall hold office for a term of 5 years but shall not be eligible for re-appointment.

✓ 7. Term of office and other conditions of service of Chairperson, Judicial Member and Expert Member.—The Chairperson, Judicial Member and Expert Member of the Tribunal shall hold office as such for a term of five years from the date on which they enter upon their office, but shall not be eligible for re-appointment:

Removal and suspension of Chairperson, Judicial Member and Expert Member:

✓ 10. Removal and suspension of Chairperson, Judicial Member and Expert Member.—(1) The Central Government may, in consultation with the Chief Justice of India, remove from office of the Chairperson or Judicial Member of the Tribunal, who,—

- (a) has been adjudged an insolvent; or
- (b) has been convicted of an offence which, in the opinion of the Central Government, involves moral turpitude; or
- (c) has become physically or mentally incapable; or
- (d) has acquired such financial or other interest as is likely to affect prejudicially his functions; or
- (e) has so abused his position as to render his continuance in office prejudicial to the public interest.

Jurisdiction:

Jurisdiction:- Tribunal shall have the jurisdiction over all civil cases where a substantial question relating to environment (under section 2(m) including enforcement of any legal right relating to environment), is involved & such question arises out of the implementation of the enactments specified in schedule I, i.e;

- The Water (Prevention and Control of Pollution) Act, 1974;
- The Water (Prevention and Control of Pollution) Cess Act, 1977;
- The Forest (Conservation) Act, 1980;
- The Air (Prevention and Control of Pollution) Act, 1981;
- The Environment (Protection) Act, 1986;
- The Public Liability Insurance Act, 1991;
- The Biological Diversity Act, 2002.

~~**Powers as follows:**~~

- i. The tribunal shall not be bound by the procedure laid down by the code of civil procedure, 1908.
- ii. The tribunal shall have power to regulate its own procedure.
- iii. The tribunal shall be guide by the principles of natural justice.
- iv. The tribunal shall also not be bound by the rules of evidence contained in the Indian evidence act, 1872.
- v. For the purposes of discharging its functions, the tribunal shall have the same powers as are vested in the civil court under the code of civil procedure, 1908, while trying a suit.

~~**22. Appeal to Supreme Court.**~~—Any person aggrieved by any award, decision or order of the Tribunal, may, file an appeal to the Supreme Court, within ninety days from the date of communication of the award, decision or order of the Tribunal, to him, on any one or more of the grounds specified in section 100 of the Code of Civil Procedure, 1908 (5 of 1908):

Provided that the Supreme Court may entertain any appeal after the expiry of ninety days, if it is satisfied that the appellant was prevented by sufficient cause from preferring the appeal.

Now,

What are Eco-sensitive zones?

The Environment Protection Act, 1986 does not mention the word “Eco-sensitive Zones”.
The two sections of Act empower government to form these zones. See below these two sections.

The section **3(2)(v)** of the Act, says that Central Government can restrict areas in which any industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards. See below:

GENERAL POWERS OF THE CENTRAL GOVERNMENT

3. Power of Central Government to take measures to protect and improve environment.—(1) Subject to the provisions of this Act, the Central Government shall have the power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution.

(2) In particular, and without prejudice to the generality of the provisions of sub-section (1), such measures may include measures with respect to all or any of the following matters, namely:—

(i) co-ordination of actions by the State Governments, officers and other authorities—

(a) under this Act, or the rules made thereunder; or

(b) under any other law for the time being in force which is relatable to the objects of this Act;

(ii) planning and execution of a nation-wide programme for the prevention, control and abatement of environmental pollution;

(iii) laying down standards for the quality of environment in its various aspects;

(iv) laying down standards for emission or discharge of environmental pollutants from various sources whatsoever:

Provided that different standards for emission or discharge may be laid down under this clause from different sources having regard to the quality or composition of the emission or discharge of environmental pollutants from such sources;

(v) restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards;

Besides the **section 5** of this act says that central government can prohibit or restrict the location of industries and carrying on certain operations or processes on the basis of considerations like the biological diversity of an area, maximum allowable limits of concentration of pollutants for an area, environmentally compatible land use, and proximity to protected areas.

✓ 5. Power to give directions.—Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions.

Explanation.—For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct—

(a) the closure, prohibition or regulation of any industry, operation or process; or

(b) stoppage or regulation of the supply of electricity or water or any other service.

The above two clauses have been effectively used by the government to declare Eco-Sensitive Zones or Ecologically Fragile Areas (EFA). The same criteria have been used by the government to declare No Development Zones. **More details not needed now.**

Sanjay Gandhi National Park is a protected area in Mumbai, Maharashtra State in India.

32. New fish species discovered in Arunachal Pradesh

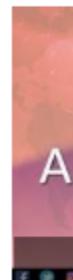
Link: <http://www.newsonair.com/News?title>New-fish-species-discovered-in-Arunachal-Pradesh&id=391345#:~:text=A%20new%20species%20of%20fish,is%20named%20as%20Schizothorax%20sikusirumensis>

Jun 15, 2020, 10:58AM

New fish species discovered in Arunachal Pradesh

A new species of fish has been discovered in Arunachal Pradesh. Dr. Keshav Kumar Jha, Associate Professor & Head, Department of Zoology, Jawaharlal Nehru College, Pasighat discovered a new fish species from genus Schizothorax.

The fish species is named as Schizothorax sikusirumensis. The name of this fish species has been derived from the name of the rivers where it was found. This fish was collected from the junction of River Siku and Sirum near Gakang area under Mebo circle of East Siang District. The fish inhabits the water logged area of torrential river drainage.



33. How ‘vaccine nationalism’ could block vulnerable populations’ access to COVID-19 vaccines?

Link: <https://www.downtoearth.org.in/news/health/how-vaccine-nationalism-could-block-vulnerable-populations-access-to-covid-19-vaccines-71825>

They can ask what Vaccine Nationalism means? And if you haven’t read this, you will get confused. We will study the concept and its impact.

What does the term “Vaccine Nationalism” signify?

Vaccine nationalism occurs when a country manages to secure doses of vaccine for its own citizens or residents before they are made available in other countries. This is done through pre-purchase agreements between a government and a vaccine manufacturer.

Few examples you see you will understand more clearly.

- In March, the White House met with representatives from CureVac, a German biotech company developing a COVID-19 vaccine. The US government is reported to have inquired about the possibility of securing exclusive rights over the vaccine. This prompted the German government to comment that “Germany is not for sale.” Angela Merkel’s chief of staff promptly stated that a vaccine developed in Germany had to be made available in “Germany and the world.”

- b. In India, the privately held Serum Institute is developing one of the leading COVID-19 vaccine candidates. The Serum Institute signaled that, if development of the vaccine succeeds, most of the initial batches of vaccine will be distributed within India.
- c. At the same time, India, alongside the US and Russia, chose not to join the Access to COVID-19 Tools Accelerator, which was launched by the World Health Organization to promote collaboration among countries in the development and distribution of COVID-19 vaccines and treatments.

Its impact:

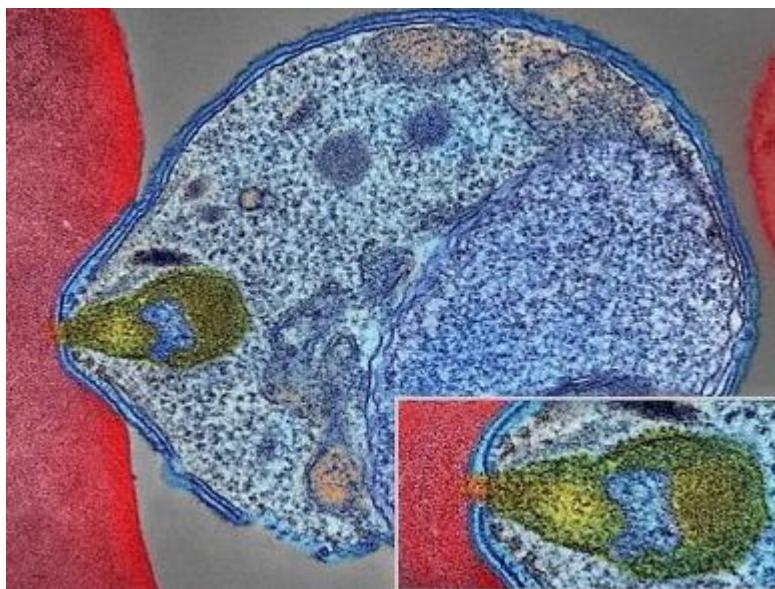
- a. The most immediate effect of vaccine nationalism is that it further disadvantages countries with fewer resources and bargaining power. It deprives populations in the Global South from timely access to vital public health goods.
- b. Vaccine nationalism also runs against the fundamental principles of vaccine development and global public health. Most vaccine development projects involve several parties from multiple countries.
- c. With modern vaccines, there are very few instances in which a single country can claim to be the sole developer of a vaccine. And even if that were possible, global public health is borderless. As COVID-19 is illustrating, pathogens can travel the globe. Public health responses to outbreaks, which include the deployment of vaccines, have to acknowledge that reality.

34. Microbe Found to Block the Transmission of Malaria

Link: <https://science.thewire.in/the-sciences/malaria-parasite-wolbachia-microsporidia-mb/>

We will learn here:

- a. About News with Introduction
- b. World Malaria Report 2019
- c. Steps taken at global and India level



Malaria has been a terrible human disease from before the Neolithic period up to present day. It has likely caused more human deaths than any other infectious agent. If realized, malaria eradication could be amongst humankind's most significant achievements.

How it infects?

Malaria is caused by parasites in the **genus Plasmodium**, of which there are five different species that infect humans. These parasites enter the female Anopheles mosquitoes (males don't bite humans) when they feed on the blood of an infected human. Plasmodium must then cross the Anopheles mosquito's gut and become established in their salivary glands, at which point it can be transmitted to another human when the mosquito feeds again.

Do we have any tool to handle this Malaria right now?

The tools currently being used to tackle malaria were developed in the last century, some more than 40 years ago. For example, **indoor residual spraying** is affected by resistance of mosquitoes, must be repeated at regular intervals and is prohibitively expensive for many African countries.

New tools are desperately needed. I do not mean a silver bullet, just additional entry points that will enable us to simultaneously exert pressure on the malaria transmission cycle from different angles.

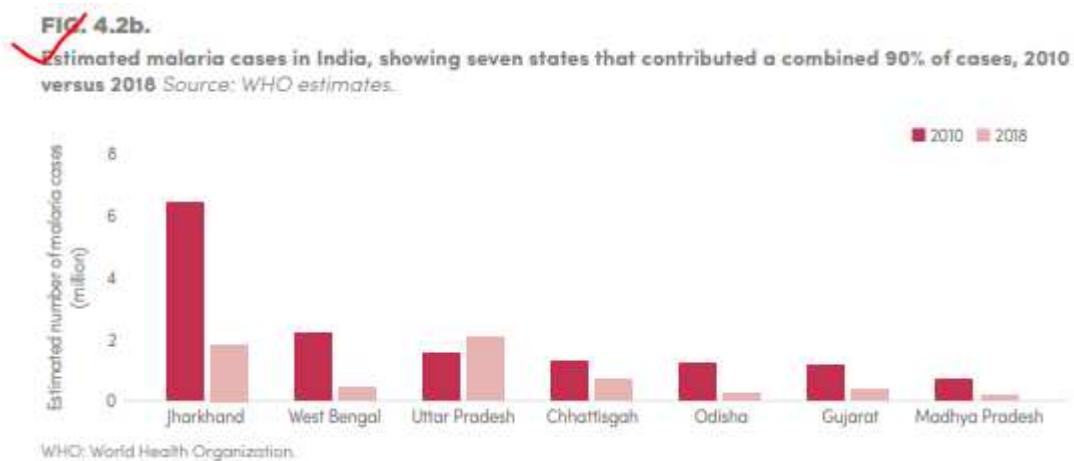
Recently, scientists discovered that a **microsporidian – a tiny parasitic fungus – called Microsporidia MB can block the transmission of malaria – Plasmodium falciparum – to the mosquito.**

World Malaria Report 2019

The World Health Organisation (WHO) has released the World Malaria Report, 2019.

Important points mentioned in this report:

- In 2018, an estimated 228 million cases of malaria occurred worldwide compared with 251 million cases in 2010.
- Most malaria cases in 2018 were in the World Health Organization (WHO) African Region (213 million or 93%), followed by the WHO South-East Asia Region with 3.4% of the cases and the WHO Eastern Mediterranean Region with 2.1%.
- Nineteen countries in sub-Saharan Africa and India carried almost 85% of the global malaria burden.
- Plasmodium falciparum is the most prevalent malaria parasite in the WHO African Region, accounting for 99.7% of estimated malaria cases in 2018.
- Globally, 53% of the P. vivax burden is in the WHO South-East Asia Region, with the majority being in **India (47%)**.
- The burden in 2018 was similar to that of 2017 in all other countries, apart from in Uganda and **India**, where there were reported reductions of 1.5 and 2.6 million malaria cases, respectively, in 2018 compared with 2017.
- Except for India, direct domestic investment remains very low relative to international funding in the **High Burden to High Impact (HBHI) countries**.
- Almost 85% of all malaria cases globally were in 19 countries: **India** and 18 African countries.
- Of these 19 countries, **India reported the largest absolute reductions in cases**, with 2.6 million fewer cases in 2018 than in 2017, followed by Uganda (1.5 million fewer cases) and Zimbabwe (0.6 million fewer cases).



Steps taken at the global level

- WHO's Global Technical Strategy for Malaria, 2016-2030.
- WHO has also released a new country-driven approach—“High burden to high impact” to enhance response to malaria in countries where malaria cases increased in 2018 as compared to 2017.

✓ Vision – A World Free of Malaria

GOALS	MILESTONES			TARGETS
	2020	2025	2030	
1. Reduce malaria mortality rates globally compared with 2015	At least 40%	At least 75%	At least 90%	
2. Reduce malaria case incidence globally compared with 2015	At least 40%	At least 75%	At least 90%	
3. Eliminate malaria from countries in which malaria was transmitted in 2015	At least 10 countries	At least 20 countries	At least 35 countries	
4. Prevent re-establishment of malaria in all countries that are malaria-free	Re-establishment prevented	Re-establishment prevented	Re-establishment prevented	

~~Definition of Malaria Elimination~~

"Interruption of local transmission (reduction to zero incidence of indigenous cases) of specified malaria parasite species in a defined geographical area as a result of deliberate activities. Continued measures to prevent re-establishment of transmission are required."
(WHO 2017. A Framework for Malaria Elimination)

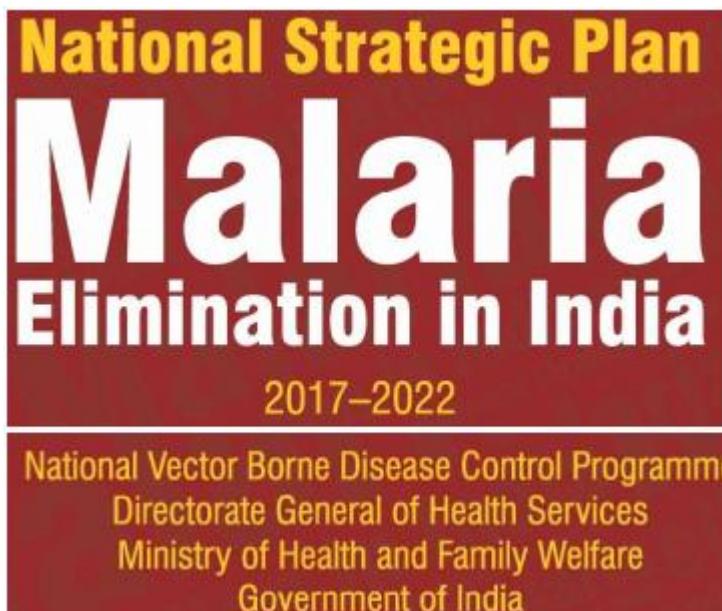
Steps taken by Indian Government: There are two major efforts in this direction.

National Strategic Plan for Malaria Elimination (2017-22)

The Strategic Plan gives year wise elimination targets in various parts of the country depending upon the endemicity of malaria in the next 5 years. Just see small explanation. Much not needed.

Indian government has released a National Strategic Plan (NSP) for malaria elimination for years **2017-2022**, targeting eradication by 2030. Under the plan, malaria transmission in the country's districts have been **divided into four categories**: no cases in 3 years, less than 1 case per 1,000 people, more than 1 but less than 2 cases per 1,000 people, and more than 2 cases per 1,000 people.

The plan will be under the National Health Mission as part of the National Vector Borne Disease Control Programme.



Malaria Elimination Research Alliance India (MERA India)

~~ICMR launches 'MERA India' to eliminate malaria by 2030~~



Press Trust of India, New Delhi, APR 26 2019, 11:48 IST | UPDATED: APR 26 2019, 12:38 IST

Over the past two decades, India has made good progress in malaria control. However, several challenges remain.

- a. There are critical operational gaps in service access, particularly for vulnerable populations in high transmission areas as well as in the services provided by the private sector.
- b. There is also a need to improve quality and effectiveness of vector and environmental control measures.
- c. In addition, the emergence and spread of drug and insecticide resistance is undermining the efficacy of existing tools.
- d. There is a need for new improved tools and approaches for disease surveillance, diagnosis, treatment and vector control.
- e. There are several research organisation and groups in the country that focus on malaria research but there is little communication and harmonization in the scientific community, resulting in duplication of efforts.

In this context, the Indian Council of Medical Research (ICMR) has put together a programme to bring the various stakeholders on a single platform to identify and prioritize research work **needed to meet the target to eliminate the disease by 2030. Called Malaria Elimination Research Alliance India (MERA India), the programme took off on April 24, with the first meeting of the stakeholders.**

We will wait to see any update on Malaria.

35. Indian Gas Exchange

Link: <https://www.thehindu.com/business/Industry/indias-first-gas-trading-platform-launched/article31833956.ece>

✓ India's first gas trading platform launched



Piyush Pandey

MUMBAI, JUNE 15, 2020 17:58 IST
✓ UPDATED: JUNE 15, 2020 17:58 IST

SHARE ARTICLE



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PRINT



First of all, what is this IGX?

Indian Gas Exchange (IGX) ✓

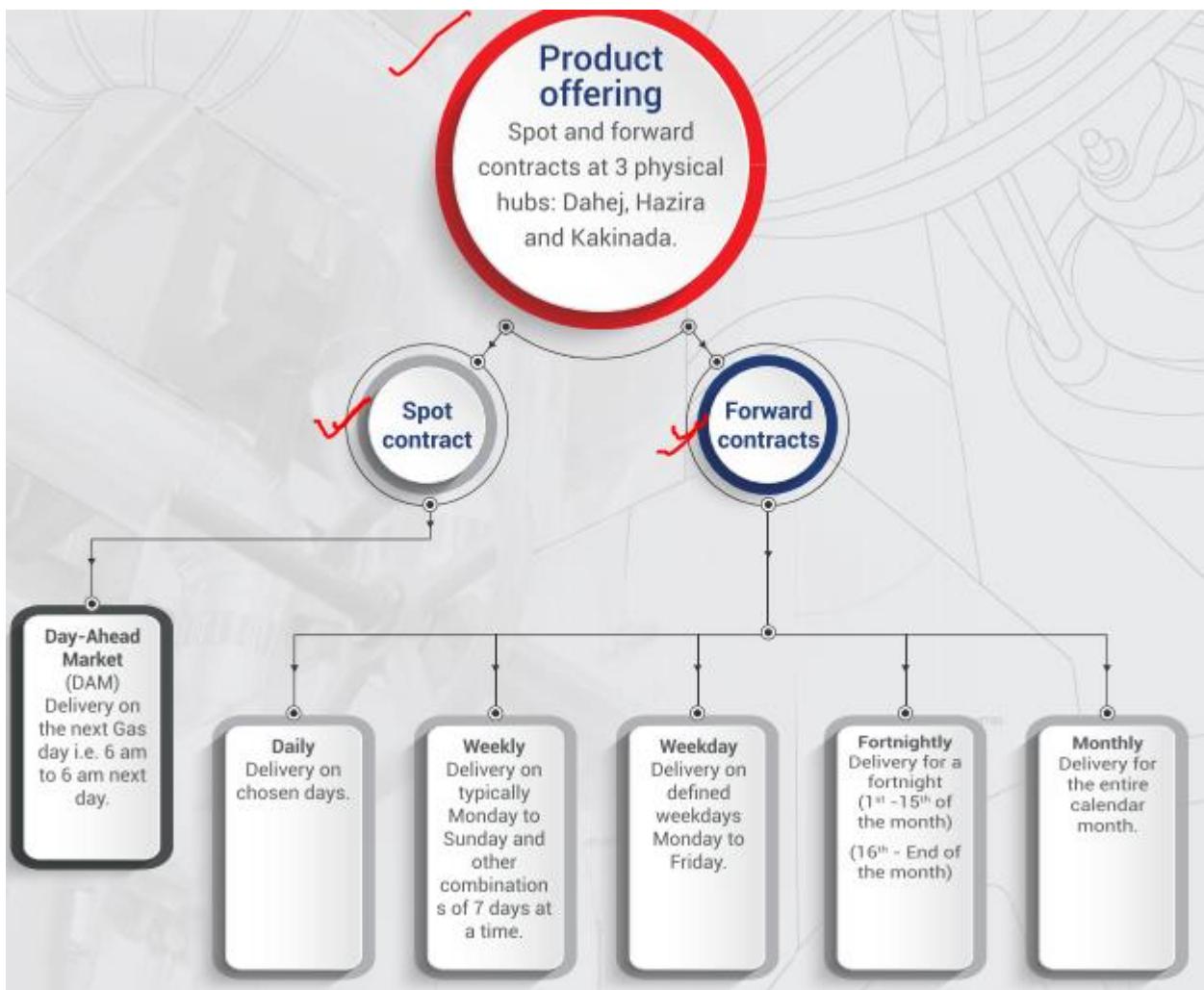
✓ OUR VISION
To lead India's transition towards a gas-based economy by architecting next generation solutions for natural gas trading and access.

01 1 st natural gas trading exchange ✓	02 Automated platform with cutting edge technology ✓
03 Efficient & transparent market driven price discovery mechanism ✓	04 Indigenous price discovery ✓

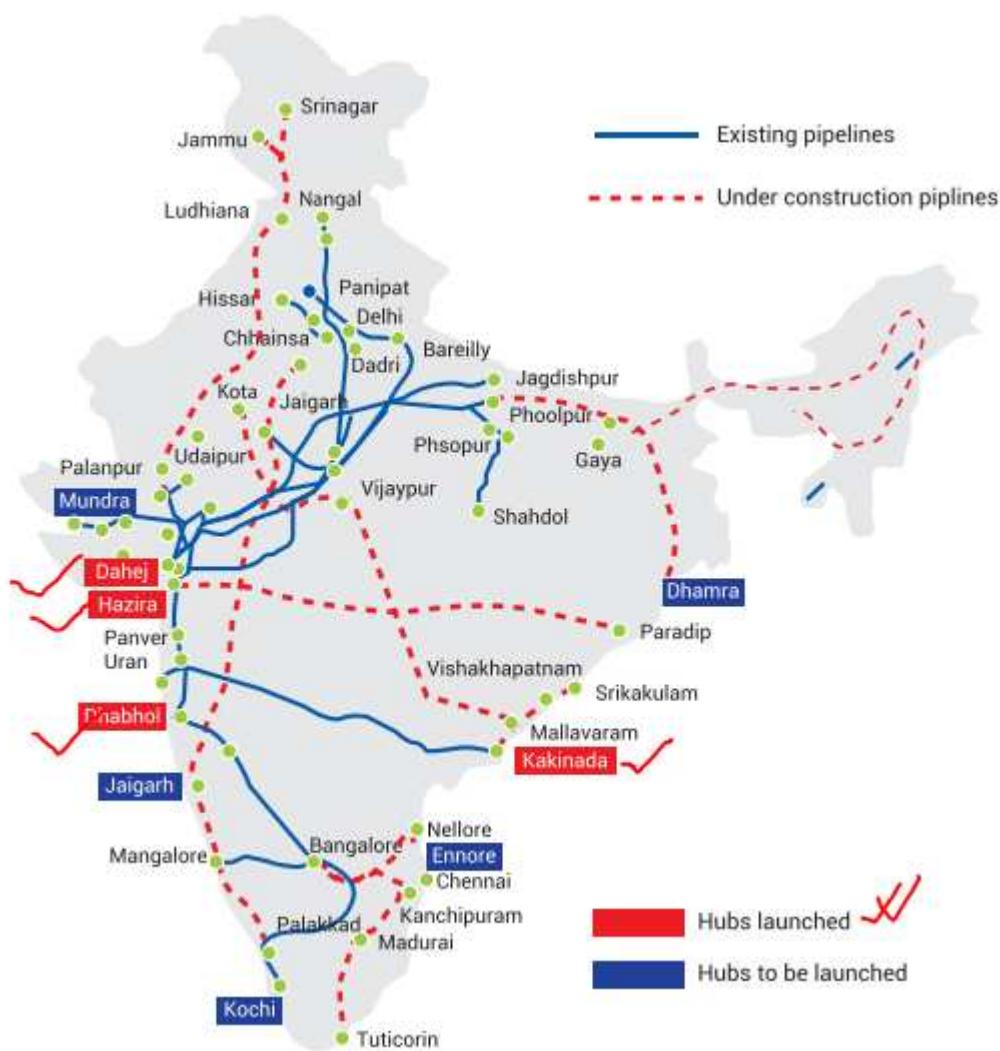
✓ Auction Mechanism

Prices are governed by the economic principle of demand & supply.

The IGX is a digital trading platform that will allow buyers and sellers of natural gas to trade both in the spot market and in the forward market **for imported (remember this) natural gas** across three hubs —**Dahej and Hazira in Gujarat, and Kakinada in Andhra Pradesh**. See below two diagrams.



Hub	Delivery point	Planned launch date
Dahej	Ex terminal, after regas	✓ Immediate
Hazira	Mora interconnection point	✓ Immediate
Kakinada	Gas land fall point (Kakinada/ Oduru)	✓ Immediate
Dabhol/Jaigarh	Interconnection point of 'Jaigarh-Dabhol tie-in connectivity pipeline' & 'DBPL' pipeline	Q2 2020
Kochi	Ex terminal, after regas	Q3 2020
Ennore	Ex terminal, after regas	Q3 2020
Mundra	Ex terminal, after regas	Q3 2020



✓ Will domestically produced natural gas also be bought and sold on the exchange?

No. The price of domestically produced natural gas is decided by the government. It will not be sold on the gas exchange.

However, following appeals by domestic producers that the prices set by the government are not viable given the cost of exploration and production in India, Petroleum Minister Dharmendra Pradhan has indicated that a new gas policy will include reforms in domestic gas pricing, and will move towards more market-oriented pricing.

Now, why this Exchange has been launched? Two important images below to explain this.

~~The GoI's vision of increasing the share of natural gas from 6% to 15% by 2030, defines the need for a market based mechanism.~~

Leveraging this opportunity, Indian Energy Exchange - the leading power exchange, is delighted to set-up Indian Gas Exchange (IGX) - the first nation-wide gas trading platform, which is equipped with cutting-edge technology.

~~Significant pain points exist in the current market which restrict the country to realize its full potential~~



No Transparency

in pricing of gas due to bundled contracts,
No visibility to consumers on element wise
pricing (commodity and transmission)-
lowering their ability to negotiate



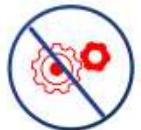
No Flexibility

for market players to procure gas on
day-ahead or week-ahead basis,
Depriving consumers of fine tuning
their requirement



No Direct access

to buyers to buy gas directly from the market,
increasing suppliers' bargaining power and
hence higher prices to consumers (specially to
marginal buyers)



High transaction costs

Negotiations, GTA signing, payment
settlements are time consuming



No Payment Security

Sellers exposed to counter party
default risk

How it will benefit?

Imported Liquified Natural Gas (LNG) will be regassified and sold to buyers through the exchange, removing the requirement for buyers and sellers to find each other. This will mean that buyers do not have to contact multiple dealers to ensure they find a fair price. **See below how nation will benefit from it?**

 IGX would provide value to the customers and serve the nations interest

Increased investments in E&P sector

- IGX would provide price signals to the market, attracting investments in upstream sector.



Optimal utilization of infrastructure

- IGX would also meet the latent demand, thus increasing the infrastructure utilization (terminal and pipelines).



Increased industrial growth

- Even small industries can use exchange to procure gas at competitive prices, increasing their utilization and spurring industrial growth.

Revival of gas-based power plants

- Exchange can provide gas at competitive rates for grid balancing purpose in upcoming high RE scenario



Reduction in fertilizer prices and subsidy bill

- Fertilizer industry can reduce their prices/subsidy burden on GoI by taking advantage of competitive prices at IGX



CGD companies can better serve customers-

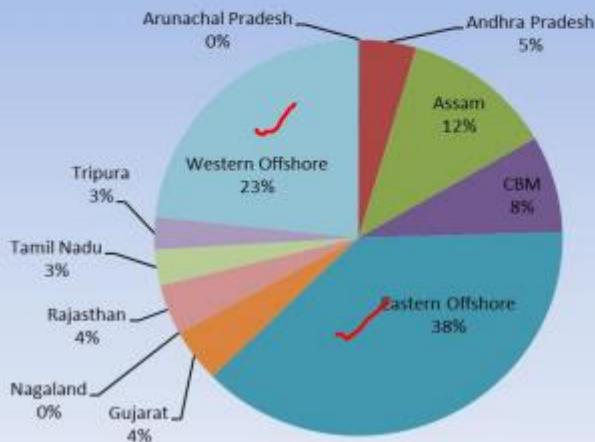
- By catering to variability in commercial & industrial demand in CGDs



Note this also:

The estimated reserves of Natural Gas in India as on 31.03.2018 stood at 1339.57 Billion Cubic Meters (BCM) as against 1289.70 BCM as on 31.03.2017 (Table 1.2).

Fig 1.4 :Estimated Reserves of Natural Gas in India as on 31.03.2018



Gas Consumption in India:

Select date on website

- In FY 2018-19, the total gas consumption in India was around 148.02 MMSCMD. The share of domestic gas and imported RLNG was about 48% & 52% respectively. Sector-wise gas consumption in FY 2018-19 is tabulated as under:

(Figures are in MMSCMD)

Sl. No.	Sector	Domestic gas	R- LNG	Total
1	City Gas Distribution (CGD)	14.36	10.91	25.27
2	Fertilizer	17.18	23.85	41.03
3	Power	25.11	8.07	33.18
4	Others- Industries -Steel, Petrochemical, Refinery etc.	14.05	34.49	48.54
	Total	70.70	77.32	148.02

** Source- PPAC

- In order to ensure the availability of natural gas at uniform delivered price to all grid connected Fertilizer (Urea) manufacturing units, the Government has implemented a policy of gas pooling mechanism-2015 for Urea sector. It has ensured uninterrupted supply of natural gas to Urea manufacturing plants leading to improve their efficiency.

Here, **City Gas Distribution (CGD) network** (including PNG network) in a specified Geographical Area (GA) of the country. CGD sector has four distinct segments – **Compressed Natural Gas (CNG) predominantly used as auto-fuel and Piped Natural Gas (PNG) used in domestic, commercial and Industrial segments.**

Re-gasified Liquefied Natural Gas (RLNG): Regasification is a process of converting liquefied natural gas (LNG) at -162°C (-260°F) temperature back to natural gas at atmospheric temperature.

Petroleum and Natural Gas Regulatory Board

The Petroleum and Natural Gas Regulatory Board (PNGRB) was constituted under **The Petroleum and Natural Gas Regulatory Board Act, 2006.**

THE PETROLEUM AND NATURAL GAS REGULATORY BOARD ACT, 2006

ACT NO. 19 OF 2006

[31st March, 2006.]

An Act to provide for the establishment of Petroleum and Natural Gas Regulatory Board to regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas so as to protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products and natural gas and to ensure uninterrupted and adequate supply of petroleum, petroleum products and natural gas in all parts of the country and to promote competitive markets and for matters connected therewith or incidental thereto.

The Board shall consist of a Chairperson, a Member (Legal) and three other members to be appointed by the Central Government.

Appeals against the decisions of PNGRB go before the Appellate Tribunals for Electricity. See below.

CHAPTER VI

APPEALS TO APPELLATE TRIBUNAL

30. Appellate Tribunal.—(1) Subject to the provisions of this Act, the Appellate Tribunal established under section 110 of the Electricity Act, 2003 (36 of 2003) shall be the Appellate Tribunal for the purposes of this Act and the said Appellate Tribunal shall exercise the jurisdiction, powers and authority conferred on it by or under this Act:

See one question of UPSC Prelims 2019 and put an end to this topic now.

94. Consider the following statements:

1. Petroleum and Natural Gas Regulatory Board (PNGRB) is the first regulatory body set up by the Government of India. — *very vague*
2. One of the tasks of PNGRB is to ensure competitive markets for gas.
3. Appeals against the decisions of PNGRB go before the Appellate Tribunals for Electricity. —

Which of the statements given above are correct?

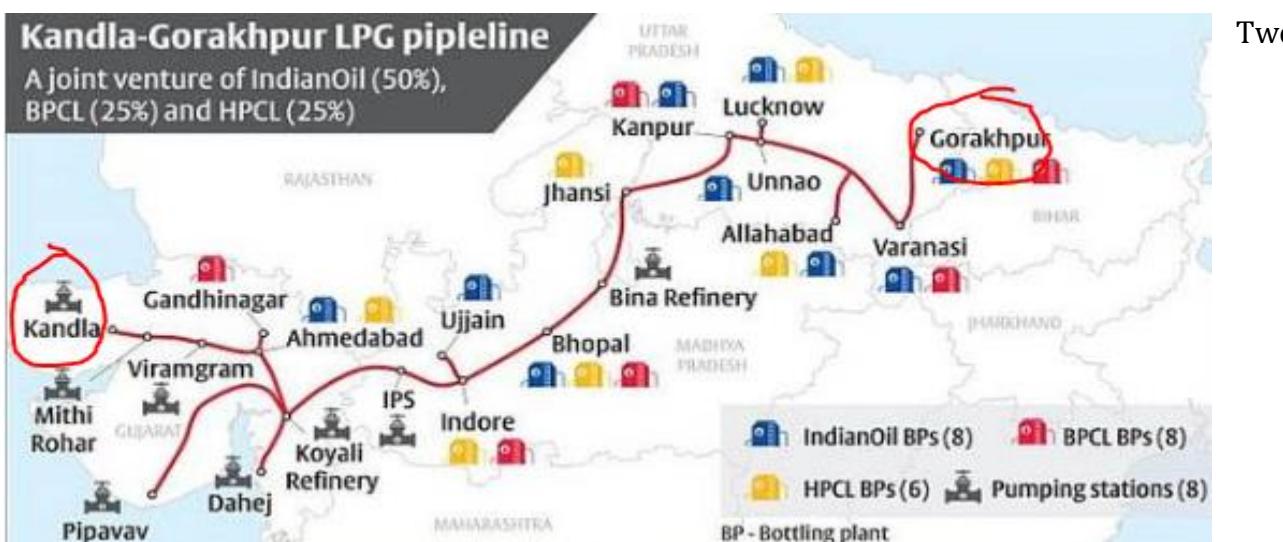
- (a) 1 and 2 only +
- (b) 2 and 3 only
- (c) 1 and 3 only +
- (d) 1, 2 and 3 +

*doesn't need any learning
But if you are in pressure
you will mark wrong.*

One news of August 2019, we are attaching here:

Oil PSUs to lay world's longest LPG pipeline between Kandla and Gorakhpur:

Indian Oil, Bharat Petroleum Corporation (BPCL) and Hindustan Petroleum Corp Ltd (HPCL) will be laying the world's longest (*that's why, it is important*) LPG pipeline, from Kandla (Gujarat) to Gorakhpur (UP).



Two important points here, you have to remember:

- Three states, **Gujarat, Madhya Pradesh and Uttar Pradesh** will be connected to the western coast from where LPG will be sourced and then will be sent to 22 bottling Plants of three above Oil Marketing Companies
- Of the three, **Indian Oil will hold 50 percent** and the other two OMCs will hold 25 per cent each.

36. Reindeer may have been domesticated 2,000 years ago

Link: <https://www.downtoearth.org.in/news/wildlife-biodiversity/global-eco-watch-reindeer-may-have-been-domesticated-2-000-years-ago-71882>



Very small news article but you should know.

Reindeer might have been domesticated and used for pulling sleds 2,000 years ago, a new study by the University of Alberta in Canada has found. In May and June of last year, an anthropologist from the university and his team found a number of artifacts that appeared to resemble reindeer harness as well as antler pieces at a site called Ust'-Polui in northern Siberia.

Radiocarbon dating of the items showed they were at least 2,000 years old. According to previous studies, reindeer domestication started only a few hundred years ago in northern

Europe, perhaps as early as the eleventh century in northern Siberia, based on evidence of genetic changes in reindeer.



Reindeer

Rangifer tarandus

CITATION

Gunn, A. 2016. *Rangifer tarandus*. The IUCN Red List of Threatened Species 2016: e.T2974A45235262. <https://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T2974A45235262.en>



37. Horseshoe Crab

Two important news regarding Horseshoe Crab. See below.

- Horseshoe crabs face an uncertain future in **Odisha**, their largest habitat in India, even as the world gets ready to celebrate the first-ever 'International Horseshoe Crab Day' on June 20, 2020.
- COVID vaccine development a new threat to horseshoe crabs

Tests for Coronavirus Vaccine Need This Ingredient: Horseshoe Crabs

Modern medicine still depends on this animal's blood to test for bacteria in vaccines. And an alternative test requires further study.

We will learn few things about Horseshoe crab.

Horseshoe crabs are a critical link to world health, biodiversity and hold cultural importance across the globe. One of their ecological functions is to lay millions of eggs on beaches to feed shorebirds, fish and other wildlife. Unfortunately, this ecological link can be broken in areas where population density is low.



There are total four species of Horseshoe crabs. The IUCN Red List of Threatened Species describes the American horseshoe crab *Limulus polyphemus* as vulnerable. And the three Asian horseshoe crab species (*Tachypleus tridentatus*, *T. gigas*, and *Carcinoscorpius rotundicauda*) are currently listed as data deficient. In India, they are the **mangrove horseshoe crab (C. rotundicauda)** and the **Indo-Pacific horseshoe crab (Tachypleus gigas)**.

Horseshoe crabs in Odisha are in danger as poachers kill them for their meat, that is popularly believed to have **aphrodisiac** (a food, drink, or other thing that stimulates sexual desire) **qualities**. Interesting. It is estimated that hundreds of horseshoe crabs have been killed in Odisha each year to supply their meat and shells to Jharkhand, Bihar, Chhattisgarh and other states.

The horseshoe crab was included on September 9, 2009 in the **Schedule IV of the Wild (Life) Protection Act, 1972, under which, the catching and killing of a horseshoe crab is an offence.**

Now, questions they can ask in any statement given in exam.

- Do Horseshoe crabs have become extinct in India?
- Do Horseshoe crabs found in western Ghats?
- Is there any species of HSC found in India?

You can easily answer now. So, when you read such species, don't think what to read in this. There is lot. Be careful!!

38. Gold Bond Scheme



Link: <https://www.livemint.com/money/personal-finance/gold-bonds-demand-dips-marginally-as-equity-market-rallies-11592559646186.html>

News was:

The third tranche of sovereign gold bonds saw people buying 23.88 lakh units worth ₹1,117 crore, as per the data released by the Reserve Bank of India (RBI). The number of units purchased was 6% lower than what was subscribed to in the May issue.

We will paste here everything relevant for Gold Bond Scheme. Go through it. There are total 20 points. Very small points in columns. Once you read, no need to read anything then.

Sl.No.	Item	Details
1	Product name	Sovereign Gold Bond 2019-20
2	Issuance	To be issued by Reserve Bank India on behalf of the Government of India.
3	Eligibility	The Bonds will be restricted for sale to resident individuals, HUFs, Trusts, Universities and Charitable Institutions.
4	Denomination	The Bonds will be denominated in multiples of gram(s) of gold with a basic unit of 1 gram.
5	Tenor	The tenor of the Bond will be for a period of 8 years with exit option after 5 th year to be exercised on the interest payment dates.
6	Minimum size	Minimum permissible investment will be 1 gram of gold.
7	Maximum limit	The maximum limit of subscribed shall be 4 KG for individual, 4 Kg for HUF and 20 Kg for trusts and similar entities per fiscal (April-March) notified by the Government from time to time. A self-declaration to this effect will be obtained. The annual ceiling will include bonds subscribed under different tranches during initial issuance by Government and those purchased from the Secondary Market.
8	Joint holder	In case of joint holding, the investment limit of 4 KG will be applied to the first applicant only.

Activ

9	Issue price	Price of Bond will be fixed in Indian Rupees on the basis of simple average of closing price of gold of 999 purity, published by the India Bullion and Jewellers Association Limited for the last 3 working days of the week preceding the subscription period. The issue price of the Gold Bonds will be Rs.50 per gram less for those who subscribe online and pay through digital mode.
10	Payment option	Payment for the Bonds will be through cash payment (upto a maximum of Rs. 20,000) or demand draft or cheque or electronic banking.
11	Issuance form	The Gold Bonds will be issued as Government of India Stock under GS Act, 2006. The investors will be issued a Holding Certificate for the same. The Bonds are eligible for conversion into demat form.
12	Redemption price	The redemption price will be in Indian Rupees based on previous 3 working days simple average of closing price of gold of 999 purity published by IBJA.
13	Sales channel	Bonds will be sold through Commercial banks, Stock Holding Corporation of India Limited (SHCIL), designated post offices (as may be notified) and recognised stock exchanges viz., National Stock Exchange of India Limited and Bombay Stock Exchange, either directly or through agents.
14	Interest rate	The investors will be compensated at a fixed rate of 2.50 percent per annum payable semi-annually on the nominal value.
15	Collateral	Bonds can be used as collateral for loans. The loan-to-value (LTV) ratio is to be set equal to ordinary gold loan mandated by the Reserve Bank from time to time.

Activ

16	KYC documentation	Know-your-customer (KYC) norms will be the same as that for purchase of physical gold. KYC documents such as Voter ID, Aadhaar card/PAN or TAN /Passport will be required. Every application must be accompanied by the 'PAN Number' issued by the Income Tax Department to individuals and other entities.
17	Tax treatment	The interest on Gold Bonds shall be taxable as per the provision of Income Tax Act, 1961 (43 of 1961). The capital gains tax arising on redemption of SGB to an individual has been exempted. The indexation benefits will be provided to long term capital gains arising to any person on transfer of bond.
18	Tradability	Bonds will be tradable on stock exchanges within a fortnight of the issuance on a date as notified by the RBI.
19	SLR eligibility	Bonds acquired by the banks through the process of invoking lien/hypothecation/pledge alone, shall be counted towards Statutory Liquidity Ratio.
20	Commission	Commission for distribution of the bond shall be paid at the rate of 1% of the total subscription received by the receiving offices and receiving offices shall share at least 50% of the commission so received with the agents or sub agents for the business procured through them.

39. Oman Is Building the Largest Oil Storage Facility in The Middle East

[Link: https://theprint.in/world/omans-plans-to-build-middle-easts-biggest-oil-tank-farm-moves-forward-after-7-years/443803/](https://theprint.in/world/omans-plans-to-build-middle-easts-biggest-oil-tank-farm-moves-forward-after-7-years/443803/)

Oman is building the region's largest oil storage facility, offering tanks to oil producers and traders. Dubbed the Ras Markaz Crude Oil Park, the storage facility is 600 miles from the Strait of Hormuz, the biggest oil chokepoint in the world.

Took this question to focus more on Map. No body will teach you this till you do somewhere wrong.

Note: One thing you have to keep this in mind, we follow and publish those current affairs which is important for your exam. We will cover every topic. Don't expect to learn topics on same day of release. We read, we analyze and then publish from best sources.



In the above map, you can see, Strait of Hormuz connects Persian Gulf and Gulf of Oman. You can see clearly, country south of Strait of Hormuz is Oman, not UAE.

40. Biomedical Waste Rules, 2016

Link: <https://www.hindustantimes.com/india-news/india-stares-at-biomedical-waste-crisis/story-SpPZrA1tutAAuYhE57p7UI.html>

Today, we will learn all important provisions of **Biomedical Waste Management Rules 2016**. *This can be bit boring topic, but this is very important because of new guidelines and handling of COVID Biomedical waste.*

*Before proceeding, just remember that these Rules are promulgated under **Environment Protection Act, 1986**. It simply means, under this Act, central government has been empowered to do anything for Bio-Medical Waste Management. So, centre formulates these Rules. For example, see section 6 of EPA Act, 1986.*

6 Rules to regulate environmental pollution.—(1) The Central Government may, by notification in the Official Gazette, make rules in respect of all or any of the matters referred to in section 3.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

- (a) the standards of quality of air, water or soil for various areas and purposes;
- (b) the maximum allowable limits of concentration of various environmental pollutants (including noise) for different areas;
- (c) the procedures and safeguards for the handling of hazardous substances;
- (d) the prohibition and restrictions on the handling of hazardous substances in different areas;
- (e) the prohibition and restrictions on the location of industries and the carrying on of processes and operations in different areas;
- (f) the procedures and safeguards for the prevention of accidents which may cause environmental pollution and for providing for remedial measures for such accidents.

Now, we will proceed towards Rules.

First of all, you should be very clear that legislation for the first time on Biomedical Waste Management Rules came in 1998, not in 2016, see below. Then we did several changes to it gradually.

**GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE**

NOTIFICATION

New Delhi, the 28th March, 2016

G.S.R. 343(E).—Whereas the Bio-Medical Waste (Management and Handling) Rules, 1998 was published vide notification number S.O. 630 (E) dated the 20th July, 1998, by the Government of India in the erstwhile Ministry of Environment and Forests, provided a regulatory frame work for management of bio-medical waste generated in the country;

And whereas, to implement these rules more effectively and to improve the collection, segregation, processing, treatment and disposal of these bio-medical wastes in an environmentally sound management thereby, reducing the bio-medical waste generation and its impact on the environment, the Central Government reviewed the existing rules;

After 1998, new rules were promulgated, called the **Bio Medical Wastes (Management and Handling) Rules 2011**. *It is not required to study 2011 Rules in detail. We will just see few differences between both the above- mentioned Rules.*

Table 1. BMW Rules 2011 vs. 1998 ✓

2011	1998
Every occupier generating BMW, irrespective of the quantum of wastes comes under the BMW Rules and requires to obtain authorisation	Occupiers with more than 1000 beds required to obtain authorisation
Duties of the operator listed	Operator duties absent
Categories of Biomedical Waste reduced to Eight	Biomedical waste divided in ten categories
Treatment and disposal of BMW made mandatory for all the HCEs	Rules restricted to HCEs with more than 1000 beds
A format for annual report appended with the Rules	No format for Annual Report
Form VI i.e. the report of the operator on HCEs not handing over the BMW added to the Rules	Form VI absent

Once again, new rules were formulated after 2011, called Biomedical Waste Management Rules 2016.

- a. The first distinction between the new rules and those prescribed in 2011 is their range of application. While in 2011, the 1998 rules were amended to include all persons who generate, collect, receive, store and transport biomedical waste, the 2016 rules bring more clarity by specifying that vaccination camps, blood donation camps, surgical camps and all other HCFs have been included.

1. **Short title and commencement.**- (1) these rules may be called the Bio-Medical Waste Management Rules, 2016.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. **Application.**

(1) These rules shall apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, ayush hospitals, clinical establishments, research or educational institutions, health camps, medical or surgical camps, vaccination camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs.

b. **These Rules shall not apply to:**

(2) These rules shall not apply to,-

Remember

- (a) radioactive wastes as covered under the provisions of the Atomic Energy Act, 1962(33 of 1962) and the rules made there under;
- (b) hazardous chemicals covered under the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 made under the Act;
- (c) solid wastes covered under the Municipal Solid Waste (Management and Handling) Rules, 2000 made under the Act;
- (d) the lead acid batteries covered under the Batteries (Management and Handling) Rules, 2001 made under the Act;
- (e) hazardous wastes covered under the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 made under the Act;
- (f) waste covered under the e-Waste (Management and Handling) Rules, 2011 made under the Act; and
- (g) hazardous micro organisms, genetically engineered micro organisms and cells covered under the Manufacture, Use, Import, Export and Storage of Hazardous Microorganisms, Genetically Engineered Micro organisms or Cells Rules, 1989 made under the Act.

c. **Pre-treatment** of the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilization on-site in the manner as prescribed by WHO or NACO.

4. **Duties of the Occupier**.- It shall be the duty of every occupier to-

- (a) take all necessary steps to ensure that bio-medical waste is handled without any adverse effect to human health and the environment and in accordance with these rules;
- (b) make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule I, to ensure that there shall be no secondary handling, pilferage of recyclables or inadvertent scattering or spillage by animals and the bio-medical waste from such place or premises shall be directly transported in the manner as prescribed in these rules to the common bio-medical waste treatment facility or for the appropriate treatment and disposal, as the case may be, in the manner as prescribed in Schedule I;
- (c) ~~pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilisation on-site in the manner as prescribed by the World Health Organisation (WHO) or National AIDS Control Organisation (NACO) guidelines and then sent to the common bio-medical waste treatment facility for final disposal;~~

d. Establish a Bar-Code System for bags or containers containing bio-medical waste for disposal.

8. Segregation, packaging, transportation and storage.-
(1) No untreated bio-medical waste shall be mixed with other wastes.

(2) The bio-medical waste shall be segregated into containers or bags at the point of generation in accordance with Schedule I prior to its storage, transportation, treatment and disposal.

(3) The containers or bags referred to in sub-rule (2) shall be labeled as specified in Schedule IV.

(4) ~~Barcode and global positioning system~~ shall be added by the Occupier and common bio-medical waste treatment facility in one year time.

e. The 2011 draft demarcated eight categories of biomedical waste (down from ten categories in the 1998 notification). **The 2016 notification further brings down the number of categories to four.** "Reduction in categories does not mean that a particular kind of biomedical waste is not being adhered to. What it means is that all types of wastes have been compiled in four categories for ease of segregation at a healthcare facility

f. State Government to provide land for setting up common bio-medical waste treatment and disposal facility

17. Site for common bio-medical waste treatment and disposal facility.-
(1) Without prejudice to rule 5 of these rules, the department in the business allocation of ~~land~~ assignment shall be responsible for providing suitable site for setting up of common biomedical waste treatment and disposal facility in the State Government or Union territory Administration.

g. Inclusion of emissions limits for Dioxin and furans

(t) ~~existing~~ incinerators to achieve the standards for treatment and disposal of bio-medical waste as specified in Schedule II for retention time in secondary chamber and **Dioxin and Furans** within two years from the date of this notification.

h. No occupier shall establish on-site treatment and disposal facility, if a service of 'common bio-medical waste treatment facility is available at a distance of seventy-five kilometer.

7. Treatment and disposal.-
(1) Bio-medical waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards provided in Schedule-II by the health care facilities and common bio-medical waste treatment facility.

(2) Occupier shall hand over segregated waste as per the Schedule-I to common bio-medical waste treatment facility for treatment, processing and final disposal:

Provided that the lab and highly infectious bio-medical waste generated shall be pre-treated by equipment like autoclave or microwave.

(3) ~~No occupier shall establish on-site treatment and disposal facility, if a service of 'common bio-medical waste treatment facility is available at a distance of seventy-five kilometer.~~

- i. Use of chlorinated plastic bags, gloves and blood bags is to be phased out by the HCF within two years to eliminate emission of dioxins and furans from burning of such wastes.

(d) phase out use of chlorinated plastic bags, gloves and blood bags within two years from the date of notification of these rules;

- j. Another improvement in the new rules is in the monitoring sector. While the 2011 rules have no provision for a monitoring authority, the 2016 rules state that the MoEF will review Health care facilities (HCFs) once a year through state health secretaries, the SPCB and the CPCB. The SPCB, in its turn, will oversee implementation through district level monitoring committees that will report to the State advisory Committee or the SPCB.

Moreover, according to the new rules, the advisory committee on biomedical waste management is now mandated to meet every six months.

✓ establish a system to review and monitor the activities related to bio-medical waste management, either through an existing committee or by forming a new committee and the Committee shall meet once in every six months and the record of the minutes of the meetings of this committee shall be submitted along with the annual report to the prescribed authority and the healthcare establishments having less than thirty beds shall designate a qualified person to review and monitor the activities relating to bio-medical waste management within that establishment and submit the annual report;

So, we are still left with some portion, Bio-Medical Waste Management (Amendment) Rules, 2018. [Pib Link](#).

Salient features of Bio-Medical Waste Management (Amendment) Rules, 2018 are as follows:

- a. Bio-medical waste generators including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, health care facilities, and clinical establishments will have to phase out chlorinated plastic bags (excluding blood bags) and gloves by March 27, 2019.
- b. All healthcare facilities shall make available the annual report on its website within a period of two years from the date of publication of the Bio-Medical Waste Management (Amendment) Rules, 2018.
- c. Operators of common bio-medical waste treatment and disposal facilities shall establish bar coding and global positioning system for handling of bio-medical waste in accordance with guidelines issued by the Central Pollution Control Board by March 27, 2019.

Hope so, we don't get more amendments and by reading all points above, you can solve any question now. All the best! Now moving to another important topic of the day.

41. Ancient algae play a role in building a healthy marine ecosystem

Link: <https://www.downtoearth.org.in/news/climate-change/ancient-algae-play-a-role-in-building-a-healthy-marine-ecosystem-study-71909>



Transmission Electron Microscope (TEM) image of Coccolithophores. Photo: India Science Wire

A study of a **microscopic ancient marine algae (Coccolithophores)** led by the National Centre for Polar and Ocean Research (NCPOR) has found that there is a decrease in the concentration of oceanic calcium carbonate (CaCO_3) in the southern Indian ocean.

This decrease in CaCO_3 is attributed to the increase in the concentration of another single-celled algae known as diatoms. This, in turn, will affect the growth and skeleton structure of coccolithophores, with potential significance for the world ocean ecosystem.

Importance of Coccolithophores.

Coccolithophores are single-celled algae living in the upper layers of the world's oceans. They have been playing a key role in marine ecosystems and the global carbon cycle for millions of years. Coccolithophores **calcify marine phytoplankton** that produces up to 40 per cent of open ocean calcium carbonate and **responsible for 20 per cent of the global net marine primary productivity.**

Coccolithophores build exoskeletons from individual CaCO_3 plates consisting of chalk and seashells building the tiny plates on their exterior. Though carbon dioxide is produced during the formation of these plates, **coccolithophores help in removing it from the atmosphere and ocean by consuming it during photosynthesis.** At equilibrium, coccolithophores absorb more carbon dioxide than they produce, which is beneficial for the ocean ecosystem.

National Centre for Polar and Ocean Research (NCPOR), in Goa.

 NCPOR
राष्ट्रीय धूवीय एवं समुद्री अनुसंधान केन्द्र
पृथ्वी विज्ञान मंत्रालय, भारत सरकार
NATIONAL CENTRE FOR POLAR AND OCEAN RESEARCH
Ministry of Earth Sciences, Government of India

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Home › Welcome to NCPOR

Welcome to NCPOR



National Centre for Polar and Ocean Research (NCPOR) is India's premier R&D institution responsible for the country's research activities in the Polar and Southern Ocean realms.

42. Invasion of Humans in the Forest Domain, Displacing Forest Species is The Major Factor For COVID-19': Manipur HC

Link: <https://www.thehindu.com/news/national/deforestation-leading-to-diseases-including-covid-19-says-manipur-hc/article31829270.ece>

 NATIONAL

Deforestation leading to diseases including COVID-19, says ~~Manipur HC~~



SPECIAL CORRESPONDENT

GUWAHATI, JUNE 15, 2020 02:23 IST
UPDATED: JUNE 15, 2020 02:38 IST

In a recent order, the High Court of Manipur directed the state authorities to take relevant steps for protection of environment, especially the forest cover of the state, to avoid the threat of animal borne diseases in the future.

Paragraph noted by the court:

"To believe that human beings are the dominant amongst all living species, fauna and flora, animals, mammals, bacteria, unicellular & multi-cellular organisms, etc. appears to be a misconception. Homo sapiens though a dominant species, cannot claim predominance as one species is interlinked to the other in their own cycle of life. It has to co-exist within limits thereby maintaining the balance in nature. The indiscriminate population fuelled deforestation and unnecessary animal human contact appears to be the cause of the present pandemic which could have been otherwise avoided."

The court observed that destruction of forests and invasion/intrusion of human beings in the forest domain displacing forest species appears to be a major factor for the series of diseases like the present COVID-19.

 In this backdrop the bench has ordered the state authorities:

- to take immediate measures to arrest wild fires which appear to be man made in many cases;
- to arrest the illegal encroachment of forest areas for human habitations;
- to protect wild animals, birds, flora and fauna as provided under the Acts and Rules;
- to take up afforestation of lands which have been subjected to deforestation by various means including forest fires;
- boundary marking of forest areas by warning signs and monitoring in such manner as to avoid human contact with the wild animals, birds, flora and fauna other than for scientific research and studies.

Few important topics related to Prelims we will study here:

Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

The court said that the funds collected by the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) should be utilized to improve the forest cover in the state.

Introduction:

In India, Forest land can be diverted for non-forest purposes such as construction of dams, mining and other developmental activities only if the government permits. Since this diversion of forest land results in loss of biodiversity which in turn affects wildlife as well as geographical parameters such as climate and terrain, compensatory afforestation is also mandated in the law. In other words, to compensate for the losses incurred, the government made compensatory afforestation mandatory.

Whenever forest land is diverted for non-forest purposes, it is mandatory under the **Forest (Conservation) Act, 1980** that an equivalent area of non-forest land has to be taken up for compensatory afforestation.

 **2. Restriction on the dereservation of forests or use of forest land for non-forest purpose.—** Notwithstanding anything contained in any other law for the time being in force in a State, no State Government or other authority shall make, except with the prior approval of the Central Government, any order directing—

- (i) that any reserved forest (within the meaning of the expression "reserved forest" in any law for the time being in force in that State) or any portion thereof, shall cease to be reserved;
- (ii) that any forest land or any portion thereof may be used for any non-forest purpose.

An undertaking to pay for Compensatory Afforestation (CA) activities is also mandatory for clearance.

APPENDIX (See Rule 6)**FORM – ‘A’****Form for seeking prior approval under section 2 of the proposals by the State Governments and other authorities****PART-I****(to be filled up by user agency)**

1. Project details:

- (i) Short narrative of the proposal and project/scheme for which the forest land is required.
- (ii) Map showing the required forest land, boundary of adjoining forest on a 1:50,000 scale map.
- (iii) Cost of the project.
- (iv) Justification for locating the project in forest area.
- (v) Cost-benefit analysis (to be enclosed).
- (vi) Employment likely to be generated.

2. Purpose-wise break-up of the total land required:

3. Details of displacement of people due to the project, if any:

- (i) Number of families.
- (ii) Number of Scheduled Castes/Scheduled Tribe families
- (iii) Rehabilitation plan (to be enclosed)

4. Whether clearance under Environment (Protection) Act, 1986 required? (Yes/No).

5. Undertaking to bear the cost of raising and maintenance of compensatory afforestation and/or penal compensatory afforestation as well as cost for protection and regeneration of Safety Zone, etc. as per the scheme prepared by the State Government (undertaking to be enclosed).

6. Details of Certificates/documents enclosed as required under the instructions.

Signature

(Name in Block letters)

Compensatory Afforestation Fund Act, 2016 came into force from 30 September 2018. The Act established a **National Compensatory Afforestation Fund** under the Public Account of India and **State Compensatory Afforestation Fund** under the Public Account of each state. The payments made for compensatory afforestation, net present value and others related to the project will be deposited in the fund. The State Funds will receive 90% of the payments while National Fund will receive remaining 10%.

CHAPTER II

~~ESTABLISHMENT, MANAGEMENT AND UTILISATION OF NATIONAL COMPENSATORY AFFORESTATION FUND AND STATE COMPENSATORY AFFORESTATION FUNDS~~

3. Establishment of National Fund.—(1) With effect from such date as the Central Government may, by notification in the Official Gazette, appoint in this behalf, there shall be established for the purposes of this Act, a special Fund to be called the “National Compensatory Afforestation Fund” under the public account of India.

(2) The National Fund shall be under the control of the Central Government and managed by the National Authority in such manner as may be prescribed.

✓ 4. Establishment of State Fund.—(1) With effect from such date as each State Government may, by notification in the Official Gazette, appoint in this behalf, there shall be established for the purposes of this Act, a special Fund to be called the “State Compensatory Afforestation Fund-..... (name of State)” under public accounts of such State:

Provided that in case of Union territory having no legislature, such fund shall be established under the public account of Union of India with effect from such date as the Union territory Administration may, by notification in the Official Gazette, appoint in this behalf.

It also established Compensatory Afforestation Fund Management and Planning Authority (CAMPA).

CHAPTER III

CONSTITUTION OF NATIONAL AUTHORITY AND STATE AUTHORITIES

✓ Constitution of National Authority.—(1) With effect from such date as the Central Government may, by notification in the Official Gazette, appoint in this behalf, there shall be constituted a National Authority to be called the “National Compensatory Afforestation Fund Management and Planning Authority”.

(2) The National Authority shall manage and utilise the National Fund for the purposes of this Act.

(3) The National Authority shall consist of a governing body and shall be assisted by an executive committee, monitoring group and administrative support mechanism.

(4) The governing body of the National Authority shall consist of the following, namely:—

(i) Minister for Environment, Forest and Climate Change, Government of India—
Chairperson, *ex officio*;

For states: Chief Minister of the State and in case of a Union territory having no legislature, the Lieutenant Governor or the Administrator, as the case may be—**Chairperson, ex officio.**

Also remember,

According to National Forest Policy 1952, the mandate was set to preserve 33 per cent of forest cover in the total geographical area.

India has set a target of bringing 33 per cent of its geographical area under forest cover. The total forest cover (TFC) of India in 2019 is 21.67 per cent of the total geographical area (TGA) of the country as against 21.54 per cent (of TGA) in 2017.

43. Keeladi Excavations:

Link: <https://timesofindia.indiatimes.com/city/chennai/keeladi-excavations-archaeologists-find-childs-skeleton/articleshow/76469136.cms>

This Keeladi is consistent in news. You can see below. In all newspaper, magazines, it is appearing.

~~Keeladi excavations: Archaeologists find child's skeleton~~

Padmini Sivarajah | TNN | Jun 19, 2020, 19:54 IST



A-

A+

Keeladi excavations: Gold coin unearthed

Padmini Sivarajah | TNN | Jun 17, 2020, 15:13 IST



~~Keeladi: Unearthing the 'Vaigai Valley' Civilisation of Sangam era Tamil Nadu~~



S. Annamalai

NOVEMBER 02, 2019 00:15 IST

UPDATED: NOVEMBER 02, 2019 12:16 IST

Keeladi excavation and different dimensions of the 'language war'

"The findings have again proved that Tamil is the oldest language"

Web Desk | September 23, 2019 14:31 IST

So first of all, remember, **this place is recently in news as excavation site. So, if any question as appeared in UPSC Prelims 2019, see below, you can attempt that.**

 What is common to the places known as Aliyar, Isapur and Kangsabati?

- (a) Recently discovered uranium deposits
- (b) Tropical rain forests
- (c) Underground cave systems
- (d) Water reservoirs

Why so much controversy around this site? Just to have basic idea.

The Keeladi site, since its discovery has been shrouded in controversies with several Dravidian and Left ideologues claiming that the archaeological finds prove that the Indus Valley Civilisation was a “Dravidian” culture and an independent “secular” Tamil civilization.

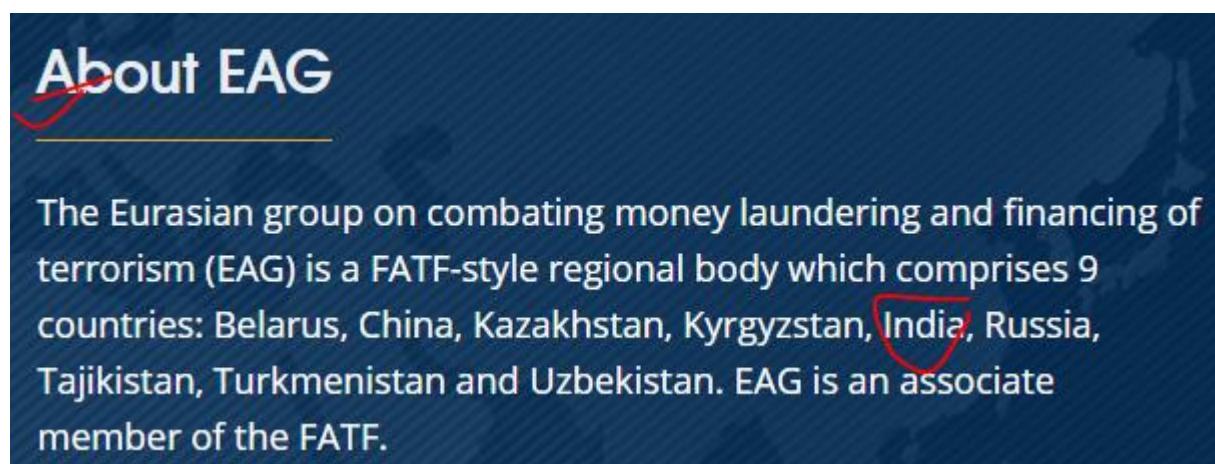
The thing is that we don't need to turn to history to appreciate the diversity that is a part of the Indian ethos. Unlike many other countries where diversity was rooted out with brutal violence, India continues to be diverse in cultural, linguistic and ethnic terms.

Many different cultures have dotted the landscape of this country from north to south and east to west, and they all have contributed to the current Indian identity. To define a culture in narrow racial terms, which didn't define itself so, is cheap politicking.

44. Eurasian Group on Combating Money Laundering and Financing of Terrorism (EAG)

Link: <https://www.thehindu.com/news/national/fatf-indian-officials-attend-virtual-eag-plenary-meet/article31871464.ece>

The EAG's founders are six states of the Eurasian region that signed the Declaration at the Founding Conference in Moscow in 2004. One year later, Uzbekistan joined the EAG as a member state, followed by Turkmenistan **and India five years later.**



About EAG

The Eurasian group on combating money laundering and financing of terrorism (EAG) is a FATF-style regional body which comprises 9 countries: Belarus, China, Kazakhstan, Kyrgyzstan, India, Russia, Tajikistan, Turkmenistan and Uzbekistan. EAG is an associate member of the FATF.

Membership in the EAG is open to other countries of the region which:

- a. take active steps to develop and enforce laws in the sphere of **Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT)** in compliance with the FATF Recommendations
- b. assume the obligation of participating in the EAG mutual evaluation programs, and
- c. assume the obligation of actively participating in the plenary meetings and other events of the EAG.

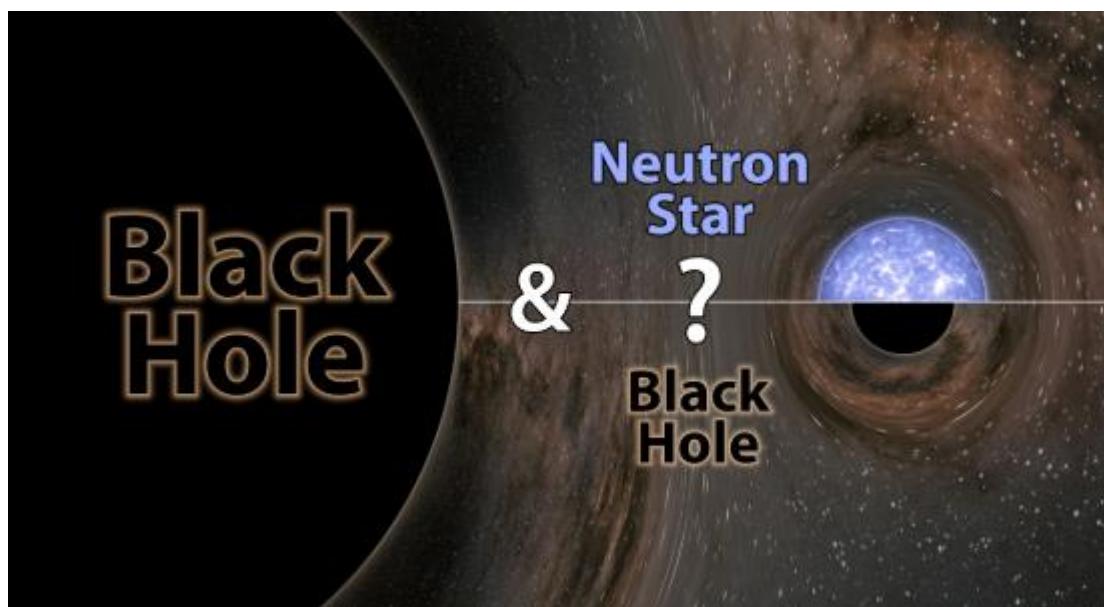
Membership in a FATF-style regional body, which the EAG is, is a condition for membership in the FATF.

The main tasks of the EAG:

- assisting member-states in implementing the 40 FATF anti-money laundering Recommendations and the 9 Special FATF Recommendations on combating terrorist financing (FATF 40 9 Recommendations); ✓
- developing and conducting joint activities aimed at combating money laundering and terrorist financing; ✓
- implementing a program of mutual evaluations of member-states based on the FATF 40 9 Recommendations, including assessment of the effectiveness of legislative and other measures adopted in the sphere of AML/CFT efforts; ✓
- coordinating international cooperation and technical assistance programs with specialized international organizations, bodies, and interested states; ✓
- analyzing money laundering and terrorist financing trends (typologies) and exchanging best practices of combating such crimes taking into account regional specifics. ✓

45. Spotted in New Gravitational Wave Discovery

Link: <https://science.thewire.in/the-sciences/ligo-virgo-gravitational-waves-gw190814-light-black-hole-heavy-neutron-star-mass-gap/>



In the early hours of August 15, 2019, as most of India slept in anticipation of a national holiday and the usual Independence Day celebrations the following morning, three gravitational wave detectors in the US and Italy observed one of the strangest signals to date.

About the twin detectors

The twin Advanced LIGO detectors in the US and the Virgo detector in Italy are the most precise measuring devices ever built. They can sense extremely tiny disturbances in the fabric of spacetime called gravitational waves, created when massive bodies like two black holes or neutron stars rapidly spiral in and merge.

Since the first detection of a binary black hole merger in September 2015, which signalled the start of a new era of astronomy, the LIGO-Virgo collaboration has reported the observation of multiple binary black hole and binary neutron star mergers.

About new Signal.

But the Independence Day signal, whose details the collaboration **announced recently**, was exceptional.

Officially designated GW190814, this signal originated about 800 million years ago – or 800 million lightyears away – from the inspiral and merger of two compact objects. The heavier of these objects was a black hole of 23 solar masses (i.e. 23-times as massive as the Sun), while its companion had a mass of 2.6 solar masses. The gravitational waves from this event travelled at the speed of light and passed through Earth on August 15, 2019, at around 2:40 am IST. And it immediately stood out from all previous LIGO-Virgo detections because of **two outstanding features**.

- a. First, with the heavier object weighing nine times more than its companion, this is the most asymmetric system ever observed using gravitational waves.
- b. Second, the lighter object of 2.6 solar masses is either the lightest black hole or the heaviest neutron star ever observed in a system of two compact objects. And we're not sure which one it is.

See video of merger. [Click here](#)

The significantly **different masses** of the two companions also challenge the existing understanding of how such systems are formed. With GW190814, we seem to have uncovered a new sub-population of compact binary mergers. Such systems are expected to form much less frequently than a system with two black holes or two neutron stars. But when they do form, they are most likely to originate in young, dense star clusters and in active galactic nuclei (galaxies with unusually energetic activity at their centres). It's also possible that the lighter object itself is the product of a merger of two even smaller compact objects.

Neutron Star or Black Hole? Scientists are already puzzled in this. We won't waste time. Just we will understand one term here: "Mass Gap".

~~Collision between black hole and 'mysterious object' puzzles astronomers~~

Ripples in space-time hint at a black hole or a neutron star like we've never seen before.

~~Neutron star or black hole?~~ *No need to go deep into these topics. Just basic understanding*

Astronomers have long had a hard time explaining why they haven't been able to find black holes lighter than 5 solar masses. At the same time, current theoretical models about the internal structures of neutron stars predict that their maximum allowed mass should be around 2 solar masses.

The difference between these two limits has created the idea of a 'mass gap' - a region in the population of objects that were once stars, like black holes and neutron stars, a.k.a. the stellar graveyard, devoid of objects within 2 to 5 solar masses.

This discovery is connected to Albert Einstein's theory of general relativity,

Finally, GW190814 has allowed us to test several predictions of **Albert Einstein's theory of general relativity**, including the multipolar structure of gravitational radiation.

When you pluck a guitar string, the sound produced is dominated by the frequency of the plucked note. But the overall sound is enriched by the presence of its overtones, leading to a colourful acoustic experience. Similarly, a gravitational wave signal contains signatures of overtones, or higher harmonics, of its fundamental frequency, especially if the two inspiralling (Describing the paths of a pair of binary stars that are losing energy, and spiralling in towards each other) objects have different masses.

Since GW190814 is mass-wise the most asymmetric detection till date, we found much stronger evidence for the presence of higher harmonics, or higher multipoles of gravitational radiation, in the underlying signal. **This is a wonderful validation of the theory of general relativity.**

~~Indian contribution~~

Various research institutes in India are part of the LIGO Science Collaboration, and researchers at many of them contributed to the analysis of different aspects of GW190814.

Scientists at IIT ~~G~~andhinagar and the Chennai ~~M~~athematical Institute teamed up to help confirm the strong signature of higher harmonics in the signal.

Researchers at the International Centre for Theoretical Sciences, Bengaluru, helped confirm that the observed signal was consistent with predictions of the theory of general relativity.

Several members of the Indian community have also made more long-standing contributions that the LIGO-Virgo collaboration has used to model gravitational wave signals and analyse the data.

46. BeiDou: China launches final satellite in challenge to GPS

China has successfully put into orbit the final satellite in its BeiDou-3 navigation system, further advancing the country as a major power in space.

Recent launch will allow China to no longer rely on the US government-owned Global Positioning System (GPS). You don't need to know anything more about this news.

Few things we will see.

- Name of Navigation Satelite of other countries
- India's Navigation System

Galileo is a Global navigation satellite system (GNSS) owned and operated by the **European Union**.

GLONASS is a global GNSS owned and operated by the Russian Federation. The fully operational system consists of 24+ satellites.

Quasi-Zenith Satellite System (QZSS) is a regional Global navigation satellite system (GNSS) owned by the Government of Japan and operated by QZS System Service Inc. (QSS). QZSS complements GPS to improve coverage in East Asia and Oceania. Japan plans to have an operational constellation of 4 satellites by 2018 and expand it to 7 satellites for autonomous capability by 2023.

IRNSS is a regional GNSS owned and operated by the **Government of India**. IRNSS is an autonomous system designed to cover the Indian region and 1500 km around the Indian

mainland. India renamed IRNSS as the Navigation Indian Constellation (NavIC, meaning "sailor" or "navigator").

We will see IRNSS in bit detail.

Introduction

Indian Regional Navigation Spacecraft System (IRNSS) is the Indian navigation system which envisages establishment of regional navigation system using a **combination of GEO and GSO spacecraft**. IRNSS system is expected to provide position accuracy of better than 20 m over Indian region and an area **extending about 1500 sq. km around India**.



Figure 9: Illustration of the IRNSS coverage which includes an area of ~1500 km around the Indian landmass (image credit: ISRO)

IRNSS constellation consists of **three Geostationary Earth Orbit (GEO) spacecraft and four spacecraft in Geosynchronous orbit** inclined at 29 deg. It would provide two types of services, namely, Standard Positioning Services (SPS) - provided to all users - and Restricted Services (RS), provided to authorized users. **So, we have total 7 Satellites (A to G)**. But we have launched H and I also. Why?? See note once below.

Note: *The 8th navigation satellite IRNSS-1I will be a replacement in the NavIC constellation for the 1,425 kg IRNSS-1H that failed to eject out of the PSLV rocket on 31 August, 2017 to its intended orbit as its heat shield failed to separate even about 20 minutes after it was launched.*

IRNSS-1H was India's first satellite to be assembled, integrated and tested by private firms under ISRO supervision and was intended to replace the failed IRNSS-1A and complete the NAVIC constellation. So, don't get confused now.

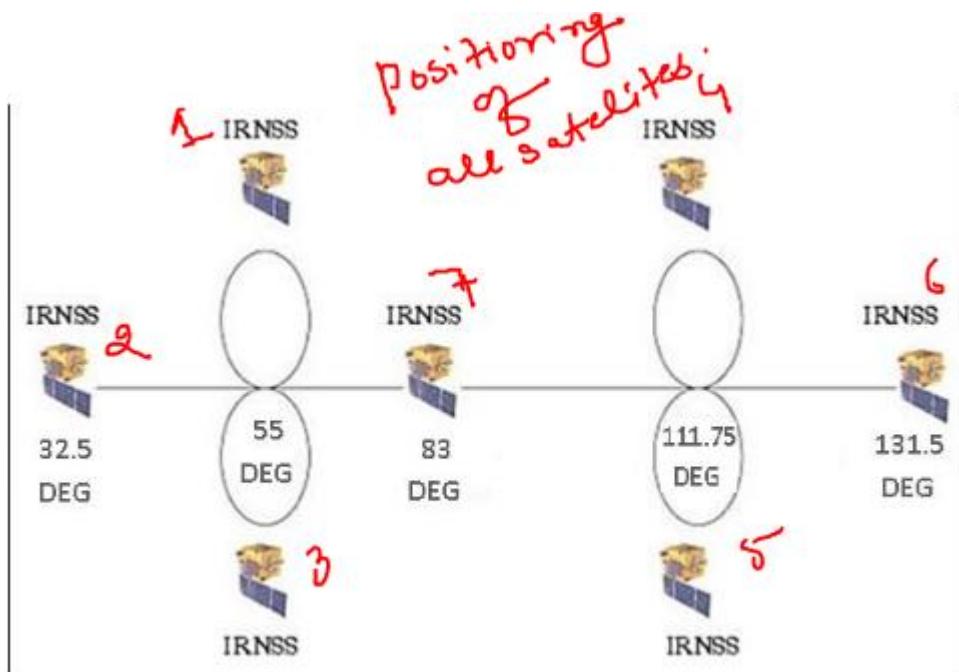


Figure 5: Alternate projection of IRNSS constellation with the GSO spacecraft at their latitudinal extremities
(image credit: ISRO)

Have we launched all seven satellites?? YES.

With IRNSS-1G launch, India completes and renames its navigation constellation

April 29, 2016 - By GPS World Staff

0 Comments

Est. reading time: 1:30

Apr 28, 2016

IRNSS-1G

IRNSS-1G is the seventh navigation satellite of the seven satellites constituting the IRNSS space segment. Its predecessors, IRNSS-1A, 1B, 1C, 1D, 1E and 1F were launched by PSLV-C22, PSLV-C24, PSLV-C26, PSLV-C27, PSLV-C31 and PSLV-C32 in July 2013, April 2014, October 2014, March 2015, January 2016 and March 2016 respectively. Like all other IRNSS satellites, IRNSS-1G also has a lift-off mass of 1425 kg. The configuration of IRNSS-1G too is the same as IRNSS-1A, 1B, 1C, 1D, 1E and 1F.

 Some applications of IRNSS are:

- Terrestrial, Aerial and Marine Navigation
- Disaster Management
- Vehicle tracking and fleet management
- Integration with mobile phones
- Precise Timing
- Mapping and Geodetic data capture
- Terrestrial navigation aid for hikers and travellers
- Visual and voice navigation for drivers

47. How Patanjali's Unilateral Declaration of Discovering COVID-19 Cure Violates Law?

Link: <https://www.livelaw.in/columns/how-patanjalis-unilateral-declaration-of-discovering-covid-19-cure-violates-law-158836>

Patanjali's founder Ramdev announced that they have developed 100% cure for the COVID-19 through "Coronil and Swasari" medicines. **Patanjali's publicity of the COVID-19 cure is fraught with several legal issues, which will be discussed below:**

Violation of AYUSH Ministry's directive of April 21

- a. On April 21, the Ministry of AYUSH, while giving nod for research for COVID-19 treatment using traditional medicine systems, had imposed several conditions. As per these conditions, it is mandatory for the institution to "apprise the Ministry of Ayush, Govt of India about the research developments".
- b. Going by the response of the AYUSH Ministry, it is clear that the Ministry was kept in the dark about the whole process adopted by Patanjali. Facts of the claim and details of the stated scientific study are not known to the Ministry.
- c. **Therefore, the unilateral declaration without prior consultation with the Ministry violates the April 21 directive.**

Violation of directives against advertisements of false claims of COVID-19 cure

- a. On March 24, the Union Home Ministry, invoking powers under the National Disaster Management Act, had declared that making of false claims with respect to COVID will be a punishable offence.
- b. Following this, the AYUSH Ministry issued a directive on April 1, invoking powers under the under Section 33 P of the Drugs and Cosmetics Act, 1940, to stop and prevent publicity and advertisement of AYUSH-related claims for COVID-19 treatment in print, TV and electronic media and directed the State/UT authorities to take necessary action against the persons/agencies involved in contravening the relevant legal provisions and the aforesaid guidelines of NDMA.
- c. **Publication of unilateral claims about discovery of COVID-19 cure, before due verification and approval by statutory authorities, would fall within the ambit of 'false claims'.**

Violation of Drugs and Cosmetics Act and Rules

As per the government Authority:

"Divya Pharmacy did not apply for license of any kind of medicine related to Corona nor were they given any license in this regard. The license was issued only for immunity booster kits and fever medicine. But now that it has come to the attention of the AYUSH department, a notice will be issued to Divya Pharmacy. If their reply is not satisfactory then their current licenses will be canceled"

If this is the case, it will attract the offence of 'misbranding of drugs' under Section 33E read with 33I of the Drugs and Cosmetics Act, 1940.

Prohibition on advertisement of Ayurveda, Siddha, Unani drugs

- a. In 2018, the Central Government amended the Drugs and Cosmetic Rules to specifically prohibit the advertisement of any AYUSH drugs for the use of "diagnosis, cure, mitigation, treatment or prevention of any disease, disorder, syndrome or condition". This means that AYUSH drugs cannot be advertised for therapeutic purposes.
- b. This was done by inserting Rule 170 to the Drugs and Cosmetic Rules, 1945 by way of Drugs and Cosmetics (Eleventh Amendment) Rules 2018. The rule said :4
"The manufacturer or his agent, of Ayurvedic, Siddha or Unani drugs, shall not participate in the publication of any advertisement relating to any drug for the use of diagnosis, cure, mitigation, treatment or prevention of any disease, disorder, syndrome or condition". The Rules permitted advertisement of AYUSH drugs for non-therapeutic purposes, after obtaining prior permission.
- c. Evidently, Patanjali's announcements violate this strict embargo on the advertisement of Ayurveda drugs for therapeutic purposes.

Violation of Drugs and Magic Remedies (Objectionable Advertisements Act), 1954

- a. The undisputed fact here is that the claims of Patanjali are yet to be verified by the AYUSH Ministry, which is the central regulatory authority with respect to Ayurvedic drugs.
- b. Therefore, the widespread publicity of unverified claims attracts the penal provisions of the Drugs and Magic Remedies (Objectionable Advertisements Act), 1954, which was enacted to protect gullible people from falling prey to dubious claims of cure.

So, Patanjali has already committed several legal violations by publicizing the drug without due verification.

48. Japan to rename islands disputed with China

A local council- assembly of Ishigaki city- in southern Japan has voted to rename an area, including islands disputed with China and Taiwan, a move Beijing denounced as illegal and a "serious provocation".



The disputed islands are known as the Senkaku in Japan and the Diaoyu in China. The Senkaku island chain dispute with Japan is not the only territorial and maritime dispute that China has long had with many of its neighbours.

The disputes include islands, reefs, banks and other features in the South China Sea including **Spratly Islands (with Vietnam, Philippines, Malaysia, Brunei, Taiwan), Paracel Islands (Vietnam), Scarborough Shoal (Philippines), and Gulf of Tonkin (Vietnam).**

Don't read Treaty, History regarding this. No use. UPSC will never ask. If you write such things, in the end, notebook will get very thick and you won't study anything even map. So, learn only what is required. Instead, we will learn here few important maps here.

- a. All Four Islands of Japan
- b. Sa of Japan
- c. Disputed South China Sea
- d. Kuril Island, another disputed Island between Japan and Russia







49. Odisha starts project to conserve Bhitarkanika fishing cats

Link: <https://www.downtoearth.org.in/news/wildlife-biodiversity/odisha-starts-project-to-conserve-bhitarkanika-fishing-cats-71928>



The Odisha forest department has started a two-year conservation project for fishing cats in Bhitarkanika National Park in Kendrapara district. The species is listed as '**vulnerable**' on the International Union for Conservation of Nature's Red List. This means it faces a high threat of extinction in the wild.



Fishing Cat

Prionailurus viverrinus

CITATION

Mukherjee, S., Appel, A., Duckworth, J.W., Sanderson, J., Dahal, S., Willcox, D.H.A., Herranz Muñoz, V., Malla, G., Ratnayaka, A., Kanti Mahanti, M., Thudugala, A., Thaung, R. & Rahman, H. 2016. *Prionailurus viverrinus*. The IUCN Red List of Threatened Species 2016: e.T18150A50662615. <https://dx.doi.org/10.2305/IUCN.UK.2016-2.RLTS.T18150A50662615.en>. Downloaded on 24 June 2020.



The United Nations Convention on International Trade in Endangered Species (CITES) lists the fishing cat on Appendix II in Article IV of CITES: This governs international trade in this species. The species is also classified under the first schedule of the Indian Wildlife (Protection) Act, 1972. Offences under the first schedule attract the maximum penalties under the law.

Fishing cats hunt fish and crustaceans for food from the park's water bodies: They dive in to catch prey with their hooked claws. They can also hunt livestock and poultry in villages near forests and have also known to encroach human habitations.

50. United Nations Arms Trade Treaty

Link: <https://economictimes.indiatimes.com/news/defence/china-to-join-un-arms-trade-treaty-enhance-world-peace/articleshow/76510217.cms>

News is, recently, China has decided to join the United Nations Arms Trade Treaty (UN-ATT) to regulate its arms sales. China's move comes after the USA announced to pull out of the ATT in 2019. In August 2019, the USA along with Russia withdrew from the Intermediate-Range Nuclear Forces Treaty, 1987. In May 2020, USA announced to exit the Open Skies Treaty (OST).

Now, we will learn about Arms Trade Treaty

The landmark Arms Trade Treaty (ATT), regulating the international trade in **conventional arms – from small arms to battle tanks, combat aircraft and warships** – entered into force on **24 December 2014**. Before the adoption of the landmark Arms Trade Treaty (ATT) by the

General Assembly, there was no global set of rules governing the trade in conventional weapons.

Through the ATT, States have agreed on robust international standards to help guide governments in deciding whether to authorize arms transfers. It provides for cooperation and assistance to help countries develop adequate regulatory systems, and safe weapons stockpiles.

Countries part of the UN Arms Trade Treaty:

105 states have ratified to the ATT, as of September 2019. These countries include 5 of the world's top 10 arms producers. The 5 states part of the treaty are:

- a. France
- b. United Kingdom
- c. Italy
- d. Germany
- e. Spain

India has not signed this treaty.

Why India is not a part of the Arms Trade Treaty?

As soon as the ATT process was started, India had maintained that such a treaty must make a real impact on illicit trafficking in conventional arms as well as in their illicit use by the terrorists and other unlawful and unauthorized non-state actors.

However, as per the Indian government, the draft treaty that has been annexed to the resolution is weak on non-state actors and terrorism and these provisions have not found a mention in the specific prohibitions of the Treaty.

India also cannot accept that the treaty is used as an instrument in the hands of exporting states against importing states parties without consequences.

51. New purchasing power parities (PPPs) released by the International Comparison Program

Link: <https://timesofindia.indiatimes.com/business/india-business/india-retains-its-position-as-3rd-largest-economy-on-ppp-basis-for-2017/articleshow/76532722.cms>

News:

~~WASHINGTON~~, May 19, 2020 — New purchasing power parities (PPPs) for reference year 2017 that adjust for differences in the cost of living across economies were released today by the International Comparison Program (ICP).

It has revised the previously published 2011 PPPs to take into account the effects of national accounts rebasing. It also published new PPPs for 2017 that reflect new price data collected from around the world.

So, first we will discuss Purchasing Power Parity.

Purchasing power parity is defined as the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as one dollar would buy in the US. **Understand with an example. You will never forget.**

~~Example~~

Imagine that the market exchange rate between Dollar and Rupee is 60. One Dollar in the US will buy one liter of milk there. Corresponding money in terms of Rupee i.e., Rs 60 can buy three liters of milk in India.

Suppose that India's GDP is Rs 600. This will become \$10 in market exchange rate terms. If milk is the only commodity produced in the world (you imagine it for simplicity sake), one will think that India is producing 10 liters of milk, if we use the market exchange rate.

Actually, India produces 30 liters of milk. This higher volume of production in India is not expressed if we use the market exchange rate to measure GDP.

To overcome this defect and to accurately measure the GDP, we can use the Purchasing Power Parity exchange rate.

Under PPP, we measure the GDP of India by measuring how much milk that Rupees 60 can purchase in India and One Dollar can purchase in the US.

Here, one dollar in the US can purchase one liter of milk whereas Rs 20 can purchase one liter of milk in India.

$$\$1 = \text{Rs } 20$$

This is the purchasing power parity exchange rate we obtained. Using this exchange rate we can calculate that India's GDP of Rs 600 will become \$30.

Thus, in terms of PPP, India's GDP is \$30 in contrast to the \$10 we estimated by using market exchange rate.

The PPP exchange rates help to minimize misleading international comparisons that can arise with the use of market exchange rates.

Now we will focus on released Report.

According to the report, ***Purchasing Power Parities and the Size of World Economies: Results from the 2017 International Comparison Program***, the size of the global economy was nearly \$120 trillion in 2017 measured by the new PPPs, and over half of total economic activity was in low- and middle-income economies.

Few important points relevant for us: **Nothing more is required.**

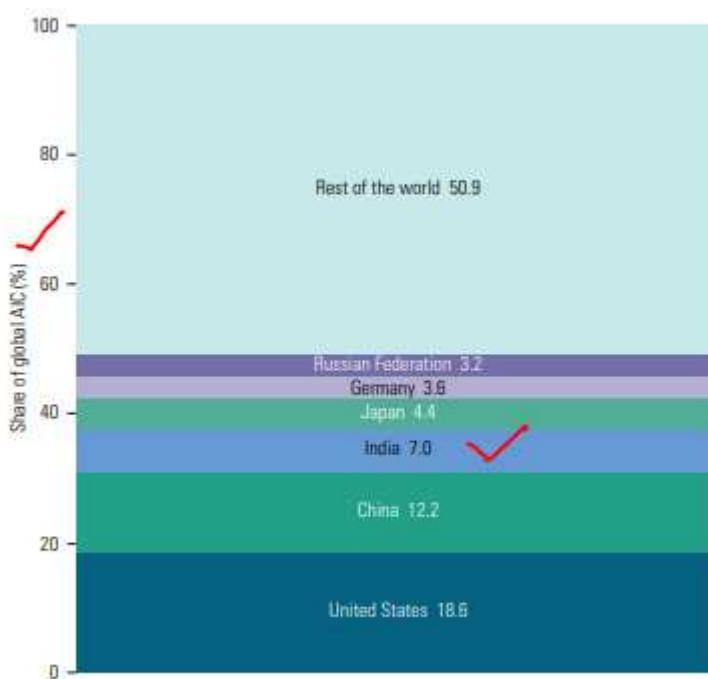
- China's GDP stood at \$19,617 billion in **PPP terms** in 2017, while the United States' GDP was \$19,519 billion. Together they accounted for one-third of global GDP. **India, at \$8,051 billion, was the third-largest economy**, followed by Japan, Germany, and the Russian Federation.

Figure 1.2 PPP-based GDP and share of global PPP-based GDP, by economy, 2017
2017 PPP \$ (billions), and global share (%)



- India is also third largest economy in terms of its PPP-based share in global Actual Individual Consumption and Global Gross Capital Formation.

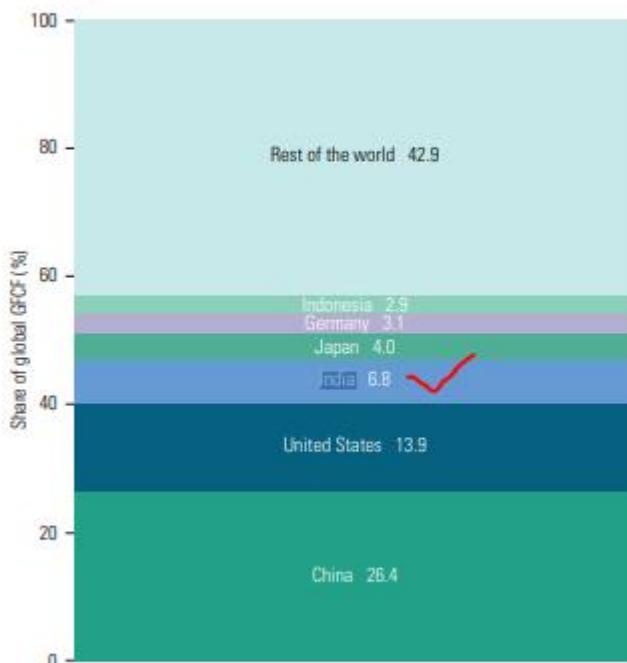
Figure 1.3 Share of PPP-based global actual individual consumption for the six economies with the largest shares, 2017



Source: ICP 2017.

Note: AIC = actual individual consumption; PPP = purchasing power parity.

Figure 1.7 Share of PPP-based global gross fixed capital formation for the six economies with the largest shares, 2017



Source: ICP 2017.

Note: GFCF = gross expenditure on gross fixed capital formation; PPP = purchasing power parity.

- c. Purchasing Power Parities (PPPs) of Indian Rupee per US\$ at Gross Domestic Product (GDP) level is now 20.65 in 2017 from 15.55 in 2011.

GROSS DOMESTIC PRODUCT Economy	Expenditure (billion US\$)				Expenditure per capita (US\$)				Price level index (world = 100.0) ^a	Expenditure per capita indexes ^b				Share (world = 100%) ^b				Reference data				
	Based on PPPs		Based on XRs		Based on PPPs		Based on XRs			World = 100.0		United States = 100.0		Expenditure		Population		PPPs ^c (US\$ = 1.000)	Market exchange rates ^c (US\$ = 1.000)	Expenditure (billion LCU)	Population (millions)	
	Based on PPPs	Based on XRs	Based on PPPs	Based on XRs	Based on PPPs	Based on XRs	Based on PPPs	Based on XRs		Expenditure	Expenditure	Expenditure	Expenditure	Population	Population	PPPs ^c (US\$ = 1.000)	Market exchange rates ^c (US\$ = 1.000)	Expenditure (billion LCU)	Population (millions)			
India	IND	8,050.5	2,552.5	6,149	1,950	47.5	37.1	17.6	10.3	3.3	6.7	3.2	18.2	20.648	65.122	166,225.6	1,309.20					
India	IND	5,482.9	1,826.8	4,508	1,502	43.0	32.4	13.9	9.1	3.0	5.8	2.5	18.1	15.550	46.670	85,256.2	1,216.15					

- d. Exchange Rate of US Dollar to Indian Rupee is now 65.12 from 46.67 during same period.

GROSS DOMESTIC PRODUCT Economy	Expenditure (billion US\$)				Expenditure per capita (US\$)				Price level index (world = 100.0) ^a	Expenditure per capita indexes ^b				Share (world = 100%) ^b				Reference data				
	Based on PPPs		Based on XRs		Based on PPPs		Based on XRs			World = 100.0		United States = 100.0		Expenditure		Population		PPPs ^c (US\$ = 1.000)	Market exchange rates ^c (US\$ = 1.000)	Expenditure (billion LCU)	Population (millions)	
	Based on PPPs	Based on XRs	Based on PPPs	Based on XRs	Based on PPPs	Based on XRs	Based on PPPs	Based on XRs		Expenditure	Expenditure	Expenditure	Expenditure	Population	Population	PPPs ^c (US\$ = 1.000)	Market exchange rates ^c (US\$ = 1.000)	Expenditure (billion LCU)	Population (millions)			
India	IND	8,050.5	2,552.5	6,149	1,950	47.5	37.1	17.6	10.3	3.3	6.7	3.2	18.2	20.648	65.122	166,225.6	1,309.20					
India	IND	5,482.9	1,826.8	4,508	1,502	43.0	32.4	13.9	9.1	3.0	5.8	2.5	18.1	15.550	46.670	85,256.2	1,216.15					

- e. Also, the **Price Level Index (PLI)**, the ratio of a PPP to its corresponding market exchange rate, which is used to compare the price levels of economies, improved to 47.55 in 2017 from 42.99 in 2011.

Just to understand more clearly: As a general observation, PLIs at the GDP level tend to be generally lower in economies with lower GDP per capita. This observation is consistent with the fact that, as an economy develops, consumers move from consuming basic goods that are also tradable to consuming more services that are not tradable. As wage rates increase, so do the costs of services, which subsequently push up the general price level.

International Comparison Program (ICP)

The ICP is one of the largest statistical initiatives in the world. **It is managed by the World Bank** under the auspices of the **United Nations Statistical Commission**, and relies on a partnership of international, regional, sub-regional, and national agencies working under a robust governance framework and following an established statistical methodology. The main objectives of the ICP are to:

- produce purchasing power parities (PPPs) and comparable price level indexes (PLIs) for participating economies
- convert volume and per capita measures of gross domestic product (GDP) and its expenditure components into a common currency using PPPs.

India has participated in almost all ICP rounds since its inception in 1970. The Ministry of Statistics and Programme Implementation is National Implementing Agency (NIA) for

India, which has the responsibility of planning, coordinating and implementing national ICP activities.

52. Pollinator Week: Why we need to protect the bees and the butterflies

Link: <https://www.downtoearth.org.in/news/wildlife-biodiversity/pollinator-week-why-we-need-to-protect-the-bees-and-the-butterflies-71948>

Around 40 per cent of invertebrate pollinator species, particularly bees and butterflies — face extinction across the world, **according to the Food and Agriculture Organization (FAO)**.

There are two categories of pollinators: **invertebrates and vertebrates**. Well-known invertebrate pollinators include bees, moths, flies, wasps, beetles and butterflies. Monkeys, rodents, lemurs, tree squirrels and birds also facilitate pollination and are among the vertebrate pollinators.

Numbers Declining in India:

✓ Decline in numbers

Around 40 per cent of invertebrate pollinator species — particularly bees and butterflies — face extinction across the world, according to the FAO

In India, wild honeybees of the genus *Apis* — including the Asian bee (*A cerana*) and the little bee (*A florea*) — declined steadily for the past 30 years, said *Pollinators Unknown: People's perception of native bees in an agrarian district of West Bengal, India, and its implication in conservation*, a 2017 study.

Nearly 168 bees died every day due to poor waste management, pointed out *Decline in honey bee population in southern India: Role of disposable paper cups*, a 2014 study. Overall, 35,211 bees died every month, the study said.

✓ Major causes for the decline

There are several causes for the decline in the number of pollinators. Most of them are the result of an increase in human activities:

- ✓ Land-use change and fragmentation
- ✓ Changes in agricultural practices including use of chemical pesticides, fungicides and insecticides
- ✓ Change in the cropping pattern and crops like the cultivation of Genetically Modified Organisms (GMOs) and mono-cropping
- ✓ High environmental pollution from heavy metals and nitrogen
- ✓ Growth of invasive alien species

Now we will learn two bodies important for Prelims Exam:

The International Pollination Initiative (IPI), formally known as the International Initiative for the Conservation and Sustainable Use of Pollinators, aims to promote coordinated worldwide action to monitor pollinator decline, identify practices and build capacity in the management of pollination services for sustainable agriculture, and improve

food security, nutrition and livelihoods through enhanced conservation, restoration and sustainable use of pollinators.



The International Pollinator Initiative Plan of action 2018-2030 is prepared jointly by Convention on Biological Diversity and the Food and Agriculture Organization of United Nation.

~~The International Pollinator Initiative~~ Plan of action 2018-2030

1. Introduction

1. The conservation and sustainable use of pollinators have been addressed under the Convention on Biological Diversity (CBD) and the Food and Agriculture Organization of the United Nations (FAO) has been leading and facilitating the implementation of related decisions. During the UN Biodiversity Conference 2016, held in Cancun, Mexico, the 13th meeting of the Conference of the Parties to the CBD, through its decision XIII/15 paragraph 10, requested the Executive Secretary of the CBD, together with FAO, and in collaboration with other partners, to review the implementation of the International Initiative on the Conservation and Sustainable Use of Pollinators and prepare a draft updated and streamlined plan of action, based on the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) assessment and including the most recent knowledge, for consideration by SBSTTA at a meeting held prior to COP14.

2. The present plan of action was prepared jointly by FAO and the CBD Secretariat, in consultation with IPBES and other partners.

This is the second Plan of Action. **The first Plan of Action was from 2000-2015.**

Next topic is, Global Coalition of the Willing on Pollinators



The organisation was formed in 2016, to follow up on the findings of IPBES Assessment on Pollinators, Pollination and Food Production, which found that many of the world's pollinator species are on the decline. Not more than this is required.

By signing Declaration on **Global coalition of the willing on Pollinators**, partners commit to:

- a. taking action to protect pollinators and their habitats by developing and implementing national pollinator strategies, consistent with the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) thematic assessment on pollinators, pollination and food production
- b. sharing experience and lessons learnt in developing and implementing national pollinator strategies, especially knowledge on new approaches, innovations and best practice
- c. reaching out to seek collaboration with a broad spectrum of stakeholders
- d. developing research on pollinator conservation
- e. mutual support and collaboration

The coalition now has 28 signatories including 17 European countries, five from Latin America and the Caribbean and four from Africa.

India is not a member of coalition.

Pollinators need you. You need pollinators.

Birds, bats, bees, butterflies, beetles, and other small mammals that pollinate plants are responsible for bringing us one out of every three bites of food. They also sustain our ecosystems and produce our natural resources by helping plants reproduce.

Pollinating animals travel from plant to plant carrying pollen on their bodies in a vital interaction that allows the transfer of genetic material critical to the reproductive system of most flowering plants – the very plants that

- bring us countless fruits, vegetables, and nuts;
- ½ of the world's oils, fibers and raw materials;
- prevent soil erosion,
- and increase carbon sequestration

53. Rail Route Through Melghat Tiger Reserve

Link: <https://science.thewire.in/environment/melghat-tiger-reserve-railways-line/>

The proposed conversion of the railways' **Akola-Khandwa metre-gauge line to broad-gauge line through the Melghat tiger reserve (MTR)** in Maharashtra's Vidarbha region has drawn concern. Apart from impacting the tiger population in the area, the project could severely affect the biodiversity and natural habitat of many other species.

Situated in the Satpura hill ranges, the MTR is a part of Amravati district bordering Madhya Pradesh. The Union Ministry of Railways is planning to upgrade the 176-kilometre-long Akola (Maharashtra)-Khandwa (Madhya Pradesh) metre-gauge line to a broad-gauge line. **Of this, around 39 kilometres of the track falls under the MTR jurisdiction while 18 kilometres of it passes through the critical tiger habitat.**

The MTR comprises five protected areas, Gugamal National Park, Melghat Sanctuary, Narnala, Amba Barwa and Wan wildlife sanctuary. While Melghat sanctuary has hilly areas, other ones like Narnala, Ambabarwa and Wan have plains. The existing metre-gauge passes through Wan sanctuary.

So, if the ask you now:

- Where is this Tiger Reserve?
- In which Hills it is situated (UPSC has asked such questions)?
- Protected areas within it?

Everything you can answer now. We don't care which material you choose to read (you are mature enough to analyze which one is good), **but these current affairs should not be missed.**

54. Smuggling of Exotic Macaws

Link: <https://www.thehindu.com/news/national/other-states/dri-busts-syndicate-smuggling-exotic-macaws-from-bangladesh/article31890379.ece>

OTHER STATES

DRI busts syndicate smuggling exotic macaws from Bangladesh



Devesh K. Pandey

NEW DELHI: , JUNE 22, 2020 17:32 IST

UPDATED: JUNE 22, 2020 17:42 IST

The Directorate of Revenue Intelligence (DRI) has busted a wildlife smuggling syndicate with seizure of a consignment of **exotic macaws** which had been smuggled from Bangladesh. They were identified as *hyacinth macaw, pesquet's parrot, severe macaw and hahn's macaw*.

The seized macaws are protected under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), with **hyacinth macaw** being accorded the highest protection. **Hyacinth Macaw important here.**

Hyacinth Macaw



It is a parrot native to central and eastern South America. It is the largest macaw and the largest flying parrot species.

Threat: Habitat loss and the trapping of wild birds for the pet trade have taken a heavy toll on their population in the wild.

Protection Status:

International Union for Conservation of Nature's Red List: Vulnerable

✓ Hyacinth Macaw

Anodorhynchus hyacinthinus

⚠ This is not the latest assessment for this species. See the latest assessment for [Global](#)

CITATION

BirdLife International. 2014. *Anodorhynchus hyacinthinus*. The IUCN Red List of Threatened Species 2014. e.T22685516A61733086. <https://dx.doi.org/10.2305/IUCN.UK.2014-2.RLTS.T22685516A61733086.en>. Downloaded on 25 June 2020.



It has been listed in **Appendix 1** of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

Directorate of Revenue Intelligence

It is India's chief anti-smuggling intelligence, investigations and operations agency. **It works under the Central Board of Indirect Taxes and Customs (CBIC), Ministry of Finance.** It is headed by a Director General of the rank of Special Secretary to the Government of India.

It is tasked with detecting and curbing smuggling of contraband, including drug trafficking and illicit international trade in wildlife and environmentally sensitive items, as well as combating commercial frauds related to international trade and evasion of Customs duty.

55. YUKTI 2.0: Platform for Higher Education Institutes

Link: <https://www.financialexpress.com/industry/sme/jugaad-to-yukti-2-0-govt-launches-platform-to-bring-startups-students-together-to-sell-ideas/2000612/>

Under which Ministry: **Ministry of Human Resource Development**

Objective:

- a. It aims to help systematically assimilate technologies having commercial potential and information related to incubated startups in our **higher education institutions**.
- b. YUKTI 2.0 initiative is a very important step in the direction of making Bharat Atma Nirbhar.
- c. More importantly, initiatives like YUKTI 2.0 will also help in fostering the culture of innovation and entrepreneurship in our academic institutions.

The portal will prove to be a milestone towards promoting innovations and entrepreneurship culture in our higher education system and involving youth in nation building.

YUKTI 2.0 is an extension of 'YUKTI (Young India combating Covid with Knowledge, Technology and Innovation) Portal' which was launched to identify ideas relevant in Covid pandemic. Through this portal, the Ministry will endeavor to ensure that students, teachers and researchers in higher educational institutions are getting appropriate support to meet the requirements needed to advance their technologies and innovations.

Other Initiatives to Boost Innovation:

- a. **Institutions of Eminence (IoE)** Scheme is a government's scheme to provide the regulatory architecture for setting up or upgrading of 20 Institutions (10 from public sector and 10 from the private sector) as world-class teaching and research institutions.
- b. Various amendments have been made in the **Prime Minister's Research Fellowship** Scheme to boost research in the country.
- c. Through the **Atal Innovation Mission**, the government has established Atal Tinkering Laboratories (ATLs) in schools across the country. The objective of this scheme is to

foster curiosity, creativity and imagination in young minds; and inculcate skills such as design mindset, computational thinking, adaptive learning, physical computing.

Other schemes launched by the Central Government: **National Institutional Ranking Framework (NIRF)**, **Impacting Research, Innovation & Technology (IMPRINT)**, **Uchchatar Avishkar Yojna (UAY)**, **Global Initiative of Academic Networks (GIAN)** in the field of education for promoting higher education and research work in the country. We will discuss them whenever we will find them in news.

56. India TB Report 2020

Link: <https://tbcindia.gov.in/showfile.php?lid=3538>

We are presenting this report keeping in mind your Prelims and Mains both. Read. Do complete reading.

Before proceeding to report, read the below paragraph.

~~E~~fforts to end TB in India through implementation of the National Strategic Plan (2017-2025) has completed the first three years of implementation. During this period, the programme has seen tremendous success and is better poised today, to meet the ambitious goal pronounced by our Honourable Prime Minister at the Delhi End TB Summit in March 2018 of ending the TB epidemic by 2025 from the country, five years ahead of SDG goals for 2030, responding to which, some States/ UTs have committed to end TB even before 2025 - Kerala (2020), Himachal Pradesh (2021), Sikkim, Lakshadweep (2022) Chhattisgarh, Jammu & Kashmir, Madhya Pradesh, Tamil Nadu and Bihar, Jharkhand, Puducherry and Dadra Nagar Haveli & Daman Diu (2025). The programme has now been renamed as National Tuberculosis Elimination Programme, to invigorate the fight in alignment with this ambition.

We will start from here, National Tuberculosis Elimination Programme.

National TB Elimination Programme is a Centrally Sponsored Scheme being implemented under the aegis of National Health Mission with resource sharing between the State Governments and the Central Government.

Structure of National Tuberculosis Elimination Programme

~~A~~National Level

At the Central Level, the National TB Elimination Programme (erstwhile Revised National TB Control Programme) is managed by the Central TB Division (CTD), the technical arm of the Ministry of Health and Family Welfare (MoHFW). CTD and its establishment have been placed under the Health Ministry. The Special Secretary & Director General (National TB Elimination Programme & NACO) is the overall in-charge of the programme.

~~B~~. State Level

At the State level, State Health Secretary and MD-NHM are responsible for programme implementation in the State. The State

~~C~~District Level

The district is the key level for the management of the primary health care services. The Chief District Health Officer (CDHO) / Chief District Medical Officer (CDMO), or an equivalent functionary in the district, is responsible for all medical and public health activities, including TB control. The District Tuberculosis Centre

TB Surveillance and Epidemiology

India is the highest TB burden country in the world having an estimated incidence of 26.9 lakh cases in 2019 (WHO). To address this, the ability to achieve complete surveillance coverage is the prerequisite. 2019 marks another milestone year for TB surveillance effort in India, with a record high notification of **24 Lakh cases; an increase of over 12% as compared to 2018**. Of the 24 lakh TB cases 90% (N=21.6 lakhs) were incident TB cases (New and Relapse/ Recurrent).

Similar to trends in the previous years, over half of the total notifications are contributed by the five states namely **Uttar Pradesh (20%)**, Maharashtra (9%), Madhya Pradesh (8%), Rajasthan (7%) and Bihar (7%).

State	TB patients notified		
	Public	Private	Total
Uttar Pradesh	326305	160080	486385
Maharashtra	144120	83228	227348
Madhya Pradesh	139111	48296	187407
Rajasthan	122852	52366	175218
Bihar	77955	44716	122671

Movement of patients is a critical aspect to consider when trying to ensure that all notified cases are on treatment without interruptions and complete treatment successfully. **Through Nikshay**, the National TB Elimination Programme has built a system to track such movement and enable field staff to follow up such patients effectively

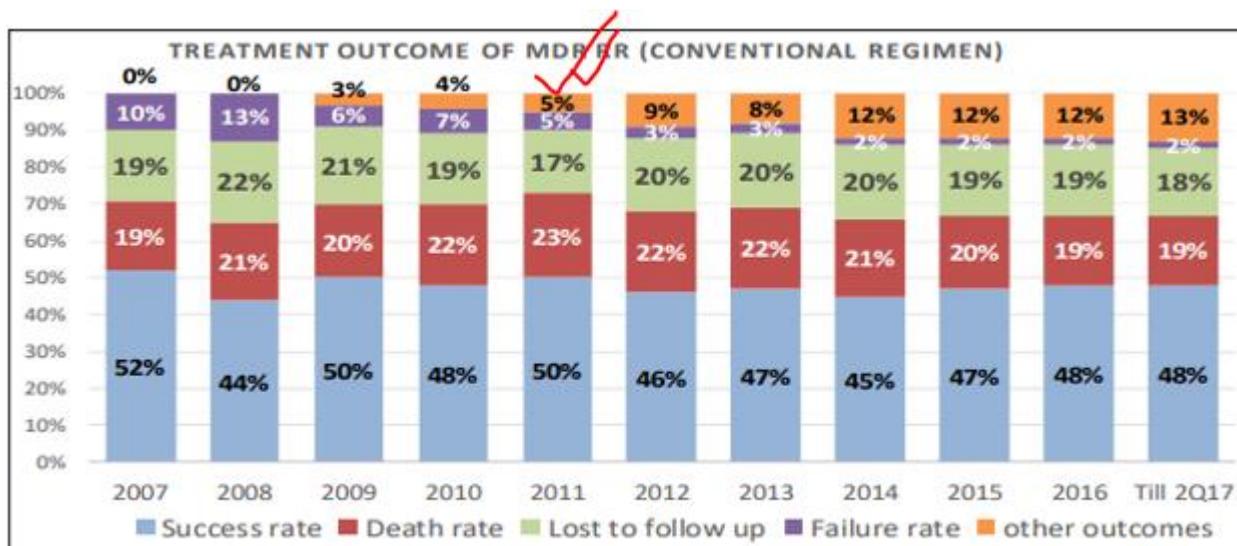
Active Case Finding

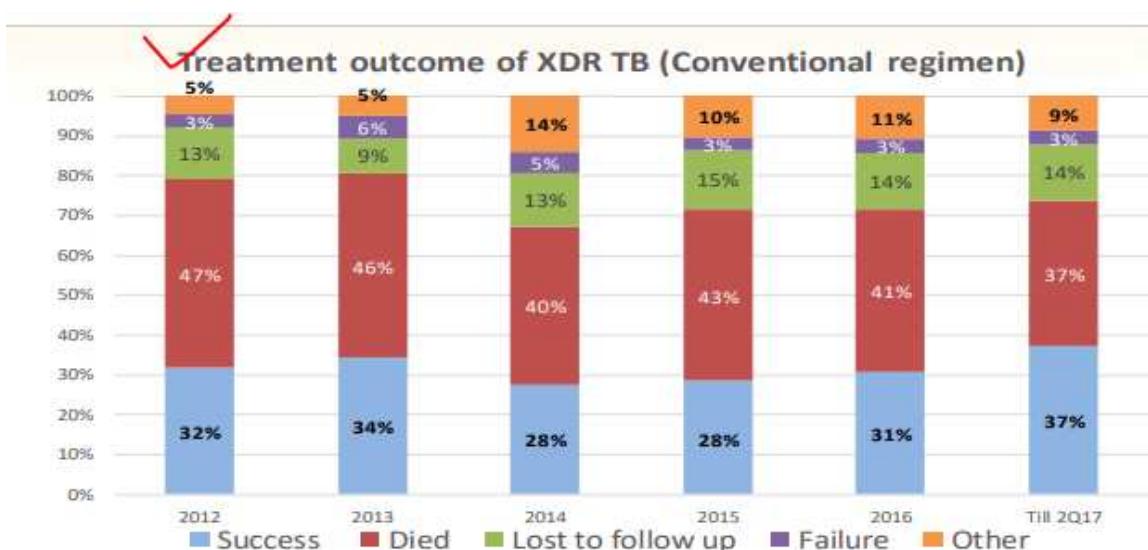
The burden of undetected tuberculosis is large in many settings, especially in high-risk groups which are identified under the country's National Strategic Plan (2017-25).

Active TB Case Finding activities began under National TB Elimination Programme in 2017. In 2019 a total of about 27.74 crore population has been screened yielding 62,958 additional TB cases were diagnosed.

Treatment Services under National TB Elimination Programme

National TB Elimination Program (NTEP) envisages to reach every TB patient for free provision of diagnosis and evidence-based treatment. During 2019, out of the notified TB patients, 94% of TB patients were initiated on TB treatment.



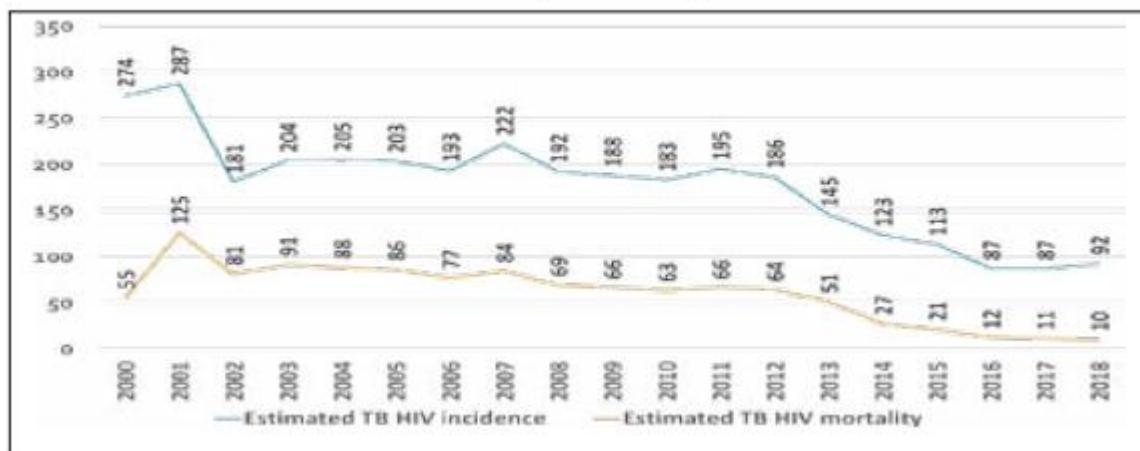


The **Saksham Project of Tata Institute of Social Sciences (TISS)** has been providing psycho-social counselling to DR-TB patient.

TB Co-morbidities

TB is the leading cause of morbidity and mortality among People Living with HIV. India is the third-highest HIV burden country in the world, with an adult prevalence of 0.22%.

Annual trend of TB-HIV burden for India (2001-2018)



- Available evidence and modeling studies indicate that nearly 20% of all TB cases in India also suffer from **DM (Diabetes Mellitus)**.
- India is the second-largest **tobacco** consumer in the world and the third-largest producer of tobacco after China and Brazil (FAO, 2005). A study conducted in 2004 using health care data from the National Sample Survey Organization (NSSO), estimated that the Tobacco - attributable cost of TB was three times higher than the expenditure on overall TB control in the country. 8% of TB cases can be attributable to tobacco usage.
- Undernutrition** is a strong risk factor for developing TB and contributes to an estimated 55% of annual TB incidence in India. It is known to adversely affect the

immune system, fasten the progress of disease from infection and predispose to poor outcomes.

Supervision, Monitoring & Evaluation

The Central TB Division assesses the States' achievements and performance are compared with 9 key indicators using the State TB Score. The States are grouped into 3 categories viz: Union Territories, Population less than 50 lakhs & population more than 50 lakhs.

STATE TB SCORE INDICATORS TOTAL SCORE 100

Indicator	Numerator	Denominator	Weightage
% of target TB notification achieved	Total notified	target	20
% of TB notified patients with known HIV status	Known HIV status	Total notified	10
% of eligible TB notified patients with UDST done	Tested for Rifampicin	70% of total notified	10
Treatment Success Rate	Successful outcome	Notified 12 months prior	15
% of eligible beneficiaries paid under Nikshay Poshan Yojana	Payment made	Eligible beneficiaries	10
% of diagnosed MDR patients initiated on treatment	Put on treatment	Total diagnosed MDR RR	15
% of eligible contact children (< 6 years) given chemoprophylaxis	Initiated on chemoprophylaxis	Children <6 year- those who are initiated on TB treatment	5
% of eligible PLHIV given IPT	Initiated on IPT	No. of PLHIV among whom active TB has been ruled out	5
% of expenditure amongst the approved ROP of the State (FY 2019-20)	Expenditure in PFMS	ROP for reporting period	10

~~X~~ The best performing States under each category was identified and rewarded during the "TB Harega Desh Jeetega" campaign launched by Hon'ble Health Minister on 25th September 2019.

The Best Performance award was given to the following States/ UTs:

- Himachal Pradesh
- Gujarat
- Tripura
- Sikkim
- Puducherry
- Daman & Diu

Direct Benefits Transfer (DBT)

Direct Benefit Transfer (DBT) is a major reform agenda of the Government of India, entailing targeted delivery of benefits to citizens through the effective use of technology.

The following DBT schemes of National TB Elimination Programme are being implemented:

- ◆ Nikshay Poshan Yojana (NPY)
 - ◆ Incentive to Treatment Supporters/ DOTS Providers
 - ◆ Notification incentive to Private Providers
 - ◆ Incentives to informants for referring presumptive cases to public sector facilities

We will see just Nikshay Poshan Yojana. No need for details of other schemes. The scheme called “Nikshay Poshan Yojana” was introduced in April 2018 by the National TB Elimination Programme.

This scheme is aimed at providing financial support to TB patients for their nutrition. The TB patients taking treatment from both, Public Sector facilities and Private sector providers are eligible to receive incentives under this scheme.

Beneficiary	All notified TB patients for the duration of treatment
Objective	To provide financial incentive for nutritional support to TB patients at the time of notification.
Benefit Amount	Rs 500 for a treatment month, paid in instalments of up to Rs1000 as an advance.

Budgeting and Finance

National TB Elimination Programme (formerly known as Revised National Tuberculosis Control Programme) is centrally sponsored scheme under NHM to implement the programme activities as envisaged under NSP 2017-25 as per National TB Elimination Programme guidelines.

Financial Performance of National TB Elimination Programme:

(Rs. In crores)

Description	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Budget Requested	1358.00	1300.00	1000.00	2200.00	4115.00	3525.00	13498.00
Budget Estimates/approved Budget	710.15	640.00	640.00	1840.00	3140.00	3333.21	10303.36
Total Releases to States	373.87	483.19	533.17	871.36	907.65	550.22*	3719.46
Total Expenditure	639.94	639.86	677.78	2759.44	2237.79	2443.81*	9398.62

*till 6thJanuary 2020

The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the World Bank are important donors.

Advocacy, Communication & Social Mobilization

Advocacy, Communication & Social Mobilization (ACSM) is an important pillar in the National TB Elimination Programme (National TB Elimination Programme) as proposed in National Strategic Plan (NSP 2017- 2025).

Examples:

- a. “TB Harega Desh Jeetega Campaign” was launched by the Hon’ble Minister of Health & Family Welfare on 25th September 2019 showcasing highest level of commitment and implementation
- b. Mention of TB in the Hon’ble Prime Minister’s “Independence Day Speech” and “Mann Ki Baat” has gained tremendous popularity among the general population.

Other important things we found in Report:

~~BRICS~~ TB Research Network

BRICS countries (Brazil, India, China, Russia and South Africa) have established a collaborative TB Research Network. The network promotes and conducts collaborative scientific and operational research along with development and innovations on diagnostics, vaccines, drugs, regimens, infection control and patient service delivery mechanisms commonly applicable in all these countries for effective TB control and management. National TB Elimination Programme is working closely with the other BRICS countries.

Since 2017, five BRICS TB Research Network Meetings were held and the VI TB Reserch Network (TBRN) Meeting was hosted by India on 4th & 5th November 2019.

Reach Project:

Resource Group for Education and Advocacy for Community Health, REACH was established in 1999 in response to the rolling out of the Revised National TB Control Program (RNTCP) in Tamil Nadu. Managed by an executive committee, REACH has been a key partner and leader in the fight against TB.

Our mandate is broad and includes support, care and treatment for TB patients as well as research, advocacy, public education and communication. We work with a range of partners including the RNTCP, local government officials, private hospitals, community-based providers and private practitioners among others.

Joint Effort for Elimination of TB (JEET)

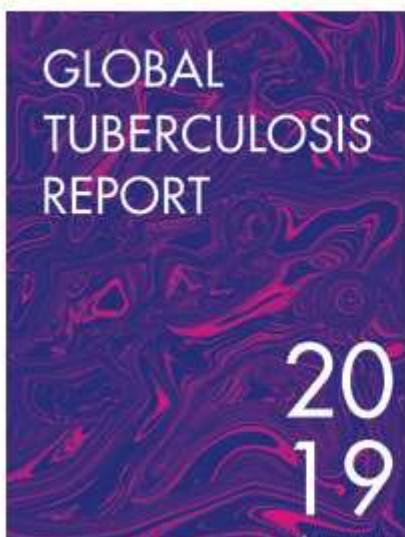
As highlighted in the National Strategic Plan (NSP), the current scale of private sector engagement is insufficient relative to its 133 size and contribution to TB care. So we need to engage them. JEET (Joint Effort for Elimination of Tuberculosis) project aims for intensive engagement with the private sector to achieve universal access to quality diagnosis and treatment for TB.

~~10. India Health Fund~~

India Health Fund (IHF) seeded by Tata Trusts, with a commitment of US \$15 million over 3 years, and strategic support from The Global Fund, has been aiming at accelerating innovations towards elimination of Tuberculosis (TB) since 2017. It is incorporated as Confluence for Health Action and Transformation Foundation, as a section 8 company registered under the Companies Act 2013.

In 2019, IHF engaged intensively on analysis of underlying factors contributing to the burden of TB in India. IHF conducts a nationwide call

~~Global tuberculosis report 2019~~



WHO has published a global TB report every year since 1997. The main aim of the report is to provide a comprehensive and up-to-date assessment of the TB epidemic, and of progress in prevention, diagnosis and treatment of the disease, at global, regional and country levels. This is done in the context of recommended global TB strategies and targets endorsed by WHO's Member States, broader development goals set by the United Nations (UN) and targets set in the political declaration at the first UN high-level meeting on TB (held in September 2018).

We will stop now. Any new updates, we will keep posting.

57. Indian National Space Promotion and Authorisation Centre' (IN-SPACe)

Link: <https://science.thewire.in/space/in-space-isro-k-sivan-private-space-activities/>

As a part of reforms of various sectors, the Government of India has announced the creation of a new 'Indian National Space Promotion and Authorisation Centre' (IN-SPACe), an "autonomous nodal agency under the Department of Space" that will provide the necessary support for the private space industry to conduct its activities.

Read following important clippings:

~~Sivan~~ said that the autonomous nodal agency, called Indian National Space Promotion and Authorisation Center (IN-SPACe) is being established under the Department of Space as a separate vertical for “permitting and regulating the activities of private industry”.

“IN-SPACe will act as a national nodal agency to hand-hold and promote private endeavours in space sector and for this ISRO will share its technical expertise as well as facilities. IN-SPACe will have its own independent Directorates for Technical, Legal, Safety & Security, Monitoring as well as Activities Promotion for assessing the private industry requirements and further coordinating the activities.” ISRO said.

The statement adds that NewSpace India Ltd. (NSIL), a CPSU under the Department of Space is being “re-defined to transform the approach of supply driven model to demand driven model for space based services”. NSIL will be strengthened and empowered to off-load operational activities of ISRO in the areas of launch vehicle and satellite production, launch services as well as space-based services. The CPSU will be expected to execute these activities through “industry consortiums”.

This will allow **ISRO to allocate more time and resources for R&D endeavours**. ISRO will continue to carry out its present activities with greater emphasis on development of advanced technology, missions and capacity building besides supporting private endeavours in space sector.

Now some suggestions,

IN-SPACe's outlook for now appears to be that of a 'regulator' functioning as an independent body under the Department of Space. So as such, there are some important steps that the Government of India needs consider to ensure IN-SPACe stays relevant and efficient.

Consolidated consent

Upstream space activities involve the use of communication frequencies, selling potentially dual-use products (both locally and internationally), and setting up devices to link space and ground assets. Further downstream, important activities include distributing images and other imagery-based services and communication-based services. Both sets of activities require consultations with, inspections from and approvals by several government departments and ministries. So IN-SPACe will solve an important problem if it includes members representing all the relevant departments and ministries that may wish to participate in regulating space activities.

Clear timelines and processes

The requirements of companies involved in upstream activities are often different from those involved in downstream activities. So IN-SPACe, and the government more broadly, needs to steer clear of a 'one size fits all' approach to dealing with them. It will go a long way by providing a clear charter on the timelines, processes and procedures involved for each activity. Such an exercise could benefit by an open dialog process with the local industry and reviewing global best practices.

Incentives for local industry

Apart from IN-SPACe's regulatory role, it should review the current demand and supply mechanisms to streamline procurement-, taxation- and investment-related matters. For example, it could review space products and services that foreign vendors are currently procuring and list them, together with local companies in the process of creating capacity to match the offering. Such initiatives can help catalyse the growth as well as competitiveness of India's local industry. The body can then install a mechanism to systematically support local development as well, to further localise these capabilities within India.

Help space activities contribute to the economy

It is currently not clear what the contributions of India's space efforts are to India's economy. So IN-SPACe could consider formally instituting a division within itself involving social scientists, economists and space technologists to create a framework to map and monitor space activities' contribution to the economy, through investments by the government as well as the private sector.

In the final analysis, if IN-SPACe does a good job, *the government may not need to go through the long process of legislating a Space Bill, as it has been doing for at least three years now.* IN-SPACe is expected to take shape in the next six months. So, by the end of 2020, India will have an opportunity to leapfrog over other spacefaring nations by providing a foundation for the private sector to become globally competitive in the coming years. We will keep an eye on new updates.

58. Solid Waste Management Rules (SWM), 2016

Link: <https://www.thehindu.com/news/cities/Kochi/govt-sets-9-months-for-clearing-legacy-waste-at-brahmapuram/article31919262.ece>

News was not much important. But the rules were. So, we took this news and prepared. Its always in news. So, we will finish it today.

The Union Ministry of Environment, Forests and Climate Change (MoEF&CC) notified the new Solid Waste Management Rules (SWM), 2016. These will replace the Municipal Solid Wastes (Management and Handling) Rules, 2000, which have been in place for the past 16 years.

The Municipal Solid Wastes (Management and Handling) Rules, 2000

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01/09/2000 | Ministry Of Environment And Forests

The Municipal Solid Wastes (Management and Handling) Rules, 2000 shall apply to every municipal authority responsible for collection, segregation, storage, transportation, processing and disposal of municipal solid wastes.

These rules are the sixth category of waste management rules brought out by the ministry, as it has earlier notified **plastic, e-waste, biomedical, hazardous and construction and demolition waste management rules.** Plastic and Biomedical, we have already covered in Previous Current Affairs. We will cover rest gradually. No worries here.

Now see its provisions in detail: Don't required more than this.

The Rules are now applicable **beyond Municipal areas** and extend to urban agglomerations, census towns, notified industrial townships, areas under the control of Indian Railways,

airports, airbase, Port and harbour, defence establishments, special economic zones, State and Central government organizations, places of pilgrims, religious & historical importance.

~~Segregation at source~~

The new rules have mandated the source segregation of waste in order to channelise the waste to wealth by recovery, reuse and recycle. Waste generators would now have to segregate waste into three streams- Biodegradables, Dry (Plastic, Paper, metal, Wood, etc.) and Domestic Hazardous waste (diapers, napkins, mosquito repellants, cleaning agents etc.) before handing it over to the collector.

~~Institutional generators, market associations, event organisers and hotels and restaurants have been directly made responsible for segregation and sorting the waste and manage in partnership with local bodies. In case of an event, or gathering of more than 100 persons at any licensed/ unlicensed place, the organiser will have to ensure segregation of waste at source and handing over of segregated waste to waste collector or agency, as specified by the local authority.~~

~~Collection and disposal of sanitary waste~~

~~The manufacturers or brand owners of sanitary napkins are responsible for awareness for proper disposal of such waste by the generator and shall provide a pouch or wrapper for disposal of each napkin or diapers along with the packet of their sanitary products.~~

~~Collect Back scheme for packaging waste~~

~~As per the rules, brand owners who sale or market their products in packaging material which are non-biodegradable, should put in place a system to collect back the packaging waste generated due to their production.~~

~~User fees for collection~~

~~The new rules have given power to the local bodies across India to decide the user fees. Municipal authorities will levy user fees for collection, disposal and processing from bulk generators. As per the rules, the generator will have to pay "User Fee" to the waste collector and a "Spot Fine" for littering and non-segregation, the quantum of which will be decided by the local bodies.~~

~~Also, the new rules have mentioned about the integration of rag pickers, waste pickers and kabadiwalas from the informal sector to the formal sector by the state government.~~

~~The rules also stipulate zero tolerance for throwing; burning, or burying the solid waste generated on streets, open public spaces outside the generator's premises, or in the drain, or water bodies.~~

Related Stories

- New rules for biomedical waste management released
- New E-waste rules announced
- New plastic waste management rules leave out vital points

Waste processing and treatment

As per the new rules, it has been advised that the bio-degradable waste should be processed, treated and disposed of through composting or bio-methanation within the premises as far as possible and the residual waste shall be given to the waste collectors or agency as directed by the local authority. The developers of Special Economic Zone, industrial estate,

industrial park to earmark at least 5 per cent of the total area of the plot or minimum 5 plots/ sheds for recovery and recycling facility.

Also, the rules have mandated bioremediation or capping of old and abandoned dump sites within five years.

Revision of parameters and existing standards

As per the new rules, the landfill site shall be 100 metres away from a river, 200 metres from a pond, 500, 200 metres away from highways, habitations, public parks and water supply wells and 20 km away from airports/airbase. Emission standards are completely amended and include parameters for dioxins, furans, reduced limits for particulate matters from 150 to 100 and now 50. Also, the compost standards have been amended to align with Fertiliser Control Order.

Management of waste in hilly areas

As per the new rules, construction of landfills on hills shall be avoided. Land for construction of sanitary landfills in hilly areas will be identified in the plain areas, within 25 kilometers. However, transfer stations and processing facilities shall be operational in the hilly areas.

Constitution of a Central Monitoring Committee

The government has also constituted a Central Monitoring Committee under the chairmanship of Secretary, MoEF&CC to monitor the overall implementation of the rules. The Committee comprising of various stakeholders from the Central and state governments will meet once a year to monitor the implementation of these rules.

59. Kala- azar Disease

Link: <https://pib.gov.in/PressReleasePage.aspx?PRID=1633851>

Ministry of Science & Technology

New biomolecules to fight drug resistance in Kala- azar
--By Sunderarajan Padmanabhan

Posted On: 24 JUN 2020 12:58PM by PIB Delhi

- a. Recently, a team of researchers from the National Centre for Cell Science (NCCS), Pune have found new biomolecules to fight drug resistance in Kala- azar (visceral leishmaniasis).
- b. Specific types of protein molecules, called transporter proteins, play a major role in carrying miltefosine into and out of the parasite's body, which comprises a single cell. A protein called 'P4ATPase-CDC50', is responsible for intake of the drug by the parasite, and another protein, called 'P-glycoprotein', is responsible for throwing this drug out from within the parasite's body.
- c. A decrease in the activity of the former protein, and an increase in the activity of the latter results in less amounts of miltefosine being accumulated inside the parasite's body, thus causing it to become resistant to the drug.
- d. A team of researchers at the Department of Biotechnology's National Centre for Cell Science (DBT-NCCS) in Pune has been exploring ways to tackle miltefosine resistance.
- e. The researchers worked with one of the species of Leishmania that causes infection, called Leishmania major. They tried to manipulate these transporter proteins in the species in a manner that would result in increased uptake of the drug and decrease in its being thrown out of the parasite's body.

About the disease and also important points:

Leishmaniasis is a neglected tropical disease affecting almost 100 countries including India. It is caused by a parasite called Leishmania, which is transmitted through the bite of sand flies.

There are three main forms of leishmaniasis – **visceral**, which affects multiple organs and is the most serious form of the disease, **cutaneous**, which causes skin sores and is the most common form); and **mucocutaneous**, which causes skin and mucosal lesion).

IT is a disease caused by protozoan parasites that infects organs such as liver and spleen and is spread through sand flies — flies with hairy, brownish-gray wings. The use of Indoor Residual Spraying (IRS) of insecticides is the only way to prevent the build-up of these flies.

Visceral leishmaniasis, which is commonly known as Kala-azar in India, is fatal in over 95% of the cases, if left untreated. The **only drug available against leishmaniasis, miltefosine**, is rapidly losing its effectiveness because of emerging resistance to this drug due to a decrease in its accumulation inside the parasite, which is necessary for the drug to kill the parasite.

“Kala-azar is still endemic in the states of Bihar, Jharkhand, West Bengal and Uttar Pradesh, with Bihar contributing to nearly 70% of the cases in India,” they point out.

Under the National Health Mission (NHM), **National Vector Borne Disease Control** Programme is the agency responsible for the IRS drive, which is used in areas where the disease is prevalent. It coordinates the kala-azar elimination programme in India.

India has already missed the kala-azar elimination target thrice in the last decade. *The initial deadline set by the National Health Programme (now NHM) was 2010, which was pushed to 2015*

in the 12th Financial Plan Document. This deadline was later extended twice — to 2017, and then to 2020.

60. Custodial Deaths in India.



Before discussing this topic, we will see incident, which **took place recently**, NHRC **statement, data on deaths under custody**. This will give us idea why we need a stringent law to protect against this torture.

 In the same week that the world marked International Day in Support of Victims of Torture (June 26), a father-son duo in Tamil Nadu who kept a shop open after COVID-19 curfew hours died in custody, allegedly after being tortured at the hands of the Thoothukudi district police.

According to reports, a baton was inserted into the anus of one man. The Chinese army's use of iron rods and nail-studded clubs in 2020 will be remembered by a generation. But we will soon forget what happened in Thoothukudi, as if it was a momentary aberration rather than part of systemic police violence in India.

The police in the same district had, on May 22, 2018, shot dead 13 people, who were among a crowd that had demonstrated for 100 days without violence, seeking closure of Vedanta's highly polluting Sterlite Copper Unit. In two years, no one has been charged, and police impunity seems to continue.

 The 2015-2016 NHRC Annual Report states:

Custodial violence and torture continue to be rampant in the country. It represents the worst form of excesses by public servants entrusted with the duty of law enforcement.

The following table has been collated from two of the answers in the Parliament about the facts regarding use of torture reported by the NHRC.

Year	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18
Torture in police custody	678	366	303	431	493	293 (till 31.10.16)	NA
Death in police custody	128	143	140	130	153	145	144
Death in judicial custody	NA	NA	NA	1,588	1,668	1,616	1,530

Has India Ratified the Convention? No, only signed.

India signed the UN Convention against Torture or Other Cruel, Inhuman, or Degrading Treatment or Punishment (UNCAT) in 1997. **However, ratifying** (which is the most crucial aspect of the commitment and implies taking legal steps to make Indian laws correspond to the UN convention commitments) is **yet to be done**.

But what about national Laws?? Have India passed any Bill to protect its citizens under custody?? A small timeline of what is happening in India to prevent this torture.

In 2008, a **Prevention of Torture Bill was brought in Parliament**, but due to its weak provisions it was sent to a select committee. The committee reported, “*after long and comprehensive deliberations, we unanimously proposed a standalone legislation against torture so as to comply with the requirements of UN Convention on Torture*”.

Nothing happened for eight years after Lok Sabha passed the bill. So, a petition was filed in SC. It said: “*Since there is no scientific method of investigation, torture remains integral to the investigation to obtain confessions from suspects.*”

Despite the guarantee under Article 21 and directions from the apex court, it pointed out there were “no checks and balances against the personnel who commit custodial torture” and thus “an intervention from this Hon’ble Court has become imperative.”

After the Supreme Court took up the matter, the Centre submitted an affidavit stating that the views of all the states and union territories on the Prevention of Torture Bill 2017 were sought. Only few states responded to the Bill. SC has asked all states to respond back soon.

So, we can say nothing has happened to prevent the custodial torture. Wait for updates. We will update you if any step India takes regarding this torture.

Something more related to this.

INTERNATIONAL

India abstains from voting on UNGA resolution on goods used for capital punishment, torture



PTI

UNITED NATIONS: JUNE 29, 2019 10:49 IST
UPDATED: JUNE 29, 2019 10:49 IST

The 193-member UN General Assembly Friday adopted the resolution 'Towards torture-free trade: examining the feasibility, scope and parameters for possible common international standards' by a recorded vote of 81 in favour to 20 against, with 44 abstentions. **But India abstain from voting.**

What does above resolution means?

This simply means, **instruments of torture** – such as finger screws, thumb cuffs, leg irons, restraint chairs, spiked batons, and whips embedded with barbs, hooks, or spikes – are still being traded freely across borders. These tools have no purpose beyond inflicting pain and suffering on human beings, yet they continue to cross borders just like any other good. **They should be banned.**

Why India abstained from voting?

India has abstained from voting on a General Assembly resolution on examining steps to restrict trade in materials used for executions and torture, saying that that it could infringe on the rights of countries that carry out capital punishments provided for under their law after following the due process of law.

Can we see one more thing? Don't get lazy. See now, just last one.

Alliance for Torture Free Trade (ATFT).



Launched in September 2017 in the margins of the United Nations General Assembly (UNGA), the **Alliance for Torture-Free Trade is an initiative of Argentina, the European Union and Mongolia.**

India is not a member of this alliance.

~~Full list of countries in the Alliance (three States are in the process of joining):~~

Albania, Argentina, Armenia, Australia, Austria, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Canada, Cape Verde, Chile, Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Ecuador, El Salvador, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Madagascar, Malta, Mexico, Moldova, Mongolia, Montenegro, the Netherlands, New Zealand, Nicaragua, Norway, Palau, Panama, Paraguay, Poland, Portugal, Romania, Serbia, Seychelles, Slovenia, Slovakia, Spain, Sweden, Switzerland, Ukraine, United Kingdom, Uruguay, Vanuatu, European Union

61. Goa Sanctuary in Danger After Two Wildlife Boards Skip Science for 'Development'

Link: <https://science.thewire.in/environment/bhagwan-mahavir-wildlife-sanctuary-goa-national-wildlife-board/>

We will learn here:

- a. National Parks and location (mentioned in paragraphs given below)
- b. What is the issue in the news?
- c. National Wildlife Board

The negligent and hasty grant of wildlife clearances for the destruction of over 170 ha of forest land within the **Bhagwan Mahavir Wildlife Sanctuary and Mollem National Park in Goa** paints a distressing picture of the future of our protected areas. By failing to carry out their statutory duty, the state and **National Wildlife Boards** have reduced themselves to redundant entities.

Issues:

The Goa State Wildlife Board (GSWB) and the National Board for Wildlife (NBWL) have opened up the Bhagwan Mahavir Wildlife Sanctuary to three linear projects: *expansion of a two-lane national highway (4A), doubling of the Castlerock-Kulem-Madgaon railway track, and a 400-kV power transmission line*. Together, these projects require the **diversion of over 170 ha of protected forest land in the same sanctuary**. All three proposals have been approved without any real cross-examination.

When an area is declared as a wildlife sanctuary or national park, what does it means?

The notification of an area as a wildlife sanctuary or national park brings with its immense statutory protection. No diversion of land can be permitted **unless it benefits wildlife or the management of their habitats**. However, public infrastructure projects have historically been allowed, thanks to environment ministry guidelines that allow such development to be

considered in "***the most exceptional of circumstances***". And while guidelines can't override the law, the decision-making power lies with the wildlife boards. **So, development within protected areas continues because wildlife boards permit it.**

Instead, all three projects – **despite failing to demonstrate any exceptional circumstances** and unavoidability – were approved as soon as an environmental impact assessment (EIA) report was placed before the state board. *Taking the time to actually study the contents of these reports appears to have been unnecessary.*

Now, we will learn **National Board of Wildlife** in detail.

The National Board for Wildlife (NBWL) is constituted by the Central Government under Section 5 A of the Wildlife (Protection) Act, 1972 (WLPA).

~~15A.~~ **Constitution of the National Board for Wild Life.**—(1) The Central Government shall, within three months from the date of commencement of the Wild Life (Protection) Amendment Act, 2002 (16 of 2003), constitute the National Board for Wild Life consisting of the following members, namely:—

- (a) the Prime Minister as Chairperson;
- (b) the Minister in-charge of Forests and Wild Life as Vice-Chairperson;

The National Board may, at its discretion, **constitute a Standing Committee** under sub-section (1) of Section 5B. The Standing Committee shall consist of the Vice-Chairperson (Union Minister in charge of Forests and Wildlife) the Member Secretary and not more than ten members to be nominated by the Vice-Chairperson from amongst the members of the National Board.

~~5B.~~ **Standing Committee of the National Board.**—(1) The National Board may, in its discretion, constitute a Standing Committee for the purpose of exercising such powers and performing such duties as may be delegated to the Committee by the National Board.

(2) The Standing Committee shall consist of the Vice-Chairperson, the Member-Secretary, and not more than ten members to be nominated by the Vice-Chairperson from amongst the members of the National Board.

(3) The National Board may constitute committees, sub-committees or study groups, as may be necessary, from time to time in proper discharge of the functions assigned to it.

One of the most important provisions of the WLPA (Section 29 for Sanctuaries and sub-section (6) of Section 35 for National Parks) is that **no person can destroy wildlife or divert the habitat of any wild animal without a permit** and no such permit can be granted unless it is considered necessary for improvement and better management of wildlife therein. See both provisions below.

129. Destruction, etc., in a sanctuary prohibited without a permit.—No person shall destroy, exploit or remove any wild life including forest produce from a sanctuary or destroy or damage or divert the habitat of any wild animal by any act whatsoever or divert, stop or enhance the flow of water into or outside the sanctuary, except under and in accordance with a permit granted by the Chief Wild Life Warden, and no such permit shall be granted unless the State Government being satisfied in consultation with the Board that such removal of wild life from the sanctuary or the change in the flow of water into or outside the sanctuary is necessary for the improvement and better management of wild life therein, authorises the issue of such permit.

(1) No person shall destroy, exploit or remove any Wild Life including forest produce from a National Park or destroy or damage or divert the habitat of any wild animal by any act whatsoever or divert, stop or enhance the flow of water into or outside the National Park, except under and in accordance with a permit granted by the Chief Wild Life Warden, and no such permit shall be granted unless the State Government being satisfied in consultation with the National Board that such removal of wild life from the National Park or the change in the flow of water into or outside the National Park is necessary for the improvement and better management of wild life therein, authorises the issue of such permit:

Now, below are important provisions related to National Board of Wildlife. Just read them once.

Specific provisions in the WLPA include:

- S 33 (a): No construction of commercial lodges, hotels... shall be undertaken except with the prior approval of the National Board
- S 35(5): No alteration of the boundaries of a National Park except on a recommendation of the National Board;
- S 35(6): No destruction, removal of wildlife or forest produce from a National Park or diversion of habitat unless State Government in consultation with the National Board authorizes the issue of such permit
- S 38-O (g): Ensure Tiger Reserves and areas linking one protected area with another are not diverted for ecologically unsustainable uses except in public interest and with the approval of the National Board
- S 38-W(1) & (2): No alteration or denotification of Tiger Reserves without the approval of the National Board for Wildlife

We want your attention all towards something important for you as an aspirant. Two important points you can mention against this NBL:

The first point is: During COVID Pandemic, all departments were closed except Environment Department. The Standing Committee (we have already discussed) met and took decisions which shocked environmentalists and activists. See below. **Not a single proposal was presented to protect wildlife.**

 The standing committee of the NBWL met less for the purpose of protecting and conserving wildlife and more for the opposite. It considered 31 proposals in all, 16 of which related to highways, transmission lines and railway lines through national Parks, sanctuaries and tiger corridors. And all 16 proposals were approved. An array of other projects concerning nearly 3,000 acres of land located in eco-sensitive areas were also approved.

One thing is clear: if there is anything the species inhabiting India's protected areas need to fear, it's the members of the NBWL. A poacher may be able to kill a few animals, a person may cut down a few dozen trees, villagers may graze their animals or collect firewood – but at the end of the day, the protected areas retain their identities as 'protected areas'. They still have a healthy chance to regenerate and repopulate themselves with the poaching and the removal of firewood and fodder. Only the NBWL has the power – when improperly exercised – to decimate the entire habitat.

Second most important thing is:

WILDLIFE & BIODIVERSITY

National Board for Wildlife hasn't met even once since 2014

Experts express dismay over state of affairs, ask how policy-level issues being dealt with



By Ishan Kukreti
Last Updated: Friday 10 April 2020



62. Baltic Sea sees rise in Nuclear Radiation

Link: <https://science.thewire.in/uncategorised/sensors-detect-rise-in-nuclear-particles-on-baltic-sea-global-body-says/>

The Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) oversees a network of hundreds of monitoring stations that use seismic, hydroacoustic and other technology to check for a nuclear weapon test anywhere in the world. According to the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Radiation sensors in Stockholm have **detected higher-than-usual but still harmless levels of isotopes produced by nuclear fission, probably from somewhere on or near the Baltic Sea.**

Very rare questions you find in UPSC Prelims Paper comes from such news. If you remember, 2018 question: See below.

✓ Which of the following has/have shrunk immensely/dried up in the recent past due to human activities ?

1. Aral Sea
2. Black Sea
3. Lake Baikal

Select the correct answer using the code given below :

- (a) 1 only
- (b) 2 and 3
- (c) 2 only
- (d) 1 and 3

So, we are not complete here. We will also see:

- a. Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)
- b. Baltic Sea

Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO)

What is the CTBT? ✓

The Comprehensive Nuclear-Test-Ban Treaty (CTBT) bans nuclear explosions by everyone, everywhere: on the Earth's surface, in the atmosphere, underwater and underground.

Why is the CTBT important? ✓

It makes it very difficult for countries to develop nuclear bombs for the first time, or for countries that already have them, to make more powerful bombs. It also prevents the huge damage caused by radioactivity from nuclear explosions to humans, animals and plants.

✓CTBT almost universal but has yet to become law ✓

Many attempts were made during the Cold War to negotiate a comprehensive test ban, but it was only in the 1990s that the Treaty became a reality. The CTBT was negotiated in Geneva between 1994 and 1996. One hundred and eighty-four countries have signed the Treaty, of which 168 have also ratified it, including three of the nuclear weapon States: France, the Russian Federation and the United Kingdom. But 44 specific nuclear technology holder countries must sign and ratify before the CTBT can enter into force. Of these, eight are still missing: China, Egypt, India, Iran, Israel, North Korea, Pakistan and the USA. India, North Korea and Pakistan have yet to sign the CTBT. The last Annex 2 State to ratify the Treaty was Indonesia on 6 February 2012.

It is unlikely that India will ratify the CTBT in the foreseeable future—even if China or the United States do— given the present domestic and international circumstances. The most likely outcome is that India will continue to observe its voluntary moratorium on testing nuclear weapons, while keeping open in principle its option to resume testing. *Nothing more than this about this treaty for now.*

See the Map of Baltic.



63. FATF first report on illegal wildlife trade (IWT)

Link: <https://www.thehindu.com/sci-tech/energy-and-environment/illegal-wildlife-trade-a-global-threat-fatf-report/article31918041.ece>

First of you should be very careful about what to read and what to leave in this topic. Don't start reading full report.

- It is very important to know who released this report.
- Any key finding in the report, we will cover points from The Hindu Section.
- FATF and CITES

The illegal wildlife trade (IWT) is a major transnational organised crime that fuels corruption, threatens biodiversity, and can have significant public health impacts. According to the 2016 UN World Wildlife Crime report, criminals are illegally trading products derived from over 7 000 species of wild animals and plants across the world.

In terms of illegal wildlife trade, there are two key types:

- Trade in species that are protected and prohibited from all national or international commercial trade (may be clandestine or overt through fraudulent activities, e.g., wild-caught animals falsely declared as captive-bred, wildlife falsely declared as being pre-Convention).

- b. Trade in volumes of specific species of wild origin which is unsustainable and in violation of CITES provisions or national provisions, often with limited regulatory controls/

To reflect the serious nature of this crime, the UN General Assembly has adopted several resolutions to combat IWT, and in September 2019, reiterated its call for all members “*to amend national legislation, as necessary and appropriate, so that offences connected to IWT are treated as predicate offences for money laundering (ML)*”.

We will report important points as mentioned in [The Hindu Section](#), regarding this report.

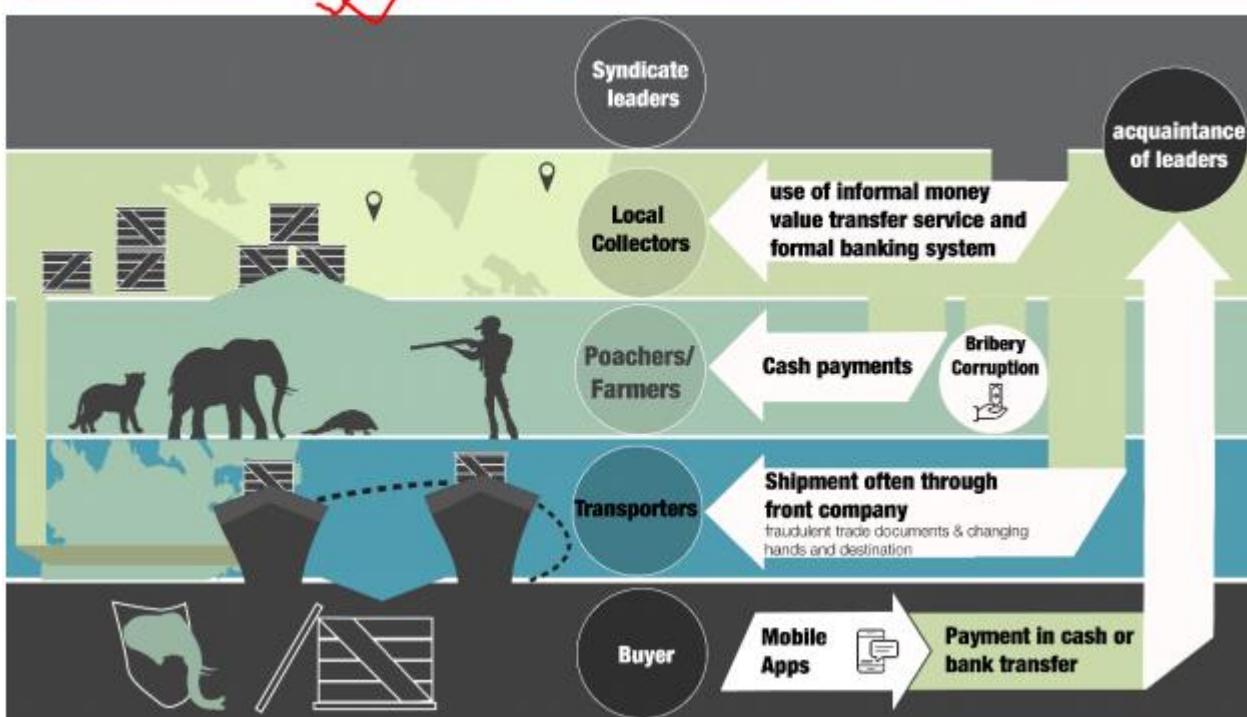
- a. The illegal trade is estimated to generate revenues of up to \$23 billion a year.
- b. The “Money Laundering and the Illegal Wildlife Trade” report said “criminals are frequently misusing the legitimate wildlife trade, as well as other import-export type businesses, as a front to move and hide illegal proceeds from wildlife crimes.”
- c. The study has highlighted the growing role of online marketplaces and mobile and social media-based payments to facilitate movement of proceeds warranting a coordinated response from government bodies, the private sector and the civil society.
- d. The report recommended that jurisdictions should consider implementing the good practices, as observed during the study.
- e. According to the report, criminal syndicates are misusing formal financial sector to launder the proceeds.
- f. The report noted that in 2012, India amended the Prevention of Money Laundering Act removing a value threshold — of ₹30 lakh and above — that was earlier applicable to the wildlife trade predicates.

Box 13. ~~Legislative change to increase applicability of AML legislation to wildlife predicates~~

In 2012, ~~India amended its AML law removing a value limitation applicable to wildlife trade predicates. Prior to this change (2002), only wildlife trade crimes estimated at or above 30 lakh rupees (USD 39 902) could be treated as predicate offences. Under the new approach (2012), there is no threshold. This has increased the applicability of India's ML offence to a broader range of wildlife trafficking offences. This includes offences related to low-value sourcing activities, many instances of which may have fallen below the previous threshold.~~

Sources: India, Legal Atlas.

Infographic 1. Example of Illegal Wildlife Trade Supply Chain and Payments



Learn here about FATF (we have already covered in Daily Quiz):

The Financial Action Task Force (FATF) was established in July 1989 by a Group of Seven (G-7) Summit in Paris, initially to examine and develop measures to combat money laundering.

In October 2001, the FATF expanded its mandate to incorporate efforts to combat terrorist financing, in addition to money laundering. In April 2012, it added efforts to counter the financing of proliferation of weapons of mass destruction. Zoom and see below image. It is taken from website.

Recently, FATF has announced that Pakistan will remain in Grey List. Let FATF do whatever it wants to do. As an aspirant for now, our concern is, **what is this FATF??**

- The Financial Action Task Force (FATF) is an **inter-governmental body** established in 1989 (discussed above only).
- The objectives of the FATF are *to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.*
- The FATF's decision making body, the '**FATF Plenary**', meets **three times per year**.
- The FATF **Secretariat supports the substantive work of the FATF membership and global network. The Secretariat is located at the OECD Headquarters in Paris.**

To achieve global implementation of the FATF recommendations, **the FATF relies on a strong global network of 9 FATF-Style Regional Bodies (FSRBs)**, in addition to its own 38 members. Among these 9 FSRBs, **India is a member of two: Asian Pacific Group and Eurasian Group.**

[Home](#) / [Countries](#) / [India](#)



India

Member of:

- Member of the FATF since 2010
- Member of the [Asia Pacific Group \(APG\)](#)
- Member of the [Eurasian Group \(EAG\)](#)

Pakistan is not a member of FATF. It is member of only Asia Pacific Group

[Home](#) / [Countries](#) / [Pakistan](#)

Pakistan

Member of:

- Member of [APG](#).

Also, we will learn **CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora)**

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments. **Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.**

~~CITES~~ is an international agreement to which States and regional economic integration organizations adhere voluntarily. States that have agreed to be bound by the Convention ('joined' CITES) are known as Parties. Although CITES is legally binding on the Parties – in other words they have to implement the Convention – it does not take the place of national laws. Rather it provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

CITES was drafted as a result of a resolution adopted in **1963** at a meeting of members of IUCN (The World Conservation Union). **It is also called Washington Convention** as it was signed here.

Signed at Washington, D.C., on 3 March 1973

Amended at Bonn, on 22 June 1979

Amended at Gaborone, on 30 April 1983

COP meeting is held after **every three years**.

Conference of the Parties

✓ Eighteenth meeting of the Conference of the Parties

Geneva (Switzerland), 17-28 August 2019

(Venue: Palexpo, Geneva, Switzerland)

✓ Seventeenth meeting of the Conference of the Parties

Johannesburg (South Africa), 24 September-04 October 2016

(Venue: Sandton Convention Centre, Johannesburg)

✓ Sixteenth meeting of the Conference of the Parties

Bangkok (Thailand), 03-14 March 2013

(Venue: Queen Sirikit National Convention Centre)

Any COP in India?? Yes.

✓ Third meeting of the Conference of the Parties

New Delhi (India), 25 February-08 March 1981

Once look at the Appendix :

Article II

Fundamental Principles

✓ Appendix I shall include all species threatened with extinction which are or may be affected by trade. Trade in specimens of these species must be subject to particularly strict regulation in order not to endanger further their survival and must only be authorized in exceptional circumstances.

✓ Appendix II shall include:

(a) all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival; and

(b) other species which must be subject to regulation in order that trade in specimens of certain species referred to in subparagraph (a) of this paragraph may be brought under effective control.

✓ Appendix III shall include all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the co-operation of other Parties in the control of trade.

✓ The Parties shall not allow trade in specimens of species included in Appendices I, II and III except in accordance with the provisions of the present Convention.

64. WMO certifies Megaflash lightning extremes

Link: <https://www.downtoearth.org.in/news/natural-disasters/south-america-witnessed-extreme-lightning-strikes-in-2018-2019-wmo-71999>

A World Meteorological Organization (WMO) committee of experts has established **two new world records** for the longest reported distance and the longest reported duration for a single lightning flash in, respectively, Brazil and Argentina.

The findings were published by the *American Geophysical Union's Geophysical Research Letters ahead of International Lightning Safety Day on 28 June*.

WMO's Committee on Weather and Climate Extremes, which maintains official records of global, hemispheric and regional extremes found that:

- The world's greatest extent for a single lightning flash is a single flash that covered a horizontal distance of **$709 \pm 8 \text{ km}$** ($440.6 \pm 5 \text{ mi}$) across parts of **southern Brazil** on 31 October 2018. The previous record for the longest detected distance for a single lightning flash was for **321 km on June 20, 2007**, across the US state of Oklahoma.
- The greatest duration for a single **lightning flash** is **16.73 seconds** from a flash that developed continuously over northern **Argentina** on 4 March 2019.



The lightning flashes that have now entered the record books are known as 'Megaflashes' in scientific parlance.

We will also study Lightning strikes in India. The WMO's findings come even as 92 people were killed in lightning strikes in Bihar on June 25, 2020.

We will mainly study here, **Mid-Monsoon 2019: Lightning Report.** Just few points. Lightning strikes' scientific mapping vis a vis impact analysis has been undertaken for the first time in India, so we will see this report in brief.

डॉ. मृत्युंजय महापात्र

मौसम विज्ञान विभाग के महानिदेशक,
विषय मौसम विज्ञान संगठन में भारत के ख्याल प्रतिनिधि
एवं कार्यकारी परिषद के सदस्य

Dr. Mrutyunjay Mohapatra

Director General of Meteorology,
Permanent Representative of India with WMO,
Member of Executive Council, WMO



भारत सरकार
पृथ्वी विज्ञान मंत्रालय
भारत मौसम विज्ञान विभाग
मौसम भवन, लोदी रोड
नई दिल्ली-110003
Government of India
Ministry of Earth Sciences
India Meteorological Department
Mausam Bhawan, Lodi Road
New Delhi - 110003

MESSAGE

I am glad to note that Climate Resilient Observing Systems Promotion Council (CROPC) is releasing Mid-Monsoon 2019 Lightning Report. This Report is a compilation of the lightning and nowcast forecast of India Meteorological Department (IMD), Indian Institute of Tropical Meteorology (IITM), Pune, National Remote Sensing Centre (NRSC), Indian Space Research Organization (ISRO), Lightning Network data alongwith inputs from various satellites' reports.

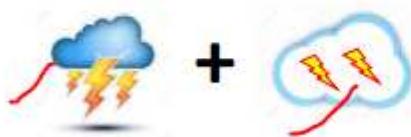
~~Total Lightning Strikes 01 April-31 July 2019~~

64,55,540

Total Lightning strikes

Total Lightning

is the combination of cloud to ground (CG) and in-Cloud (IC) lightning strikes



23,52,614



Cloud to ground Lightning

Total Lightning

CG
36.43 %

IC
64.57%

23,52,614



In Cloud Lightning

Cloud to Ground Lightning	In-Cloud Lightning
Lightning that happens between opposite charges in a cloud and on the ground	Lightning that occurs between opposite charges within a thunderstorm

Lightning Count Rankings

Period 01 April 2019 to 31 July 2019

First 22 states/UTs

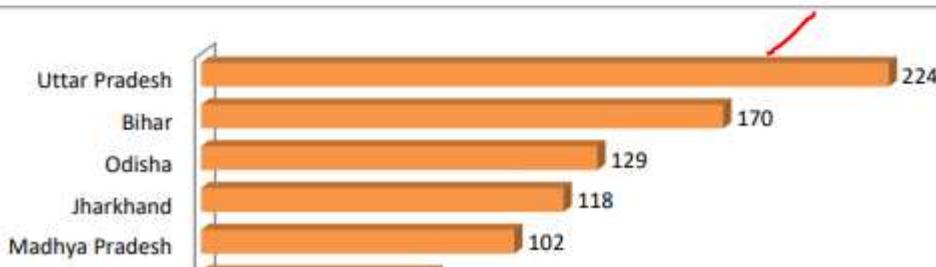


Odisha tops with 9 lakh lightning strikes which is 15% of total strikes. But highest deaths in UP.

Lightning Deaths

01 April 2019 to 31 July 2019

This report on lightning deaths has been compiled based on reports as received from state Governments or media or reported by Volunteers. With few states, the data is still being reconciled .



Also see in brief, Lightning Resilient India Campaign published in the 2019 Report.

Lightning Resilient India Campaign

A joint initiative by Climate Resilient Observing Systems Promotion Council (CROPC), Indian Meteorological Department, Ministry of Earth Science , Government of India and World Vision India

Patrons	Aim	Grateful for support to
Sri P.P. Shrivastav,(IAS) (Retd) Member NDMA Advisory Committee	1. To reduce Lightning deaths of human beings, livestock and wild animals by 80% in next 03 years	National Disaster Management Authority
Sri Anil Kumar Sinha, IAS(Retd) Fellow ICIMOD, Frmr VC BSDMA	Vision	Ministry of Home Affairs
Dr. K.J. Ramesh, former DG Indian Meteorological Department	2. The vision of Lightning Safe Indian Campaign is to create a Lightning Resilient Society through a comprehensive, multipronged innovative approach and collective action thereby taking Multi Hazard Early Warning to the community up to last mile , capacity building and creating lightning safe infrastructures with focus on local disaster hotspots in accordance with the Sendai Framework for Disaster Risk Reduction(SF DRR) and zero tolerance towards avoidable disasters.	Indian Meteorological Society (IMS)
Dr. M. Mohapatra, DG Indian Meteorological Department		Association of Agro-meteorologists
Sri R.K. Jain, IAS Secretary General , IRCS		IIT Delhi
Prof A.K.Gosain, IIT Delhi		SCDR, JNU
Dr. VS Prakash Founder Director KSNDMC		All India Radio
Prof. S.K. Dash, CAS, IIT Delhi		International Federation of Red Crescent (IFRC)
President IMS		Indian Red Cross Society

65. How e-waste crisis continues to plague informal sector?

Link: <https://www.downtoearth.org.in/blog/waste/how-e-waste-crisis-continues-to-plague-informal-sector-72033>

Read the news. Our main concern here is E-waste Management Rules, 2016. We will learn that.

Few examples of reports (You need sometimes these reports to start your answer in Mains). See below.

According to the Global E-Waste Monitor 2017, India generates about 2 million tonnes (MT) of e-waste annually and ranks fifth among e-waste producing countries, after the US, China, Japan and Germany. In 2016-17, India treated only 0.036 MT of its e-waste.

About 95 per cent of India's e-waste is recycled in the informal sector and in a crude manner. A report on e-waste presented by the United Nations (UN) in World Economic Forum on January 24, 2019 points out that the waste stream reached 48.5 MT in 2018 and the figure is expected to double if nothing changes.

Now, we will learn E-waste Management Rules 2016.

The Ministry of Environment, Forest and Climate Change notified the **E-Waste Management Rules, 2016 on 23 March 2016 in supersession of the e-waste (Management & Handling) Rules, 2011.**

Now we will see the salient features of this Bill:

1. Manufacturer, dealer, refurbisher and Producer Responsibility Organization (PRO) have been introduced as additional stakeholders in the rules.
 1. **Short title and commencement.** - (1) These rules may be called the E-Waste (Management) Rules, 2016.
(2) They shall come into force from the 1st day of October, 2016.
 2. **Application.** - These rules shall apply to every manufacturer, producer, consumer, bulk consumer, collection centres, dealers, e-retailer, refurbisher, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment listed in Schedule I, including their components, consumables, parts and spares which make the product operational but shall not apply to -
 - (a) used lead acid batteries as covered under the Batteries (Management and Handling) Rules, 2001 made under the Act;
 - (b) micro enterprises as defined in the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006); and
 - (c) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made there under.

2. It mandated extended producer responsibility (EPR) for all plastic producers, importers and brand owners (PIBOs). ERP is a mechanism through which producers are made responsible for handling and recycling end-of-life products.

(t) 'Extended Producer Responsibility' means responsibility of any producer of electrical or electronic equipment, for channelisation of e-waste to ensure environmentally sound management of such waste. Extended Producer Responsibility may comprise of implementing take back system or setting up of collection centres or both and having agreed arrangements with authorised dismantler or recycler either individually or collectively through a Producer Responsibility Organisation recognised by producer or producers in their Extended Producer Responsibility - Authorisation;
3. Compact Fluorescent Lamp (CFL) and other mercury containing lamp brought under the purview of rules.
4. Provision for **Pan India EPR (Extended Producer Responsibility)** Authorization by CPCB has been introduced replacing the state wise EPR authorization.

(u) 'Extended Producer Responsibility - Authorisation' means a permission given by Central Pollution Control Board to a producer, for managing Extended Producer Responsibility with implementation plans and targets outlined in such authorisation including detail of Producer Responsibility Organisation and e-waste exchange, if applicable;
5. **Deposit Refund Scheme** has been introduced as an additional economic instrument wherein the producer charges an additional amount as a deposit at the time of sale of the electrical and electronic equipment and returns it to the consumer along with interest when the end - of - life electrical and electronic equipment is returned.

'deposit refund scheme' means a scheme whereby the producer charges an additional amount as a deposit at the time of sale of the electrical and electronic equipment and returns it to the consumer along with interest when the end-of-life electrical and electronic equipment is returned;
6. The manufacturer is also now responsible to collect e - waste generated during the manufacture of any electrical and electronic equipment and channelize it for recycling or disposal and seek authorization from State Pollution Control Board (SPCB)

(dd) 'Producer Responsibility Organisation' means a professional organisation authorised or financed collectively or individually by producers, which can take the responsibility for collection and channelisation of e-waste generated from the 'end-of-life' of their products to ensure environmentally sound management of such e-waste;

~~5.~~ **Responsibilities of the producer.** - The producer of electrical and electronic equipment listed in Schedule I shall be responsible for -

- (1) implementing the Extended Producers Responsibility with the following frameworks, namely:-
 (a) collection and channelisation of e-waste generated from the 'end-of-life' of their products or 'end-of-life' products with same electrical and electronic equipment code and historical waste available on the date from which these rules come into force as per Schedule I in line with the targets prescribed in Schedule III in Extended Producer Responsibility - Authorisation;
7. The roles of the State Government have been also introduced in the Rules in order to ensure safety, health and skill development of the workers involved in the dismantling and recycling operations.
8. Department of Industry in State or any other government agency authorized in this regard by the State Government is to ensure earmarking or allocation of industrial space or shed for e - waste dismantling and recycling in the existing and upcoming industrial park, estate and industrial clusters.

~~12.~~ **Responsibilities of State Government for environmentally sound management of E-waste.** – (1) Department of Industry in State or any other government agency authorised in this regard by the State Government, to ensure earmarking or allocation of industrial space or shed for e-waste dismantling and recycling in the existing and upcoming industrial park, estate and industrial clusters;

9. Department of Labour in the State or any other government agency authorized in this regard by the State Government need to ensure recognition and registration of workers involved in dismantling and recycling.

~~(2)~~ Department of Labour in the State or any other government agency authorised in this regard by the State Government shall:

- a. ensure recognition and registration of workers involved in dismantling and recycling;
- b. assist formation of groups of such workers to facilitate setting up dismantling facilities;
- c. undertake industrial skill development activities for the workers involved in dismantling and recycling;
- d. undertake annual monitoring and to ensure safety & health of workers involved in dismantling and recycling;

10. State Government to prepare integrated plan for effective implementation of these provisions, and to submit annual report to Ministry of Environment, Forest and Climate Change.

~~(3)~~ State Government to prepare integrated plan for effective implementation of these provisions, and to submit annual report to Ministry of Environment, Forest and Climate Change.

11. Liability for damages caused to the environment or third party due to improper management of e - waste including provision for levying financial penalty for violation of provisions of the Rules has also been introduced.

~~✓ 21.~~ **Liability of manufacturer, producer, importer, transporter, refurbisher, dismantler and recycler.** - (1) The manufacturer, producer, importer, transporter, refurbisher, dismantler and recycler shall be liable for all damages caused to the environment or third party due to improper handling and management of the e-waste;

(2) The manufacturer, producer, importer, transporter, refurbisher, dismantler and recycler shall be liable to pay financial penalties as levied for any violation of the provisions under these rules by the State Pollution Control Board with the prior approval of the Central Pollution Control Board.

12. Urban Local Bodies (Municipal Committee/Council/Corporation) has been assigned the duty to collect and channelize the orphan products to authorized dismantler or recycler.

~~✓ 24.~~ **Urban Local Bodies (Municipal Committee or Council or Corporation)** shall ensure that e-waste pertaining to orphan products is collected and channelised to authorised dismantler or recycler.

13. The import of electrical and electronic equipment shall be allowed only to producers having Extended Producer Responsibility authorisation.

~~✓~~ (3) the import of electrical and electronic equipment shall be allowed only to producers having Extended Producer Responsibility authorisation;

66. Gynandromorphism in dragonfly

Link: <https://www.thehindu.com/sci-tech/science/rare-biological-phenomenon-in-dragonflies-sighted-at-kole-wetlands/article31939658.ece#:~:text=When%20Renjith%20R.V%20and%20Vivek,a%20very%20rare%20biological%20phenomenon>.

Why in News?

Recently, a rare biological phenomenon i.e. **Gynandromorphism** has been spotted in a **dragonfly**, the Scarlet Skimmer (*Crocothemis servilia*), which is found in the Kole wetlands, Kerala.

~~SCIENCE~~

Rare biological phenomenon in dragonflies sighted at Kole wetlands



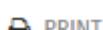
S. Anil Radhakrishnan

THIRUVANANTHAPURAM, JUNE 28, 2020 20:10 IST
UPDATED: JUNE 28, 2020 23:54 IST

SHARE ARTICLE



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Gynandromorphism is a characteristic of an organism that contains both male and female tissues and characteristics. Such organisms are also called gynandromorphs.

Kole Wetlands:

Kole Wetlands is a wetland lying in Thrissur District in Kerala. It gives 40% of Kerala's rice requirement and acts as a natural drainage system. **It is a part of Vembanad-Kole wetlands.**

 Vembanad-Kol Wetland. 19/08/02. Kerala. 151,250 ha. 09°50'N 076°45'E. The largest brackish, humid tropical wetland ecosystem on the southwest coast of India, fed by 10 rivers and typical of large estuarine systems on the western coast, renowned for its clams and supporting the third largest waterfowl population in India during the winter months. Over 90 species of resident birds and 50 species of migratory birds are found in the Kol area. Flood protection for thickly-populated coastal areas of three districts of Kerala is considered a major benefit, groundwater recharge helps to supply well water for the region, and the value of the system for the local transport of people and trade is considerable. Ramsar site no. 1214. Most recent RIS information: 2002.

One more news related to dragonfly was there in The Hindu section,

ENVIRONMENT

 A rare dragonfly spotted in chance encounter



K Jeshi

 OIMBATORE, JUNE 17, 2020 15:22 IST
UPDATED: JUNE 18, 2020 12:29 IST 



Megalogomphus Superbus Fraser | Photo Credit: Ravindran Kamatchi

Megalogomphus superbus Fraser, endemic to the Western Ghats, has been photographed for the first time in nine decades

Megalogomphus superbus Fraser, endemic to the Western Ghats, has been photographed for the first time in nine decades.

67. Researchers rediscover extinct plant after 136 years

Link: <https://timesofindia.indiatimes.com/city/pune/researchers-rediscover-extinct-plant-after-136-years/articleshow/76679621.cms#:~:text=PUNE%3A%20Researchers%20from%20Pune%2C%20Calicut,for%20the%20last%20136%20years.&text=The%20plant%20discovered%20by%20them,as%20a%20critically%20endangered%20species.>

Researchers from Pune, Calicut and Kozhikode have rediscovered the plant, *Globe Andersonii*, from Sikkim Himalaya which has been considered extinct for the last 136 years. The *Globe Andersonii* is commonly known as Dancing Ladies or Swan Flower.

✓ Researchers rediscover extinct plant after 136 yrs

TNN | Jun 29, 2020, 04:30 IST

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Found in July 2011

Pune: Researchers from Pune, Calicut and Kozhikode have rediscovered the plant, *Globe Andersonii*, from Sikkim Himalaya which has been considered extinct for the last 136 years.

Their research was recently published in an international journal, *Botany Letters*.

The plant discovered by them is commonly called Dancing

Ladies or Swan flower and has been enlisted as a critically endangered species. It usually grows in dense areas on rocky slopes in evergreen forests. Sachin Punekar, who is the co-author of the paper, collected this species from Sevoke Hill Forest in July, 2011, after a gap of 136 years.

68. Virtual Summoning of the Houses of Parliament

Link: <https://www.barandbench.com/columns/how-a-benign-provision-from-government-of-india-act-1935-could-virtually-hold-government-accountable-in-covid-19-times>

Interesting news. Try to understand.

The Indian Constitution envisages three major roles for Parliament: representation, law-making, and accountability.

Relevant to our discussion is **Article 75(3)**, which states that the 'Council of Ministers shall be collectively responsible to the House of the People'.

✓5. Other provisions as to Ministers.—(1) The Prime Minister shall be appointed by the President and the other Ministers shall be appointed by the President on the advice of the Prime Minister.

1[(1A) The total number of Ministers, including the Prime Minister, in the Council of Ministers shall not exceed fifteen per cent. of the total number of members of the House of the People.

(1B) A member of either House of Parliament belonging to any political party who is disqualified for being a member of that House under paragraph 2 of the Tenth Schedule shall also be disqualified to be appointed as a Minister under clause (1) for duration of the period commencing from the date of his disqualification till the date on which the term of his office as such member would expire or where he contests any election to either House of Parliament before the expiry of such period, till the date on which he is declared elected, whichever is earlier.]

(2) The Ministers shall hold office during the pleasure of the President.

✓(3) The Council of Ministers shall be collectively responsible to the House of the People.

However, legislatures could only hold the executive accountable when the House is summoned by President (on the advices of Cabinet) or when the Parliamentary Committees meet. With the budget session adjourned sine die on **March 23**, and no alternative mechanism of ensuring continuity of Parliament, it is becoming increasingly difficult for the legislature to hold the executive responsible.

As per the Indian Constitution, the President has time until **September 23** (gap of 6 months) to summon the House.

✓85. Sessions of Parliament, prorogation and dissolution.—(1) The President shall from time to time summon each House of Parliament to meet at such time and place as he thinks fit, but **six months** shall not intervene between its last sitting in one session and the date appointed for its first sitting in the next session.

✓(2) The President may from time to time—

- (a) prorogue the Houses or either House;** ✓
- (b) dissolve the House of the People.]** ✓

Reasons for the delay in summoning of the Houses:

✓The reasons for the delay are also understandable. The Secretary General of the Lok Sabha and Rajya Sabha have **expressed** their helplessness in assuring social distancing within Parliament. With social distancing norms in place, Parliament can accommodate 60 members in the Rajya Sabha and 100 members in the Lok Sabha. Additionally, while Members of Legislative Assemblies may come from within the same state, Members of Parliaments come from across the country. With differing quarantine rules for different states, this may cause a lot of confusion and compromise efficiency. Therefore, **with the average age of Lok Sabha MPs at 55**, we need to find methods to keep them accountable while **ensuring** them safety.

What other countries are doing?

Globally, different governments have responded with varying degrees of accountability during the pandemic. Keeping up the traditional parliamentary methods of ensuring government accountability, we saw Maldives becomes the world's first parliament to go virtual after which countries including Canada and United Kingdom decided to take democracy online.

“ Maldives becomes the world’s first Parliament to go virtual

Online Democracy!

What Speaker and Chairman have to say about holding a session?

On June 9, after the meeting of Lok Sabha Speaker Om Birla and Rajya Sabha Chairman Venkaiah Naidu, **it was conveyed that virtual Parliament is ruled out for India, since amendments to rules of the Houses would be required. And here comes the problem.... Read below.**

~~✓ Article 85 of Indian Constitution says that~~

~~"The President shall from time to time summon each house Parliament to meet at such time and place as he thinks fit...."~~ ✓

The corresponding provision for state legislatures is provided under Article 174, which gives power to the Governor to summon sessions of state legislatures.

I argue that considering the nature of pandemic, we need to prudentially interpret the meaning of the word 'place' to include physical as well as virtual place. On the meaning of the word 'place', the Constituent Assembly debates shed little light, as most of the discussion was around the latter part of Article 85(1) regarding minimum time lapse between two sessions of Parliament.

Interestingly, the Article has been borrowed from the ~~Government of India Act, 1935~~ where under **Section 19**, the Governor-General had the power to summon Parliament at a place and time he deemed fit. The nature of language used and the constitutional borrowing of Section 19 of the Government of India Act has opened a window for holding our representative responsible.

~~✓~~ On the question of requirement of amendment of parliamentary rules, it is submitted that Rule 3 of the Rules of Procedure and Conduct of Business in Lok Sabha (Lok Sabha Rules) and Rule 3 of the corresponding Rajya Sabha Rules both enable the Secretary-General to issue summons to each member specifying the date and place for a session of the House. As far as meetings of Parliamentary Committees are concerned, while generally, they should be held within the 'precincts of the House', a perusal of the definition of the phrase informs us that it includes the "Chamber, the Lobbies, the Galleries and such other places as the Speaker (Chairman in case of Rajya Sabha) may from time to time specify".

~~✓~~ Additionally, the Lok Sabha Rules under Rule 267 and the Rajya Sabha Rules under Rule 81 enable the Speaker and Chairman respectively to allow the Committees to meet outside the precincts of the respective houses. Therefore, it is humbly submitted that there are no limitations as far as rules are concerned.

Therefore, considering the unprecedented nature of the situation at hand, in order to strengthen democracy, which is a basic feature of our Constitution, we consider this a strong case for the President (on advice of the Cabinet) to summon Parliament virtually.

69. Government approves use of dexamethasone

Link: <https://www.thehindu.com/news/national/coronavirus-india-approves-use-of-dexamethasone/article31934249.ece>



You don't need to learn this dexamethasone for Ph.D., Since India has introduced it now for treatment, just have a fair idea what is this.

A drug named dexamethasone is the talk of the hour given recent claims that it can cut mortality in patients with severe forms of COVID-19 by a third. The claims originated in a press

release issued by scientists involved with the RECOVERY (short for 'Randomized Evaluation of COVID-19 Therapy') trial, from the University of Oxford.

~~X~~ Dexamethasone is not a novel drug. It is an often-used steroid with powerful anti-inflammatory properties. Dexamethasone falls under a broader class of drugs called corticosteroids, which in turn has two sub-classes: glucocorticoids and mineralocorticoids. Glucocorticoids have anti-inflammatory activity. Mineralocorticoids regulate electrolyte and water balance in the body.

Dexamethasone is a glucocorticoid drug and its action is generic. It is administered for various conditions, including arthritis, immune system disorders and allergic reactions of the skin, eyes and ears.

